

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five

| Year | 2018-19 | 2017-18 | 2016-17 | 2015-16 | 2014-15 |
|------|---------|---------|---------|---------|---------|
| No. | 59 | 37 | 92 | 62 | 26 |

Book Chapter

2016-17

| Sl. No. | Name of the teacher | Title of the book/chapters published | Title of the paper | Title of the proceedings of the conference | Name of the conference | National / International | Year of publication | ISBN/ISSN number of the proceeding | Affiliating Institute at the time of publication | Name of the publisher |
|---------|---------------------|---|--------------------|--|------------------------|--------------------------|---------------------|------------------------------------|--|-----------------------|
| 1 | Dr H P Srichand | A Text book of Engineering Mathematics III | - | NA | NA | National | 2016-2017 | 978-81-315-3400-7 81-315-3400-6 | Bharat Institute of Engineering and Technology | Cengage Publications |
| 2 | Dr. R.Madana Mohana | Blockage With in Wi-Fi Sensor Networks in Addition to Systems Regarding Controlling | NA | NA | NA | National | 2016-2017 | 978-981-10-3935-5 | Bharat Institute of Engineering and Technology | Springer |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|---|---------------------|---|----|----|----|---------------|-----------|-------------------|--|---------------------------------|
| | | Congestion | | | | | | | | |
| 3 | Dr. R.Madana Mohana | Review upon distributed Facts Hard Drive Schemes throughout Wireless Sensor Communities | NA | NA | NA | National | 2016-2017 | 978-3-11-046960-8 | Bharat Institute of Engineering and Technology | DE GRUYTER |
| 4 | Dr.M Pandi | Modified neldermead simplex method for clustering gene expression data | NA | NA | NA | International | 2016-2017 | 978-620-2-02430-3 | Bharat Institute of Engineering and Technology | LAP Lambert Academic Publishing |
| 5 | Dr.R. Balamurugan | An approach for market segmentation using customer pain points | NA | NA | NA | International | 2016-2017 | 978-620-2-02425-9 | Bharat Institute of Engineering and Technology | LAP Lambert Academic Publishing |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|---|----------------------|---|----|----|----|---------------|-----------|----------------|--|-------------|
| 6 | Dr.R. Balamurugan | Biclustering algorithms for microarray data | NA | NA | NA | International | 2016-2017 | 978-3668549692 | Bharat Institute of Engineering and Technology | Grin Verlag |
|---|----------------------|---|----|----|----|---------------|-----------|----------------|--|-------------|

Conference 2016-17

| Sl. No. | Name of the teacher | Title of the book/chapters published | Title of the paper | Title of the proceedings of the conference | Name of the conference | National / International | Year of publication | ISBN/ISSN number of the proceeding | Affiliating Institute at the time of publication | Name of the publisher |
|---------|---------------------|--------------------------------------|--------------------|--|------------------------|--------------------------|---------------------|------------------------------------|--|-----------------------|
| | | | | | | | | | | |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|---|--------------------------|----|---|---|---|----------|---------------|---------------|---|----|
| 1 | G.Kumar aswamy Rao | NA | Enhancing Antijamming Capabilities of Electronic Systems onboard the Civilian Communication Satellites used during the Tactical Wars | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016- 2017 | 2231- 4903 | Bharat Institu te of Engine ring and Techn ology | NA |
| 2 | Bijay Kumar Muni | NA | Zigbee Analysis for short range Wireless communication system | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016- 2017 | 2231- 4903 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|---|-----------------------|----|--|---|---|----------|---------------|---------------|---|----|
| 3 | D Sankara Reddy | NA | Robustness of Novel MIMO- OFDM Schemes for future Digital TV to carrier frequency offset | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016- 2017 | 2231- 4903 | Bharat Institu te of Engine ring and Techn ology | NA |
| 4 | R Gopi Reddy | NA | Modified Booth Encoding Multiplier for both signed and unsigned Radix Based Multi- Modulus Multiplier | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016- 2017 | 2231- 4903 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|---|---------------------------|----|---|---|---|----------|---------------|---------------|---|----|
| 5 | Chandika Mohan Babu | NA | Power Quality Network Distribution using SRF with Effective THD analysis of Voltage and Current in UPQC Smart Grid | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016- 2017 | 2231- 4903 | Bharat Institu te of Engine ring and Techn ology | NA |
| 6 | CH Kranthi Rekha | NA | Extended Median Filtering for the enhancement of color images | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016- 2017 | 2231- 4903 | Bharat Institu te of Engine ring and Techn ology | NA |
| 7 | I Ravi Kumar | NA | Design of flip flops with signal feed through scheme using | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016- 2017 | 2231- 4903 | Bharat Institu te of Engine ring | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|---|---------------|----|---|--|--|----------|-----------|-----------|--|----|
| | | | transmission gate | | | | | | and Technology | |
| 8 | K Pavan Kumar | NA | Design of binary Comparator in QCA technology | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016-2017 | 2231-4903 | Bharat Institute of Engineering and Technology | NA |
| 9 | G Asha Latha | NA | Detection of artefacts in Electrocardiogram(ECG) signals using Kalman Filtering | National Conference on Advances in Control, Power & Energy Systems | National Conference on Advances in Control, Power & Energy Systems | National | 2016-2017 | 2231-4903 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------|----|---|---|---|---------------|-----------|-------------------|--|----|
| 10 | SHALINDER MISHRA | NA | Transmission line model for inherently stable MSWCNT bundled global interconnect for 22nm technology node | 2017 4th IEEE Uttar Pradesh Section (UPCON) | International Conference on Electrical, Computer and Electronics (UPCON) | International | 2016-2017 | 978-1-5386-3004-4 | Bharat Institute of Engineering and Technology | NA |
| 11 | E V Reddy | NA | Optimal communication of real time data on secure CDMA IP RAN network{ | SCOPES 2016 - Proceedings | International Conference on Signal Processing, Communication, Power and Embedded System | International | 2016-2017 | 978-150904620-1 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|---|----|---|---|--|-------------------|---------------|----------------------------|---|--------------|
| 12 | P.Saha, P.Samanta, D.Kumar | NA | 4:2 And 5:2 Decimal Compressor | 2016 7th International Conference on Intelligent Systems, Modelling and Simulation (ISMS) | 2016 7th International Conference on Intelligent Systems, Modelling and Simulation (ISMS) | Internati onal | 2016- 2017 | 2166- 0670 | Bharat Institu te of Engine ring and Techn ology | NA |
| 13 | Kasturi, K., V. Madhuvan thi and M. Pooja | NA | A High Accuracy Framework for Automatic Railway Gate Control and Monitoring | International Conference on Frontiers in Engineering, Applied Sciences and Technology | International Conference on Frontiers in Engineering, Applied Sciences and Technology | Internati onal | 2016- 2017 | 97881 90- 83888 7 | Bharat Institu te of Engine ring and Techn ology | NA |
| 14 | P.RAJESH KUMAR REDDY | NA | OPTIMAL ENERGY PERFORMAN CE AND COMPARISON OF OPEN RACK AND | Proceedings of 1st international conference on power engineering,COMPUTI NG AND CONROL,PECCON-2017 | 1st international conference on power engineering,COMPUTI NG AND CONROL,PECCON- 2017,VIT UNIVERSITY | Internati onal | 2016- 2017 | 1876- 6102 | Bharat Institu te of Engine ring and Techn | Elsevie r |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|---|----|---|--|--|-------------------|---------------|----------------------------|--|----|
| | | | ROOF MOUNT MONO c-Si photovoltaic systems | | | | | | ology | |
| 15 | Kasturi, K., K. Sri Mourya and I. Mahendr a | NA | Household Device Monitoring Based on Gesture Recognition and Zigbee Protocol | International Conference on Frontiers in Engineering, Applied Sciences and Technology | International Conference on Frontiers in Engineering, Applied Sciences and Technology | Internati onal | 2016- 2017 | 97881 90- 83888 7 | Bharat Institu te of Engine ering and Techn ology | NA |
| 16 | Kasturi, K., P. Vishal Reddy, Vijayasim ha Reddy Bonagiry and S. | NA | Effect of Frequency Upshifting on the Speech Recognition in Noise using Speech Enhancement | International Conference on Frontiers in Engineering, Applied Sciences and Technology | International Conference on Frontiers in Engineering, Applied Sciences and Technology | Internati onal | 2016- 2017 | 978- 15396 69203 | Bharat Institu te of Engine ering and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------------------------|----|--|---|---|----------------|-----------|----|---|----|
| | Vinod | | Methods for Cochlear Implants | | | | | | | |
| 17 | N.Srikant h Prasad, | NA | Modeling And Reporting Parameters Of Optical Ofdm System Using Different Modulating Techniques | Icpet-2016 2-3rd March | Icpet-2016 2-3rd March | Internati onal | 2016-2017 | NA | Bharat Institu te of Engine ering and Techn ology | NA |
| 18 | G.Madhu Babu ,K. Pavan Kumar Reddy | NA | DESIGN AND FABRICATION OF MULTI-FUNCTIONAL ELEVATOR | National conference on Trends in Mechanical Engineering JNTUACE-Anantapur | National conference on Trends in Mechanical Engineering JNTUACE-Anantapur | National | 2016-2017 | NA | Bharat Institu te of Engine ering | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------------------------|----|--|--|--|-------------------|---------------|----------------------------|---|--------------|
| | | | | | | | | | and Techn ology | |
| 19 | R. Madana mohana | NA | AN EFFICIENT PLACEMENT OF ELECTRONIC COMPONENT S USING GENETIC ALGORITHM | Springer INTERNATIONAL CONFERENCE ON INNOVATIVE IN ENGG. TECHNOLOGY. (Date Added to IEEE Xplore: 19 January 2017) | INNOVATIVE IN ENGG. TECHNOLOGY. (Date Added to IEEE Xplore: 19 January 2017) | Internati onal | 2016- 2017 | 9 78-1- 5090- 1285-5 | Bharat Institu te of Engine ring and Techn ology | NA |
| 20 | NALLAPA NENI MANOJ KUMAR | NA | OPTIMAL ENERGY PERFORMAN CE AND COMPARISON OF OPEN RACK AND ROOF MOUNT | Proceedings of 1st international conference on power engineering,COMPUTI NG AND CONROL,PECCON-2017 | 1st international conference on power engineering,COMPUTI NG AND CONROL,PECCON- 2017,VIT UNIVERSITY | Internati onal | 2016- 2017 | 1876- 6102 | Bharat Institu te of Engine ring and Techn ology | Elsevie r |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------|----|--|---|--|---------------|-----------|-------------------|--|------|
| | | | MONO c-Si photovoltaic systems | | | | | | | |
| 21 | P.SHAMBHU PRASAD | NA | INDUCTION MOTOR SPEED CONTROL BY CARRIER MODULATION BASED MATRIX CONVERTER | PROCEEDINGS OF INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING ,COMMUNICATION,POWER AND EMBEDDED SYSTEM SCOPES-2016 | INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING ,COMMUNICATION,POWER AND EMBEDDED SYSTEM SCOPES-2016 | International | 2016-2017 | 978-1-5090-4620-1 | Bharat Institute of Engineering and Technology | IEEE |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------------|----|---|--|--|-------------------|---------------|-------------------------------|---|------|
| 22 | ABV SRAVAN KUMAR | NA | INDUCTION MOTOR SPEED CONTROL BY CARRIER MODULATIO N BASED MATRIX CONVERTER | PROCEEDINGS OF INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING ,COMMUNICATION,PO WER AND EMBEDDED SYSTEM SCOPES-2016 | INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING ,COMMUNICATION,PO WER AND EMBEDDED SYSTEM SCOPES-2016 | Internati onal | 2016- 2017 | 978-1- 5090- 4620-1 | Bharat Institu te of Engine ring and Techn ology | IEEE |
| 23 | Mubeena Begum | NA | A Mechanism for Message Authenticatio n and Integrity for Hybrid Crypto Algorithm | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|--------------------------|----|--|---|--|-------------------|---------------|-------------------------------|---|--------------|
| 24 | KADAPAL LY PRAVEEN | NA | OPTIMAL ENERGY PERFORMAN CE AND COMPARISON OF OPEN RACK AND ROOF MOUNT MONO c-Si photovoltaic systems | Proceedings of 1st international conference on power engineering,COMPUTI NG AND CONROL,PECCON-2017 | 1st international conference on power engineering,COMPUTI NG AND CONROL,PECCON- 2017,VIT UNIVERSITY | Internati onal | 2016- 2017 | 1876- 6102 | Bharat Institu te of Engine ring and Techn ology | Elsevie r |
| 25 | R. Madana Mohana | NA | Clustering CategoricalTi me Evolving Data From KMeans To Rough Set Theory Using Map-Reduce Technique | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|---|----|--|--|--|----------|-----------|-------------------|--|----|
| 26 | Pavan Kumar Pagadala, Shiva Kumar Vanam | NA | Enhancing the security of the MANETS form DDOS Attacks using Deterministic Bit marking Algorithm | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 27 | Farhana Bano | NA | Detection of Selfish nodes in Networks using RED Algorithm | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 28 | K. Harikrishna | NA | Monitoring Data Using Amazon S3 API | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|--------------------------|----|--|--|--|----------|---------------|-------------------------------|---|----|
| | | | | | | | | | ology | |
| 29 | N. Aruna Jyothi | NA | Issues on Cloud Computing Security and Threats | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |
| 30 | Gowravar am Rashmi | NA | Augmented Reality | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------|----|--|--|--|----------|-----------|-------------------|--|----|
| 31 | R. Madana Mohana | NA | Privacy Preserving Applications in Data Mining | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 32 | S. Keerthi | NA | Data Analytics:A survey | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 33 | Y. Sirisha | NA | Secured Mobile Cloud Using IRIS Recognition | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-------------------|----|---|--|--|----------|---------------|-------------------------------|---|----|
| | | | | | | | | | ology | |
| 34 | Hari Krishna K | NA | An Outline And Synopsis Of Cloud Computing | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |
| 35 | Hari Krishna K | NA | A Comprehensi ve Review of the Big Data . | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------------|----|--|--|--|----------|---------------|-------------------------------|---|----|
| 36 | K. S. Parimala | NA | Digital Locker- Push APIs to move URIs into digital locker and PULL APIs to search documents from repositories by using the XML structure format | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |
| 37 | K. SrihariBa bu | NA | A Review on Efficient Data Storage for Mobile Cloud Computing and security issues with challenges | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |
| 38 | P. SrinivasR | NA | Self Protective | National Conference on Innovative | National Conference on Innovative | National | 2016- 2017 | 978- 93- | Bharat Institu | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------|----|--|---|--|---------------|-----------|-------------------|--|------|
| | ao | | Cloud Service Providers (CSP) in the Vicinity of Stealthy Denial of Service Strategy | Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | | | 82829-58-4 | te of Engineering and Technology | |
| 39 | G SRINIVASA RAO | NA | INDUCTION MOTOR SPEED CONTROL BY CARRIER MODULATION BASED MATRIX CONVERTER | PROCEEDINGS OF INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING ,COMMUNICATION,POWER AND EMBEDDED SYSTEM SCOPES-2016 | INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING ,COMMUNICATION,POWER AND EMBEDDED SYSTEM SCOPES-2016 | International | 2016-2017 | 978-1-5090-4620-1 | Bharat Institute of Engineering and Technology | IEEE |
| 40 | K. Hari Krishna | NA | KNN Range Query Services Designed for Protecting Data in the | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|---------------|----|---|--|--|----------|---------------|-------------------------------|---|----|
| | | | Cloud | | | | | | Techn ology | |
| 41 | N. Sainath | NA | A Study on Top of Cloud Storage Confidentialit y Preserve Public Auditing for Regenerating Code | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |
| 42 | N. Sainath | NA | Exposure of Attribution Imitation and Packet- Drop Attacks in WSN | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|--------------------|----|--|--|--|----------|-----------|-------------------|--|----|
| 43 | Dr. P. Padmanabham | NA | Cloud Storage Design to Facilitate Care for User Privacy | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 44 | N. Sainath | NA | Energetic directionfinding for Data reliability and wait differentiate Services in WSN | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 45 | K. Hari Krishna | NA | Data Dissemination and Origin in Online Social Media Networks. | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-------------------------------|----|---|--|--|----------|---------------|-------------------------------|---|----|
| | | | | | | | | | ology | |
| 46 | K. Hari Krishna | NA | Outlay Useful Reliable and Unknown Data Allocation with Further Security. | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |
| 47 | P. Lalitha Surya Kumari | NA | A novel Authenticatio n and Confidentialit y Scheme Based on Zero Knowledge | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|---------------------------|----|--|--|--|----------|-----------|-------------------|--|----|
| 48 | B. Madhu, K. Bhaskar(I T) | NA | Research and Analysis on Vulnerability Assessments in Cyber Security | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 49 | Dr. P. Padmanabham | NA | A KDD Framework for Multi Dimensional Home Interview Survey Data . | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 50 | Dr. P. Padmanabham | NA | Information Warehouse - A Paradigm shift | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-------------------|----|--|---|---|-------------------|---------------|---------------------------|---|------|
| | | | | | | | | | ology | |
| 51 | K.Hari Krishna | NA | A Performance study of metric on wireless sensor network routing protocols | 6th IEEE International Advance Computing Conference ACC | 6th IEEE International Advance Computing Conference ACC | Internati onal | 2016- 2017 | 978-1- 4673- 8285-4 | Bharat Institu te of Engine ring and Techn ology | IEEE |
| 52 | K.Hari Krishna | NA | Wireless Sensor Network Topology Control Using Clustering | International Conference on Communication ,Computing and Virtualization | International Conference on Communication ,Computing and Virtualization | Internati onal | 2016- 2017 | 1877- 0509 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-------------------|----|---|---|---|-------------------|---------------|-------------------------------|--|--------------|
| 53 | K.Hari Krishna | NA | Wireless Network Topological Routing in Wireless Sensor Networks | Procedia Computer Science | Procedia Computer Science | Internati onal | 2016- 2017 | 1877- 0509 | Bharat Institu te of Engine ering and Techn ology | Elsevie r |
| 54 | K.Hari Krishna | NA | A Study about data exploration strategies for wireless intrusion detection system(IDS) | International conference on Innovations in Engineering Science & Management | International conference on Innovations in Engineering Science & Management | Internati onal | 2016- 2017 | 978- 81- 93197 4-1-7 | Bharat Institu te of Engine ering and Techn ology | NA |
| 55 | K.Hari Krishna | NA | A Generic Algorithm to improve the Performance of Wireless Sensor Network | International Conference on Computational Modeling and Security(CM S 2016) | International Conference on Computational Modeling and Security(CM S 2016) | Internati onal | 2016- 2017 | 1877- 0509 | Bharat Institu te of Engine ering and Techn | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | Protocol | | | | | | ology | |
|----|-------------------|----|--|--|--|-------------------|---------------|-------------------------------|---|----|
| 56 | K.Hari Krishna | NA | A Comparative Study on Various Wireless Sensor Network tools | International Conference on Emerging Trends in Engineering Research | International Conference on Emerging Trends in Engineering Research | Internati onal | 2016- 2017 | 9 78- 15147 8 2- 128 | Bharat Institu te of Engine ring and Techn ology | NA |
| 57 | K.Hari Krishna | NA | SIGNIFICANCE OF INFORMATIO N SECURITY IN RISK MANAGEMEN T | International Conference on Recent Innovations in Science Engineering & Management | International Conference on Recent Innovations in Science Engineering & Management | Internati onal | 2016- 2017 | 978- 81- 93207 4-1-3 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|---------------------|----|---|--|--|-------------------|---------------|-------------------------------|---|----|
| 58 | K.Hari Krishna | NA | Information Mining Procedures in Wireless Sensor Networks | International Conference on Innovative research in engineering ,science and management | International Conference on Innovative research in engineering ,science and management | Internati onal | 2016- 2017 | 978- 81- 93065 4-7-1 | Bharat Institu te of Engine ring and Techn ology | NA |
| 59 | K.Hari krishna | NA | Enterprise facts safety possibility supervision | International Conference on Innovations and Advancements in Computing(ICIAC-2016) | International Conference on Innovations and Advancements in Computing(ICIAC-2016) | Internati onal | 2016- 2017 | NA | Bharat Institu te of Engine ring and Techn ology | NA |
| 60 | K.Hari Krishna - | NA | Event Influenced grouping plan and vitality effective steering for wireless | International Conference on Innovations and Advancements in Computing | International Conference on Innovations and Advancements in Computing | Internati onal | 2016- 2017 | 2319- 1163 | Bharat Institu te of Engine ring and Techn | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------|----|--|---|--|----------|-----------|-------------------|--|----|
| | | | sensor networks | | | | | | ology | |
| 61 | K.Hari Krishna - | NA | New study about wireless intrusion discovery applying data exploration strategies | National conference on IPR: Challenges in Digital Environment(NCICDE) | National conference on IPR: Challenges in Digital Environment(NCICDE) | National | 2016-2017 | 2319-1112 | Bharat Institute of Engineering and Technology | NA |
| 62 | NAGARAJ U.ANNAM | NA | INTERNET THINGS(Ot):A PERCEPTION. MODERN TREND APPLICATION S,AND FUTURE DIRECTIONS | PROCEEDINGS OF NATIONAL CONFERENCE ON INNOVATIVE TECHNOLOGIES IN BIG DATA,CLOUD,MOBILE AND SECURITY(ITBCMS) | NATIONAL CONFERENCE ON INNOVATIVE TECHNOLOGIES IN BIG DATA,CLOUD,MOBILE AND SECURITY(ITBCMS) | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------------------------|----|--|---|---|-------------------|---------------|-------------------------------|---|---|
| 63 | NAGARAJ U ANNAM | NA | RELIABILITY COST/WORTH ASSESSMENT OF GENERATING SYSTEMS INCORPORATI NG SOLAR PV/WIND ENERGY | PROCEEDINGS OF 5TH WORLD CONFERENCE ON APPLIED SCIENCES,ENGINEERIN G&TECHNOLOGY | 5TH WORLD CONFERENCE ON APPLIED SCIENCES,ENGINEERIN G&TECHNOLOGY | Internati onal | 2016- 2017 | 978- 81- 93022 2-2-1 | Bharat Institu te of Engine ring and Techn ology | BRCOR P |
| 64 | NALLAPA NENI MANOJ KUMAR | NA | EXPERIMENT AL DESIGN OF WIND TURBINE WITH AN AIRFOIL EMBEDDED MULTIPLE GENERATORS | 2ND INTERNATIONAL CONFERENCE ON ADVANCED ENGINEERING AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT | 2ND INTERNATIONAL CONFERENCE ON ADVANCED ENGINEERING AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT | Internati onal | 2016- 2017 | 0973- 4562 | Bharat Institu te of Engine ring and Techn ology | Resear ch India Public ations |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------------|----|--|---|--|-------------------|---------------|---------------------------|---|------|
| 65 | ANUP KUMAR SINGH | NA | SPEED CONTROL OF 3-PHASE INDUCTION MOTOR FED THROUGH DIRECT MATRIX CONVERTER USING GSPWM TECHNOQUE WITH UNITY POWER FACTOR | IEEE INTERNATIONAL CONFERENCE PROCEEDINGS | IEEE INTERNATIONAL CONFERENCE ON "ELECTRICAL POWER AND ENERGY SYSTEMS" | Internati onal | 2016- 2017 | 978-1- 5090- 2476-6 | Bharat Institu te of Engine ring and Techn ology | IEEE |
|----|------------------------|----|--|---|--|-------------------|---------------|---------------------------|---|------|

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------------------------|----|--|---|--|-------------------|---------------|---------------------------|---|------|
| 66 | NALLAPA NENI MANOJ KUMAR | NA | SPEED CONTROL OF 3-PHASE INDUCTION MOTOR FED THROUGH DIRECT MATRIX CONVERTER USING GSPWM TECHNOQUE WITH UNITY POWER FACTOR | IEEE INTERNATIONAL CONFERENCE PROCEEDINGS | IEEE INTERNATIONAL CONFERENCE ON "ELECTRICAL POWER AND ENERGY SYSTEMS" | Internati onal | 2016- 2017 | 978-1- 5090- 2476-6 | Bharat Institu te of Engine ring and Techn ology | IEEE |
|----|-----------------------------------|----|--|---|--|-------------------|---------------|---------------------------|---|------|

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------------------------|----|--|--|--|-------------------|---------------|---------------------------|---|--------------|
| 67 | K.VINAY REDDY | NA | SPEED CONTROL OF 3-PHASE INDUCTION MOTOR FED THROUGH DIRECT MATRIX CONVERTER USING GSPWM TECHNOQUE WITH UNITY POWER FACTOR | IEEE INTERNATIONAL CONFERENCE PROCEEDINGS | IEEE INTERNATIONAL CONFERENCE ON "ELECTRICAL POWER AND ENERGY SYSTEMS" | Internati onal | 2016- 2017 | 978-1- 5090- 2476-6 | Bharat Institu te of Engine ring and Techn ology | IEEE |
| 68 | NALLAPA NENI MANOJ KUMAR | NA | FOSSIL FUEL TO SOLAR POWER:A SUSTAINABLE TECHNICAL DESIGN FOR STREET LIGHTING IN | PROCEEDINGS OF 6TH INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | 6TH INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | Internati onal | 2016- 2017 | 1877- 0509 | Bharat Institu te of Engine ring and Techn ology | Elsevie r |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------------------------|----|--|--|--|-------------------|---------------|---------------|--|--------------|
| | | | FUGAR CITY, NIGERIA | | | | | | | |
| 69 | NALLAPA NENI MANOJ KUMAR | NA | VERTICAL AXIS WIND TURBINE:AER ODYNAMIC MODELLING AND ITS TESTING IN WIND TUNNEL | PROCEEDINGS OF 6TH INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | 6th INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | Internati onal | 2016- 2017 | 1877- 0509 | Bharat Institu te of Engine ering and Techn ology | Elsevie r |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|-----------------------------------|----|---|--|---|-------------------|---------------|----|---|----|
| 70 | NALLAPA NENI MANOJ KUMAR | NA | MODELLING AND CONTROL OF INFINITE BUS INTERFACED SOLID OXIDE FUEL CELL POWER SUPPLY SYSTEM | PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON ELECTRICAL,ELECTRONI CS AND COMPUTER COMMUNICATION | INTERNATIONAL CONFERENCE ON ELECTRICAL,ELECTRONI CS AND COMPUTER COMMUNICATION | Internati onal | 2016- 2017 | NA | Bharat Institu te of Engine ring and Techn ology | NA |
| 71 | NALLAPA NENI MANOJ KUMAR | NA | EXPERIMENT AL DESIGN OF WIND TURBINE WITH AN AIRFOIL EMBEDDED MULTIPLE GENERATORS | | 2ND INTERNATIONAL CONFERENCE ON ADVANCED ENGINEERING AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT | Internati onal | 2016- 2017 | NA | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|---|----|---|--|--|-------------------|---------------|---------------|---|--------------|
| 72 | K VINAY KUMAR REDDY | NA | FOSSIL FUEL TO SOLAR POWER:A SUSTAINABLE TECHNICAL DESIGN FOR STREET LIGHTING IN FUGAR CITY, NIGERIA | PROCEEDINGS OF 6TH INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | 6th INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | Internati onal | 2016- 2017 | 1877- 0509 | Bharat Institu te of Engine ring and Techn ology | Elsevie r |
| 73 | Krishna, K.H., Kumar, T., Sureshba bu, Y., Sainath, N., Madanm ohan, R., Jeny, J.R.V | NA | Diverse execution dimensions for information conveyance in distant sensor systems | IFIP International Conference on Wireless and Optical Communications Networks | IFIP International Conference on Wireless and Optical Communications Networks | Internati onal | 2016- 2017 | 16504 455 | Bharat Institu te of Engine ring and Techn ology | IEEE |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|--------------------|----|---|--|--|----------|-----------|-------------------|--|----|
| 74 | Rekha Andal | NA | Detection of Selfish nodes in Networks using RED Algorithm | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS), | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 75 | G.Kumar aswamy Rao | NA | Computer Networking of Information Warfare Systems | 1st National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS-2016) | ITBCMS-2016 | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |
| 76 | Chandika Mohan | NA | Isolated Subcarrier modulation schemes approach for LTE system with effective | 1st National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS-2016) | ITBCMS-2016 | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|--------------------------|----|---|---|---|----------|-----------|-------------|--|---|
| | | | PAPR bandwidth applications in UPLINK and Downlink. | | | | | | ology | |
| 77 | G.Kumar aswamy Rao | NA | New Technologies to improve Antijam Performance of Commersatcoms to bring them on par with Milsatcoms | Proceedings of Fourth International Conference on Electronic Warfare EWCI | National Science Seminar Complex Indian Institute of Science, Bang ,EWCI-2016 | National | 2016-2017 | 007R0 26 | Bharat Institute of Engineering and Technology | Association of Old Crows, India Chapter |
| 78 | G.Kumar aswamy Rao | NA | Providing Protection to Security Convoys and Sport Arenas from RCIEDs by using | Proceedings of Fourth International Conference on Electronic Warfare EWCI | National Science Seminar Complex Indian Institute of Science, Bang ,EWCI-2016 | National | 2016-2017 | 051R0 77 | Bharat Institute of Engineering and Technology | Association of Old Crows, India Chapter |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------------------|----|---|-----------|--|-------------------|---------------|-------------------------------|--|------|
| | | | Smart Jammers Mounted on UAVs | | | | | | ology | |
| 79 | E V Reddy | NA | Multi attribute optimization for optimal and secure coding in wireless communicati on | IEEE-2016 | 2016 International Conference on Inventive Computation Technologies (ICICT) | Internati onal | 2016- 2017 | 978-1- 5090- 1286-2 | Bharat Institu te of Engine ering and Techn ology | IEEE |
| 80 | G. Kumaras wamy Rao | NA | Computer Networking Of Information Warfare Systems | ITBCMS | National Conference on Innovative Technologies in Big Data, Cloud, Mobile and Security (ITBCMS- 2016) | National | 2016- 2017 | 978- 93- 82829- 58-4 | Bharat Institu te of Engine ering and Techn | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|--|----|---|-----------|---|-------------------|---------------|---------------------------|---|----|
| | | | | | | | | | ology | |
| 81 | Vikas Mahesh wari ,Apoorva Gupta,Sh alini Sharma,R ajikar | NA | Crosstalk Noise And Delay Analysis For High Speed On- Chip Global Rlc Vlsi Interconnects With Mutual Inductance Using 90nm Process Technology | IEEE-2016 | International Conference on Computing, Communication & Automation, date of publication 2015/5/15 | Internati onal | 2016- 2017 | 978-1- 4799- 8890-7 | Bharat Institu te of Engine ring and Techn ology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|------------------------|----|--|------------------------------------|---|-------------------|---------------|---------------------------|---|------|
| 82 | Kasturi, K. | NA | Evaluation of MMSE Spectral Amplitude Estimator and Subspace Enhancement Methods based on Frequency Shifting for Cochlear Implants | Implantable Auditory Prostheses | Proceedings of Conference on Implantable Auditory Prostheses | Internati onal | 2016- 2017 | 978-1- 4673- 8207-6 | Bharat Institu te of Engine ring and Techn ology | NA |
| 83 | K.RATNA MADHUR I | NA | Harmonic Investigations in Multilevel inverters | IRAJ | IRAJ,PUNE | INTERNA TIONAL | 2016- 2017 | NA | Bharat Institu te of Engine ring and Techn ology | IRAJ |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

| | | | | | | | | | | |
|----|--------------------|----|--|---|--|---------------|-----------|-------------------|--|--------|
| 84 | J.BHAGWAN REDDY | NA | RELIABILITY COST/WORTH ASSESSMENT OF GENERATING SYSTEMS INCORPORATING SOLAR PV/WIND ENERGY | PROCEEDINGS OF 5TH WORLD CONFERENCE ON APPLIED SCIENCES,ENGINEERING&TECHNOLOGY | 5TH WORLD CONFERENCE ON APPLIED SCIENCES,ENGINEERING&TECHNOLOGY | International | 2016-2017 | 978-81-930222-2-1 | Bharat Institute of Engineering and Technology | BRCORP |
| 85 | Dr.J.BHAGWAN REDDY | NA | INTERNET THINGS(IoT):A PERCEPTION. MODERN TREND APPLICATIONS,AND FUTURE DIRECTIONS | PROCEEDINGS OF NATIONAL CONFERENCE ON INNOVATIVE TECHNOLOGIES IN BIG DATA,CLOUD,MOBILE AND SECURITY(ITBCMS) | NATIONAL CONFERENCE ON INNOVATIVE TECHNOLOGIES IN BIG DATA,CLOUD,MOBILE AND SECURITY(ITBCMS) | National | 2016-2017 | 978-93-82829-58-4 | Bharat Institute of Engineering and Technology | NA |

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mangalpally (Village), Ibrahimpatnam (Mandal), Ranga Reddy (District), Telangana-501510

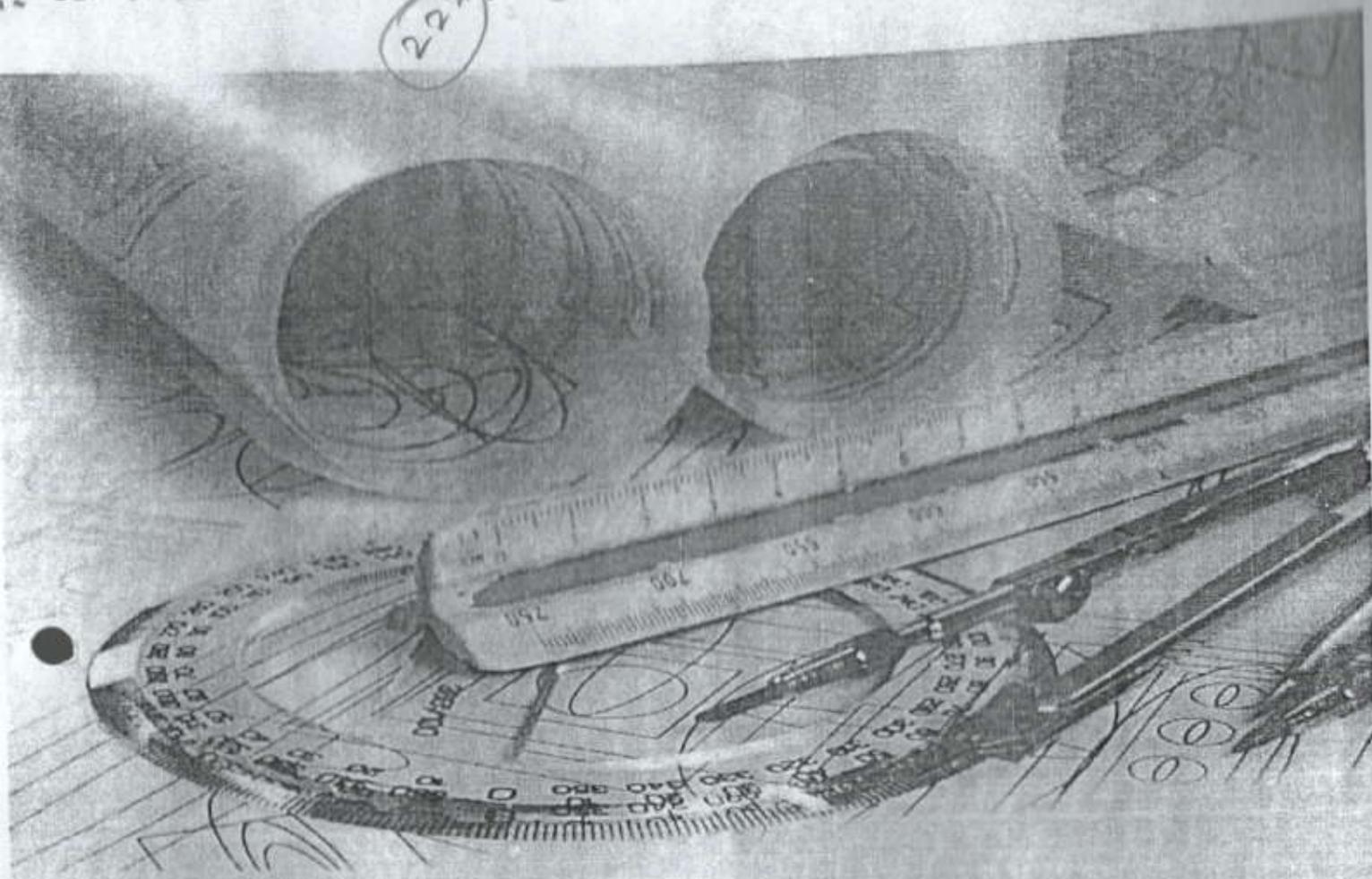
| | | | | | | | | | | |
|----|------------------------|----|---|--|--|-------------------|---------------|---------------|---|--------------|
| 86 | ANUP KUMAR SINGH | NA | FOSSIL FUEL TO SOLAR POWER:A SUSTAINABLE TECHNICAL DESIGN FOR STREET LIGHTING IN FUGAR CITY, NIGERIA | PROCEEDINGS OF 6TH INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | 6th INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING&COMMU NICATIONS,ICACC 2016 | Internati onal | 2016- 2017 | 1877- 0509 | Bharat Institu te of Engine ring and Techn ology | Elsevie r |
|----|------------------------|----|---|--|--|-------------------|---------------|---------------|---|--------------|

PRINCIPAL



Vattharam Babu
Principal
Bharat Institute of Engg. and Tech
Mangalpally(V), Ibrahimpatnam(M)
Ranga Reddy (Dist)-Telangana-501510

227
227
CENGAGE



A Textbook of

Engineering Mathematics III



Hima Bindu • Gnana Prasuna • Srichand

227

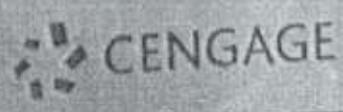
A Textbook of Engineering Mathematics III

Dr. P. Hima Bindu
Vice Principal and Professor
Humanities & Sciences Department
Shadan Womens' College of Engineering & Technology
Khairtabad, Hyderabad
Telangana

Dr. M. Gnana Prasuna
Associate Professor
Basic Sciences & Humanities Department
Bhoj Reddy Engineering College for Women
Saidabad, Hyderabad
Telangana

Dr. H.P. Srichand
Professor
Department of Mathematics
Bharat Institute of Engineering & Technology
Mangalpally, Ibrahimpatanam
Telangana

With Best Compliments
PRAMOD AMANCHI
9989646193
pramod.amanchi@cengage



86

SpringerLink

Computing and Network Sustainability pp 19–37 | Citas

Blockage With in Wi-Fi Sensor Networks in Addition to Systems Regarding Controlling Congestion

Authors: [Aruna Mani Krishna](#), [Tapas Kumar](#), [Suresh Babu](#), [Madan Mohan](#), [Srinath N.](#), [Satyanarayana V.](#)

Conference paper
First Online: 06 July 2017

Part of the [Lecture Notes in Networks and Systems](#) book series (LNNS, volume 12)

Abstract

The intriguing characteristics of remote sensor systems, for instance, mindful nature of action to bear station that happens through its various to-one topology and effect in physical channel

Log in to check access

Buy eBook
EUR 192.59

Buy paper (PDF)
EUR 24.95

- Instant download
- Readable on all devices
- Own it forever
- Local sales tax included if applicable

Learn about institutional subscriptions

Cite paper

SpringerLink

About this paper

Cite this paper as:
Aruna Mani Krishna, Kumar T, Suresh Babu V, Madan Mohan N, Srinath N, Satyanarayana V. (2017) Blockage With in Wi-Fi Sensor Networks in Addition to Systems Regarding Controlling Congestion. In: Velmurugan M, Akash S (eds) Computing and network sustainability. Lecture Notes in Networks and Systems, vol 12. Springer, Singapore

| | | |
|---------------------------------|--|---------------------------------------|
| First Online 06 July 2017 | DOI https://doi.org/10.1007/978-981-10-3925-5_3 | Publisher Name Springer, Singapore |
| Print ISBN 978-981-10-3924-8 | Online ISBN 978-981-10-3925-5 | eBook Packages Engineering |

[Buy this book on publisher's site](#)

[Benefits and Permissions](#)

Log in to check access

Buy eBook
EUR 192.59

Buy paper (PDF)
EUR 24.95

- Instant download
- Readable on all devices
- Own it forever
- Local sales tax included if applicable

Learn about institutional subscriptions

Academic Edition

Over 10 million scientific documents at your fingertips

Home | Introduction | Legal Information | Privacy Statement | How we use cookies | Guidelines | Accessibility | Contact us

87

degruyter.com uses cookies to store information that makes us to optimize our website and make browsing more comfortable for you. To learn more about the use of cookies, please read our privacy policy. [OK](#)

Communication and Power Engineering
Ed. by Rajesh, R. / Mathivanan, B.

Review upon Distributed Facts Hard Drive Schemes throughout Wireless Sensor Communities

30.95 € / \$42.95 / €22.95
[GET ACCESS TO FULL TEXT](#)

Krishna, Konda Hari / Tapas, Kumar / Babu, V. Suresh / Sathish, N. / Mohana, R. Madana

Print Flyer
[See all formats and pricing](#)

Overview
Content
Get Access to EPUB
Contact Persons

Search within...

Konda Hari Krishna*, Dr Tapas Kumar*, Dr V. Suresh Babu*, N. Sathish* and R. Madana Mohana*
Review upon Distributed Facts Hard Drive Schemes throughout Wireless Sensor Communities

Abstract: The most critical purpose of distributed knowledge storage plans in wireless sensor networks is to precisely disperse knowledge over the network. Central understanding accumulating via expert a network plan in processing knowledge accessibility, safety, stability proficiency and robust behavior of sensor network programs. Classification methods had been proposed different methods to enable understanding to a dispersed way. This paper portrays a evaluation on dispersed facts hard drive accumulating plans in wireless sensor networks. We've classified these plans into for probably the most various two classes namely centrally distributed information accumulating and information dissemination. In fact point, these plans are further categorized into four classes based on the response topology, security, load balancing and accessing point. Favorable analysis and evaluation of every plan are commented on and to make the examination of each plan with existing schemes.

And under this we present "centralized and replication based distributed data storage Protocol", an efficient correlation and replication based distributed information storage protocol for wireless sensor networks with self-learn. Consistency is related protocol "replication and replication based distributed information storage Protocol" after deeply analyzes for this application.

* M.T. Research Scholar, Vignana Jyothi's University & Assistant professor, Dept. Of Computer Sci

degruyter.com uses cookies to store information that makes us to optimize our website and make browsing more comfortable for you. To learn more about the use of cookies, please read our privacy policy. [OK](#)

DE GRUYTER

Log in Register Help Deutsch

My Cart (2) My Wishlist (5) Search De Gruyter Online [Advanced Search](#)

[MY CART](#)

SUBJECTS PRODUCT TYPES

Communication and Power Engineering

Ed. by Rajesh, R. / Mathivanan, B.

79,95 € / \$112.50 / €72.50

[ADD TO CART](#)

eBook (PDF)
Publication Date: February 2017
Copyright year: 2016
ISBN: 978-3-11-040560-8

[See all formats and pricing](#)
[Print Flyer](#)
[Recommend to Librarian](#)

Calculating server connection

233

Table of Contents

1. Flip-Flops
2. Introduction to Sequential Circuits
3. Reduction of State Tables and State Assignments
4. Specification of Digital Systems
5. Iterative Network
6. Introduction to VHDL
7. Algorithmic State Machines
8. Asynchronous Sequential Machine
9. Programmable Logic Devices
- I. Index
- P. Previous Year Papers

Additional Information

| | |
|-----------------|---------------------|
| SKU | E110 |
| AUTHOR | Shiv Shankar Mishra |
| EDITION | 2016 |
| ISBN NO. | 81-7684-697-X |
| BINDING | Paper Back |
| NUMBER OF PAGES | 500 |
| SIZE | 6.5 × 9.5 |

Reviews

Be the first to review this product

PRODUCT TAGS

Add Your Tags:

ADD TAGS

Use spaces to separate tags. Use single quotes (') for phrases.

ABOUT

Change
Magento'S
Default Phone
Numbers And

COMPANY

About Us
Contact Us
Customer Servi
ce

QUICK LINKS

Site Map
Search Terms
Advanced Searc
h

NEWSLETTER

SUBSCRIBE

ACCOUNT

https://ieeexplore.ieee.org/document/8251044

Performance optimization of self X Transmission line model for inhe X

ieeexplore.ieee.org/document/8251044

Conferences > 2017 4th IEEE Uttar Pradesh S...

Transmission line model for inherently stable MSWCNT bundled global interconnect for 22nm technology node

Publisher: IEEE

Cite This

2 Author(s)

Shailendra Mishra ; Diya Mishra View All Authors

47 Full Text Views



Need Full-Text access to IEEE Xplore for your organization? REQUEST A FREE TRIAL >

More Like This

Modeling of carbon nanotube interconnects and comparative analysis with Cu interconnects
2006 Asia-Pacific Microwave Conference
Published: 2006

Analysis of on-chip copper-single-walled carbon nanotube composite interconnects using transmission line model
2016 Progress in Electromagnetic Research Symposium (PIERS)
Published: 2016

Abstract

Abstract:

The paper aims to perform stability analysis of Metallic Single Walled Carbon Nanotube (MSWCNT) bundled global interconnects, based on transmission line mode (TLM) using a sixth order linear parametric expression. The effect of dimensional variations (length and diameter) in interconnects with respect to global regimes are analyzed through Bode plots specific to 22nm technology node. It is realized that the increment in the stability of the system is in accordance with dimensional variations, making them a viable option as interconnects in nanometer regime.

Document Sections

- I. Introduction
- II. Parametric Considerations

IEEE websites place cookies on your device to give you the best user experience. By using our websites, you agree to the placement of these cookies. To learn more, read our [Privacy Policy](#).

Accept & Close

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X



11:42 AM 2/16/2020

<https://uksim.info/isms2016/isms2016.htm#best>

Selection of Best Papers and for IJSSST

Blue = Best papers. Blue and Green 24 papers selected for IJSSST

Grey = Not presented papers, excluded from selection.

If your paper has been selected congratulations, here are the steps:

1. Extend the paper by at least one page over the conference paper, up to a maximum of 20 pages
2. Amend the title, abstract section and conclusions to reflect the additional material
3. Submit the new version to IJSSST-V17 Issue No. 5 using EDAS, by the end of February 2016.
4. Inform the general chair on david.al-dabass@ntu.ac.uk and Guest Editor on tiranee@cpe.kmutt.ac.th

Best papers are published without fee, Green papers are published at flat rate of \$75, up to 20 pages. If your paper has not been selected but you still wish to submit an extended version to IJSSST there will be the normal publication charge of \$15 per page with a minimum of 10 pages.

| # | Seq | # | Title | First author | Presenters: names | rwg avg |
|----|-----|----------------------------|--|--|-------------------|---------|
| 1 | 11 | 1570237288 | <i>A Nonlinear Adaptive State-Observer for Pressurized Water Reactors</i> | Zhe Dong | Dong | 0.8 |
| 2 | 37 | 1570241452 | <i>Prediction of Driver's Brake Pedal Operation in Vehicle Platoon System</i> | Hironori Suzuki | Suzuki | 0.8 |
| 3 | 1 | 1570234557 | <i>Quadrature Oscillator Using Operational Transresistance Amplifiers</i> | Montree Kummern | Kummern | 0.7 |
| 4 | 4 | 1570234989 | <i>Deep Belief Networks with Feature Selection for Sentiment Classification</i> | Petrawat Ruangkanokmas | Ruangkanokmas | 0.7 |
| 5 | 6 | 1570236592 | <i>Automatic Segmentation of Fuzzy Laser Lines with Sub-Pixel Accuracy From the Uneven Background During Robotic Arc Welding</i> | ZhenZhou Wang | | 0.7 |
| 6 | 8 | 1570236655 | <i>Design and Development of an Oil Spill Detection and Transmission System Using Artificial Illumination Using LEDs</i> | Mark Nelson Panglinan | Panglinan | 0.7 |
| 7 | 9 | 1570236798 | <i>Design of Alcohol Detection System for Car Users Thru Iris Recognition Pattern Using Wavelet Transform</i> | Rommel Anacan | Anacan | 0.7 |
| 8 | 17 | 1570236625 | <i>Energy Consumption and Performance of Delay Tolerant Network Routing Protocols Under Different Mobility Models</i> | Ehed Bista | Bista | 0.7 |
| 9 | 20 | 1570236880 | <i>4.2 and 5.2 Decimal Compressors</i> | Prabir Saha | Saha | 0.7 |
| 10 | 21 | 1570238324 | <i>Intelligent Power Management System of Bangladesh Using Artificial Neural Network</i> | Md. Mahfuzur Rahman | Rahman | 0.7 |
| 11 | 22 | 1570240475 | <i>Rotation, Translation, and Scale Invariant Bag of Feature Based on Feature Density</i> | Shih-Min Chen | Chiang | 0.7 |

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X

11:45 AM
2/16/2020

<https://www.researchgate.net/publication/318318221> A High Accuracy Framework for Automatic Railway Gate Control and Monitorin

Download citation Share Request full-text

A High Accuracy Framework for Automatic Railway Gate Control and Monitorin

Conference Paper · April 2017 with 10 Reads

Conference: International Conference on Frontiers in Engineering, Applied Sciences and Technology, NIT, Trichy, At National Institute of Technology, Trichy
[Cite this publication](#)

 **Kalyan Kasturi**
113.2 - R.M.D Engineering College

Do you want to **read the rest** of this conference paper?

[Request full-text](#)



FEATURED VIDEOS Powered by



Pheromone in baby mouse tears makes females less interested in sex [Read More](#)

Advertisement

https://www.researchgate.net/publication/318318031_Household_Device_Monitoring_Based_on_Gesture_Recognition_and_Zigbee_Protocol

ResearchGate Search for publications, researchers, or questions or Discover by subject area Recruit researchers Join for free Login

Download citation Share Request full-text

Household Device Monitoring Based on Gesture Recognition and Zigbee Protocol

Conference Paper · April 2017 with 13 Reads
Conference: International Conference on Frontiers in Engineering, Applied Sciences and Technology, NIT, Trichy, At National Institute of Technology, Trichy
[Cite this publication](#)

Kalyan Kasturi
113.2 · R.M.D Engineering College

Do you want to **read the rest** of this conference paper?

[Request full-text](#)

FEATURED VIDEOS Powered by

A SIGNIFICANT DOWNSIDE TO WASTEWATER TREATMENT IS THEIR CARBON FOOTPRINT.

Purple bacteria can turn human waste into clean hydrogen energy [Read More](#)

Advertisement
International Water Resources Assoc

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all

11:47 AM 2/16/2020

https://www.scopus.com/inward/record.uri?eid=2-s2.0-85030645791&doi=10.1016%2fj.egypro.2017.05.116&partnerID=40&md5=66e5f6af8f7dc2b379423387b85df200

The screenshot shows a web browser window with the Scopus document details page. The browser's address bar contains the URL: `scopus.com/record/display.uri?eid=2-s2.0-85030645791&doi=10.1016%2fj.egypro.2017.05.116&origin=inward&txGid=0d2e8ca09c218e2586a103a44f743141`. The page title is "Document details".

1 of 1
Export Download More... >

Energy Procedia
Volume 117, 2017, Pages 136-144
1st International Conference on Power Engineering Computing and CONTROL, PECCON 2017; VIT University, Chennai Campus Chennai, Tamil Nadu; India; 2 March 2017 through 4 March 2017; Code 130810

Optimal energy performance and comparison of open rack and roof mount mono c-Si photovoltaic Systems (Conference Paper) (Open Access)

Kumar, N.M., Reddy, P.R.K., Praveen, K.

View additional authors v

Save all to author list

Department of Electrical and Electronics Engineering, Bharat Institute of Engineering and Technology, Mangalpally, Ibrahimpatnam Ranga Reddy Telangana, 501 510, India

View additional affiliations v

Abstract

Cited by 22 documents

Zhan, B., Shao, S., Zhang, H.
Simulation on vertical microchannel evaporator for rack-backdoor cooling of data center
(2020) *Applied Thermal Engineering*

Chaudhari, B.N., Singh, N.K., Gupta, R.
Performance Study on a 20 kW Roof Mount Residential Photovoltaic System
(2019) *2018 International Conference on Power Energy, Environment and Intelligent Control, PEEIC 2018*

Kumar, N.M., Singh, N.K., Goel, S.
Emission Reductions from Solar PV Plants in India
(2019) *2018 International Conference on Power Energy, Environment and Intelligent Control, PEEIC 2018*

Taskbar: naac-2020 (5).php, naac-2020 (4).php, naac-2020 (3).php, naac-2020 (2).php, naac-2020 (1).php, Show all X
System tray: 11:52 AM 2/16/2020

https://www.scopus.com/inward/record.uri?eid=2-s2.0-85025176362&doi=10.1109%2fSCOPES.2016.7955626&partnerID=40&md5=38775f1fa5bd597d17ec9b68e688ae06

Document details

1 of 1
Export Download More... >

International Conference on Signal Processing, Communication, Power and Embedded System, SCOPES 2016 - Proceedings
22 June 2017, Article number 7955626, Pages 1176-1180
2016 IEEE International Conference on Signal Processing, Communication, Power and Embedded System, SCOPES 2016; Centurion University of Technology and ManagementParalakhernundi, Odisha; India; 3 October 2016 through 5 October 2016; Category numberCFP16H12-ART; Code 128486

Induction motor speed control by carrier modulation based matrix converter (Conference Paper)
Prasad, P.S., Kumar, A.B.V.S., Rao, G.S.

View additional authors v

Save all to author list

Dept of EEE, Bharat Institute of Engineering and Technology, Hyderabad, India
View additional affiliations v

Abstract
Speed control of induction motor is one of the vastly used application nowadays. Efficient, harmonic free and affordable control is a major

Cited by 0 documents

Inform me when this document is cited in Scopus:
Set citation alert > Set citation feed >

Related documents

Find more related documents in Scopus based on:
Authors > Keywords >

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X

11:53 AM 2/16/2020

https://www.scopus.com/inward/record.uri?eid=2-s2.0-85020065983&doi=10.1109%2fICEPES.2016.7915968&partnerID=40&md5=f68d33a0422b667223e3ef1ee11fdb0e

1 of 1
Export Download More... >

International Conference on Electrical Power and Energy Systems, ICEPES 2016
1 May 2017, Article number 7915968, Pages 420-425
2nd International Conference on Electrical Power and Energy Systems, ICEPES 2016; Maulana Azad National Institute of Technology Bhopal; India; 14 December 2016 through 16 December 2016; Category number CFP16TPF-ART; Code 127556

Speed control of 3-phase Induction motor fed through direct matrix converter using GSPWM technique with unity input power factor (Conference Paper)

Singh, A.K., Kumar, N.M., Pattnaik, S., Reddy, K.V.

View additional authors v

Save all to author list

^aDept. of Electrical Engineering, National Institute of Technology, Raipur, Chhattisgarh 492 010, India
^bDept. of Electrical and Electronics Engg., Bharat Institute of Engineering and Technology, Mangalpally, R. R. Dist., 501 510, India

View additional affiliations v

Abstract

Cited by 1 document

Dole, R.D., Thakre, P.V.
Performance Analysis of PI control based Matrix Converter for speed control of Asynchronous motor using MATLAB/Simulink
(2018) Proceedings of the 3rd International Conference on Communication and Electronics Systems, ICCES 2018

View details of this citation

Inform me when this document is cited in Scopus:
Set citation alert > Set citation feed >

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X

11:54 AM 2/16/2020

https://www.scopus.com/inward/record.uri?eid=2-s2.0-85020065983&doi=10.1109%2fICEPES.2016.7915968&partnerID=40&md5=f68d33a0422b667223e3ef1ee11fdb0e

Performance optimization of self X Scopus preview - Scopus - Docu X

scopus.com/record/display.uri?eid=2-s2.0-85020065983&doi=10.1109%2fICEPES.2016.7915968&origin=inward&txGid=918317c34dfc535a1792cbc022ea0983

Scopus Preview Author search Sources ? Create account Sign in

Document details

1 of 1
Export Download More... >

International Conference on Electrical Power and Energy Systems, ICEPES 2016
1 May 2017, Article number 7915968, Pages 420-425
2nd International Conference on Electrical Power and Energy Systems, ICEPES 2016; Maulana Azad National Institute of Technology Bhopal; India; 14 December 2016 through 16 December 2016; Category number CFP16TPF-ART; Code 127556

Speed control of 3-phase Induction motor fed through direct matrix converter using GSPWM technique with unity input power factor (Conference Paper)

Singh, A.K., Kumar, N.M., Pattnaik, S., Reddy, K.V.

View additional authors v

Save all to author list

^aDept. of Electrical Engineering, National Institute of Technology, Raipur, Chhattisgarh 492 010, India
^bDept. of Electrical and Electronics Engg., Bharat Institute of Engineering and Technology, Mangalpally, R. R. Dist., 501 510, India

Cited by 1 document

Dole, R.D., Thakre, P.V.
Performance Analysis of PI control based Matrix Converter for speed control of Asynchronous motor using MATLAB/Simulink
(2018) Proceedings of the 3rd International Conference on Communication and Electronics Systems, ICCESSES 2018

View details of this citation

Inform me when this document is cited in Scopus:

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X

11:54 AM 2/16/2020

https://www.scopus.com/inward/record.uri?eid=2-s2.0-84985898081&doi=10.1016%2fj.procs.2016.07.284&partnerID=40&md5=7256f7628f3e70a9b9bb57b9e9d05664

The screenshot shows a web browser window displaying a Scopus document page. The browser's address bar contains the URL: `scopus.com/record/display.uri?eid=2-s2.0-84985898081&doi=10.1016%2fj.procs.2016.07.284&origin=inward&txGid=9cdfbb2b8174b4674b497334da523c07`. The page title is "Document details".

The document information includes:

- 1 of 1
- Export Download More... >
- Procedia Computer Science
- Volume 93, 2016, Pages 956-966
- 6th International Conference On Advances In Computing and Communications, ICACC 2016; Rajagiri School of Engineering and Technology Kochi; India; 6 September 2016 through 8 September 2016; Code 131418
- Fossil Fuel to Solar Power: A Sustainable Technical Design for Street Lighting in Fugar City, Nigeria** (Conference Paper) (Open Access)
- Kumar, N.M., Singh, A.K., Reddy, K.V.K.
- View additional authors v
- Save all to author list
- Department of Electrical and Electronics Engineering, Bharat Institute of Engineering and Technology, Mangalpally, Ibrahimpatnam, Ranga Reddy, Telangana State, 501 510, India
- View additional affiliations v
- Abstract

The "Cited by 20 documents" section lists the following references:

- Duman, A.C., Güler, Ö. Techno-economic analysis of off-grid photovoltaic LED road lighting systems: A case study for northern, central and southern regions of Turkey (2019) *Building and Environment*
- Chaudhari, B.N., Singh, N.K., Gupta, R. Performance Study on a 20 kW Roof Mount Residential Photovoltaic System (2019) *2018 International Conference on Power Energy, Environment and Intelligent Control, PEEIC 2018*
- Elmanfi, A., Elsharif, E., Rajab, Z. Sustainable Street Lighting System Design in Libya

The bottom of the browser window shows a taskbar with several open tabs labeled "naac-2020 (5).php", "naac-2020 (4).php", "naac-2020 (3).php", "naac-2020 (2).php", and "naac-2020 (1).php". The system tray shows the time as 11:55 AM on 2/16/2020.

https://www.scopus.com/inward/record.uri?eid=2-s2.0-84985931213&doi=10.1016%2fj.procs.2016.07.305&partnerID=40&md5=60e13db778f91bd16317ab43d2042b2a



Document details

1 of 1

Export Download More... >

Procedia Computer Science

Volume 93, 2016, Pages 1017-1023

6th International Conference On Advances In Computing and Communications, ICACC 2016; Rajagiri School of Engineering and Technology Kochi; India; 6 September 2016 through 8 September 2016; Code 131418

Vertical Axis Wind Turbine: Aerodynamic Modelling and its Testing in Wind Tunnel (Conference Paper) (Open Access)

Sunny, K.A., Kumar, N.M.

View additional authors

Save all to author list

^aDepartment of Aerospace Engineering, Karunya University, Coimbatore, Tamil Nadu, 641 114, India

^bDepartment of Electrical and Electronics Engineering, Bharat Institute of Engineering and Technology, Ranga Reddy, Telangana, 501 510, India

View additional affiliations

Abstract

Cited by 9 documents

Kavade, R.K., Ghanegaonkar, P.M.

Performance Evaluation of Small-Scale Vertical Axis Wind Turbine by Optimized Best Position Blade Pitching at Different Tip Speed Ratios

(2019) *Journal of The Institution of Engineers (India): Series C*

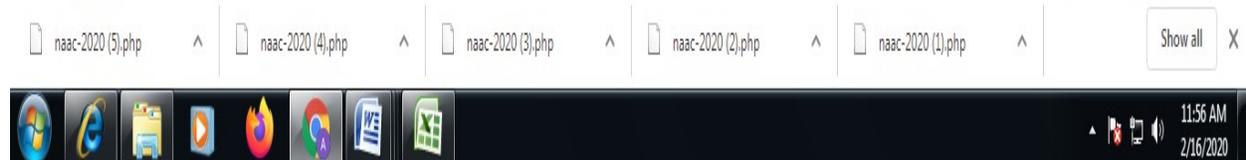
Kavade, R.K., Ghanegaonkar, P.M.

Effect of blade pitching on power coefficient of small-scale vertical axis wind turbine at different tip speed ratios

(2019) *Wind Engineering*

Sunny, K.A., Kumar, P., Manoj Kumar, N.

Airfoil selection and computational



<https://ieeexplore.ieee.org/document/7830063/authors#authors>

Performance optimization of self X Multi attribute optimization for c X

ieeexplore.ieee.org/document/7830063/authors#authors

Search History

Conferences > 2016 International Conference...

Multi attribute optimization for optimal and secure coding in wireless communication

Publisher: IEEE [Cite This](#)

2 Author(s) E. Venkat Reddy ; K. Srinivasa Rao [View All Authors](#)

49 Full Text Views

[PDF](#) [Download](#) [Reprints](#) [Email](#) [Cite](#) [Share](#) [Alert](#)

Abstract

Abstract: This paper presents an integrated approach to resource utilization and security concern for wireless communication. In wireless communication, during the exchange of data, allocated spectrum and its utilization over a wireless channel plays an important role in providing efficient communication service in such network. In the need towards optimal resource utilization in wireless communication, a spectrum sensing and its utilization to higher resource optimization is suggested. The proposed communication

Document Sections

- I. Introduction
- II. Resource Allocation

Need Full-Text
access to IEEE Xplore for your organization?
[CONTACT IEEE TO SUBSCRIBE >](#)

More Like This

Partial discharge localization for efficient radio spectrum management
Annual Report Conference on Electrical Insulation and Dielectric Phenomena
Published: 2002

Prediction-Based Resource Allocation for OFDM in Wireless Channels
2005 Australian Communications Theory Workshop
Published: 2005

IEEE websites place cookies on your device to give you the best user experience. By using our websites, you agree to the placement of these cookies. To learn more, read our [Privacy Policy](#). [Accept & Close](#)

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php [Show all](#) X

11:58 AM 2/16/2020

<https://ieeexplore.ieee.org/document/7759897>



Other Search Options

- Command Search
- Citation Search
- Search History

Conferences > 2016 Thirteenth International...

Diverse execution dimensions for information conveyance in distant sensor systems

Publisher: IEEE

Cite This

6 Author(s)

Konda Hari Krishna ; Tapas Kumar ; Y. Sureshbabu ; N. Sainath ; R. Madanmohan ; J. Rethna Virgil Jeny [View All Authors](#)

19 Full Text Views



Need Full-Text
access to IEEE Xplore for your organization?
[CONTACT IEEE TO SUBSCRIBE >](#)

More Like This

Design and Optimization of Wireless Sensor Network with Mobile Gateway
21st International Conference on Advanced Information Networking and Applications Workshops (AINAW'07)
Published: 2007

Abstract

Abstract:

For Remote sensor systems, there is an advancement criteria for the system sways on the lifetime can be maintained with the vitality and it can be non-renewable of sensor hubs. Streamlining should be possible

IEEE websites place cookies on your device to give you the best user experience. By using our websites, you agree to the placement of these cookies. To learn more, read our [Privacy Policy](#). [Accept & Close](#)



https://ieeexplore.ieee.org/document/7148579

Conferences > International Conference on C...

Crosstalk noise and delay analysis for high speed on-chip global RLC VLSI interconnects with mutual inductance using 90nm process technology

Publisher: IEEE [Cite This](#)

4 Author(s) Apoorva Gupta ; Vikas Maheshwari ; Shalini Sharma ; Rajib Kar [View All Authors](#)

3 Paper Citations 256 Full Text Views

[PDF](#) [Download](#) [Reprints](#) [Email](#) [Cite](#) [Share](#) [Alert](#)

Abstract

Abstract: With continuous scaling of VLSI technology, coupling capacitance between interconnects lines need more accurate transmission line modelling, requiring the introduction of self and mutual inductances. Self and mutual inductances can cause for crosstalk noise and delay between high speeds VLSI interconnects. This paper presents an mathematical computation of crosstalk noise of 'L' Type RLC global interconnects in the presence of self and mutual inductances. This crosstalk noise analysis is carried out for the case when two L type RLC networks are parallel to each other but are not connected, and Step input is applied to the

Document Sections

- I. Introduction
- II. Basic Theory

Need Full-Text
access to IEEE Xplore for your organization?
[CONTACT IEEE TO SUBSCRIBE >](#)

More Like This

Evaluation of Crosstalk in High-Frequency Interconnects with an Enhanced Transmission Line Model
2006 IEEE Electrical Performane of Electronic Packaging
Published: 2006

Crosstalk noise model for shielded interconnects in VLSI-based circuits
IEEE International (Systems-on-Chip) SOC Conference, 2003. Proceedings.
Published: 2003

IEEE websites place cookies on your device to give you the best user experience. By using our websites, you agree to the placement of these cookies. To learn more, read our [Privacy Policy](#). [Accept & Close](#)

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X

12:00 PM 2/16/2020

<http://www.aoc-india.org/2016%20attachements/EWCI%202016%20Programme.pdf>

The screenshot shows a web browser window displaying a PDF document titled "EWCI 2016 Programme.pdf". The address bar shows the URL: <http://www.aoc-india.org/2016%20attachements/EWCI%202016%20Programme.pdf>. The document content is as follows:

| | | | |
|--|---------|--|--------------------|
| Chairman: CV S Sastry, OS & Director, ANURAG, DRDO | 031R063 | Radio Emitter Threat Degree Judgment Based On Machine Learning Algorithms By Sasanka, Kr Biswas & G. Siva Prasad, Defence Electronics Research Laboratory, Hyderabad | 11:10 |
| Co Chairman: Anupam Sharma, Scientist G, DLRL | 031 | Model based design and EW component library based approach for fast development cycles in FPGA dominant architectures By K.Srinivasa Raju CEO, Unistring Tech Solutions Pvt. Ltd, Hyderabad | 11:30 to 11:50 Hrs |
| Duration: 11:10 to 12:30 Hrs | 067R068 | Information Exchange Through Replication - An EW Perspective By CP Amulya , Ravi Tudu, S.K.Gupta, & CS Krishna Kumar, Defence Electronics Research Laboratory, DRDO, Hyderabad | 11:50 to 12:10 Hrs |
| | 075R092 | Comprehensive study and simulation for Flexible Adaptation Scheme Based Smart Spectrum Sensing in Cognitive Radio Networks By Somyajit Choudhury and K Krishna Naik, Communication Laboratory, Department of Electronics Engineering, Defence Institute of Advanced Technology, Pune | 12:10 to 12:30 Hrs |
| 12:30 to 13:30 : Lunch Break | | | |
| 13:30 to 14:30 Hrs : Time to Visit Technical Exhibition | | | |
| Session 12 EW SYSTEMS AND DF TECHNIQUES – II | | | |
| Chairman: J M Pascual Ruiz, Indra, Spain | 057R049 | Implementation of IQ based frequency and direction finding algorithm in FPGAs By V V S R Raju, Sounak Samanta, Deepthi Agrawal, Dr. A K Sing, M.K.Das, Defence Electronics Research Laboratory, DRDO, Hyderabad | 15:00 to 15:20 Hrs |
| Co Chairman: MK Das, Scientist G, DLRL | 004R017 | Geolocation Of An EM Emitter Using ES Sensors Mounted On Naval Frigates By Prof. G. Kumaraswamy Rao, Director R&D, BIET, Hyderabad | 15:20 to 15:40 Hrs |
| Duration: 15:00 to 16:20 Hrs | 053R050 | Factors Affecting Baseline Interferometric Direction Finding Accuracy By Deepthi Agrawal, J.Vijayalakshmi, P.Papaji, Y.Uttara Kumari, Dr. A.K Singh & O.K.Singh, Defence Electronics Research Laboratory, DRDO, Hyderabad | 15:40 to 16:00 Hrs |
| | 073R090 | Implementation of Fast Analog AGC in TDMA Application By Vasudha Chattannavar, Ajay Tomar , Arpana M K & G Rambabu, Bharat Electronics Limited, Jalahalli Post, Bangalore | 16:00 to 16:20 Hrs |
| 16:20 to 16:40 : Tea Break | | | |
| Session 15 COMMUNICATION EW AND RCIED – II | | | |
| Chairman: David Lazaro, Indra, Spain | 032 | Synchronization issues and Adhoc network based wireless radio architectures for multi node Military Communications By M.Siva Kumar Application Engineer, & K.Srinivasa Raju CEO, Unistring Tech Solutions Pvt. Ltd, Hyderabad | 16:40 to 17:00 Hrs |
| Co Chairman: O K Singh, Scientist G, DLRL | 003R030 | Universal Data Communication System for Aerostat based surveillance systems By N. Kumara Swamy, Gunvanta V. Mate and Arun Kumar H H , BEL, Bangalore | 17:00 to 17:20 Hrs |
| Duration: 16:40 to 18:00 Hrs | 039R067 | Factors Effecting Message Fidelity in Real Time Follow on Monitoring for Frequency Hopped Spread Spectrum By Mr. Kumar Gautam, M. Madhu Sudhan Reddy & Mr. Lalit Kumar, Defence Electronics Research Laboratory, DRDO, Hyderabad | 17:20 to 17:40 Hrs |
| | 014R072 | Modified Turbo Equalization for HF Modem | 17:40 to 18:00 Hrs |

The browser interface includes a taskbar at the bottom with several open tabs labeled "naac-2020 (5).php", "naac-2020 (4).php", "naac-2020 (3).php", "naac-2020 (2).php", and "naac-2020 (1).php". The system clock shows 12:04 PM on 2/16/2020.

<http://www.aoc-india.org/2016%20attachements/EWCI%202016%20Programme.pdf>

EWC 2016 Programme.pdf 7 / 10 Rao 9/22

Day 2: TECHNICAL SESSIONS 5, 8, 11 and 14
Wednesday, 24 February 2016 Venue : Seminar Hall A

Session 5 COMMUNICATION EW AND RCIED – I

| | | | |
|--|---------|---|--------------------|
| Chairman: Dr K Maheshwara Reddy, OS & Director, DARE, DRDO | 013R003 | A High Performance Processing Architecture for Near Real Time Communication Intelligence Applications By Nalini Matturthi & Ramesha, Deputy Managers, Bharat Electronics Ltd, Bangalore | 09:30 to 09:50 Hrs |
| Co Chairman: Raghurama Aithal, AGM (TP), BEL | 005R022 | Extraction of information from multiple frequency band signals for COMINT applications By Ms. Swetha P.M & Mr. Chiranjeevi D, Mrs. Rajasree K.P & Mr. Ramesh K.S, CRL, Bharat Electronics Ltd, Bangalore | 09:50 to 10:10 Hrs |
| | 054R065 | Localization Techniques for Mobile Wireless Communications: An EW Perspective By RK Rudheesh, CS Krishna Kumar & VS Radha Krishna, Defence Electronics Research Laboratory, DRDO, Hyderabad | 10:10 to 10:30 Hrs |
| | 007R026 | New Technologies To Improve Antijam Performance Of Comersatcoms To Bring Them On Par With Milsatcoms By Prof. G. Kumaraswamy Rao Prof, BIET, Hyderabad & J. Shanker Rao, Defence Electronics Research Laboratory, DRDO, Hyderabad | 10:30 to 10:50 Hrs |
| Duration: 09:30 to 10:50 Hrs | | | |

10:50 to 11:10 : Tea Break

Session 8 EW SYSTEMS INSTALLATION AND TESTING / EVALUATION – I

| | | | |
|--|---------|---|--------------------|
| Chairman: Phillip Jacob, Former Executive Director, BEL | 034R055 | Simulation and Experimental based Structural Investigation of Narrowband EW Receiver Unit against the Vibration and Shock loads By K Chandrakar, Uday Kumar, Kundan Kumar & C Satyanarayana, Defence Electronics Research Laboratory, Hyderabad | 11:10 to 11:30 Hrs |
| Co Chairman: CHV Prasad, Scientist G, DLRL | 015R027 | Challenges in custom packaging an existing RWR system into an airborne LRU By Damodaran V, Gokulan S, Anil Kumar, & Yogesh Raj Urs, Bharat Electronics Ltd, Bangalore | 11:30 to 11:50 Hrs |
| | 029R056 | Thermal Management of Antenna Head Unit By Uma Ravindra Maddipati, Dr. P.Rajendran & Dr Lachiram, Defence Electronics Research Laboratory, Hyderabad | 11:50 to 12:10 Hrs |
| Duration: 11:10 to 12:30 Hrs | 036R058 | Structural Analysis of 3-Bay Antenna Sub- system for Ship-borne Applications By U Uday Kumar, Gopal G & C Satyanarayana & P L Venkateshwar Rao, Defence Electronics Research Laboratory, Hyderabad | 12:10 to 12:30 Hrs |

12:30 to 13:30 : Lunch Break

13:30 to 14:30 Hrs : Time to Visit Technical Exhibition

Session 11 EW RECEIVERS AND RF SUB SYSTEMS – II

| | | | |
|--|---------|---|--------------------|
| | 002R006 | Compact 0.5-40 GHz Two Way Symmetric Microstrip Power Division Circuit | 15:00 to 15:20 Hrs |
|--|---------|---|--------------------|

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X

12:03 PM 2/16/2020

<http://www.aoc-india.org/2016%20attachements/EWCI%202016%20Programme.pdf>

EWCI 2016 Programme.pdf 9 / 10

| | | | |
|---|---------|---|--------------------|
| Chairman: Dr Robert S Andrews, MBE, EW Simulation Technology Ltd, UK Co Chairman: Narayana Rao, Scientist G, DLRL | 018R004 | Thermal modeling and analysis of High Power Amplifier By Prashant and Karthikeyan A, Bharat Electronics Ltd, Bangalore | 10:00 to 10:20 Hrs |
| | 033R057 | Investigation of Wind Load Effects on Monitoring Antenna Structure using CAE Tools By P.L.Venkateshwar Rao, Dr G Gopal, Dr.Lachiram, Defence Electronics Research Laboratory, Hyderabad | 10:20 to 10:40 Hrs |
| | 035R054 | FEA and Experimental Validation of Electronic Enclosures along with PCB for Space Applications By Gopal G, Ch Navya & C Satyanarayana, Defence Electronics Research Laboratory, Hyderabad | 10:40 to 11:00 Hrs |
| | 066R040 | Testing of Unified EW System in Far Field Anechoic Chamber By M. Sreenivasa Rao, Venkatesh Joshi. B and Dr. K. Maheswara Reddy, Defence Avionics Research Establishment, Bangalore | 11:00 to 11:20 Hrs |
| Duration: 10:00 to 11:20 Hrs | | | |
| 11:20 to 11:40 Hrs : Tea Break | | | |
| Session 19 COMMUNICATION EW AND RCIED – III | | | |
| Chairman: Harold Screven, Northrop Grumman, USA Co Chairman: VS Radha Krishna, Scientist G, DLRL | 051R077 | Providing Protection to Security Convoys and Sport Arenas from RCIEDs by using Smart Jammers Mounted on UAVs By Prof. G. Kumaraswamy Rao, Former Director, DLRL & Director R&D, BIET, Hyderabad | 11:40 to 12:00 Hrs |
| | 049R085 | V/UHF EXCITER For Multi Band, COMINT EW Jammer System By Ravi Shanker & K Sridhar, Bharat Electronics Ltd, Hyderabad | 12:00 to 12:20 Hrs |
| | 050R086 | RF Front-end for Multi Band, Multi Channel, and Multi Purpose COMINT EW System By D S Binu, V Thimmappa, A V Mamatha, Bharat Electronics Ltd, Hyderabad | 12:20 to 12:40 Hrs |
| Duration: 11:40 to 12:40 Hrs | | | |
| 12:45 Hrs to 13:30 Hrs | | | |
| Panel Discussion : Valedictory Function: Distribution of Certificates Discussion on Feedback Advanced Future Courses & EWCI Conclusion | | | |
| 13:30 to 14:30 Hrs : Lunch Break | | | |
| 14:30 to 16:30 Hrs : Final opportunity to Visit Stalls and interact with Exhibitors. End of the EWCI 2016. | | | |

naac-2020 (5).php naac-2020 (4).php naac-2020 (3).php naac-2020 (2).php naac-2020 (1).php Show all X

12:05 PM 2/16/2020

https://ieeexplore.ieee.org/document/7830063

The screenshot shows a web browser window with the following elements:

- Browser Tabs:** Three tabs are visible: "JSETR...", "Inbox (91) - acharpe@bietacin...", and "Multi attribute optimization for c...".
- Address Bar:** The URL is "ieeexplore.ieee.org/document/7830063".
- Search History:** A section titled "Search History" is visible at the top.
- Breadcrumbs:** "Conferences > 2016 International Conference..."
- Title:** "Multi attribute optimization for optimal and secure coding in wireless communication".
- Publisher:** "IEEE" with a "Cite This" button.
- Authors:** "2 Author(s) E. Venkat Reddy ; K. Srinivasa Rao View All Authors".
- Views:** "49 Full Text Views".
- Abstract:** "This paper presents an integrated approach to resource utilization and security concern for wireless communication. In wireless communication, during the exchange of data, allocated spectrum and its utilization over a wireless channel plays an important role in providing efficient communication service in such network. In the need towards optimal resource utilization in wireless communication, a spectrum sensing and its utilization to higher resource optimization is suggested. The proposed communication..."
- Document Sections:** "I. Introduction", "II. Resource Allocation".
- More Like This:** A list of related articles including "Partial discharge localization for efficient radio spectrum management" and "Prediction-Based Resource Allocation for OFDM in Wireless Channels".
- Cookie Notice:** A banner at the bottom states "IEEE websites place cookies on your device to give you the best user experience. By using our websites, you agree to the placement of these cookies. To learn more, read our Privacy Policy." with an "Accept & Close" button.
- Taskbar:** The Windows taskbar at the bottom shows several open files named "naac-2020 (5).php" through "naac-2020 (1).php" and the system clock showing "12:15 PM 2/16/2020".

Enhancing Anti jamming Capabilities of Electronic Systems onboard the Civilian Communication Satellites used during the Tactical Wars

G. KUMARASWAMY RAO

(Former Director, DLRL DRDO, Ministry of Defence)

Senior Director, Bharat Institute of Engineering & Technology, Mangalpally, R.R. Dist.-501 510, India
Email: rao_gksdlrdrdo@yahoo.co.in

Abstract: The middle east and Desert Storm Wars were fought by NATO coalition forces far away from the natural boundaries of their nations. In such cases communication is the most vital necessity between the command and control centers located tens of thousands of kilometers away from the scene of war and the fighting forces communication must be swift, reliable, maintain utmost secrecy and jam proof. Because of non availability of such networks, either on land or through sea, the fighting forces uses the civilian communication satellites. The Electronic Systems, used either onboard the satellites or on the ground are vulnerable for jamming by the enemy. The present paper brings out the limitation of the electronic equipment with numerical illustrations. The new methods that are required to be incorporated into the electronic systems are brought out in this paper.

Keywords: Desert Storm, Communication Satellites, anti jamming, tactical wars.

Introduction:

Data, Text or Video Communication is lifeline for any military operation. Wars are fought far away from the natural boundaries of a particular nation. Effective coordination is necessary between military troops fighting war at a particular location and higher echelons of commanding regiments located far away from the war zone. Civilian Communication Satellites are the only available carriers of information. The Electronic Systems both onboard and on the ground need to be robust to escape enemy jamming of the up and downlinks of the satellites.

There are large number of advantages of Communication through satellites. (i) Transmits high Communication capacities over long distances, (ii) Single point to multi point in a broadcast mode, (iii) Covers the complete globe with three satellites, (iv) Access to remotely located areas, deep hills, seas, inhospitable areas, (v) Cost does not depend on distance, (vi) use of VSAT permit direct link with central commands etc. One of the limitations to Satellite Communication is its high cost. When it becomes necessary to ruggedize and make jam proof Electronic Systems, it becomes very complex and expensive.

The topology of a Communication is depicted at Fig. No. 1

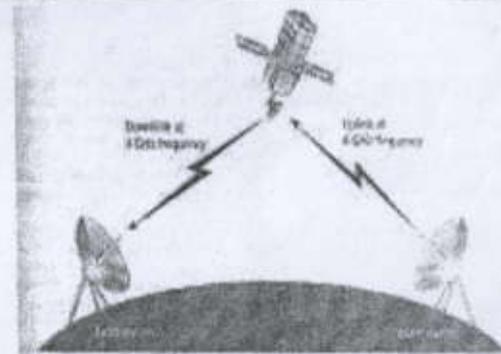


Fig. No. 1 Topology of a Communication
I. CATEGORIZATION OF SATELLITE COMMUNICATION ELECTRONIC SYSTEMS

- Satellites are generally divided into
- (1) Communication Satellites: (a) Commercial Communication Satellite (COMMSAT), (b) Military Communication Satellite (MILSAT), (c) Personal Communication Systems (PCS), (d) Broadband Satellite Systems, (e) Navigational Satellite Systems (GPS), (f) Very Small Aperture Terminal Satcom.
 - (2) EW Satellites: (a) Electronic Intelligence (ELINT) Satellite for Radar Intelligence, (b) Communication Intelligence (COMMINT) Satellite for Communication Signal monitoring, (c) Electronic Attack (EA) Satellite.

The star topology and mesh topology is depicted at Fig No.2&3

Robustness of Novel MIMO-OFDM Schemes for Future Digital TV to Carrier Frequency Offset

D. SANKARA REDDY, R.GOPI REDDY

Dept. of Electronics & Communication Engineering, Bharat Institute of Engineering & Technology,
Mangalpally, Ranga Reddy-501 510, Telangana, India
Email: sankarareddy.dasari@biet.ac.in, gopireddy@biet.ac.in

Abstract: This paper investigates the impact of carrier frequency offset (CFO) on the performance of different MIMO-OFDM schemes with high spectral efficiency for next generation of terrestrial digital TV. We show that all studied MIMO-OFDM schemes are sensitive to CFO when it is greater than 1% of inter-carrier spacing. We show also that the Alamouti scheme is the most sensitive MIMO scheme to CFO.

Keywords: Modulation & Multiplexing (MIMO-OFDM), Signal Processing for Transmission (Carrier Frequency Offset).

Introduction:

Digital video broadcast is the technology driving fixed, portable and mobile TV. Since its inauguration in 1993, digital video broadcast (DVB) project for terrestrial (DVB-T) transmission has fully responded to the objectives of its designers, delivering wireless digital TV services in almost every continent [1]. The main concern of many researchers is to support transmission at higher data rates with minimum error probability. In 2006, the DVB forum launched a study mission to investigate what technologies might be considered for a future DVB-T2 standard. It is expected that a multiple input multiple output (MIMO) system combined with orthogonal frequency division multiplexing (OFDM) should take place for that target. However, it is well known that OFDM systems suffer considerably from carrier frequency offset (CFO) between transmitter and receiver since CFO includes inter carrier interference (ICI) at the receiving side [2].

This work is carried out within the framework of the European project 'Broadcast for the 21st Century' (B21C) which constitutes a contribution task force to the reflections engaged by the DVB forum. The main contribution of this work is twofold. First, a generalized framework is proposed for modelling the effect of CFO on MIMO-OFDM systems. Therefore, we analyze the robustness of different MIMO-OFDM systems. The paper is organized as follows. Section 2 describes the transmission system model. In section 3, we present the different MIMO schemes considered in this paper.

System Model:

We consider in this paper the downlink communication with two transmit antennas ($M_T=2$) at the base station and two receiving antennas ($M_R=2$) at the terminal. Figure 1 depicts the transmitter modules. Information bits b_k are first channel encoded with a convolutional encoder of coding rate R . The encoded, interleaved bits are then fed to a

quadrature amplitude modulation (QAM) module which assigns B bits for each of the complex constellation points. Therefore, each group $s=[s_1, \dots, s_Q]$ of Q complex symbols is encoded through a space time (ST) block code (STBC) encoder and transmitted during T symbol durations according to the chosen ST scheme. The ST coding rate is then defined by $L=Q/T$. With M_T transmitting antennas, the output of the ST encoder is an (M_T, T) matrix $X=[x_{i,t}]$ where $x_{i,t}$ ($i=1, \dots, M_T$; $t=1, \dots, T$) is a function of the input symbols s_q ($q=1, \dots, Q$) depending on STBC encoder type. The resulting symbols are then fed to OFDM modulator of N subcarriers.

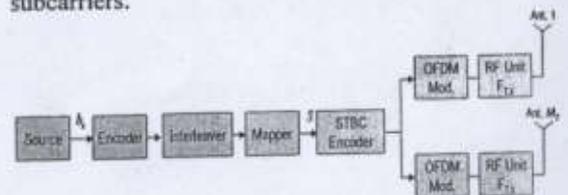


Figure 1- Block diagram of the transmitter

After D/A conversion, the signal is transposed to the transmitter carrier frequency F_{TX} by the RF unit, and transmitted through the channel. At the receiver (Figure 2), it is transposed to base band with the receiver carrier frequency F_{RX} and sampled at sampling frequency $F_s=1/T_s$. In this work, we assume equal carrier frequencies F_{TX} for all transmitting antennas and equal carrier frequencies F_{RX} for all receiving antennas. The carrier frequency offset is therefore given by $\Delta F = F_{RX} - F_{TX}$. After OFDM demodulation, the signal received by the j^{th} antenna at each time sample t on the n^{th} subcarrier could be written as:

$$y_j[n, t] = \frac{1}{\sqrt{M_T}} \sum_{m=0}^{M_T-1} \sum_{p=0}^{N-1} x_m[p, t] h_{j,m}[p] \phi(n, p) + w_j[n, t] \quad (1)$$

Modified Booth Encoding Multiplier for both Signed and Unsigned Radix based Multi-Modulus Multiplier

R. GOPI REDDY, D. SANKARA REDDY

*Department of Electronics & Communication Engineering,
Bharat Institute of Engineering & Technology, Telangana, India*

Abstract: Multi-modulus designs capable of performing the desired modulo operation for more than one modulus in Residue Number System (RNS) are explored in this paper to lower the hardware overhead of residue multiplication. Two multi-modulus multipliers that reuse the hardware resources amongst the modulo, modulo and modulo multipliers by virtue of their analogous number theoretic properties are proposed. The former employs the radix- Booth encoding algorithm and the latter employs the radix- Booth encoding algorithm. In the proposed radix- and radix- Booth encoded multi-modulus multipliers, the modulo-reduced products for the moduli, and are computed successively. With the basis of the radix- Booth encoded modulo and radix- Booth encoded modulo and modulo multiplier architectures, new Booth encoded modulo multipliers are proposed to maximally share the hardware resources in the multi-modulus architectures. Our experimental results on based RNS multiplication show that the proposed radix- and radix- Booth encoded multi-modulus multipliers save nearly 60% of area over the corresponding single-modulus multipliers. The proposed radix- and radix- Booth encoded multi-modulus multipliers increase the delay of the corresponding single-modulus multipliers by 18% and 13%, respectively in the worst case. Compared to the single-modulus multipliers, the proposed multi-modulus multipliers incur a minor power dissipation penalty of 5%.

Keywords: multiplier, residue number system (RNS), Booth algorithm, multi-modulus architectures.

Introduction:

Power dissipation is recognized as a critical parameter in modern VLSI design field. To satisfy MOORE'S law and to produce consumer electronics goods with more backup and less weight, low power VLSI design is necessary. Fast multipliers are essential parts of digital signal processing systems. The speed of multiply operation is of great importance in digital signal processing as well as in the general purpose processors today, especially since the media processing took off. In the past multiplication was generally implemented via a sequence of addition, subtraction, and shift operations. Multiplication can be considered as a series of repeated additions. The number to be added is the multiplicand, the number of times that it is added is the multiplier, and the result is the product. Each step of addition generates a partial product. In most computers, the operand usually contains the same number of bits. When the operands are interpreted as integers, the product is generally twice the length of operands in order to preserve the information content. This repeated addition method that is suggested by the arithmetic definition is slow that it is almost always replaced by an algorithm that makes use of positional representation. It is possible to decompose multipliers into two parts. The first part is dedicated to the generation of partial products, and the second one collects and adds them. The basic multiplication principle is two fold i.e. evaluation of partial products and accumulation of the shifted partial products. It is performed by the successive additions of the columns of the shifted partial product matrix. The 'multiplier' is successfully shifted and

gates the appropriate bit of the 'multiplicand'. The delayed, gated instance of the multiplicand must all be in the same column of the shifted partial product matrix. They are then added to form the product bit for the particular form. Multiplication is therefore a multi operand operation. To extend the multiplication to both signed and unsigned numbers, a convenient number system would be the representation of numbers in two's complement format.

The MAC (Multiplier and Accumulator Unit) is used for image processing and digital signal processing (DSP) in a DSP processor. Algorithm of MAC is Booth's radix-4 algorithm, Modified Booth Multiplier, 34-bit CSA and improves speed. MIPS was implemented as micro processors and permitted high performance pipeline implementations through the use of their simple register oriented instruction sets.

Although those algorithms (radix-4 algorithm, pipelining, etc) are widely used technique for speeding up each part, the MAC on specific processor cannot be run at 100% efficiency. Due to the reasons of lower speed of MAC, MIPS instruction "mul" (multiplication) takes longer time than any other instruction in our MIPS processor. To improve speed of MIPS, MAC needs to be fast and MIPS must have special algorithm for "mul" instruction. One of the methods we chose was to design multi-clock MAC instead of one-clock MAC which improved the speed of MIPS. In general, the instruction set of MIPS processor includes complex works like multiplication and floating point operation



Power Quality Network Distribution using SRF with Effective THD analysis of Voltage and Current in UPQC Smart Grid

CHANDIKA MOHAN BABU, K. SRINIVAS, V. PRADEEP KUMAR

Department of Electronics and Communication Engineering,
Bharat Institute of Engineering and Technology, Mangalpally, Hyderabad, India
Email: mohanitkqp08@gmail.com

Abstract: Power quality problems are also related to the voltage up and downs, surges, spikes, unwanted interruptions etc. These problems most exist in the supply system of the power right from the generating side of the system to various non-linear loads like furnaces, uninterrupted power supplies, switched mode power supplies. During this capacitor banks might fail to work in substance. These problems may also increase losses in the distribution system, voltage in-balances, and out dated-operation of induction motors in the industries, interference in the communication networks, electronic controllers and so on. These power quality problems seems to be more critical in semi-conductor based inverters in the purpose of industries so as to have the reliable and sustainable stability of the system. In the branch of power electronic based strategies which are growing more sensitive to the voltage enhancement of the grid system, as they generate PQ problem due to the unbalanced three phase rectifier bridge load. Due to these problems quality has become more important in the respective field of electrical engineering for the power distribution and utilization. It has become the utmost responsibility of the power generating companies to supply their users a good quality of power. At the same time the manufacturers of the electric equipments which work without any type of distractions in adequate power supply. So number of techniques has been used in the devices. Many organizations have developed various methods for giving flexible equipments to the end users. So it has become very helpful for giving new ideas to engineers working in the field of power electronics, information technology, electric drives etc. the objective is to make use of customized power device-UPQC using synchronous reference frame method within control strategy and compares voltage and current signal with reference signal by implementing Hysteresis voltage and current controller.

Keywords: UPQC, PQ, PCC, SRF, VAR, THD, APF

Introduction of Power Quality:

Power quality can be defined as a good quality if power occurs without any breakdown at all levels like distribution, generation and so on. Now day's pollution is a crucial problem in the world, like other pollution electrical pollution is also a crucial at the level of utilizing electricity. So it is necessary to study the problems of end users at the distribution level. For the pollution of ac supply system many causes like flash-over, lightening, voltage distortions, voltage in-balances, disturbances etc. When customer's equipment draws non-sinusoidal current, it may also cause pollution of the supply system. Voltage, current or frequency deviations of the supply system can disturb the working of customer's equipment. So the equipments based on power electronics use power converters at the emerging stage. Some techniques are used to improve power quality exist in electric load and variations in power supply consumption. With improvised standardization in power electronic we need to have better controllability and enhanced functioning of the entire grid system.

Particularly in many situations PQ issues may exist in distribution system and solid-state static compensators are relatively in touch for enhancing the quality of system. Further these mitigation thoughts are designed in such a way that they particularly through image on power filter rectification inverters. As per above discussions the most suitable compensating device for the improvement in stability at the PCC is power conditioner in a unified manner [3]. To resolve such high density problem we can approach to SRF method for generating reference voltage and current inputs respectively. During switching operation regarding voltage and current power filter errors occur. These errors are passed on to the input side of hysteresis comparator (both in case of series and shunt inverter), on comparing the signal with respect to actual load voltages and current so as to carry out the switching of both inverters to eliminate the distortions [2]. MATLAB/SIMULINK results are revealed as such and a comparative analysis is draft out with and without compensating device based on desired topology set up in the entire system.[1] [2] [12]

Design of FlipFlops with Signal Feed through Scheme using Transmission Gate

I. RAVIKUMAR, T. V. SURESH KUMAR

Department of Electronics & Communication Engineering, Bharat Institute of Engg & Technology, Hyderabad
Email: lakshmi_ravikumar@yahoo.com, tv_s4u@yahoo.com

Abstract: In this brief, a low-power flip-flop (FF) design featuring an explicit type pulse-triggered structure and a modified true single phase clock latch based on a signal feed-through scheme is presented. The proposed design successfully solves the long discharging path problem in conventional explicit type pulse-triggered FF (P-FF) designs and achieves better speed and power performance. Based on post-layout simulation results using TSMC CMOS 90-nm technology, the proposed design outperforms the conventional P-FF design data-close-to-output (ep-DCO) by 8.2% in data-to-Q delay. In the mean time, the performance edges on power and power-delay-product metrics are 22.7% and 29.7%, respectively.

Keywords: *Signal Feed, Pass Transistor, Low Power, Pulse-Triggered Flip-Flop.*

Introduction:

Flip-flops (FFs) are the basic storage elements used extensively in all kinds of digital designs. In particular, digital designs nowadays often adopt intensive pipelining techniques and employ many FF-rich modules such as register file, shift register, and first in first out. It is also estimated that the power consumption of the clock system, which consists of clock distribution networks and storage elements, is as high as 50% of the total system power.

FFs thus contribute a significant portion of the chip area and power consumption to the overall system design [1], [2]. Pulse-triggered FF (P-FF), because of its single-latch structure, is more popular than the conventional transmission gate (TG) and master-slave based FFs in high-speed applications. Besides the speed advantage, its circuit simplicity lowers the power consumption of the clock tree system. A P-FF consists of a pulse generator for strobe signals and a latch for data storage. If the triggering pulses are sufficiently narrow, the latch acts like an edge-triggered FF. Since only one latch, as opposed to two in the conventional master-slave configuration, is needed, a P-FF is simpler in circuit complexity.

This leads to a higher toggle rate for high-speed operations [3]–[8]. P-FFs also allow time borrowing across clock cycle boundaries and feature a zero or even negative setup time. Despite these advantages, pulse generation circuitry requires delicate pulse width control to cope with possible variations in process technology and signal distribution network. In [9], a statistical design framework is developed to take these factors into account. To obtain balanced performance among power, delay, and area, design space exploration is also a widely used technique [10]–[13].

In this brief, we present a novel low-power P-FF design based on a signal feed-through scheme. Observing the delay discrepancy in latching data “1” and “0,” the design manages to shorten the longer delay by feeding the input signal directly to an internal node of the latch design to speed up the data transition. This mechanism is implemented by introducing a simple pass transistor for extra signal driving. When combined with the pulse generation circuitry, it forms a new P-FF design with enhanced speed and power-delay-product (PDP) performances.

Proposed P-FF Design Based on a Signal Feed Through Scheme:

Conventional Explicit Type P-FF Designs

PF-FFs, in terms of pulse generation, can be classified as an implicit or an explicit type. In an implicit type P-FF, the pulse generator is part of the latch design and no explicit pulse signals are generated. In an explicit type P-FF, the pulse generator and the latch are separate [7]. Without generating pulse signals explicitly, implicit type P-FFs is in general more power-economical. However, they suffer from a longer discharging path, which leads to inferior timing characteristics. Explicit pulse generation, on the contrary, incurs more power consumption but the logic separation from the latch design gives the FF design a unique speed advantage. Its power consumption and the circuit complexity can be effectively reduced if one pulse generator is shares a group of FFs (e.g., an n -bit register).

Detection of Artefacts in Electrocardiogram (ECG) Signals using Kalman Filtering

CH. KRANTHI REKHA, G. ASHA LATHA

Department of Electronics & Communication Engineering, Bharat Institute of Engineering & Technology, Mangalpally, R. R. Dist.-501 510, India
Email: madakranthirekha@gmail.com

Abstract: The Kalman Filter (KF) is a powerful tool in the analysis of the evolution of a dynamical model in time. The filter provides with a flexible manner to obtain recursive estimation of the parameters, which are optimal in the mean square error sense. The properties of KF along with the simplicity of the derived equations make it valuable in the analysis of signals. In this chapter an overview of the Kalman Filter, its properties and its applications is presented. More specifically, we focus on the application of Kalman Filter in the Electrocardiogram (ECG) processing, addressing extensions of Kalman Filter such as the Kalman Smoother (KS) in the time varying autoregressive (TVAR) model. The model can be written in a state space form and the employment of KF provides with an estimation of the AR parameters which can be used for the estimation of the non – stationary signal. It is also demonstrated how these parameters can be used as input features of the signal in a clustering approach. The Kalman Filter is an estimator with interesting properties like optimality in the Minimum Mean Square Error (MMSE). The proposed method is compared with many other conventional methods.

Keywords: ECG, Kalman filter, Time varying autoregressive model, kalman smoother.

Introduction:

Electrocardiogram (ECG) signal is an electrical manifestation of the contractility of the heart. Ambulatory ECG signal recordings obtained by placing electrodes on the body chest using invasive method. The ECG signal frequency ranges from 0.5 to 100 Hz [1]. ECG analysis is very important for the evolution of cardiac arrhythmia and it guides the condition of a normal heart beat. Fig1 represents an example of a normal ECG signal. ECG includes the valuable information about heart condition, but it is frequently corrupted by various noises such as power line interferences and harmonics from power mains, muscle contraction, respiration and electromyogram is mixed with ECG, baseline wander noise is occurred due to the variable connection between the skin and the connected electrodes [2]. Noise affects at both low-frequency and high frequency components. This noise component reduces the precision and accuracy of an ECG signal. Hence noise reduction from ECG signals is very important research and studied widely from many years.

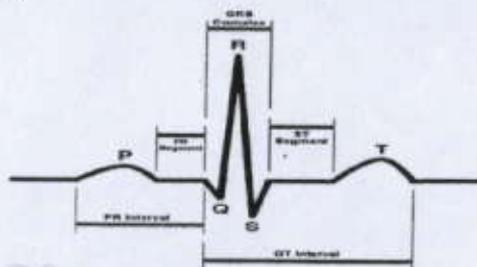


Fig 1: A typical ECG signal

Kalman Filter Derivation:

The Kalman filter is a recursive predictive filter that is based on the use of the recursive algorithms and the state space model techniques. The Kalman filter is developed with a set of mathematical equations that implements a predictor-corrector type estimator. It is an optimal data processing algorithm in the sense that it minimizes the estimated error covariance when some presumed conditions are met [9].

The Process to Be Estimated:

The Kalman filter is used to solve the problem of estimating the state 'x' of a controlled process that is regulated with the linear stochastic difference equation,

$$x_k = Ax_{k-1} + Bu_k + w_{k-1} \text{-----(Eq.1)}$$

And with a measurement 'y_k', it is

$$Y_k = Hx_k + v_k \text{-----(Eq. 2)}$$

The random variables in above equations and represents the process and measurement noise respectively. These noises are assumed to be white process with normal probability distributions and independent of each other [10],

$$P(w) \sim N(0, Q) \text{ and } p(v) \sim N(0, R) \text{-----(Eq. 3)}$$

The measurement noise covariance R_k and process noise covariance Q_k matrices may be change with each time step, however here we assume that they are constant.

Enhancing the security of the MANETS form DDOS Attacks using Deterministic Bit marking Algorithm

Pavan Kumar Pagadala¹, Shiva Kumar Vanam²
1-2 Assistant Professor, Department of Computer Science and Engineering
Bharat Institute of Engineering and Technology, Telangana, India
pavankumarpagadala@gmail.com, vanm.shiva@gmail.com

Abstract: Network security is a weak link in wired and wireless network systems. Malicious attacks have caused tremendous loss by impairing the functionalities of the computer networks. Denial of Service (DoS) and Distributed DoS (DDoS) attacks are two of the most harmful threats to the network functionality. Mobile Ad Hoc Networks (MANET) are even more vulnerable to such attacks. Denial of Service (DoS) is the degradation or prevention of legitimate use of network resources. The wireless ad hoc network is particularly vulnerable to DoS attacks due to its features of open medium, dynamic changing topology, cooperative algorithms, decentralization of the protocols, and lack of a clear line of defense is a growing problem in networks today. Bit marking is a variation of packet marking technique that modifies the packet header at each router. However bit marking differs from packet marking in its process and the purpose. Instead of storing the router information in the packets, bit marking alters one or more bits in the marking field at each router. The bit positions for each ingress line card are selected randomly only once at the initialization. Such bit marking is performed to all the packets, resulting in a common path signature in the marking field upon arriving at a destination for all the packets originating from the same location. Since the packets traversing different paths are likely to have different path signatures, the bit marking process generates quite unique path signature for different sources, roughly emulating the source IP. Such Path Signature allows an easy identification and blocking of the DDoS attack.

Keywords: DDOS attacks, ad hoc network, vulnerable, bit marking, Network Security.

I. Introduction

A. Denial-of-service Attack

In computing, a denial-of-service (DoS) or distributed denial-of-service (DDoS) attack is an attempt to make a machine or network resource unavailable to its intended users. Although the means to carry out, the motives for, and targets of a DoS attack vary, it generally consists of efforts to temporarily or indefinitely interrupt or suspend services of a host connected to the Internet.

B. Distributed Denial-of-Service Attack

DDoS is a type of DOS attack where multiple compromised systems -- which are usually infected with a Trojan - are used to target a single system causing a Denial of Service (DoS) attack.

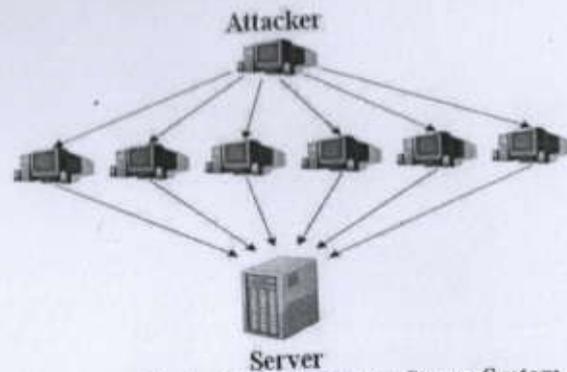


Fig 1: DDoS Attacks on Server System

Victims of a DDoS attack consist of both the end targeted system and all systems maliciously used and controlled by the hacker in the distributed attack. According to this report on eSecurityPlanet, in a DDoS attack, the incoming traffic flooding the victim originates from many different sources -- potentially hundreds of thousands or more. This effectively makes it impossible to stop the attack simply by blocking a single IP address; plus, it is very difficult to distinguish legitimate user traffic from attack traffic when spread across so many points of origin.

C. Mobile Ad Hoc Networks (MANET)

A mobile ad hoc network (MANET) is a continuously self-configuring, infrastructure-less network of mobile devices connected without wires. Each device in a MANET is free to move independently in any direction, and will therefore change its links to other devices frequently. Each must forward traffic unrelated to its own use, and therefore be a router. The primary challenge in building a MANET is equipping each device to continuously maintain the information required to properly route traffic. Such networks may operate by themselves or may be connected to the larger Internet. They may contain one or multiple and different transceivers between nodes. This results in a highly dynamic, autonomous topology. Some MANETs are restricted to a local area of wireless devices (such as a group of laptop computers), while others may be connected to the Internet. For example, A VANET (Vehicular Ad Hoc Network) is a type of MANET that allows vehicles to communicate with roadside equipment. While the vehicles may not have a direct Internet connection, the wireless roadside equipment may be connected to the Internet, allowing data from the vehicles to be sent over the Internet. The vehicle data may be used to measure traffic conditions or keep track of trucking fleets. Because of the dynamic nature of MANETs, they are typically not very secure, so it

Detection of Selfish Nodes in Networks using RED Algorithm

Farhana Bano¹, Rekha Andral², Md. Asma³

¹Assistant Professor, CSE, Bharat Institute of Engineering and Technology, Hyderabad

²Assistant Professor, ECE, Bharat Institute of Engineering and Technology, Hyderabad

³Associate Professor, Department of CSE, Nizam Institute of Engineering and Technology, Hyderabad
¹farhana89bano@gmail.com, ²rekhavangala@biet.ac.in, ³asma.mtech@gmail.com

Abstract

In this paper, we consider the problem of detecting whether a compromised router is maliciously manipulating its stream of packets. In particular, we are concerned with a simple yet effective attack in which a router selectively drops packets destined for some victim. Unfortunately, it is quite challenging to attribute a missing packet to a malicious action because normal network congestion can produce the same effect. Modern networks routinely drop packets when the load temporarily exceeds their buffering capacities. Previous detection protocols have tried to address this problem with a user-defined threshold too many dropped packets imply malicious intent. However, this heuristic is fundamentally unsound; setting this threshold is, at best, an art and will certainly create unnecessary false positives or mask highly focused attacks. We have designed, developed, and implemented a compromised router detection protocol that dynamically infers, based on measured traffic rates and buffer sizes, the number of congestive packet losses that will occur. Once the ambiguity from congestion is removed, subsequent packet losses can be attributed to malicious actions.

Keywords—Internet dependability, Intrusion detection and tolerance, Reliable networks, Malicious routers.

1. Introduction

The Internet is not a safe place. Unsecured hosts can expect to be compromised within minutes of connecting to the Internet and even well-protected hosts may be crippled with denial-of-service attacks. However, while such threats to host systems are widely understood, it is less well appreciated that the network infrastructure itself is subject to constant attack as well. Indeed, through combinations of social engineering and weak passwords, attackers have seized control over thousands of Internet routers. Even more troubling is Mike Lynn's controversial presentation at the 2005 Black Hat Briefings, which demonstrated how Cisco routers can be compromised via simple software vulnerabilities. Once a router has been compromised in such a fashion, an attacker may interpose on the traffic stream and manipulate it maliciously to attack others—selectively dropping, modifying, or rerouting packets. Several researchers have developed distributed protocols to detect such traffic manipulations, typically by validating that traffic transmitted by one router is received

unmodified by another. However, all of these schemes—including our own—struggle in interpreting the absence of traffic. While a packet that has been modified in transit represents clear evidence of tampering, a missing packet is inherently ambiguous: it may have been explicitly blocked by a compromised router or it may have been dropped benignly due to network congestion.

In fact, modern routers routinely drop packets due to bursts in traffic that exceed their buffering capacities, and the widely used Transmission Control Protocol (TCP) is designed to cause such losses as part of its normal congestion control behavior. Thus, existing traffic validation systems must inevitably produce false positives for benign events and/or produce false negatives by failing to report real malicious packet dropping. In this paper, we develop a compromised router detection protocol that dynamically infers the precise number of congestive packet losses that will occur. Once the congestion ambiguity is removed, subsequent packet losses can be safely attributed to malicious actions. We believe our protocol is the first to automatically predict congestion in a systematic manner and that it is necessary for making any such network fault detection practical. In the remainder of this paper, we briefly survey the related background material, evaluate options for inferring congestion, and then present the assumptions, specification, and a formal description of a protocol that achieves these goals. We have evaluated our protocol in a small experimental network and demonstrate that it is capable of accurately resolving extremely small and fine-grained attacks.

2. Literature Survey

A Content Delivery Network or Content Distribution Network (CDN) is a system of computers networked together across the Internet that cooperate transparently to distribute content for the purposes of improving performance and scalability. Content types include web objects, downloadable objects (media files, software, and documents), applications, real time media streams, and other components of internet delivery (DNS, routes, and database queries). Strategically placed edge servers decrease the load on interconnects, public peers, private peers and backbones, freeing up capacity and lowering delivery costs. It uses the same principle as above. Instead of loading all traffic on a backbone or peer link, a CDN can offload these by redirecting traffic to edge servers. CDNs deliver content over TCP and UDP connections. TCP throughput over a network is

Monitoring Data Using Amazon S3 API

B. Mounika

Bharat Institute of Engineering and Technology
Ibrahimpattam - 501 510, Hyderabad Email:
mounika22994@gmail.com

K. Harikrishna

Bharat Institute of Engineering and Technology
Ibrahimpattam - 501 510, Hyderabad Email:
kharikrishna@biet.ac.in

Abstract — In cloud computing, monitoring of big data is persistently uncovered of infrastructures, platforms and applications. This monitoring data analysis remits the deep results of all systems information at best favorable outcomes. The analysis process mainly involves query processing, uprooting of data, result visualizations there is a huge mass of data techniques possess a adaptive and authentic architecture to pull out, combine and examine data in an arbitrary range of granularity. This granularity results the knowledge discovery. This paper provides cloud service architecture which showcase the search results in data querying and amazon S3 API for transferring the data and also analyzing the big data.

Keywords – Cloud monitoring, cloud computing, amazon s3 API

I. INTRODUCTION

Cloud monitoring is a process of monitoring infrastructures, platforms, and custom metrics to help ensure that workloads are operating at optimum levels.[1]For example: analyzing the memory usage for each task in a cluster helps to determine usage patterns of tasks and allows setting up alerts when certain thresholds are reached to balance the workload and maintain high availability. The decision on which management action(s) are appropriate for a given situation depends on monitoring and analysis between cloud and big data. cloud monitoring analysis involves querying and processing a large amount of data. This monitoring helps in analyzing the pattern of tasks and setting alerts for thresholds.

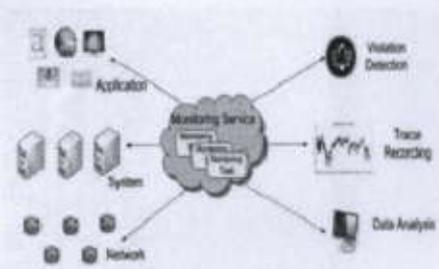


Fig 1: Cloud Monitoring

1.1 NEED OF MONITORING :

This monitoring of data helps in managing and maintaining the workloads and latency delays in the system. Both cloud providers as well as users can

get desired results bu monitoring the data . cloud monitoring has many other essential tasks involved in it.By performing monitoring in cloud attains in controlling the managing the hardware and software system. This monitoring have some characteristics or activities

- i. capacity and resource planning
- ii. capacity and resource management
- iii. data centre management
- iv. troubleshooting
- v. security management
- vi. performance management

1.2 CLOUD MONITORING BASIC CONCEPTS:

As cloud monitoring is needed in measuring and assessing the activities of system here is the base concept for monitoring the data.

The cloud monitoring is divided into seven layers which are the important layers for performing the analyzing: they are

- Facility: at this layer we consider the physical infrastructure comprising the data centers that host the computing and networking equipment.
- Network: at this layer we consider the network links and paths both in the Cloud and between the Cloud and the user.
- Hardware: at this layer we consider the physical components of the computing and networking equipment.
- Operating System (OS): at this layer we consider the soft- ware components forming the operating system of both the host (the OS running on the physical machine) and the user (the OS running in the virtual machine).
- Middleware: at this layer we consider the software layer between the OS and the user application. It is typically present only in the Cloud systems offering SaaS and PaaS service models.
- Application: at this layer we consider the application run by the user of the Cloud system.
- User: at this layer we consider the final user of the Cloud system and the applications that run outside the Cloud (e.g. a web browser running on a host at the user's premise).

Privacy Preserving Applications in Data Mining

B. K. N. Priyanka
M.Tech CSE, Bharat Institute of
Engineering and
Technology
Ibrahimpattam - 501 510, Hyderabad
kameshwarinagapriyanka9@gmail.com

B. Mounika
M.Tech CSE, Bharat Institute of
Engineering and
Technology
Ibrahimpattam - 501 510,
Hyderabad
mounika22994@gmail.com

R. Madana Mohana
Associate Professor of CSE
Bharat Institute of Engineering and
Technology
Ibrahimpattam - 501 510, Hyderabad
rrmnaidu@gmail.com

Abstract — As cloud computing becoming the most popular effective platform for storing, managing and retrieving the data, the main complication that come to light is the uncertainty of redistributed data in cloud environment. This difficulty causes many different questions how to fix the problem. There is a technique that evaluates this issue to overcome is weighted attribute encipher scheme. This paper notes different attribute weights, cipher text threshold access structure based on multi-firm encryption scheme to acquire the fine grained access control in the cloud.

Keywords – data mining, encryption techniques, privacy preserving methods

I. INTRODUCTION

In an identity based encryption scheme, each user is identified by a unique identity string. An attribute based encryption scheme (ABE), [1] in contrast, is a scheme in which each user is identified by a set of attributes, and some function of those attributes is used to determine decryption ability for each cipher text. Most existing ABE encryption techniques have only a single authority to manage both secret keys and public keys. In many situations, however, users have attributes from multiple authorities, and data owners share data with users who are administered by a different authority. To solve this problem, many different multiauthority attribute-based access control schemes have been introduced. Yang et al proposed a scheme called multi-authority data access control for in-cloud storage with efficient decryption. In these schemes a data owner has to be online all the time in order to update cipher text. Most existing multi-authority schemes treat attributes equally and give them the same status in the access control system. In ABE system, users private keys and cipher text are labeled with sets of descriptive attributes and access policies respectively, and a particular key can decrypt a particular cipher text only if associated attributes and policy are matched. In key-policy attribute-based encryption, the access policy is assigned in private key, whereas, in cipher text-policy attribute-based encryption, it is specified in cipher text.

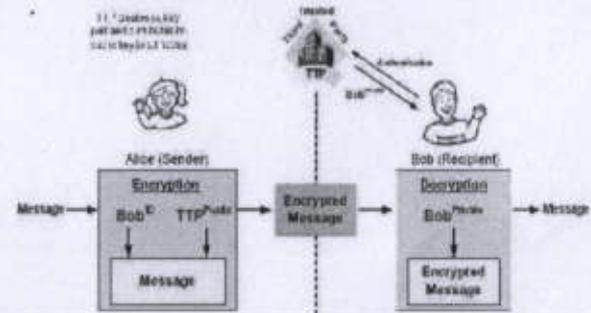


Fig 1: Encryption

As the development of data mining users concerns about data security are the main obstacles that impedes cloud computing from wide adoption. These concerns are originated from the fact that sensitive data resides in public cloud, which is maintained and operated by untrusted cloud service provider (CSP). ABE provides a secure way that allows data owner to share outsourced data on untrusted storage server instead of trusted server with specified group of users. [1] The only method for protecting sensitive data across multiple sites is to encrypt the data before uploading to the server. Data stored on the cloud must be protected through different mechanisms. One of the vital techniques is public key encryption. In the traditional public key infrastructure, the data owner encrypts the data with the data user's public key, before uploading it to the cloud. When a data user sends a request to access data on the cloud, the cloud returns a corresponding cipher text to the data user. The user then decrypts this cipher text with the private key. There are two major disadvantages with this technique. First, for encryption, the data owner must obtain the data user's public key before uploading. Second, because the same plain text is used with different public keys, the storage overhead becomes excessive.

II. DATAMINING

In recent years, privacy-preserving data mining has been studied extensively, because of the wide proliferation of sensitive information on the internet. A number of algorithmic techniques have been designed for privacy-preserving data mining. The data mining has been viewed as a threat to privacy because of the widespread

Issues On Cloud Computing Security And Threats

N. Aruna jyothi

Assistant Professor, Computer Science and Engineering

Bharat Institute of Engineering and Technology

Hyderabad

Email: arunlucky13@gmail.com

Abstract — Nowadays as cloud computing technology plays a vital role on internet of services. Cloud Computing is referred as a most emerging technology of computing utilities. Cloud computing shifts the computing resources to a third party, reduce the need to purchase, configure and maintenance of those resources with the cost effective utilization of software, hardware, and human effort. Many organizations in need of cloud computing services as it is best in utilization. Cloud computing is using the connected computers via internet to share the resources, software information and other devices on-demand, from the resource pool of the cloud providers. The main thing that grabs the organizations to adapt the cloud technology is cost reduction through optimized and efficient computing. Though the cloud computing has its advantages many IT companies have expresses concern about critical security issues which threatens them such as data security, unauthorized access of network and use of infected application[1]. In this paper, it provides an introduction to cloud computing, characteristics, several cloud service models, deployment models and finally this paper aims to make a survey on cloud system security threats and giving solutions to such threats.

Keywords – Social networks, cloud computing

I. INTRODUCTION

Cloud Computing is a computing model that enables sharing of resources on- demand with cost effectiveness and location independent. In Cloud systems the customers need not to buy any resources in their own instead they can use the resources from the cloud and they can pay for the resource as per the usage. Cloud computing is a technology that offers many advantages like cost saving, flexibility, scalability[1].

Cloud Computing is a general term used to explain a general class of network-based computing that takes place on the Internet, mostly a step on from Utility Computing and a collection of all and networked hardware, software and Internet infrastructure (called a platform). It uses the World Wide Web for communication and provides hardware, software and networking services to clients[8]. These platforms bypass the difficult situation and details of the inherent infrastructure from clients and applications by providing easiest graphical interface or API (Applications Programming Interface). In addition, the platform delivers on demand services, that are permanently on, anywhere, anytime and any place.

Cloud computing provides a centralized pool of configurable computing resources and computing outsourcing mechanisms that enable different computing services to different people in a way similar to utility-based systems such as electricity, water, and sewage. In electricity, for example, people started to connect with central grids, supported by power utilities rather than relying on their own electricity production capabilities. This migration is beneficial in reducing the cost and time of production and in providing better performance and reliability [4]. Similarly, clouds provide their customers with high performance and more reliable computing services such as e-mail, instant messaging, and web services at a lower cost. Cloud computing does not have a common accepted definition yet [5]. The National Institute of Standards and Technology (NIST) [6] defined five essential characteristics of cloud computing, namely: on-demand self-service, broad network access, resource pooling, rapid elasticity or expansion, and measured service. Also, cloud computing is described as a dynamic and often easily extended platform to provide transparent virtualized resources to users through the Internet [7].

II. CHARACTERISTICS OF CLOUD DATA

Cloud computing, applications services and infrastructure defined by number of characteristics

- Remotely hosted: Services or data are hosted on remote infrastructure.
- Ubiquitous: Services or data are available from anywhere.
- Co-modified: The result is a utility computing model similar to traditional that of traditional utilities, like gas and electricity - you pay for what you would want.

General characteristics:

- o Massive Scale
- o Homogeneity
- o Virtualization
- o Low Cost Software
- o Resilient Computing
- o Service Orientation
- o Geographic Distribution
- o Advanced Security

Augmented Reality

Gowravaram Rashmi

Assistant Professor (CSE), Bharat Institute of Engineering & Technology (BIET), Hyderabad, India.
g.rashmi@bieta.ac.in

Abstract:

This paper presents an overview of basic aspects of Augmented Reality (AR) and the main concepts of this technology. It describes the main fields in which AR is applied nowadays and important AR devices. Some characteristics of Augmented Reality systems will be discussed and this paper will provide an overview of them.

Keywords: Augmented Reality, Virtual Reality, Scientific Visualization.

1. Introduction:

Augmented reality (AR) is a live, direct or indirect, view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or GPS data. Augmentation is conventionally in real-time and in semantic context with environmental elements, such as sports scores on TV during a match. With the help of advanced AR technology (e.g. adding computer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulable. Artificial information about the environment and its objects can be overlaid on the real world.

AR is within a more general context termed Mixed Reality (MR), which refers to a multi-axis spectrum of areas that cover Virtual Reality (VR), AR, telepresence, and other related technologies.

Virtual Reality is a term used for computer generated 3D environments that allow the user to enter and interact with synthetic environments. The users are able to -immerse themselves to varying degrees in the computers artificial world which may either be a simulation of some form of reality or the simulation of a complex phenomenon.



Figure 1: AR example with virtual Chairs and a virtual lamp.

In telepresence, the fundamental purpose is to extend operator's sensory-motor facilities and problem solving abilities to a remote environment. In this sense, telepresence can be defined as a human/machine system in which the human operator receives sufficient information about the teleoperator and the task environment, displayed in a sufficiently natural way, that the operator feels physically present at the remote site. Very similar to virtual reality, in which we aim to achieve the illusion of presence within a computer simulation, telepresence aims to achieve the illusion of presence at a remote location.

AR can be considered a technology between VR and telepresence. While in VR the environment is completely synthetic and in telepresence it is completely real, in AR the user sees the real world augmented with virtual objects.

When designing an AR system, three aspects must be in mind:

- > Combination of real and virtual worlds,
- > Interactivity in real time,
- > Registration in 3D.

Besides the mentioned three aspects, another one could be incorporated: Portability. In almost all virtual environment systems, the user is not allowed to go around much due to devices limitations. However, some AR applications will need that the user really walks through a large environment. Thus, portability becomes an important issue.

2. AR Components:

2.1 Scene Generator

The scene generator is the device or software responsible for rendering the scene. Rendering is not currently one of the major problems in AR, because a few virtual objects need to be drawn, and they often do not necessarily have to be realistically rendered in order to serve the purposes of the application.

2.2 Tracking System

The tracking system is one of the most important problems on AR systems mostly because of the registration problem. The objects in the real and virtual worlds must be properly aligned with respect to each other, or the illusion that the two worlds coexist will be compromised. For the industry, many applications demand accurate registration, specially on medical systems.

2.3 Display

The technology for AR is still in development and solutions depend on design decisions. Most of the Displays devices for AR are HMD (Head Mounted Display), but other solutions can be found when combining the real and virtual world two basic choices are available: optical and video technology. Each of them has some trade-offs depending on factors like resolution, flexibility, field-of-view, registration strategies, among others. Display technology continues to be a limiting factor in the development of AR systems. There are still no see-through displays that have sufficient brightness, resolution,

Data Analytics: A Survey

S. Keerthi

Assistant professor, CSE Dept
Bharat Institute of Engineering and Technology
Ibrahimpattanam - 501 510, Hyderabad
Email: swarnakeerthi@biet.ac.in

Abstract — *The age of big data is now coming. But the traditional data analytics may not be able to handle such large quantities of data. The question that arises now is, how to develop a high performance platform to efficiently analyze big data and how to design an appropriate mining algorithm to find the useful things from big data. To deeply discuss this issue, this paper begins with a brief introduction to data analytics, followed by the discussions of big data analytics. Some important open issues and further research directions will also be presented for the next step of big data analytics.*

Keywords – Big data, data analytics, data mining

I. INTRODUCTION

As the information technology spreads fast, most of the data were born digital as well as exchanged on internet today. According to the estimation of some papers, the new data stored in digital media devices have already been more than 92 % in 2002, while the size of these new data was also more than five Exabyte's. In fact, the problems of analyzing the large scale data were not suddenly occurred but have been there for several years because the creation of data is usually much easier than finding useful things from the data. Even though computer systems today are much faster than those in the 1930s, the large scale data is a strain to analyze by the computers we have today.

In response to the problems of analyzing large-scale data, quite a few efficient methods, such as sampling, data condensation, density based approaches, grid-based approaches, divide and conquer, incremental learning, and distributed computing, have been presented. Of course, these methods are constantly used to improve the performance of the operators of data analytics process. The results of these methods illustrate that with the efficient methods at hand, we may be able to analyze the large-scale data in a reasonable time. The dimensional reduction method (e.g., principal components analysis; PCA) is a typical example that is aimed at reducing the input data volume to accelerate the process of data analytics. Another reduction method that reduces the data computations of data clustering is sampling, which can also be used to speed up the computation time of data analytics.

Although the advances of computer systems and internet technologies have witnessed the development of computing hardware following the Moore's law for several decades, the problems of handling the large-scale data still exist when we are entering the age of big data. The pointed out that big data means that the data is unable to be handled and processed by most current information systems or methods because data in the big data era will not only become too big to be loaded into a single machine, it also implies that most traditional data mining methods or data analytics developed for a centralized data analysis process may not be able to be applied directly to big data. In addition to the issues of data size, presented a well-known definition (also called 3Vs) to explain what is the -big data: volume, velocity, and variety. The definition of 3Vs implies that the data size is large, the data will be created rapidly, and the data will be existed in multiple types and captured from different sources, respectively.

Later studies pointed out that the definition of 3Vs is insufficient to explain the big data we face now. Thus, veracity, validity, value, variability, venue, vocabulary, and vagueness were added to make some complement explanation of big data.

The report of IDC indicates that the marketing of big data is about \$16.1 billion in 2014. Another report of IDC forecasts that it will grow up to \$32.4 billion by 2017. The reports of and further pointed out that the marketing of big data will be \$46.34 billion and \$114 billion by 2018, respectively. As shown in Fig. 1, even though the marketing values of big data in these researches and technology reports are different, these forecasts usually indicate that the scope of big data will be grown rapidly in the forthcoming future.

In addition to marketing, from the results of disease control and prevention, business intelligence, and smart city, we can easily understand that big data is of vital importance everywhere. A numerous researches are therefore focusing on developing effective technologies to analyze the big data. To discuss in deep the big data analytics, this paper gives not only a systematic description of traditional large-scale data analytics but also a detailed discussion about the differences between

Secured Mobile Cloud Using Iris Recognition

Y. Sirisha

Assistant Professor of CSE

Bharat Institute of Engineering and Technology

Ibrahimpattam - 501 510, Hyderabad

Email: ysirisha@biet.ac.in

Abstract — Mobile users play a predominant role in mobile computing in the daily life transactions. The uses of mobile cloud computing have been increased for the mobile devices having rich internet capabilities. The mobile devices require heavy CPU processing and extensive memory for installing and running the applications. The mobile users of cloud computing allows synchronizing the data with remote storage and utilize applications requires heavy CPU processing and extensive memory. The mobile cloud computing is a combination of cloud computing and mobile computing. The main important security issue is unauthorized user access of resources exist in the mobile cloud. Protecting the mobile users from the illegitimate access is an important issue in the mobile cloud. This paper proposes the new user authentication method using iris authentication in the mobile cloud. To access the mobile clouds computing the retina of the eye images of the mobile users are captured and processed using mobile phone camera. The implementation of the proposed solution in diverse mobile operating systems and devices shows the acceptable performance levels and security enhancements.

Keywords – Mobile cloud computing, Wireless Network, Mobile Network, Mobile devices, Cloud computing, iris authentication.

I. INTRODUCTION

The significant advantages of the mobile cloud computing are accessing the data and applications from anywhere in the world at low cost. The major security issue on mobile cloud computing is shielding the remote data and applications from illegal access. The legitimate users can access the data provided by the cloud providers. There is a chance of illegal access which can be accessed by the third parties such as hackers in the mobile cloud. Therefore the top areas of research becomes the security issue in the mobile cloud computing [1][2]. In the conventional days the data in the encrypted format is sent and stored in the cloud to avoid the security risks. Conversely, this is not case for the mobile users; the encryption technology is not apt for the mobile devices, due to high CPU processing and high workload. In this paper a new method is proposed and implemented for the security in mobile cloud computing by using iris recognition as a solution. The overall security of the mobile cloud is improved by improving the protecting mechanism from the unauthorized access.

A. The Revolution on Mobile:

Portability plays an important role in computer devices, either at home or at work, by saving processing power and local data storage. The growing number of laptop users than PC users illustrated the reasons for changing the functionality of the mobile phones[3,4].

In the earlier days the functionality of the mobile was just to make phone calls from person to person. At present this becomes an insignificant function, because while moving also the mobile users need to access the internet and can perform their online transactions on their mobile. Hence the complete functionality of the mobile phones changed. In reality the functionality of the personal computer closely matches with the mobile phones. Hence people are unable to avoid the mobile world and the consequences of transactional activity of mobile technology. This increases the number of users of mobile phones which provide Internet access and built in computing applications [5].

In the conventional days the mobile users can eradicate some of the constraints like cost, space, time and power, by combining the already existing technologies to create an environment named cloud computing. The core technology can be utilized in new environment, in which virtualization provides more flexibility, where the physical resources can be shared virtually in multi OS. The usage of advanced processors and storage will reduce the cost and increases the speed. So finally cloud is the most convincing solution and the evolution of the internet in the future will be mostly towards cloud computing [6,7].

Nowadays mobile users access the internet through mobile devices, and these devices allow users to synchronize data from or to their PCS. Because of hardware restrictions, these devices can't install and run software such as adobe photo shop or Microsoft office. Another alternative solution is to overcome the limitations of cloud computing and the future of the mobile computing.

Mobile cloud computing (MCC) has created the new concept of accessing the cloud through the mobile device. Data can be easily accessed by sitting at home or office and can manage the data from anywhere around the

An Outline And Synopsis Of Cloud Computing

K. Harikrishna
Assistant Professor of CSE
Bharat Institute of Engineering and Technology
Ibrahimpattam - 501 510, Hyderabad
Email: kharikrishna@biet.ac.in

Abstract—This summary gives the fundamental idea, characterizes the terms utilized as a part of the business, and layouts the general design and utilization's of Cloud processing. It gives a rundown of Cloud Computing and gives a decent establishment to comprehension.

Keywords – Cloud Computing, PaaS, SaaS, IaaS.

I. INTRODUCTION

Cloud Computing," basically, signifies "Web Computing." The Internet is normally imagined as mists; thus the expression "distributed computing" for calculation done through the Internet. With Cloud Computing clients can get to database assets by means of the Internet from anyplace, for whatever length of time that they require, without stressing over any support or administration of genuine assets. Also, databases in cloud are extremely alterable and versatile. Distributed computing is dissimilar to network processing, utility registering, or autonomic figuring. Truth be told, it is an extremely free stage regarding figuring. The best case of distributed computing is Google Apps where any application can be gotten to utilizing a program and it can be conveyed on a large number of PC through the Internet.

II. CLOUD COMPUTING

Cloud figuring gives the office to get to shared assets and regular framework, offering administrations on request over the system to perform operations that meet changing business needs. The area of physical assets and gadgets being gotten to are ordinarily not known to the end client. It likewise gives offices to clients to create, send and deal with their applications 'on the cloud', which involves virtualization of assets that keeps up and oversees itself.

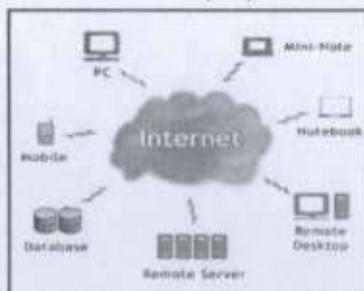


Fig: Cloud Computing

Some bland illustrations include:

- Amazon's Elastic Computing Cloud (EC2) offering computational administrations that empower individuals to utilize CPU cycles without purchasing more PCs
- Storage administrations, for example, those gave by Amazon's Simple Storage Service (S3)
- Companies like Nirvanix permitting associations to store information and reports without including a solitary site server
- SaaS organizations like Salesforce.com conveying CRM administrations, so customers can oversee client data without introducing particular programming.

III. SOFTWARE AS A SERVICE(SAAS)

SaaS is a model of programming arrangement where an application is facilitated as an administration gave to clients over the Internet. SaaS is by and large used to allude to business programming instead of buyer programming, which falls under Web 2.0. By expelling the need to introduce and run an application on a client's own particular PC it is seen as a route for organizations to get the same advantages as business programming with littler cost expense. SaaS can ease the weight of programming upkeep and backing yet clients give up control over programming variants and prerequisites. Different terms that are utilized as a part of this circle incorporate Platform as a Service (PaaS) and Infrastructure as a Service (IaaS).

IV. DISTRIBUTED STORAGE

Over time numerous enormous Internet based organizations (Amazon, Google...) have come to understand that lone a little measure of their information stockpiling limit is being utilized. This has prompted the leasing of space and the capacity of data on remote servers or "mists". Data is then incidentally stored on desktop PCs, cell phones or other web connected gadgets. Amazon Elastic Compute Cloud (EC2) and Simple Storage Solution (S3) are the present best known offices.

Information Cloud: Along with administrations the cloud will have information. There has been some exchange of

A Comprehensive Review of the Big Data

K. Harikrishna
Assistant professor of CSE
Bharat Institute of Engineering and Technology
Ibrahimpattanam - 501 510, Hyderabad
Email: kharikrishna@biet.ac.in

Abstract — There has been a steadily expanding enthusiasm for enormous information because of its quick development and since it covers assorted territories of utilizations. Consequently, there is by all accounts a requirement for a scientific survey of late advancements in the enormous information innovation. This paper intends to give a far reaching survey of the enormous information best in class, applied investigations, real advantages, and research testing perspectives. Notwithstanding that, few future bearings for huge information research are highlighted.

Keywords – Enormous information, inquire about difficulties, huge information engineering, huge information open issues.

I. INTRODUCTION

Big information is a term including distinctive sorts of confused and substantial datasets that is difficult to handle with the customary information preparing frameworks. Various difficulties are set up with huge information like stockpiling, move, perception, seeking, examination, security and protection infringement and sharing. The exponential development of information in all fields requests the progressive measures required for overseeing and getting to such information. In this paper we have highlighted the requirement for the exploration in enormous information, so as to deal with the online bi-legitimate information road. They have predicted the significance of huge information in the natural and biomedical research. It has detonated in a manner that it has underestimated an administrative construction for by and by identifiable data. This is conceivable by breaking down the meta information and by utilizing the prescient, accumulated discoveries accordingly consolidating the past discrete information sets. The centrality of huge information examination comes when ventures pick a specialized stack, which directs the sort of information to store and to prepare. Social Data Base administration Systems are doing fine with organized information and keep on being the decision for some necessities. Yet, for the exponential development of unstructured information in terabytes or even peta bytes, got from interpersonal organizations, sensor systems and other combined information with replications, enormous information is the response for taking care of such information. When all is said in done, cloud based huge information appears savvy, expedient to assemble and versatile. The

antagonistic impact for the executives lies in riding the information. On the off chance that a framework head has a private cloud, the unstructured information look like ordinary organized information stack where IaaS (Infrastructure as a Service) is in the base, center layer is the database and applications on the top. Be that as it may, in broad daylight cloud benefits, the worry about information security and overseeing protection are on the ascent. Putting away NoSQL information in frameworks like MangoDB, Amazon SimpleDb, Windows Azure Tables, began the period of Big information science. This paper outfits a nitty gritty study on enormous information innovation with qualities, conduct and characterized classifications. The fundamental center is on tossing light into the exploration issues, openings and open issues.

II. FIVE V'S OF BIG DATA

There are many properties associated with big data. The prominent aspects are Volume, Variety, Velocity, Variability and Value. There are many properties associated with big data. The prominent aspects are Volume, Variety, Velocity, Variability and Value.

Volume: The volume of enormous information is detonating exponentially everyday. The information collected through social sites and sensor systems going to cross from petabytes to Zetabytes.

Variety: Data created are from various classifications, comprises of unstructured, standard, semistructured and crude information which are exceptionally hard to be taken care of by conventional frameworks.

Velocity: This is an idea which demonstrates the speed at which the information produced and get to be recorded. Enormous information can deal with the approaching and active information quickly.

Variability: It depicts the measure of difference utilized as a part of outlines kept inside the information bank and alludes how they are spread out or firmly bunched inside the information set.

Digital Locker-Push APIs to move URIs into digital locker and PULL APIs to search documents from repositories by using the XML structure format

K. S. Parimala
Assistant Professor, Dept. of Computer
Science and Engineering
Bharat Institute of Engineering and Technology
Hyderabad
Email: ksparimala@biet.ac.in

Abstract — The Digital India concept inaugurates India to become technically strong and creative platform to provide high-end e-services to every citizen of the country. A major new national program designed by the BJP Government to transform India into technically Sound. The digital Locker concept is one of the crucial strategies under the Digital India Programme. Its goal is to reduce the usage of manual documents and allows to make use of electronic documents across the country and it builds paperless governance. The e- documents are stored in registered repositories and those can be shared across the agencies by verifying authenticity. Every citizen of a country can upload their related electronic documents and digital sign them by using the e - signature facility. These digitally signed documents can be linked with government sectors/ organizations. This paper first focuses on the concept of the digital India programme next gives an overview of a Digital Locker along with the specification of the Digital Locker Push URI APIs and Pull APIs. The push URI API used to move (push) the URI's of all the documents available in issuer repositories to a digital locker. The Pull model of integration with Digital Locker enables a Digital Locker user to search a document/certificate from issuer repository and fetch (pull) it in Digital Locker. The issuer departments can use these APIs for the documents that are not Aadhaar seeded.

Keywords – Digital India, Digital Locker, e-documents, e-sign, Repositories, Push URI APIs Pull APIs

I. INTRODUCTION

The Digital India an initiative launched on 2nd July 2015 by our Honorable Prime Minister Shri Narendra Modi which ensures that government services are made convenient to citizens electronically by boosting online facilities and by increasing internet services to make country digitally empowered. This program includes a plan to connect rural areas with high-speed internet. In order to convert the entire ecosystem of government services with the use of information technology, the Government of India has initiated the Digital India programme with the vision to mould India into a digitally empowered society and knowledge economy. The Government of India wishes to achieve growth in different areas with the Digital India Programme. Specifically, the government of India points to target on nine Pillars of the Digital India' they are identified as

- Broadband for rural and urban areas

- Universal Access to Mobile Connectivity by network penetration
- Public Internet Access Programme by CSCs
- e-Governance –Reforming Government through Technology
- eKranti - Electronic delivery of services
- Information for All
- Electronics Manufacturing
- Digital or IT for Jobs-Training for youth
- Early Harvest Programme-short term plans

II. CONCEPT OF DIGITAL LOCKER

Digital Locker is a part of the digital India programme released by the Department of Electronics and Information Technology (DeitY), Govt of India. This gives a secure committed personal electronic space for storing the documents of resident Indian citizens. The storage space (at the time of launching 10 MB max & present upgraded to 1GB) is linked to the Aadhaar number (Unique Identification Authority of India) of the user. Space can be used for storing personal records like voter ID, Permanent account number (PAN) cards, University certificates, cards, etc., and the URIs of the e-documents provided by various issuer departments. There is also a facility for e-signing records. The service is intended to reduce the use of physical documents and to provide authentication to the e-documents. It gives secure access to a government issued documents. It is cost effective for administrative departments of government and to make it easy for the citizen to receive services.

III. DIGITAL LOCKER SYSTEM OVERVIEW

The architecture of the Digital Locker system is explained in –Digital Locker Technical Specifications (DLTS) document. The digital locker system consists of electronic-Document repositories and access gateways for providing an online facility for issuers to save and requesters to make use of a Digital Document in a uniform way in real-time.

A Review On Efficient Data Storage For Mobile Cloud Computing And Security Issues With Challenges

K. Srihari Babu

Assistant Professor of CSE

Bharat Institute of Engineering and Technology, Hyderabad

Email: ksrihari@biet.ac.in

Abstract—Mobile Cloud Computing consolidates portable figuring and distributed computing, has one of a noteworthy examination string in the IT world. By consolidating portable registering and distributed computing idea, Mobile Cloud Computing has been acquainted with be a potential innovation for versatile administrations. Versatile Cloud Computing coordinates the distributed computing into the portable environment and beats issues identified with the execution, environment and security. There are numerous versatile cloud applications, for example, email get to, picture altering, web perusing, report altering, video playback, diversions and so forth. These applications are utilizing the product as an administration display. By utilizing distributed computing these applications are put away in cloud server and get to clients at whatever point they required, this lessens stockpiling limit and battery use. The clients of Mobile Cloud Computing are still underneath desires in view of the related dangers as far as protection and security. These dangers are assuming most imperative part by keeping the any associations to receive the Mobile Cloud Computing environment. This paper gives productive information stockpiling to Mobile Cloud Computing and lessens security issues and difficulties.

Keywords— Terms-Mobile Computing, Cloud Computing, Mobile Cloud Computing.

I. INTRODUCTION

Mobile registering includes portable equipment gadgets versatile correspondence, and versatile programming applications. These days markets of cell phones have grown quickly as cell phones (Smart Phones, PDA, Tablets and so forth.) are turning into the most key some portion of human life as the best and helpful specialized instruments not limited by time and place. This fast development of portable registering has turned into an effective part in the improvement of IT ventures and additionally trade and other industry field. Versatile clients amass rich experience of different administrations from portable applications (e.g., Google applications, Android applications, iPhone applications, and so forth), which keep running on the gadgets and/or on remote servers by means of remote systems. In any case, the cell phones are confronting numerous difficulties in their assets (e.g., battery life, stockpiling, and data transmission) and interchanges (e.g., portability and security). The restricted assets altogether obstruct the change of administration qualities. Distributed computing

is like the PC systems which incorporates the accumulation of more than figuring assets ordinarily alluded as a server and the registering assets are associated through a correspondence systems, for example, a web, an intranet, LAN or WAN. Instead of utilizing PC for each opportunity to application, we utilize the cloud server to run the use of the client from anyplace whenever on the planet and the preparing power for the application is given by the cloud server. There are distinctive sorts of mists that can be utilized, contingent upon your requirements. There are Public Cloud, Community Cloud, Private Cloud, and Hybrid Cloud.

II. LITERATURE SURVEY

Zhibin Zhou and Dijiang Huang suggested that security structure for cloud information stockpiling administrations to secure the information administration out in the open mists. This paper utilizes Attribute-Based Encryption to secure client's scrambled information. The primary inconvenience is Cipher content size is restricted and for the portable clients no efforts to establish safety gave. C Shrivanthi and H S Guruprasad suggested that vitality preservation in movement issues, cell phones, application advancement stages and the different versatile distributed computing applications. The disadvantages in this paper are less secure and it focuses just on versatile related applications. Mazedur Rahman, Jerry Gao and Wei-Tek Tsai introduced that vitality sparing procedures and arrangements in three points of view: cell phones, organize frameworks and interchanges and cloud bases and figuring programming. The fundamental disadvantages are security instrument did not gave and just spotlights on vitality sparing. Yanuaris Teofilus Larosa et al [7] proposed and broke down to acquire the new idea developing versatile distributed computing framework. Data trading procedure is introduced. The downsides in this paper are it gives how to process information in remote environment and security calculation did not gave. Andreas Klein et al recommended that system for the utilization of portable related data for the Heterogeneous Access Management gave by the Mobile Cloud as an administration for the versatile terminals. The principle burden is it gives just get to plan and absence of security

Self Protective Cloud Service Providers (CSP) in the Vicinity of Stealthy Denial Of Service Strategy

Ramavath Vinod Kumar
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: vinodasdhoni@gmail.com

P. Srinivas Rao
Associate Professor of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: psrinivasraocse@bict.ac.in

Abstract — Cloud Computing permits clients to get to cloud assets and administrations. On-request, self-administration and pay-by-utilize plan of action are adjusted for the cloud asset sharing procedure. Benefit level assertions direct the cost for the administrations that are accommodated the clients. Cloud server farms are utilized to share information qualities to the clients. Foreswearing of-Service (DoS) assault is an endeavor by aggressor to keep authentic clients from utilizing assets. Dispersed Denial of Service (DDoS) Attacks is produced in a "numerous to one" measurement. In DDoS assault show expansive number of bargained host are accumulated to send pointless administration demands, bundles in the meantime DoS and DDoS assaults starts the administration debasement, accessibility and cost issues under cloud benefit suppliers. Savage constrain assaults are raised against through particular intermittent, beating and low-rate movement designs. Rate-controlling, time-window, most pessimistic scenario edge and example coordinating are adjusted to segregate the authentic and assailant exercises. Stealthy assault examples are brought against applications running up in the cloud. Gradually Increasing-Polymorphic DDoS Attack Strategy (SIPDAS) can be connected to start application vulnerabilities. SIPDAS corrupts the administration gave by the objective application server running in the cloud. Polymorphic assaults changes the message arrangement at each progressive disease to maintain a strategic distance from mark location handle. Gradually expanding polymorphic conduct instigates enough over-burdens on the objective framework. XML-based DoS (XDoS) assaults to the online frameworks are connected as the testing environment for the assault recognition prepare.

Keywords – Cloud Computing, Sophisticated Attacks Strategy, Low-Rate Attacks, Intrusion Detection.

I. INTRODUCTION

Cloud suppliers offer administrations to lease calculation and capacity limit, in a route as straightforward as could reasonably be expected, giving the impression of „unlimited asset availability“. Such assets are not free. Hence, cloud suppliers permit clients to get and arrange appropriately the framework limit, and to rapidly renegotiate such limit as their prerequisites change, all together that the clients can pay just for assets that they really utilize. A few cloud suppliers offer the „load balancing“ benefit for consequently dispersing the

approaching application benefit asks for over different occasions, and additionally the „auto scaling“ benefit for empowering shoppers to nearly take after the request bend for their applications. Keeping in mind the end goal to minimize the client costs, the auto scaling guarantees that the quantity of the application occurrences increments flawlessly amid the request spikes and reductions naturally amid the request calms. For instance, by utilizing Amazon EC2 cloud benefits, the customers can set a condition to include new computational cases when the normal CPU usage surpasses an altered edge. Besides, they can design a chill off period keeping in mind the end goal to permit the application workload to balance out before the auto scaling includes or evacuates the cases. In the accompanying, we will demonstrate how this element can be malevolently abused by a stealthy assault, which may gradually deplete the assets gave by the cloud supplier to guaranteeing the SLA, and improve the expenses acquired by the cloud client.

Accessible and Planned system:

A. Accessible System: Sophisticated DDoS assaults are characterized as that class of assaults, which are customized to hurt a particular powerless point in the objective framework plan, keeping in mind the end goal to direct dissent of administration or just to altogether debase the execution. The term stealthy has been utilized to distinguish advanced assaults that are particularly intended to keep the malignant practices for all intents and purposes imperceptible to the identification instruments. These assaults can be fundamentally harder to distinguish contrasted and more conventional beast drive and flooding style assaults. The strategies for propelling modern assaults can be ordered into two classes: work content-based and occupations landing design based. As of late, variations of DoS assaults that utilization low-rate activity have been proposed, including Shrew assaults (LDoS), Reduction of Quality assaults (RoQ), and Low-Rate DoS assaults against application servers (LoRDAS).

B. Planned System: This paper exhibits an advanced system to coordinate stealthy assault designs against applications running in the cloud. Rather than going for making the administration inaccessible, the proposed methodology goes for misusing the cloud adaptability, compelling the application to devour a bigger number of assets than required, influencing the cloud client more on

KNN Range Query Services Designed For Protecting Data In The Cloud

Papishetty Niharika
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: niharika.240@gmail.com

K. Hari Krishna
Assistant Professor of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: kharikrishna@biet.ac.in

Abstract — Query administrations have encountered horrendously gigantic development inside recent years thus expansive utilization of administrations need to adjust outsourcing information administration to Cloud benefit suppliers that give question administrations to the customer for information proprietors, in this manner information proprietor needs information classification and additionally inquiry protection to be ensured inferable from unfaithful conduct of cloud administration supplier subsequently improving information secrecy must not be bargain the question handled execution. It is not huge to give moderate question benefits as the consequence of security alongside protection confirmation. We propose the arbitrary space bother information annoyance strategy to furnish secure with KNN go question administrations for ensuring information in the cloud and Frequency Structured R-Tree proficient range inquiry. Our plans improve information privacy without bargaining the FSR-TREE inquiry handling execution that additionally builds the client encounter.

Keywords – Confidentiality, Minimum bouncing Region, Range inquiry, Query security.

I. INTRODUCTION

Because of the a lot of clients question administrations has moved to the Cloud for their non-intruded on availability to diminish the framework cost. With these cloud foundations, the administration proprietors helpfully scaled up or down the administration pay for a considerable length of time of utilizing the servers. Along these lines the administration suppliers lose the control over the information in the cloud, information as in closeness and question isolation get to be driving concerns. Aggressors as administration suppliers, perhaps make a duplicate of the DB or listen in client's questions are hard to distinguish/forestall in the frameworks of cloud. Amid the time that new methodologies are expected to keep up information privacy and inquiry isolation the effectiveness of question administrations utilizing the mists ought to likewise be saved. The current methodologies, for example, crypto file approach puts substantial weight on the in-house foundation to improve security and security, arrange saving encryption are interested in the assaults and New Casper approach utilizes shrouding boxes to ensure information alongside questions create effectiveness of inquiry handling

incorporating into house workload. In this venture we propose arbitrary space bother (RASP) irritation technique to give shield can minimize the in-house handling workload, FSR-Tree is utilized to give proficient range inquiry can kNN question administrations for securing information in the cloud. The essential thought is to arbitrarily change the multidimensional information sets with a blend of request saving encryption, dimensionality developed, arbitrary commotion infusion, and irregular venture, so that utility for preparing range questions is protected. The Random Space Perturbation is outlined in such some way that the questioned reaches are safely changed into polyhedral in RASP-irritated information space, productively handled with help of ordering structures in the annoyed space. The Random Space Perturbation approach safeguards the topology of multidimensional range in secure change that licenses ordering together with proficiently questions preparing. The proposed benefit developments are prepared to minimize the in-house handled workload as low bother cost and high exactness inquiry comes about. This is basic empowering down to earth cloud-based arrangements.

II. SYSTEM DESIGN

The framework engineering graph proposed is appeared in below figure. For both RASP-based range question benefit, FSR-Tree are isolated into two gatherings is the faithful gatherings and the backstabbing parties. The faithful gatherings incorporate the information proprietor trades the irritated information to the cloud including approved clients submit questions. The traitorous gatherings incorporate the cloud suppliers who have the question benefits moreover ensuring database. Along these lines, change extend questions the customer side that handles information encryption/decoding and inquiry encryption. The information proprietor, approved clients present the first information inquiries to the intermediary server; subsequently intermediary server sends the scrambled information/questions to the administration supplier, thusly benefit supplier is to file the encoded information effectively prepare encoded inquiries.

A Study On Top Of Cloud Storage Confidentiality Preserve Public Auditing For Regenerating Code

Bandi Mamatha
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: b.mamatha8008@gmail.com

131

20

N. Sainath
Associate Professor of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: nsainath@biet.ac.in

Abstract — A few strategies that arrangement with the strength of outsourced information missing of neighborhood duplicate were prescribed in numerous models up to now. Fliers and business cards of remote scanning for recovering coded data give private inspecting, requires information managers to continually keep focused web and mange examining. We present a totally open examining strategy for regeneration code-premise distributed storage. For unraveling recovery difficulty of insufficient authenticators in lacking information proprietors, we start an intermediary, which recover authenticators, into set up open examining framework representation. Or maybe of direct change in fliers and business cards of open reviewing towards multi-server setting, we exhort novel authenticator, that is appropriate for recovering codes that is delivered by method for a few keys as are recovered by method for fractional keys henceforth our technique can thoroughly make information proprietor's without weight.

Keywords – Regenerating codes, Proxy, Public reviewing, Cloud stockpiling, Multi-server, Authenticator.

I. INTRODUCTION

Cloud stockpiling strategy is famous because of its adaptable on-request information outsourcing with fascinating advantages for example alleviation of weight for overseeing stockpiling, and assurance against capital costs on equipment et cetera. In any case, this achievement of learning facilitating administration likewise brings novel security dangers towards client information, subsequently making people feel dubious. Strategies that oversee solidness of outsourced information missing of nearby duplicate were anticipated and loads of essential work between these studies is provable information ownership representation also to evidence of hopelessness representation, which have been prescribed for single-server situation. While considering that documents are regularly striped moreover to needlessly put away crosswise over multi-mists, respectability check procedures that are proper for multiclouds setting with some other excess plans were investigated. Inside our work we present a completely open examining strategy for recovery code-premise distributed storage. For protecting genuine information security against outsider reviewer, we randomize coefficients in starting fairly valuable of visually impaired

technique amid inspecting methodology. For taking care of recovery issue of unsuccessful authenticators in insufficient information proprietors, we start an intermediary, which recover authenticators, into built up open reviewing framework representation. We present a completely open evident authenticator, that is created by method for a few keys as are recovered by method for fractional keys subsequently our strategy can absolutely make information proprietor's sans weight. Our lan's underlying one for permitting privacy-preserving open examining for recovery code-premise distributed storage. It discharges information proprietors from weight for recharging of pieces also to authenticators at blemished servers in addition to it offers benefit with an intermediary for reward.

II. APPROACH

Outsourced data inside distributed storage against debasements was secured including adaptation to non-critical failure towards distributed storage with each other with checking of comprehension trustworthiness besides to disappointment reparation gets to be imperative. We focus on trustworthiness confirmation many-sided quality in recovering code-based distributed storage, especially with useful repair approach and acquaint a purge examining approach with recovery code-premise distributed storage and afterward we start an intermediary, which recover authenticators, into set up open inspecting framework representation for taking care of recovery issue of unsuccessful authenticators in inadequate information proprietors. To make certain information uprightness and spare client calculation sources, we exhort a purge inspecting framework for recovering code-based distributed storage, in where trustworthiness checking besides to recovery are transported out by thirdparty examiner moreover to semi-dependable intermediary independently in help of information proprietor. Instead of direct adjustment of fliers and business card printing of open inspecting towards multi-server setting, we prompt novel authenticator, that is suitable for recovering codes. We secure coefficients to protect information protection against evaluator, that is lightweight than utilization of confirmation visually impaired method. We make an open obvious

Exposure Of Attribution Imitation And Packet- Drop Attacks In WSN

Mounika Challa
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: mouni.niki@gmail.com

N. Sainath
Associate Professor of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: nsainath@biet.ac.in

Abstract — Wireless sensor arranges gather the information from the all hubs and which is utilized for the basic leadership reason. Now and then counseling hub may present or trade off with the current hub so that the information can be effectively adjusted. Information provenance confirms the sensor information. Be that as it may, a few difficulties are happens while utilizing provenance like space unpredictability, transmission capacity utilization. In this paper a protected plan is utilized to safely transmit provenance for sensor information. Here plan utilizes just the blossom channel rationale to encode and translate the information provenance furthermore vitality productive directing convention for sparing the vitality of the system. Plot extends the strategy to discover the parcel drop assaults in the systems.

Keywords – Wireless sensor organize, Provenance encoding, Provenance disentangling, Data provenance, Security, Bloom filter.

I. INTRODUCTION

Wireless sensors used to total the information from the earth like temperature, stickiness, etc...Which are required for the basic leadership by base station. Just reliable data is considered in the basic leadership prepare. In a multi-jump sensor organize, information provenance permits the BS to follow the source and sending way of an singular information parcel. Provenance must be recorded for every parcel, except critical difficulties emerge due to the tight capacity, vitality and data transfer capacity limitations of sensor hubs. Hence, it is important to devise a light-weight provenance arrangement with low overhead. Moreover, sensors frequently work in an untrusted environment, where they might be liable to assaults. Consequently, it is important to address security prerequisites, for example, privacy, honesty and freshness of provenance. Information provenance is a viable strategy to survey information dependability, since it outlines the historical backdrop of possession and the activities performed on the information. Information encoding method is utilized to encode the information provenance at sender hub. Information unraveling calculation which is utilized at the base station for confirming the information provenance i.e. the information is taken after a similar way or not, which is pre-chosen by the sender hub. Bundle misfortune

minimizes the Packet Delivery Ratio. Parcel misfortune can be created by various components including signal corruption over the system medium because of multi-way blurring. Bundle misfortune is conceivable in remote sensor organize. So that the gatecrashers can be effectively catch the information. Identifying the dropping parcel and acting mischievously exercises are the most important measures for secure transmission in it. Without an endorsement a hub can't take an interest in the transmission. The procedure likewise reached out to discover the information parcel misfortune assault in the system. Here the fundamental objective is to encoding provenance and disentangling system that fulfills such security and execution needs. In provenance encoding every hub on the way of an information bundle safely append provenance data inside a Bloom channel that is transmitted alongside the information. After getting the bundle, the BS extricates and confirms the provenance data.

II. RELATED WORK

In a substantial sensor organize, in-system information total altogether lessens the measure of correspondence and vitality utilization. As of late, the examination group has proposed a powerful conglomeration structure called summary dispersion which consolidates multipath directing plans with copy in touchy calculations to precisely process totals (e.g., predicate Count, Sum) notwithstanding message misfortunes coming about because of hub and transmission disappointments. Be that as it may, this collection structure does not address the issue of false sub total qualities contributed by traded off hubs bringing about expansive mistakes in the total figured at the base station, which is the root hub in the total chain of command. This is an imperative issue since sensor systems are exceptionally powerless against hub bargains because of the unattended way of sensor hubs and the absence of alter safe equipment. Capacities based systems show a basic move in the security plan of system structures.

Rather than allowing the transmission of parcels from any source to any goal, switches deny sending as a matter of course. For a fruitful transmission, bundles need to

Cloud Storage Design To Facilitate Care For User Privacy

Swapna Mahanthani
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: swapnamanthani12@gmail.com

Dr. P. Padmanabham
Professor, Dept. of CSE
Bharat Institute of Engineering and Technology
Hyderabad
padmanabham46@gmail.com

Abstract — Cloud storage offerings have come to be increasingly across the board. In light of the fact that of the estimation of privateness, numerous distributed storage encryption plans have been proposed to shield information from people who don't have passage. Every single such plan accepted that distributed storage merchants are riskless and can't be hacked; in any case, in take after, a few powers (i.e., coercers) may drive distributed storage suppliers to uncover individual insider facts or private information on the cloud, hence by and large bypassing stockpiling encryption plans. In this paper, we introduce our outline for a fresh out of the plastic new distributed storage encryption plot that licenses distributed storage suppliers to make persuading fake client insider facts to take care of client privateness. For the reason that coercers can't disclose if gained privileged insights are legitimate or not, the distributed storage provider be sure that client privateness keeps on being safely secured.

Keywords – Cloud processing, Deniable Encryption, AttributeBased Encryption, Data security and Privacy.

I. INTRODUCTION

In cloud, information proprietor can store their information and section their data wherever whenever from the cloud. The most vital objective of this paper is to monitor information from the outside programmers. Our proposed plan is utilized not just for the security which is also to persuading the programmers by utilizing the false archives and who cannot to discover regardless of whether the got to document is valid or now not. A couple of the proposed plans expect capacity suppliers in cloud arenontoxic and can't be hacked; in any case, by and by, Some coercers may catch correspondences between the information owner and the capacity supplier and drive, stockpiling supplier toun lock proprietor's privileged insights and procedures or secret information with the guide of using some supervisory control in cloud.

In such case, the capacity suppliers are asked for to revealconsumer insider facts. As an occasion, in 2010, without informing itscustomers, Google propelled individual records to the FBI afterreceiving a court order. When distributed storage merchants arecompromised, all encryption plans lose their effectivenessin the past plans. Be that as it may, In our plan, storagevendors can battle contrary to such coercers to protect the personprivacy. Subsequently, client protection is still darkened.

There are few ABE plans which were proposed. A large portion of the proposed plans accept distributed storage supplier sellers ordepended on third occasions managing key administration by utilizing key distributorare trusted. A few substances may simply catch report betweencustomers and distributed storage provider. At that point constrain capacity sellers toliberate individual insider facts by utilizing power or distinctive way. In this case,encrypted learning are thought to be recognized and capacity suppliers arerequested to free up client insider facts and techniques.Sahai and Waters initially presented the proposition of ABE whereknowledge information proprietors can get to how they need to share information in expressions ofencryption. There are two types of ABE, CP-ABE and KeyPolicy ABE (KP-ABE). Goyal et al, Proposed the main KPABE.They built up a powerful way to portray any monotonicsystem on the grounds that the scope for client mystery keys. Bettencourt et al.Proposed the essential Ciphertext-scope ABE (CP-ABE). Thisscheme utilized a tree get to structure to express any monotonicsystem over traits in light of the fact that the approach in the figure literary substance.

Furthermore it is unreasonable to encode data by and large for some men and women.With ABE, information proprietors choose just which sort of clients canaccess their scrambled information. Clients who fulfill the stipulations areequipped to decode the encoded information. Utilize translucent units orsimulatable open key procedures to uphold deniability. Mostdeniable open key plans are bitwise, this implies theseschemes can just scramble one piece a period; consequently, bitwisedeniability encryption plans are wasteful for genuine use,mainly inside the distributed storage benefit case. A large portion of the priordeniable encryption plans are between encryption impartial.That is, the encryption parameters will must be completely exceptional foreach and each encryption operation. In the event that two deniable encryptions areperformed inside a similar domain, the last encryption will losedeniability after the principal encryption is pressured, because of the way that eachcoercion will decrease adaptability. Most deniable encryptionschemes have unscrambling blunder issues. These mistakes come fromthe outlined decoding systems.

Energetic Direction-Finding For Data Reliability And Wait Differentiate Services In WSN

V. Nehru
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology
Hyderabad
Email: nehru.krp@gmail.com

N. Sainath
Associate Professor of CSE
Bharat Institute of Engineering and Technology
Hyderabad
Email: nsainath@biet.ac.in

Abstract — With the colossal headway in the field of installed PC and sensor innovation, Wireless Sensor Networks (WSNs) have had momentous effect in this day and age. These WSNs comprise of a few a large number of sensor hubs conveyed arbitrarily, are fit for detecting, impelling, and imparting the gathered data. Since remote sensor systems are compelled by cost, versatility, topology change and power utilization, new innovations are being considered to overcome these and numerous different issues. Applications running on a similar Wireless Sensor Network (WSN) stage for the most part have diverse Quality of Service (QoS) necessities. Two essential prerequisites are low postponement and high information trustworthiness. Be that as it may, by and large, these two prerequisites can't be fulfilled all the while. In this paper, in light of the idea of potential in material science, we propose IDDR, a multi-way dynamic directing calculation, to determine this contention. By building a virtual cross breed potential field, IDDR isolates bundles of uses with various QoS prerequisites as per the weight doled out to every parcel, and courses them towards the sink through various ways to enhance the information constancy for honesty delicate applications and in addition lessen the end-to-end postpone for deferral touchy ones. Utilizing the Lyapunov float strategy, we demonstrate that IDDR is steady. Reproduction comes about exhibit that IDDR gives information trustworthiness and defer separated administrations.

Keywords – Wireless Sensor Networks, Data Integrity, Delay Differentiated Services, Dynamic Routing, And Potential Field.

I. INTRODUCTION

WSN have increased overall consideration lately, especially with the multiplication in Micro-Electro-Mechanical Systems innovation which has encouraged the advancement of keen sensors. These sensors are little, with restricted handling and processing assets, and they are reasonable contrasted with conventional sensors. These sensor hubs can detect, measure, and accumulate data from nature and, in view of some nearby choice process, they can transmit the detected information to the client. Shrewd sensor hubs are low power gadgets furnished with at least one sensors, a processor, memory, control supply, radio, and an actuator. WSNS, which are utilized to detect the physical world, will assume an

imperative part in the cutting edge systems. Because of the differing qualities and intricacy of utilizations running over WSNs, the QoS ensure in such systems increases expanding consideration in the exploration group. As a part of a data framework, WSNs ought to have the capacity to bolster different applications over a similar stage. Distinctive applications may have diverse QoS prerequisites. For example, in a fire observing application, the occasion of a fire alert ought to be accounted for to the sink as quickly as time permits. Then again, a few applications require the greater part of their bundles to effectively touch base at the sink regardless of when they arrive. For instance, in natural surroundings observing applications, the entry of bundles is permitted to have a postponement, yet the sink ought to get the vast majority of the parcels. WSNs have two essential QoS prerequisites: low postponement and high information honesty, prompting to what are called defer delicate applications and high-respectability applications, separately. For the most part, in a system with light load, both necessities can be promptly fulfilled. Be that as it may, an intensely stacked system will endure blockage, which expands the end-to-end delay. This work intends to all the while enhance the loyalty for high-uprightness applications and abatement the end-to-end defer for deferral touchy ones, notwithstanding when the system is congested. We get the idea of potential field from the train of material science and outline a novel potential based steering calculation, which is called trustworthiness and postpone separated directing.

II. RELATED WORK

IDDR can give the accompanying two capacities:

1. Enhance Fidelity for High-Integrity Applications: The fundamental thought is to discover however much cradle space as could reasonably be expected from the sit without moving or potentially under-stacked ways to store the over the top parcels that may be dropped on the most brief way. Accordingly, the main errand is to locate these sit without moving or potentially under stacked ways, then the second undertaking is to store the parcels effectively for consequent transmission. IDDR builds a potential field as indicated by the depth and line length data to locate the under-used ways. The parcels with high trustworthiness prerequisite will be sent to the following

135

135

Data Dissemination And Origin In Online Social Media Networks

N. Sruthi
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: neelasruthi@gmail.com

K. Hari Krishna
Assistant Professor of CSE
Bharat Institute of Engineering and Technology
Hyderabad
Email: kharikrishna@biet.ac.in

Abstract — Traditional information mining methods are experiencing a broad research in order to suit their application in the powerfully developing web-based social networking systems which are vast in size as well as require ongoing preparing of information streams. One such application which is of social, mechanical and political intrigue is to amplify (in some cases even minimize) data dispersion in online web-based social networking systems. Informal interchanges have been to a great extent utilized in an extensive variety of utilization situations extending from showcasing methodologies to making mass mindfulness. As of late, we saw a blast in the development of online informal communities with numerous effective administration suppliers like Facebook, twitter, YouTube, LinkedIn and so on decision the market. The utilization of online interpersonal organizations is not constrained to fun and building proficient systems. Online interpersonal organizations are presently observed as an intense medium to impact the social and political environment of a nation and the world all in all. Data on these informal communication destinations in some cases should be proliferated successfully and rapidly to satisfy the concerned methodologies. It is similarly imperative that given some data display on informal organization, we can infer its source with the goal that bits of gossip can be recognized from truth. In this paper, we talk about a portion of the issues and difficulties in data dispersion and provenance from online interpersonal organizations perspective. We additionally talk about a portion of the methodologies and models that have been utilized for data dispersion and provenance in online informal organizations in later past. Some of these methodologies have been assessed by scientists for particular interpersonal organization benefits however we will talk about them in a general sense.

Keywords – Data Mining, Social Network Analysis (SNA), Information Diffusion, Information Provenance, Influence Modeling, Community Analysis

I. INTRODUCTION

Growing utilization of web among the masses is assuming a urgent part in fast data spread. After the passage of online long range informal communication destinations, the diversion has turned out to be significantly all the more intriguing for all partners. Clients of these administrations may simply require sentiments about individuals or items, data about most recent happenings, proposals for extending their systems, joining new

gatherings or groups or accepting business promotions in light of their interpersonal organization movement. Business people group might be occupied with clients' action to target potential customers or distinguish compelling hubs and so forth. Benefit suppliers might be occupied with extending their support of greatest number of clients and offering client information for business purposes while keeping up obscurity and security. We, the scientists are keen on breaking down these informal organizations to meet interests of clients, business group and additionally benefit suppliers. Remembering this, different interpersonal interaction mammoths like Facebook, twitter make some of their information publically accessible for research purposes furthermore give easy to understand APIs to get that information straightforwardly in our exploration model usage making it workable for social and in addition PC researchers to inquire about various issues with sensible information. One such issue for research in online interpersonal organizations is data dispersion and data provenance. When discussing data dissemination, it is critical to know that whether the hidden informal community is impact driven or homophily determined. In an impact driven informal community, the action of a client is affected by the action of some compelling hubs. Though in homophily (likeness) driven systems, individuals tend to act like their companions. A true informal community is all around spoke to by a blend of both. Be that as it may, this forces issues for analysts. It gets to be hard to choose from a given dataset that the connection between two client's information is a direct result of homophily or due to one individual impacting the other. Individuals with solid ties or continuous association will probably have gotten their data from same source and consequently more averse to be presented to novel data. In any case, the data move through the solid ties is clearly more grounded. Then again, individuals with frail ties or less regular connections will probably have gotten their data from various sources and henceforth more presented to novel data. In any case, the data move through the feeble ties is weaker. Any data dissemination show needs to consider these elements. Data provenance alludes to distinguishing proof of source(s) or history of data present on the interpersonal organization. This issue is essential to

Outlay Useful Reliable And Unknown Data Allocation With Further Security

V. Bhavana
M.Tech Scholar of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: varakantam.bhavana.reddy@gmail.com

K. Hari Krishna
Assistant Professor of CSE
Bharat Institute of Engineering and Technology,
Hyderabad
Email: kharikrishna@biet.ac.in

Abstract — Data imparting has never been simpler to the advances of distributed computing, and a precise examination on the mutual information gives a variety of advantages to both the general public and people. Information imparting to an expansive number of members must consider a few issues, including productivity, information uprightness and protection of information proprietor. Ring mark is a promising possibility to develop a mysterious and valid information sharing framework. It permits an information proprietor to secretly validate his information which can be put into the cloud for capacity or examination reason. However the expensive declaration check in the customary open key foundation setting turns into a bottleneck for this answer for be adaptable. Character based ring mark, which dispenses with the procedure of testament confirmation, can be utilized. In this paper, we facilitate upgrade the security of ID-based ring mark by giving forward security: If a mystery key of any client has been traded off, all past produced marks that incorporate this client still stay legitimate. This property is particularly essential to any huge scale information sharing framework, as it is difficult to ask all information proprietors to re-confirm their information regardless of the possibility that a mystery key of one single client has been traded off. We give a solid and effective instantiation of our plan, demonstrate its security and give an execution to demonstrate its reasonableness.

Keywords – Authentication, Data Sharing, Cloud Computing, Forward Security

I. INTRODUCTION

Forward secure character based ring mark for information partaking in the cloud give secure information sharing of inside the gathering in an effective way. It additionally give of the credibility and obscurity of the clients. Ring mark is the promising possibility to develop an unknown and real information sharing framework. It permits an information proprietor to their mystery validate his information which can be put into the cloud for capacity or investigation reason. The framework can be to dodge expensive endorsement confirmation in the conventional open key foundation setting turns into a bottleneck for this answer for be versatile. Personality based ring mark which is disposes of the procedure of testament for check can be utilized. The security of the ID-based ring mark by giving forward security: If a mystery key of any

client has been upset, all past created marks that incorporate this client still stay substantial. The property is particularly critical to any expansive size of information sharing framework, as it is difficult to ask all information proprietors to re-validate their information regardless of the possibility that a mystery key of the one single client has been surrendered. Responsibility and protection issues with respect to cloud are turning into the noteworthy hindrance to the wide reception of cloud administrations. There is the part of headway happens in the framework as for the web as a noteworthy worry in it's implementation in a well powerful way individually furthermore give of the framework in multi-cloud environment. A large number of the clients are a getting pulled in to this innovation because of the administrations required in it the took after by the lessened calculation took after by the cost furthermore the solid information of transmission happens in the framework in a well successful way separately.

II. RESEARCH BACKGROUND

A. Information Authenticity: In a cryptographic sense, the genuineness shows that the message was embraced by the specific main. This important may underwrite numerous messages, and of a similar verification tag can be approve particular messages. In an information stream sense, legitimacy ensures the provenance of the message, yet it doesn't the recognize diverse messages from a similar primary. A minor genuineness check does not protect against replay assaults: the message that was real in a past keep running of the convention is still bona fide

B. Namelessness: Anonymous correspondence permits clients to send messages to each other without uncovering of their character. It is the gone for concealing who plays out some activity, while full protection requires furthermore covering up what are activities are being performed. With regards to appropriated calculation, namelessness permits concealing which clients hold which neighborhood inputs, while protection requires concealing all the data about the contributions aside from what takes after from the yields

A novel Authentication and Confidentiality Scheme Based on Zero Knowledge Protocols

P Lalitha Surya Kumari
Assistant Professor

Department of Computer Science and Engineering
Bharat Institute of Engineering and Technology
Hyderabad, Telangana
vialithanagesh@yahoo.co.in

Prof. Avula Damodaram
Dept. of Computer Science and Engineering
Vice Chancellor, S. V. University
Tirupathi, Andhra Pradesh
damodarama@rediffmail.com

Abstract — The authenticity of a genuine user needs to be determined in all corporate and commercial sectors like the banking, aviation, military etc.. Usually authentication mechanisms are derived from three factors such as knowledge, biometrics and possession. These factors are inclined to (prone to) hardware failure, theft, expensive, etc. Hence, there is a need for a strong authentication solution. This paper presents a concept for a new method to provide the authentication and confidentiality using zero knowledge protocol. Zero knowledge proof protocol is an essential component of cryptography, which in recent years has increasingly popular amongst scholars. Its applications have widened and it has made inroads in several areas including mathematics and network safety and so on. This simple protocol based on zero knowledge proof by which user can prove to the authentication server that he has the password without having to send the password to the server either clear text or in encrypted format. In this paper we first discuss about zero-knowledge protocol proof system of knowledge and then about novel authentication and confidentiality scheme. The whole new protocol involves mutual identification of two users, exchange of a random common secret key or session key for the verification of public keys.

Keywords: zero knowledge proof; authentication; confidentiality; key exchange; signature; session key; secret key; public key

I. INTRODUCTION

An interactive proof [1][2] is a protocol that is defined between a prover, usually called P or Peggy, and a verifier, usually called V or Victor. More formally, an interactive proof is a pair (P, V) of programs that implement the protocol steps that Peggy and Victor are supposed to execute. An interactive proof must be complete and sound. Completeness means that an honest prover succeeds in convincing the honest verifier, and soundness means that a dishonest prover does not succeed in convincing Victor of a false statement. An interactive proof transfers only the conviction that the claimed statement is true but does not leak any further information, in particular not a manageable proof. More precisely, an interactive proof is called zero-knowledge if the verifier could simulate the entire protocol transcript by himself, without interacting with the prover. In particular, this implies that the transcript is not convincing for any other party.

There are two types of interactive proofs [2]: proofs of a mathematical statement and proofs of knowledge. A proof of knowledge proves that Peggy knows a value satisfying a

certain predicate (a witness). Often a proof of a mathematical statement (e.g. that a number is a square modulo an RSA modulus) is carried out as a proof of knowledge of a witness for the statement (i.e., of a square root).

II. ZERO KNOWLEDGE PROTOCOL

A. Main Proposal

P (the prover) had some secret information and wanted to prove V (the verifier) by taking other proof process without revealing anything other than the fact that it knows in order to prevent the confidential information from leaking to anyone (including V or any other third party). We call this technology as zero knowledge proof (ZKP) [4] which can achieve the purpose of proof without revealing anything. This method can be a good solution for proving mutual identity.

In Zero Knowledge protocols [4], a Prover tries to prove knowledge of a secret to a Verifier without revealing the secret itself. The Verifier can ask questions to find out if the Prover really knows the secret. It is impossible for the Verifier to discover information about the secret even if he doesn't follow the rules of the protocol. An Eavesdropper is a third party that listens to the conversation and does not able to learn anything about the secret, or convince somebody else that he knows the secret if the protocol is secure. There is also a malicious user able to send, modify or destroy messages. A good protocol should be resistant against this user. A protocol has to consider cases that both Peggy and Victor may have malicious intentions as well. Peggy might try to cheat Victor into accepting a false statement, and Victor might try to get information to use in the future for personal advantage.

A good scheme must be built by taking the following factors into account:

1. If Peggy does not know the secret information, she is unable to pretend to have such knowledge. Many rounds of the protocol should assure that (with probability close to 1) she couldn't cheat Victor.
2. Victor is able to convince himself that Peggy knows the secret, but he is unable to get any additional information, which could allow him to convince somebody else that he knows the secret. In specific he cannot find out anything from the protocol that he could not learn without asking Peggy direct questions. From this concept comes the name of this approach.

B. Example investigation

Research and Analysis on Vulnerability Assessments in Cyber Security

B. Madhu

Assistant Professor

Department of Computer Science and engineering
Bharat Institute of Engineering and Technology
Hyderabad, Telangana

K. Bhaskar

Assistant Professor

Department of Computer Science and engineering
Bharat Institute of Engineering and Technology
Hyderabad, Telangana

Abstract — Now a day's most of the people are using the internet to transform the data. If people are sending confidential data without security there is a chance to hackers to capture the confidential data. This paper mainly concentrates on identification of vulnerabilities and exposures in the organization. The key element of the vulnerability Analysis is properly defining the impact of loss and vulnerability. Vulnerability Analysis is a powerful proactive process for securing the enterprise network. With this vulnerability assessment potential Security holes are fixed (Identified) before they become problematic. In this issue most of the organizations are inviting the security analysts to solve the fixed problems in the enterprise networks.

Keywords: Vulnerability analysis, Exposures, Countermeasures

I. INTRODUCTION

In general Vulnerability is used to identify weakness of the organization, it is a process that defines, identifies and classifies the security holes in a computer, network and infrastructure. In addition, Vulnerability analysis can forecast the effectiveness of proposed countermeasures and evaluate their actual effectiveness after they are put into use. This paper mainly concentrates on identification of vulnerabilities and exposures in the organization. Cyber security mainly focuses on focuses on protecting computers, networks, programs and data from unintended or unauthorized access, change or destruction. Cyber security for the power grid is an emerging area of research. Efforts by International Electrotechnical Commission Technical Council (IEC TC 57) on power systems management and associated information exchange have advanced communication protocols with stronger encryption and authentication mechanisms. Specifically, this has been proposed in IEC62351 for data and communication security that assures access to sensitive power equipment and provides higher reliability with audit capabilities [1]. They allow verification and evaluation of potential threats. Besides the power industry standards, control system standards applicable to oil and gas have been reported [2]. The main contribution of this paper is a vulnerability assessment is control of reducing the risks in the organization. The proposed countermeasures are very useful in cyber security, with this we can reduce the severity of loss. Countermeasures can include technical or operational control change to physical environment of the organization and also we can estimate whether the controls are preventive or detective.

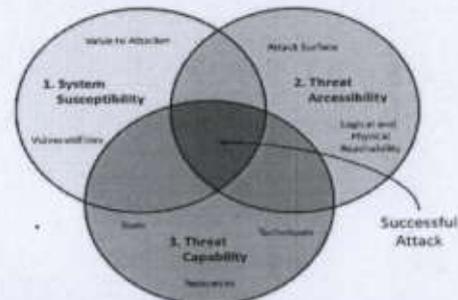


Fig 1: Vulnerability Assessment

Types of Vulnerability Assessments and Tools:

Generally the vulnerability Assessment can be categorized in to 6 categories, with the help of these the security analyst can perform the scanning in the organization.

1. **Active Assessment:** Used to scan the network using network scanner to find service and vulnerabilities.
2. **Passive Assessment:** It is a technique to change the network route to find vulnerabilities in the organization.
3. **Host based Assessment:** This is a sort of security check carried out through a configuration level test through command line.
4. **Internal Assessment:** It is a one kind technique to scan the internal architecture in the organization [3] to find out the exploit and vulnerabilities.
5. **External Assessment:** This is used to assess the network from a hacker point of view to find exploits and vulnerabilities are available to the outside world.
6. **Application Assessment:** This category is used to tests the web server infrastructure for any misconfiguration in the organization.

II. ARCHITECTURE

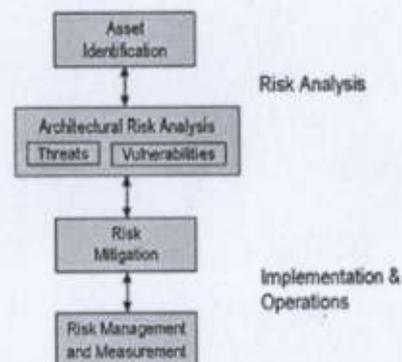


Fig 2: Vulnerability Assessment Architecture

A KDD Framework for Multi Dimensional Home Interview Survey Data

Sesham Anand
Associate Professor, Dept of CSE
M.V.S.R Engineering College
Hyderabad
asesham@gmail.com

Dr. P. Padmanabham
Professor, Dept. of CSE, BIET,
Hyderabad,
padmanabham46@gmail.com

Dr. A. Govardhan
Principal & Executive Council
Member
JNTU, Hyderabad,
govardhan_cse@yahoo.co.in

Abstract— This paper develops a new framework of KDD process for Home Interview Survey (HIS). All the steps of KDD are taken and applied on the data. The main aim is to give the transportation experts a procedure which when used will aid in proper identification. All the steps have been illustrated by applying all the steps on a real world HIS data with proper results and comparisons. It also recommends a series of steps when followed will achieve the desired results.

Keywords: KDD, HIS, Pre Processing

1. INTRODUCTION

This section introduces the contributions made as part of the research work done. The whole work is described in a series of steps which is summarized as follows. Initially the data is described of the Household Survey data in terms of its variables and instances used. Then, identification of the problems in the dataset and corresponding pre-processing on data is shown. A procedure for pre-processing is explained. Because of the multidimensional nature of the data, applying Principal Components Analysis and Factor Analysis has reduced the dimensionality. Subsequently, the factor scores are identified and interpretation of those factors is made.

Afterwards, exploratory data mining is done by applying clustering using k-Means on the dataset. Subsequently, we identified number of clusters as four in consultation with the domain expert and interpreted all the clusters. We compare the clustering by applying on original dataset and then on factor scores.

A. Purpose of Research

This data is employed for analyzing existing travel patterns and behaviour, to help in the calibration of Travel demand Models. These models are then employed to estimate and predict the future travel demand. Thus transportation demand and supply conditions can be critically examined and new facilities can be suggested.

B. KDD Framework

The main aim of this paper has been to develop a new KDD framework specific to HIS dataset. All the steps of KDD have been adapted and suitable techniques have been recommended for each step.

The framework is shown in Fig.1. Rest of the paper discusses all the steps in detail elaborating on the work done.

2. KDD FRAMEWORK FOR HIS DATA

A. Description

The travel patterns in the form of "Number of Trips" performed by each member in a city, from a identifiable location in the city called "Origin" to another identifiable location called "Destination", together with the trip makers "Socio Economic characteristics", is the primary bed block based on which future predictions of travel are made [1]. These predicted travel patterns are the main source of information for identifying, planning, locating, designing, justifying various transportation projects. The main purpose of organizing such a large scale Home Interview Surveys was to understand the present day travel patterns and relate these travel patterns to the Socio-Economic characteristics of Trip makers, the type of activity after reaching the end of trip, and to the transportation supply provided in the form of road network, public transportation facilities etc. While so doing several socio economic and vehicle ownership properties are captured through a set of questions administered on them.

The principal method of obtaining all these travel attributes from road users is to elicit from them either directly by interviews or obtaining indirectly by phone call or through written reply by mail or e-mail [1]. The principal methods of intercepting the transport users are either at the "Beginning of trip called Origin end", or at "End of called Destination end", or "En route called Road side survey" of the travel. Home Interview survey among other surveys is the most important survey for any comprehensive transportation study. Representative samples of dwelling units are selected and personal interviews are conducted to obtain travel characteristics for all members of the household by all modes of transportation on one full normal working day.

The main issue is to capture attributes that are relevant, causative and should not contain noise or redundancy. Data mining techniques can help in identifying variables that contain relevant information for use in the models. We now present the data that is normally collected through Home Interview Surveys.

Internet of Things (IoT): A Perception, Modern Trend Applications, And Future Directions

Nagaraju Annam¹, Dr. J. Bhagwan Reddy², Dr. Sardar Ali³

¹Associate Professor, Department of Electrical & Electronics Engineering, BIET, Hyderabad, India

²Professor, Department of Electrical & Electronics Engineering, NMREC, Hyderabad, India

³Professor, Department of Electrical & Electronics Engineering, RITS, Hyderabad, India

Email: rajunagaeecc219@gmail.com, drjbhagwanreddy9@gmail.com, dr.saliswcc@gmail.com

Abstract: At present trend, extensive attention has been paid to Internet of Things. Internet of things folds out entirely new maps to explore, across and between industries, society and people. In this paper the concept and implementation of Internet of Things were introduced firstly. This paper aims to provide a comprehensive overview of the IoT scenario and reviews its enabling technologies and the sensor networks. The key technologies of Internet of Things were mentioned, including RFID technology, sensor network and detection technology, intelligent technology and Nano-technology. This paper narrate the future prospects of Internet of Things technology, as well as its facilitating role to human life, industrial development, power sector.

The applications of IOT are not limited to particular fields, but span a wide range of applications such as energy systems, homes, industries, cities, logistics, health, agriculture and so on.

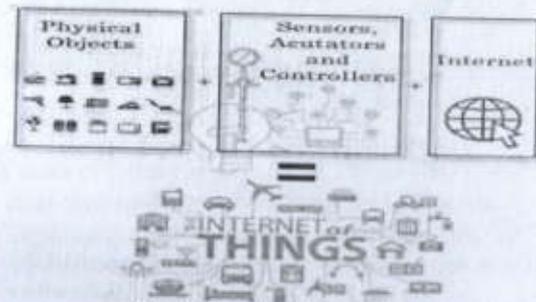


Fig 2. Applications of IOT

Keywords: IOT, nergy, Automation, Smart grid

1. INTRODUCTION

Several recent digital and smart manufacturing technologies, and design innovations besides the internet connectivity origins Internet of Things (IOT) to become a revolutionary technology in transforming many areas of modern day living.

Though the inception of IOT was started in the context of supply chain management, it has been evolved into a wide range of applications such as transport, utilities, industrial automation, healthcare, building and home automation, etc. The smart connectivity with existing networks though IOT results in ubiquitous, computer sense information without the aid of human intervention.

The goal of IOT is not only just connecting things such as machines, devices and appliances, but also allows the things to communicate, exchange control data and other necessary information while executing applications towards machine goal.

It consist of IOT devices that have unique identities and capable of performing remote sensing, monitoring and actuating tasks. These devices capable of interacting with one another directly or indirectly and also data collection are performed locally or remotely via centralized serves or cloud based applications. These devices can be data collection devices to which various sensors are attached such as temperature, humidity, light, etc. or they can be data actuating devices to which actuators are connected such as relays.

It is a global network in which computers, sensors and actuators are interconnected through internet protocols. For example, consider the figure below in which a computer communicates with a device consisting of sensor, over the internet. The TCP/IP protocol is used as internet protocol in such cases.

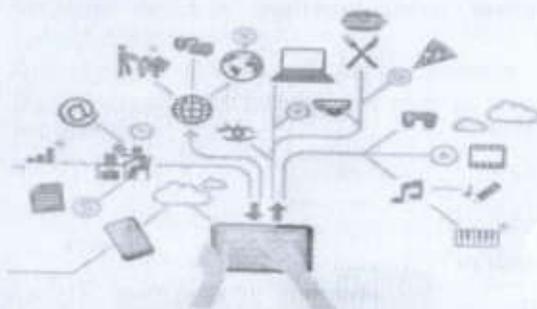


Fig 1: Smart connectivity with IOT

1.1 Internet of Things (IOT):

Interne of Things is an emerging paradigm of internet connected things that allows the physical objects or things to connect, interact and communicate with one another similar to the way humans talk through web in today's environment. It connects systems, sensors and actuator instruments to the broader internet.

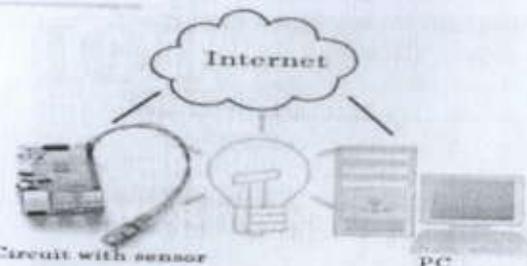


Fig 3. Interconnection of actuators/ sensors over internet protocols

Reliability Cost/Worth Assessment of Generating Systems Incorporating Solar PV / Wind Energy

NAGARAJU ANNAM¹, J. BHAGWAN REDDY², SARDAR ALI³

¹Department of Electrical and Electronics Engineering, Bharat Institute of Engg. & Tech, Hyderabad, India

²Department of Electrical & Electronics Engineering, Nalla Malla Reddy Engg. College, Hyderabad, India

³Department of Electrical & Electronics Engineering, Royal Inst. of Technology & Science, Hyderabad, India

Email: rajunagaeee219@gmail.com, drjbhagwanreddy9@gmail.com, dr.saliswcc@gmail.com

Abstract: Today's world needs uninterrupted qualitative electrical power with high reliability. Since the renewable sources such as wind and solar energy provide stochastic power output, it is crucial to predict and control absolutely. Energy storage is expected to be correlative with them to maintain stability and reliability of system. The reliability evaluation models of wind power, solar photovoltaic power and energy storage which can be used in sequential Monte Carlo simulation are developed. The inherent characteristics that are deterministic to chronological variation of power output are incorporated during modelling. It includes wind speed, solar radiation, energy conversion performance and charge/discharge constraints of energy storage. Reliability evaluation methods are preferred for assessment of dependable capacities associated with system reliability indices to determine specific information for the long-term planning purposes. In this paper Evaluation techniques for performing reliability cost/worth studies on a power system using wind energy, solar energy and energy storage systems are presented. Two major methods designated as the optimal utility cost method and the reliability cost/worth method are developed and discussed.

Keywords: Renewable, Reliability, Solar PV, Wind

1. Introduction:

Since the fuel cost with conventional generation is continuously escalating, the utilization of renewable energy resources such as wind and solar energy for electric power supply has received considerable attention in recent years. Wind and solar energy will become major sources for power generation in the future because of their environmental, social and economic benefits, together with public support and government incentives.

The wind and sunlight are, however, unstable and variable energy sources, and behave far distinctly than conventional sources. Energy storage systems are often required to smoothen the fluctuating nature of the energy conversion system especially in small isolated applications. This paper is focused on the development and application of reliability and economic benefits assessment associated with incorporating wind energy, solar energy and energy storage in power generating systems. A probabilistic strategic approach using sequential Monte Carlo simulation was employed in this paper and a number of analyses were conducted with regards to the adequacy and economic assessment of generation systems having solar energy, wind energy, and energy storage. The evaluation models and techniques incorporate risk index distributions and different operating strategies associated with diesel generation in small isolated systems. Deterministic and probabilistic techniques are combined to provide useful adequacy indices for small isolated systems that include renewable energy and energy storage.

1.1 Power System Reliability Evaluation

The Objective function of a modern power system is to deliver its customers with electrical energy as economically as possible and with an acceptable level of reliability [1]. Electric power utilities therefore must provide a reasonable assurance of quality and continuity of supply to their customers. The level of assurance depends on the needs of the customer and the associated cost of providing the service. In general, high reliable systems involve large financial investment. In practice it is unrealistic to try to design a power system with a hundred percent reliability and hence, power system planners and engineers always try to achieve a reasonable level of reliability at an affordable cost. It is evident that reliability and related cost/worth evaluation are important aspects in power system design, planning and operation.

The reliability of a power system is a measure of the overall ability of the system to perform its basic adequate function. The concept of adequacy is generally treated to be the existence of sufficient facilities within the system to satisfy the load demand. Hence Adequacy is considered to be associated with static conditions which do not include system disturbances.

2. Reliability Cost/Worth Modelling and the Effects of Wind Energy, Solar Energy and Energy Storage Utilization in Electric Power Systems

The major focus in Electrical power system planning in general is directed to the areas of reliability and the investment/operation alternatives associated with determining a desired level of reliability.

Experimental Design of Wind Turbine with an Airfoil Embedded Multiple Generators

Orville Damaso Cota, *Member, IEEE*, Nallapaneni Manoj Kumar, *Member, UAMAE*

Abstract—A feasible wind turbine design for harvesting wind energy with multiple generators is described in this paper. Concepts of generator principle, air foil and its mechanical design are used for framing a feasible theory on DC wind turbine with airfoil embedded AC generators. NACA 0010 Airfoil series with favorable drag and mechanical strength is selected for designing wind turbine blades with hub as per the dimensions. An outer frame which can hold a DC generator and the windings for AC generators is designed. DC generator is placed in the hub region of wind turbine acts as primary generator. Multiple permanent magnets were placed in the tip of an airfoils and copper windings mounted for the outer frame acts as multiple AC generators when the turbine is in motion, acts as secondary generation. This entire setup is first designed in Solid Works, then it is fabricated as an experimental model with PLA polymer material using 3-D printer. Finally, the prototype is analyzed in the subsonic wind tunnel and also the power generation analysis is carried out in real time conditions. This shows power generation is possible in both DC and other AC multiple generators which is considerably low. However the design is feasible and it can be enhanced for generating wind energy.

Index Terms— Wind turbine, airfoil, multiple AC generators, DC wind turbine, subsonic wind tunnel.

I. INTRODUCTION

WIND energy, one of the cleanest renewable energy sources whose applications are ranging from windmills to pumping water, sailing boats and finally for the power generation [1]. Technological evolution of wind energy exploitation was dated to few centuries ago [2]. With increasing in oil prices and environmental problems related to climate change, green energy generation has given importance especially for utilizing wind energy which later became a part of energy consumption [3].

In recent years we have seen many new designs for wind energy harvesting [4-6]. In this paper an experimental design of wind turbine with multiple generators is illustrated.

Orville Damaso Cota was with the Karunya University, Coimbatore-641114, India, during the development of this work. (Phone: +91 90428 87372; (e-mail: mr.o.cota@iecc.org).

Nallapaneni Manoj Kumar, is with Electrical & Electronics Engineering Department, Bharat Institute of Engineering & Technology, Hyderabad-501 510, India (Phone: +91 94919 25258; (e-mail: nallapanenichow@gmail.com, nmanoj@biet.ac.in).

II. EXPERIMENTAL DESIGN

Wind turbine with multiple generators concept is framed from the basic concept of electrical generator principle [7]. In this work, design is almost takes the shape of existing traditional wind turbines. All the components like hub, blades are seen in this design too. Wind turbine illustrated in this paper has 6 airfoil blades mounted on a hub and a DC generator is connected. This structure generates DC power, apart from this, multiple AC generators were built in existing structure using 6 airfoils by creating an extra outer support holding from hub in the circular shape whose diameter is a bit higher than the turbine blades swept area. Outer support is wired with copper coil which acts as a conductor. Permanent magnets were inserted in the tip of the blades by making a provision for magnets, see Fig. 1. These magnets cuts the conductor coils during the turbine rotation to generate power.

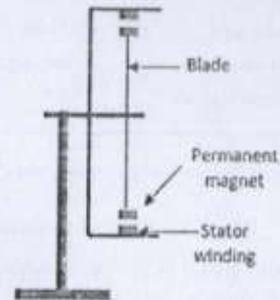


Fig. 1. Schematic view of wind turbine with airfoil embedded generators

After framing the theoretical concept, NACA 0010 series airfoil co-ordinates are used to design wind blades in Gambit software [8]. Wind blades designed in Gambit are exported to solid work to further design entire system that can be seen in Fig. 2. Detailed design specifications of the system are tabulated in TABLE I.

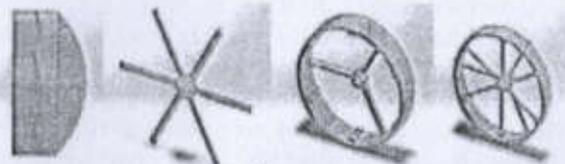


Fig. 2. Solid works design of hub, wind blades and outer frame

Modelling And Control of Infinite Bus Interfaced Solid Oxide Fuel Cell Power Supply System

Bhogula Navothana¹, Nallapaneni Manoj Kumar²

Department of Electrical & Electronics Engineering
Bharat Institute of Engineering & Technology
Mangalpally, Ibrahimpatnam, Ranga Reddy-501 510, India
navoethna9999@gmail.com, nallapanenichow@gmail.com

Abstract:

In this paper, solid oxide fuel cell (SOFC) is opted as distributed energy resource due to its benefits over the other energy renewable energy resources. First, a dynamic model of solid oxide fuel cell is modelled based on its electrochemical reactions. Fuel cell that is modelled is connected to the utility grid i.e. infinite bus using power electronic converters. The interconnection of SOFC with a DC-AC voltage source inverter for interfacing with the infinite bus is modelled. A control circuit is designed using hysteresis current controller to control the voltage source inverter by taking the reference derived from the infinite bus to meet load demand. The proposed system is mathematically modelled, designed and simulated in Matlab Simulink. The simulation results obtained shows that the control scheme designed for the inverter functions accurately, with change in the load or power demand.

Keywords- Distributed generation, Solid oxide fuel cell, dynamic modelling of SOFC, voltage source inverter, hysteresis current controller, infinite bus.

1. INTRODUCTION

Increase in power demand due to advancements in utility restructuring, technology, energy and environmental policies and awareness were given an opportunity for the practice of green measures while generating power in electrical power industries [1]. Among these measures, the use of renewable resource based power generation became more prominent in the present century.

In this regard, distributed generation is found to be most suitable way of meeting the increased energy demand. The various green energy technologies available for distributed generation are wind energy conversion systems, solar photovoltaic systems, micro-turbines, fuel cells stack, biomass energy systems, geothermal energy, ocean energy etc. Among these energy sources, each source has its own advantages and disadvantages in terms of conversion efficiencies, life time and in other factors. In recent years, photovoltaic, wind energy, biomass and micro water turbine based distribution generation has been widely used [2]. But they have some drawbacks. Solar power is only generated during the day time [3], wind power is highly variable due to wind speeds, [4] biomass energy also not feasible in all the places due to lack of sufficient resources [5] and water turbine power is only suitable in the places where water resource presence at

suitable heads are available [6]. In this paper fuel cells are opted as distributed energy resources due to its favorable conditions in terms of conversion efficiency, life span, compact in size, noise free operation etc. [7]. Here, SOFC fuel cell is used and it is interfaced with utility grid using power converter circuits [8]. The detailed modelling and analysis of the system is briefly described in this paper.

2. SOLID OXIDE FUEL CELL (SOFC)

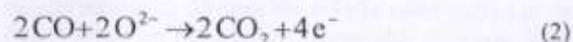
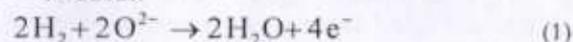
Solid oxide fuel cell is abbreviated as SOFC. It is one of the types in fuel cells, which is widely used in commercial application of power generation. It operates at very high temperatures when compared to other fuel cells. Fuel to energy conversion ratio of SOFC is around 45-50 % [1]. The construction of any fuel cell is similar which consists of two electrodes and electrolyte. The only variations among fuel cell construction is the use of material for electrode and electrolyte. SOFC has two electrodes i.e. anode, made of nickel-zirconia cermet and cathode, made of strontium doped lanthanum manganite. The electrolyte is a non-porous ceramic solid oxide (yttria stabilized zirconia) which is capable for ion conducting. Hence it can be referred as solid state device. As it is solid in nature, it can be constructed in different geometric shapes like tubular, flat plate and monolithic [9, 10].

2.1 Operation of Solid Oxide Fuel Cell

Unlike other fuel cells, SOFC also needs the fuel as input source. But the major advantage of SOFC is flexibility of input fuel (H₂, CO, CH₄). Pure Hydrogen gas or hydrogen mixed with other carbon based fuels like CO and CH₄ in appropriate ratios is given as input to the anode. Oxygen is given at the cathode side.

The electrochemical reduction will takes place at the cathode. This reduction release oxide ions. The oxide ions pass through the solid oxide layer of electrolyte to the anode where oxidation of hydrogen take place to release water. For SOFC electrochemical reactions, refer to the following Equations. 1, 2, 3 & 4. [1, 10, 11].

At anode:





Available online at www.sciencedirect.com

ScienceDirect

Procedia Computer Science 93 (2016) 956 – 966

Procedia
Computer Science

6th International Conference on Advances in Computing & Communications, ICACC 2016, 6-8 September 2016, Cochin, India

Fossil Fuel to Solar Power: A Sustainable Technical Design for Street Lighting in Fugar City, Nigeria

Nallapaneni Manoj Kumar^a *, Anup Kumar Singh^b, and K. Vinay Kumar Reddy^c

^a*Department of Electrical & Electronics Engineering, Bharat Institute of Engineering & Technology, Mangalpally, Ibrahimpatnam, Ranga Reddy-501 510, Telangana State, India*

Abstract

This paper presents a study on replacing the usage of fossil fuel energy with solar energy for lighting the dark and depressing streets of Fugar city, Nigeria. Fugar city is quite populated area without any street lights, almost every house use fossil energy to light up the streets which they access. The main objective is to select best solution among diesel generators, grid electricity, on-site solar photovoltaics and off-site solar photovoltaics. In order to have a sustainable solution for lighting up 210 LED street lights, the four proposed solutions were analyzed based on their technical feasibility, environmental parameters like CO₂ emission analysis and cost analysis with simple payback periods. Analysis showed that, on-site solar photovoltaics is best among the other three proposed solutions in terms of technical and financial feasibility with almost negligible emissions leading to sustainability.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the Organizing Committee of ICACC 2016

Keywords: Fossil fuels; Diesel generators; solar energy; on-site solar photovoltaics; off-site solar photovoltaics; LED street lights

1. Introduction

Energy, one of the most important needs of human life. It helps in achieving social welfare and economic development among the nations. Most of the countries depends on fossil fuels for their energy needs. Considering

* Corresponding author. Tel.: +91 94919 25258;

E-mail address: nallapanenichow@gmail.com, nmanoj@biet.ac.in.



Available online at www.sciencedirect.com

ScienceDirect

Procedia Computer Science 93 (2016) 956 – 966

Procedia
Computer Science

6th International Conference on Advances in Computing & Communications, ICACC 2016, 6-8 September 2016, Cochin, India

Fossil Fuel to Solar Power: A Sustainable Technical Design for Street Lighting in Fugar City, Nigeria

Nallapaneni Manoj Kumar^{a,*}, Anup Kumar Singh^b, and K. Vinay Kumar Reddy^c

^{a,b,c} Department of Electrical & Electronics Engineering, Bharat Institute of Engineering & Technology, Mangalpally, Ibrahimpatnam, Ranga Reddy-501 510, Telangana State, India

Abstract

This paper presents a study on replacing the usage of fossil fuel energy with solar energy for lighting the dark and depressing streets of Fugar city, Nigeria. Fugar city is quite populated area without any street lights, almost every house use fossil energy to light up the streets which they access. The main objective is to select best solution among diesel generators, grid electricity, on-site solar photovoltaics and off-site solar photovoltaics. In order to have a sustainable solution for lighting up 210 LED street lights, the four proposed solutions were analyzed based on their technical feasibility, environmental parameters like CO₂ emission analysis and cost analysis with simple payback periods. Analysis showed that, on-site solar photovoltaics is best among the other three proposed solutions in terms of technical and financial feasibility with almost negligible emissions leading to sustainability.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the Organizing Committee of ICACC 2016

Keywords: Fossil fuels; Diesel generators; solar energy; on-site solar photovoltaics; off-site solar photovoltaics; LED street lights

1. Introduction

Energy, one of the most important needs of human life. It helps in achieving social welfare and economic development among the nations. Most of the countries depends on fossil fuels for their energy needs. Considering

* Corresponding author. Tel.: +91 94919 25258;

E-mail address: nallapanenichow@gmail.com, nmanoj@biet.ac.in.



Available online at www.sciencedirect.com

ScienceDirect

Procedia Computer Science 93 (2016) 956 – 966

Procedia
Computer Science

6th International Conference on Advances in Computing & Communications, ICACC 2016, 6-8 September 2016, Cochin, India

Fossil Fuel to Solar Power: A Sustainable Technical Design for Street Lighting in Fugar City, Nigeria

Nallapaneni Manoj Kumar^a *, Anup Kumar Singh^b, and K. Vinay Kumar Reddy^c

^a*Department of Electrical & Electronics Engineering, Bharat Institute of Engineering & Technology, Mangalpally, Ibrahimpatnam, Ranga Reddy-501 510, Telangana State, India*

Abstract

This paper presents a study on replacing the usage of fossil fuel energy with solar energy for lighting the dark and depressing streets of Fugar city, Nigeria. Fugar city is quite populated area without any street lights, almost every house use fossil energy to light up the streets which they access. The main objective is to select best solution among diesel generators, grid electricity, on-site solar photovoltaics and off-site solar photovoltaics. In order to have a sustainable solution for lighting up 210 LED street lights, the four proposed solutions were analyzed based on their technical feasibility, environmental parameters like CO₂ emission analysis and cost analysis with simple payback periods. Analysis showed that, on-site solar photovoltaics is best among the other three proposed solutions in terms of technical and financial feasibility with almost negligible emissions leading to sustainability.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the Organizing Committee of ICACC 2016

Keywords: Fossil fuels; Diesel generators; solar energy; on-site solar photovoltaics; off-site solar photovoltaics; LED street lights

1. Introduction

Energy, one of the most important needs of human life. It helps in achieving social welfare and economic development among the nations. Most of the countries depends on fossil fuels for their energy needs. Considering

* Corresponding author. Tel.: +91 94919 25258;

E-mail address: nallapanenichow@gmail.com, nmanoj@biet.ac.in.



Available online at www.sciencedirect.com

ScienceDirect

Procedia Computer Science 93 (2016) 1017 – 1023

Procedia
Computer Science

6th International Conference On Advances In Computing & Communications, ICACC 2016, 6-8
September 2016, Cochin, India

Vertical axis wind turbine: Aerodynamic modelling and its testing in wind tunnel

Kalakanda Alfred Sunny^{a,*}, and Nallapaneni Manoj Kumar^b

^aDepartment of Aerospace Engineering, Karunya University, Coimbatore-641 114, Tamil Nadu, India

^bDepartment of Electrical & Electronics Engineering, Bharat Institute of Engineering & Technology, Ranga Reddy-501 510, Telangana, India

Abstract

This paper presents aerodynamic modelling, fabrication and the performance evaluation of vertical axis wind turbine (VAWT). Aerodynamic modelling of VAWT is designed using software tools by considering NACA0012 airfoil whose chord length is 0.12 m. Aluminum material based light weight 3 bladed practical prototype model of VAWT having rotor diameter and rotor height as 0.36 m and 0.40 m respectively is fabricated. This practical prototype model is tested in subsonic wind tunnel to analyze the performance parameters like power in the wind, mechanical power at turbine shaft, tip speed ratio (TSR) and power coefficient. The rotor is tested under different wind speeds ranging from 4.38 m/s to 22.38 m/s, test results shows the reliable and efficient performance.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the Organizing Committee of ICACC 2016

Keywords: Wind turbine; Vertical axis wind turbine (VAWT); Aerodynamic Modelling; Wind tunnel testing; Tip speed ratio.

1. Introduction

Renewable energy power generation has gained acceptable level of attention in the present day energy sector, even though the majority contribution to the energy sector is from fossil fuels like-coal, natural gas and other fossil fuels¹. Among renewable power generation, wind energy has gained its importance and marked as cheapest and freely

* Corresponding author. Tel.: +91 95-97-139760; +91 94-91-925258.
E-mail address: alfredsunny@karunya.edu

Isolated Subcarrier Modulation Schemes Approach for LTE System with Effective PAPR Bandwidth Application in UPLINK and DOWNLINK

Mr. Chandika Mohan Babu
 Assistant Professor, ECE
 Bharat Institute of Engineering and Technology
 Hyderabad
 mohantitkgp08@gmail.com

Mr. K. Srinivas Rao
 Associate Professor, ECE
 Bharat Institute of Engineering and Technology
 Hyderabad
 academic.ece@biet.ac.in

Abstract-Long term evolution (LTE) is considered to be a important technology for the next generation of cellular telecommunications to enhance the data rate and bandwidth applications. The 3rd Generation Partner Ship Project (3GPP) produced the first version of WCDMA standard in the end of 1999, which is the basis of the Universal Mobile Telephone System (UMTS) deployed in the field today. This release, called release 99, contained all the basic elements to meet the requirements for IMT-2000 technologies. Release 5 introduced the High Speed Downlink Packet Access (HSDPA) in 2002, enabling now more realistic 2 Mbps and even beyond with data rates up to 14 Mbps. Further Release 6 followed with High Speed Uplink Packet Access (HSUPA) in end of 2004, with market introduction expected in 2007. The objective of Evolved UTRA is to develop a framework for the evolution of the 3GPP radio-access technology towards wider bandwidth, lower latency and packet-optimized radio-access technology with peak data rate capability up to 100 Mbps. When we do multicarrier transmission results in higher peaks in the RF Transmission. High PAPR signal degrades the PA (Power Amplifier) efficiency because PA has to operate in high back-off mode. When we consider the battery of UE which will drain faster due to PA which is a very critical problem in uplink this encourages the device to perform the different techniques which can reduce the PAPR. The result are performed using different SCFDMA scheme with effective quality factor of filter. We conclude maximum transmission can be up to 20 MHz and Minimum Transmission upto 180MHz considering the trade off between PAPR and Out Band Distortion.

Keywords: LTE, UMTS, HSPDA, OFDM, PAPR, SCFDMA.

1. INTRODUCTION

LTE offers several important benefits for consumers and operators Performance and capacity - One of Requirements on LTE are to provide downlink peak rates of at least 100Mbit/s. The technology allows for speeds over 200Mbit/s LTE supports flexible carrier bandwidths, from below 5MHz up to 20MHz. LTE also supports both FDD (Frequency Division Duplex) and TDD (Time Division Duplex). Ten paired and four unpaired spectrum bands have so far been identified by 3GPP for LTE. And there are more bands to come. This means that an operator may introduce LTE in 'new' bands where it is easiest to deploy 10MHz or 20MHz carriers, and eventually deploy LTE in all bands where it is easiest to deploy 10MHz or 20MHz carriers, and eventually deploy LTE in all bands.

2. SCFDMA IN UPLINK

While PAPR is a major concern in portable terminals, Information throughput is an even more important indicator of system performance. As in OFDMA, throughput in SC-FDMA depends on the way in which information symbols are applied to subcarriers. There are two approaches to apportioning subcarriers among terminals. In localized SC-FDMA (LFDMA), each terminal uses a set of adjacent subcarriers to transmit its symbols. Thus the bandwidth of an LFDMA transmission is confined to a fraction of the system bandwidth. The alternative to IFDMA is distributed SC-FDMA in which the subcarriers used by a terminal are spread over the entire signal band. One realization of distributed SC-FDMA. [1]

| Channel bandwidth [MHz] | 1.4 | 3 | 5 | 10 | 15 | 20 |
|--|------|------|------|-------|-------|-------|
| Number of resource blocks (N_{RB}) | 6 | 15 | 25 | 50 | 75 | 100 |
| Number of occupied subcarriers | 72 | 180 | 300 | 600 | 900 | 1200 |
| IDFT(T_s)/DFT(T_s) size | 128 | 256 | 512 | 1024 | 1536 | 2048 |
| Sample rate [MHz] | 1.92 | 3.84 | 7.68 | 15.36 | 23.04 | 30.72 |
| Samples per slot | 960 | 1920 | 3840 | 7680 | 11520 | 15360 |

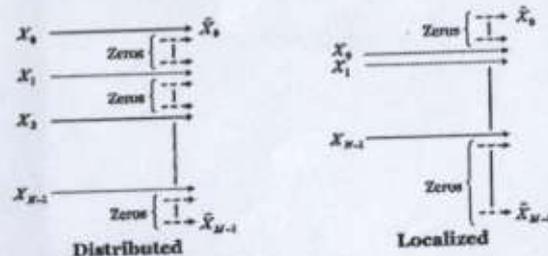


Figure 1: Sub-Carrier allocation Methods

SC-FDMA is interleaved IDMA (IFDMA) where occupied subcarriers are equidistant from each other. Figure 1 shows the two arrangements in the frequency domain. There are three terminals, each transmitting symbols on four subcarriers in a system with a total of 12 subcarriers. In the distributed arrangement, terminal 1 uses subcarriers 0, 3, 6, and 9; with LFDMA it uses subcarriers 0, 1, 2, and 3.[7]

New Technologies To Improve Antijam Performance of Commercialsatcoms to Bring Them on Par With Milsatcoms

Prof. G. Kumaraswamy Rao¹, Sri J. Shanker Rao²

¹ Director R&D, Bharat Institute of Engg. & Technology, TS 501510
(Ex. Director DLRL, Hyderabad)
rao_gksdlrldrld@yahoo.co.in

²Scientist 'H' & Associate Director, DLRL, Hyderabad

Abstract:

Middle East wars, Kosovo wars were fought tens of thousands miles away from mother land. Huge war information was communicated between moving fighting units and central command posts. MILSATCOMS which are Antijam, with Low Probability of Interception and Detection and Secure Encryption were used. MILSATCOMS are prohibitively expensive. This paper discusses features that can be incorporated on COMMERSATCOMS to bring them partially on par with MILSATCOMS.

Key words: MILSATCOM, COMMERSATCOM, Antijam, Low Probability of Interception, Secure Encryption, Bent Pipe Transponder, Regenerative Transponder.

I. INTRODUCTION

For a success in a battle field, effective Communication is vital. It forms an integral part of fighting plan. Today's wars are fought in remote areas of the world where Communication infrastructure is absent. The middle east wars, Gulf wars, Kosovo wars relied on high technology weapons and on reliable, secure communication. Huge war information like voice, data, fax, video, imagery was passed on between moving fighting units and central command and control posts which were located sometimes tens of thousands of kms distances away. 21st war technologies using unmanned aerial vehicles (VAV) precision guided weapons, Electronic Warfare Intelligence, surveillance centres etc. generate huge amount of data. They can be voice, data, fax, video, imagery etc. They need to be communicated with utmost security and with high data rates. Military SATCOMS satisfy these requirements. This is the only means of Communication in the complex war scenario. Military SATCOMS are designed with special architectures, they are nuclear hardened and possess antijam capabilities, low probability of detection and interception, secure encryption etc. which are not found in Commercial SATCOMS. As such they are expensive, sometimes 3 to 4 times the cost of COMMERSATCOMS. However the requirement of MIL SATCOMS is for a short period during the war and time of necessity is unpredictable. Secondly incorporation of the features in COMMERSATCOMS leads to degradation in operational efficiency. For example

lengthy, robust encryption algorithms reduces the data throughout rates. This may increase the customer user cost. To design, build and launch a MILSATCOM, it takes 4 to 5 years whereas a COMMERSATCOM can be launched in less than 2 years time. In order to overcome the above problems, two ways are suggested;

1. During the real conflict, some S are diverted to the place of conflict. However, COMMERSATCOMS are not designed to provide safety and secrecy of the information. During the war the data to be communicated is very huge. MILSATCOMS alone will not able to take the load. Critical data, where safety and security is vital, is transferred using MILSATCOM. Non critical data may be diverted for communication through COMMERSATCOMS.
2. With the far reaching advances in the VLSI technologies, it is now possible to incorporate some of the features of MILSATCOMS to be incorporated into the design of COMMERSATCOM without incurring much expenditure. For example COMMERSATCOMS presently use Bent Pipe Technology. By adopting regenerative transponders in the space segment, the anti jam capabilities can be enhanced considerably.

This paper discusses some of these feasible techniques to be incorporated into the new generation COMMERSATCOMS to bring them partially on par with MIL SATCOMS.

II. BACKGROUND HISTORY OF SATELLITES

Arthur C. CLARKE in 1945 postulated that a transponder moving at the speed of earth in space will look stationary for an observer on earth. In the year 1957, his postulation was proved when Soviet Union (Russia) launched world's first artificial satellite. With subsequent launches of Explorer, Score, Courier, Telesat, Syncom etc., it was established that global communication was possible. In 1964, U.S. decided to bifurcate the satellites as Civilian or Commercial Satellites and Military. Since the Defence needs are unique, different types of architecture is used. The series of Military Satellites are named as Defense Satellite Communication Systems (DSCS).

New Technologies To Improve Antijam Performance of Commercialsatcoms to Bring Them on Par With Milsatcoms

Prof. G. Kumaraswamy Rao¹, Sri J. Shanker Rao²

¹ Director R&D, Bharat Institute of Engg. & Technology, TS 501510
(Ex. Director DLRL, Hyderabad)
rao_gksdlrldrld@yahoo.co.in

²Scientist 'H' & Associate Director, DLRL, Hyderabad

Abstract:

Middle East wars, Kosovo wars were fought tens of thousands miles away from mother land. Huge war information was communicated between moving fighting units and central command posts. MILSATCOMS which are Antijam, with Low Probability of Interception and Detection and Secure Encryption were used. MILSATCOMS are prohibitively expensive. This paper discusses features that can be incorporated on COMMERSATCOMS to bring them partially on par with MILSATCOMS.

Key words: MILSATCOM, COMMERSATCOM, Antijam, Low Probability of Interception, Secure Encryption, Bent Pipe Transponder, Regenerative Transponder.

I. INTRODUCTION

For a success in a battle field, effective Communication is vital. It forms an integral part of fighting plan. Today's wars are fought in remote areas of the world where Communication infrastructure is absent. The middle east wars, Gulf wars, Kosovo wars relied on high technology weapons and on reliable, secure communication. Huge war information like voice, data, fax, video, imagery was passed on between moving fighting units and central command and control posts which were located sometimes tens of thousands of kms distances away. 21st war technologies using unmanned aerial vehicles (VAV) precision guided weapons, Electronic Warfare Intelligence, surveillance centres etc. generate huge amount of data. They can be voice, data, fax, video, imagery etc. They need to be communicated with utmost security and with high data rates. Military SATCOMS satisfy these requirements. This is the only means of Communication in the complex war scenario. Military SATCOMS are designed with special architectures, they are nuclear hardened and possess antijam capabilities, low probability of detection and interception, secure encryption etc. which are not found in Commercial SATCOMS. As such they are expensive, sometimes 3 to 4 times the cost of COMMERSATCOMS. However the requirement of MIL SATCOMS is for a short period during the war and time of necessity is unpredictable. Secondly incorporation of the features in COMMERSATCOMS leads to degradation in operational efficiency. For example

lengthy, robust encryption algorithms reduces the data throughput rates. This may increase the customer user cost. To design, build and launch a MILSATCOM, it takes 4 to 5 years whereas a COMMERSATCOM can be launched in less than 2 years time. In order to overcome the above problems, two ways are suggested;

1. During the real conflict, some S are diverted to the place of conflict. However, COMMERSATCOMS are not designed to provide safety and secrecy of the information. During the war the data to be communicated is very huge. MILSATCOMS alone will not able to take the load. Critical data, where safety and security is vital, is transferred using MILSATCOM. Non critical data may be diverted for communication through COMMERSATCOMS.
2. With the far reaching advances in the VLSI technologies, it is now possible to incorporate some of the features of MILSATCOMS to be incorporated into the design of COMMERSATCOM without incurring much expenditure. For example COMMERSATCOMS presently use Bent Pipe Technology. By adopting regenerative transponders in the space segment, the anti jam capabilities can be enhanced considerably.

This paper discusses some of these feasible techniques to be incorporated into the new generation COMMERSATCOMS to bring them partially on par with MIL SATCOMS.

II. BACKGROUND HISTORY OF SATELLITES

Arthur C. CLARKE in 1945 postulated that a transponder moving at the speed of earth in space will look stationary for an observer on earth. In the year 1957, his postulation was proved when Soviet Union (Russia) launched world's first artificial satellite. With subsequent launches of Explorer, Score, Courier, Telesat, Syncom etc., it was established that global communication was possible. In 1964, U.S. decided to bifurcate the satellites as Civilian or Commercial Satellites and Military. Since the Defence needs are unique, different types of architecture is used. The series of Military Satellites are named as Defense Satellite Communication Systems (DSCS).



189

CROSSTALK NOISE REDUCTION USING DRIVER SIZING OPTIMIZATION IN VLSI RC GLOBAL INTERCONNECTS USING 90NM PROCESS TECHNOLOGY

¹Vikas Maheshwari, ²Anushree

¹Deptt. Of ECE, Amity School of Engineering & Technology, Amity University Madhya-Pradesh, Gwalior, M.P., INDIA

²Deptt. of ECE, Hindustan College of Science and Technology, Mathura, U.P., INDIA

¹maheshhhwarivikas1982@gmail.com, ²anushree.ece@gmail.com

ABSTRACT

In this paper noise avoidance in closed form crosstalk noise model for on-chip VLSI RC interconnects using 2π model is presented. In this crosstalk noise model we consider the case when step input is applied to the aggressor which is adjacent to the victim net and further simplified it, then find out the closed form formulae for noise pulse width and noise amplitude for RC interconnect. Various noise avoidance approaches can be used for crosstalk noise reduction. This paper presents crosstalk noise reduction using driver sizing optimization. Sensitivity expressions of driver resistance to peak noise and noise width are used in this work.

Keywords- Noise Modelling, Crosstalk, On-Chip RC Interconnect, Step Input, VLSI

I. INTRODUCTION

Due to the advancement in VLSI technology feature size is reduced which affects the crosstalk noise problem and also affects the design's timing and functionality goals [1-2]. As a result of this chip area is reduced which degrades the performance of VLSI circuits such as logic failure, unwanted coupling voltage between two adjacent wires, timing delay etc. Decreasing feature size also increases crosstalk noise which is produced due to the parasitic coupling between interconnects. The amount of this crosstalk noise can be calculated by using circuit and layout techniques [3]. Coupling capacitance is high; it is the sum of area capacitance and the fringing capacitances of a wire. According to the trends, the role of this coupling capacitance will be more dominant in the future as feature sizes shrink. Due to this coupling capacitance crosstalk noise is induced in the circuit, which reduces the performance and reliability of the circuit. This may also induce unwanted voltage spikes in neighboring nets. An aggressor net is physically adjacent to a victim net and may be modeled as being connected with the help of a distributed coupling capacitance.

In the current technology, noise analysis and avoidance are becoming equally important or in some cases, more important than the timing and power analysis. Crosstalk noise exhibits a negative impact on the reliability of the VLSI circuits. In these

circuits, it is very common to have wires running adjacent to another known as aggressor and victim

nets. The net on which noise is being induced is called the victim net; whereas, the net that induces this noise is called the aggressor net. In deep submicron design, the parasitic coupling effects become significant due to the greater proximity of adjacent wires and the increase in the switching speeds of the signals. Hence it has become necessary to consider the crosstalk between parallel RC interconnects lines [4]. Crosstalk is a well-known phenomenon in integrated circuit design. Crosstalk noise may cause various undesirable effects such as overshooting, undershooting, glitches, increasing and reducing a signal delay. In [5-6] various telegraph equations are directly solved and an analytical formula for peak noise in capacitively coupled bus lines is obtained. The work in [7] derives bounds for crosstalk noise using a lumped RC model, but it assumes a step input for aggressor. Extensions to [7] are made in [8-10] to consider a saturated ramp input and π -circuit to represent the distributed nature of on-chip VLSI interconnect. But most of these models fail to represent the distributed nature of an RC network. The model proposed in [11] considers an Elmore delay like peak noise model for general RC trees but it assumed an infinite ramp input. The peak noise obtained in [11] may even be larger than the supply voltage. Devgan's metric

Computer Networking of Information Warfare Systems

Prof. G. Kumaraswamy Rao
(Former Director DLRL, DRDO)
Director & HOD of ECE Dept.

Bharat Institute of Engineering and Technology, Hyderabad-501510
Email: rao_gksdlrdrdo@yahoo.co.in

Abstract

Information Warfare (IW), comprises collection, storage, analysis and transmission of information. War Information is collected in peacetime (strategic) and in real time (tactical). IW is a concept involving the use and management of Information and Communication Technology in pursuit of a competitive advantage over the enemy. This involves seeking adversaries' information but at the same time protect our own information. A commander in a war functions more efficiently if information about war machinery of opponent is provided to him. Some of the sensors of IW are Radar EW System, Unmanned Aerial Vehicle (UAV) EW Systems, Communication EW System, IR and Laser Detection system, Electro Optical data gathering system, Satellite Communication System. Each of these IW sensor is controlled by a computer. The computer not only collects the information but also analyzes, correlates, and segregates the crucial war information. These individual computers are networked to present an 'Integrated War Scenario' to the Commander of C4I. The paper briefly describes the sensors used for collection of information, and its relevance to IW.

1. Introduction

1.1. Lessons of Gulf Wars

In 1990 USA and other NATO countries launched 'Desert Storm'. In just 4 days of combat, Kuwait was liberated from Iraqi occupation forces. The victory thus achieved with minimum number of manpower casualties of NATO forces, was due to the extensive use of advances in Information Warfare. Radar EW, Communication EW systems along with military satellites played a crucial role in the success. The role played by IW technology deserves to be studied in this paper.

Fig. Nos. 1,2,3 & 4 depicts the complexity of a real combat wars.

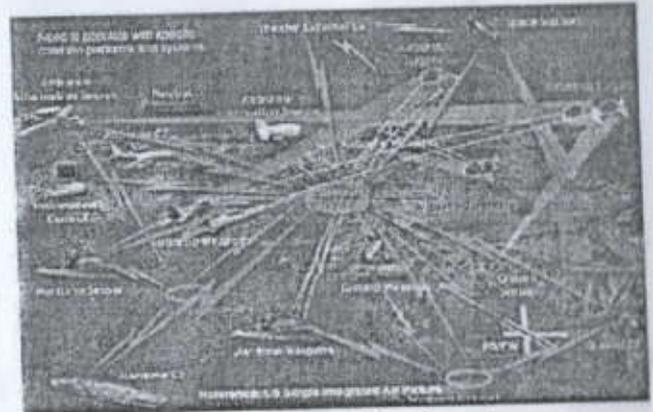


Fig No. 1 Typical Integrated War Scenario

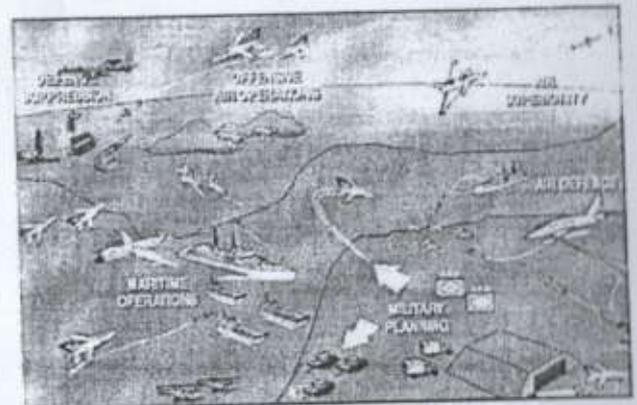


Fig. No. 2 Typical Battle Space Scenario

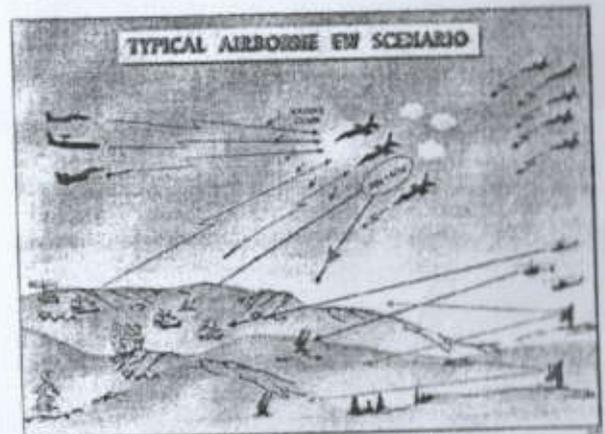


Fig. No. 3 Typical Airborne EW Scenario



CROSSTALK NOISE REDUCTION USING DRIVER SIZING OPTIMIZATION IN VLSI RC GLOBAL INTERCONNECTS USING 90NM PROCESS TECHNOLOGY

¹Vikas Maheshwari, ²Anushree

¹Deptt. Of ECE, Amity School of Engineering & Technology, Amity University Madhya-Pradesh, Gwalior, M.P., INDIA

²Deptt. of ECE, Hindustan College of Science and Technology, Mathura, U.P., INDIA

¹maheshhhwarivikas1982@gmail.com, ²anushree.ece@gmail.com

ABSTRACT

In this paper noise avoidance in closed form crosstalk noise model for on-chip VLSI RC interconnects using 2π model is presented. In this crosstalk noise model we consider the case when step input is applied to the aggressor which is adjacent to the victim net and further simplified it, then find out the closed form formulae for noise pulse width and noise amplitude for RC interconnect. Various noise avoidance approaches can be used for crosstalk noise reduction. This paper presents crosstalk noise reduction using driver sizing optimization. Sensitivity expressions of driver resistance to peak noise and noise width are used in this work.

Keywords- Noise Modelling, Crosstalk, On-Chip RC Interconnect, Step Input, VLSI

I. INTRODUCTION

Due to the advancement in VLSI technology feature size is reduced which affects the crosstalk noise problem and also affects the design's timing and functionality goals [1-2]. As a result of this chip area is reduced which degrades the performance of VLSI circuits such as logic failure, unwanted coupling voltage between two adjacent wires, timing delay etc. Decreasing feature size also increases crosstalk noise which is produced due to the parasitic coupling between interconnects. The amount of this crosstalk noise can be calculated by using circuit and layout techniques [3]. Coupling capacitance is high; it is the sum of area capacitance and the fringing capacitances of a wire. According to the trends, the role of this coupling capacitance will be more dominant in the future as feature sizes shrink. Due to this coupling capacitance crosstalk noise is induced in the circuit, which reduces the performance and reliability of the circuit. This may also induce unwanted voltage spikes in neighboring nets. An aggressor net is physically adjacent to a victim net and may be modeled as being connected with the help of a distributed coupling capacitance.

In the current technology, noise analysis and avoidance are becoming equally important or in some cases, more important than the timing and power analysis. Crosstalk noise exhibits a negative impact on the reliability of the VLSI circuits. In these

circuits, it is very common to have wires running adjacent to another known as aggressor and victim

nets. The net on which noise is being induced is called the victim net; whereas, the net that induces this noise is called the aggressor net. In deep submicron design, the parasitic coupling effects become significant due to the greater proximity of adjacent wires and the increase in the switching speeds of the signals. Hence it has become necessary to consider the crosstalk between parallel RC interconnects lines [4]. Crosstalk is a well-known phenomenon in integrated circuit design. Crosstalk noise may cause various undesirable effects such as overshooting, undershooting, glitches, increasing and reducing a signal delay. In [5-6] various telegraph equations are directly solved and an analytical formula for peak noise in capacitively coupled bus lines is obtained. The work in [7] derives bounds for crosstalk noise using a lumped RC model, but it assumes a step input for aggressor. Extensions to [7] are made in [8-10] to consider a saturated ramp input and π -circuit to represent the distributed nature of on-chip VLSI interconnect. But most of these models fail to represent the distributed nature of an RC network. The model proposed in [11] considers an Elmore delay like peak noise model for general RC trees but it assumed an infinite ramp input. The peak noise obtained in [11] may even be larger than the supply voltage. Devgan's metric

VF-ATM: "Biometric Enabled Bank"

Biplab Kumar Sarkar
Professor, Department of
Computer Science &
Engineering
Bharat Institute of Engineering
and Technology
Ibrahimpattam-501 510,
Hyderabad
dr.bksarkar2003@yahoo.in

R. Madana Mohana
Associate Professor,
Department of Computer
Science & Engineering
Bharat Institute of Engineering
and Technology
Ibrahimpattam-501 510,
Hyderabad
rmmnaidu@gmail.com

Nihalahmad Shikalgar
TCS, Pune India
nihalse12@gmail.com

B. S. Patel
TCS, Pune India
dr.bsapatel2005@yahoo.in

Abstract— Today's world banking system and transaction is depending on traditional way like going with card type ATM and passbook, checkbook like that. There is number of ambiguity and financial loss is occurred. There is no single machine available which can do all sort of banking operation (deposit, withdraw, passbook print/issue, checkbook print/issue). Now the new era is coming to do banking operation in new way. In this paper, we propose the VF-ATM machine which is added integrated biometric technique in banking system. This device is not only replacement of ATM machine but also it is a combination of all banking operation. It is like mini bank. VF-ATM is truly deserving to devote the work of all banking operation by using integrated biometric of user. It will provide finest, strongest security, card less system in banking domain.

Keywords—Biometric identification, Numeric Voice Identification, Timer OTP, Voice Pin, VF-ATM machine, Encryption, Fiber Optic, Wireless.

1. Introduction

Today's banking system is made online, but is it online? Why this online system is comes? Basically intension behind to do online is keep preserve paper work i.e. paperless banking. Are we using paperless banking? But in current scenario also lots of papers are used. In An automated teller machine (ATM) system also not going to provide all sorts of banking operation. If it is online, then why we are facing the problem of waiting queue? If anyone wants to do cash deposit then he/she wants to go in the bank. If anyone wants to do passbook issue/print, checkbook issue/print then he/she wants to go in the bank. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic strip or a plastic smart card with a chip that contains a unique card number and some security information such as an expiration date. Authentication is provided by the customer entering a personal identification number (PIN). Using an ATM, customers can access their bank accounts in order to make cash withdrawals, debit card cash advances, and check their account balance [1].

Voice-Fingerprint automated teller machine VF-ATM is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. This device is capable to do transaction without using any plastic card or swap card. It is different than traditional ATM system on variety of concept.

1. Card less system, no need to bring plastic card or swap card.
2. Passbook issue/print facility available.
3. Checkbook issue/print facility available.
4. Cash depositor.
5. Check depositor
6. Fund Transfer to any other bank.

A VF-ATM is voiced-based and finger print access control system, which is biometric in nature, will enable automatic verification of identity by electronic assessment of one or more behavior and/or physiological characteristics of a person in order to overcome the problems of smartcard access control in ATM. This technology developed a biometric access control system which is a biometric technique that offers an ability to provide positive verification of identity from individual voice, finger print, and other characteristics to access VF-automated teller machine. The VF-ATM operate integrated biometric authentication first speak the voice PIN if voice PIN is matched then enter the finger print and again finger print is matched then user go inside of VF-ATM function like choose the banks, choose the account

status, enter the amount, in that time VF- ATM machine OTP code generate and send user register mobile number after selecting enter the amount again demand enter the OTP code so user enter the OTP code then VF-ATM machine amount can have debited. Out of 15 Input chose any one or more than one for authentication process can complete according to user requirement OTP Code generate or not Generate totally depend on the user.

Market Survey

The fig 1.1 shows survey of ATM and VF-ATM machine, VF- ATM machine is more demand of the

Analyzing Internet DNS (SEC) Traffic with “R” For Resolving Platform Optimization

R. Madana Mohana¹, N. Veneela², I. Sai Kiran³, Y. Bhavani Sree⁴

¹Associate Professor, CSE Department, BIET

⁴2016 pass out student, CSE, BIET

^{2,3}M.S. Students, Department of Software Engineering, University of Houston-clear lake
Houston, Texas-77058

Abstract

This paper proposes to use data mining methods implemented via *R* in order to analyze the Domain Name System (DNS) traffic and to develop innovative techniques for balancing the DNS traffic according to Fully Qualified Domain Names (FQDN) rather than according to the Internet Protocol (IP) addresses. With DNS traffic doubling every year and the deployment of its secure extension DNSSEC, DNS resolving platforms require more and more CPU and memory resources. After characterizing the DNS(SEC) traffic thanks to reduction in dimension and clustering methods implemented with *R* functions and packages, we propose techniques to balance the DNS traffic among the DNS platform servers based on the FQDN. Several methods are considered to build the FQDN-based routing table: K-means clustering algorithm, mixed integer linear programming, and a heuristic scheme. These load balancing approaches are run, and evaluated with *R* on real DNS traffic data extracted from an operational network of an Internet Service Provider. They result in reducing the platform CPU resources by 30% with a difference of less than 2% CPU between the servers of a platform.

KEYWORDS

Telecommunications; Internet; DNS; DNSSEC; Feature selection; Dimension reduction; Clustering; Load balancing; K-means.

1. Introduction

Domain Name System (DNS) (Mockapetris, 1987a,b) is the computer protocol that facilitates Internet communication using hostnames by matching an Internet Protocol (IP) address and a Fully Qualified Domain Name (FQDN), e.g., -www.google.com. DNS servers, which host the IP addresses of the queried web sites—that is to say the DNS responses—are called *Authoritative Servers*. Because *Authoritative Servers* would not be able to support all end users' queries, the DNS architecture introduces *Resolving Servers* that cache the responses during Time to Live (TTL) seconds. Internet Service Providers (ISPs) manage such servers for their end users. Thanks to the caching mechanism, *Resolving Servers* do not need to ask *Authoritative Servers* if the response is still in their cache. This provides faster responses to the end user and reduces the traffic load on the *DNS Authoritative Servers*.

For multiple reasons, ISPs consider operating DNSSEC, the security extension of DNS defined in the standards

(Arends et al., 2005a,b,c; Sawyer, 2005). With DNSSEC, a DNS response is signed so that its authenticity (generation by a legitimate Authoritative Server) and its integrity (nonmodification of response) can be checked. With DNSSEC, resolutions require multiple signature checks so that responses are around seven times longer than traditional DNS responses. Migault (2010), Migault et al. (2010), and Griffiths (2009) show that DNSSEC resolution platforms require up to five times more servers than DNS resolution platforms. Migault et al. (2010) measures that a DNSSEC resolution involves three signature checks and costs up to 4.25 times more than a regular DNS resolution. With the DNS traffic doubling every year and the deployment of its secure extension DNSSEC, DNS resolving platforms require more and more resources.

The operational problem faced is to reduce the resources needed by a resolving platform. The resolving platform consists of several *DNS resolving servers* behind a load balancer device. The load balancer splits the incoming traffic to distribute queries on resolving servers. The classical way of load balancing is performed by assigning a pool of clients to be served to each server.

One way to reduce the load on a server is to lower the number of resolutions. To reduce the number of resolutions, Migault and Laurent (2011) and Francfort et al. (2011) evaluate the advantage of splitting the DNS traffic according to the queried FQDN rather than according to the IP addresses. This increases the efficiency provided by caching mechanisms, reduces the number of signatures to be checked, and can result in a 1.32 times more efficient architecture.

To design this new load balancing mechanism, we first need to characterize the DNS traffic and to evaluate how the DNSSEC traffic looks like. We perform data extraction from raw network captures taken from a DNS resolving platform. The main challenge here is to define the variables, which are taken and computed for each FQDN. The goal is to define a routing table mapping each frequently requested FQDN to a server of the resolving platform.

2. Data Extraction from PCAP to CSV File

To conduct this study, we first gather pieces of DNS data. They consist of real outbound and inbound DNS traffic of the platform stored in PCAP files. Then, for each FQDN found in a traffic sample, we compute a series of variables. Given the application considered, these variables are related to the FQDN's resolution cost.

230

3

A Novel approach for Service Providers in Cloud using Double Guaranteed Quality of Service (DG-QoS)

P.SRINIVAS RAO

Associate Professor, Dept of CSE
 Bharat Institute of Engineering and Technology, Hyderabad
 psrinivasraocse@gmail.com

Abstract: Cloud computing has become very popular in providing computing resources and services to customers on demand. From perspective of service providers profit is one of the most essential concern. On the other hand, only one long-term durable renting scheme is used to build a platform for cloud which failed in guarantee the service quality and leads wasting of resources. In this paper, a Double-Quality-Guaranteed resource renting scheme is designed in which first, a short-term renting scheme and long-term renting scheme are integrated to overcome the problem of existing issues. This DQG resource renting scheme can effectively improve the quality of service of all requests and reduce the wastage of resources significantly. Second, a service model is measured as M/M/m+D queuing model and the performance indicators which affect the profit of double renting scheme is analyzed, i.e., average charge, and the ratio of requests that temporary servers require. Third, a profit maximization problem is used in double renting scheme and the optimized configuration is obtained. Finally, a series of computations are performed to measure the profit of our proposed scheme with single renting scheme. The result shows that our proposed method not only guarantee quality of all service requests, but also achieve more profit than earlier methods.

I. PROPOSED METHOD:

A novel approach using Double-Quality-Guaranteed resource renting scheme is proposed and designed in which first, a short-term renting scheme and long-term renting scheme are integrated to overcome the problem of existing issues. This DQG resource renting scheme can efficiently improve the quality of service of all requests and reduce the wastage of resources significantly. Second, a service model is measured as M/M/m+D queuing model and the performance indicators which affect the profit of double renting scheme is analyzed, i.e., average charge, and the ratio of requests that temporary servers require. Third, a profit maximization problem is used in double renting scheme and the optimized configuration is obtained. Finally, a series of computations are performed to measure the profit of our proposed scheme with single renting scheme. The result shows that our proposed method not only guarantee quality of all service requests, but also achieve more profit than earlier .

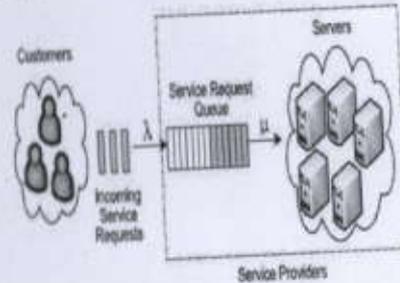


Fig 1. The multiserver system model

Algorithm: Double-Quality-Guaranteed (DQG) Scheme

- m* no. of servers are running on a multi server system and waiting for the actions to perform as mentioned :
- 1: *Q* is initialized as empty queue
 - 2: **Event** – a service request is initiated then verify for server availability
 - 3: **if** found then
 - 4: Assign the service request to available server
 - 5: **else**
 - 6: record waiting time of server placed at the end of queue *Q*
 - 7: **end if**
 - 8: **End Event**
 - 9: **Event** – when a server becomes idle
 - 10: Search if queue *Q* is empty
 - 11: **if true then**
 - 12: Wait for a new request
 - 13: **else**
 - 14: first consider the request from queue *Q* and assign it to the server which is idle state
 - 15: **end if**
 - 16: **End Event**
 - 17: **Event** – when deadline of a service request is achieved
 - 18: Rent a temporary server to execute and release when the request is done.
 - 19: **End Event**

II. SYSTEM DESIGN

The cloud services delivered by IT that are independent of location which provides dynamically, virtualized resources as a service over the Internet where end- users are not expertise in, or control over the technology infrastructure that supports them.

Modules

1. Queuing model.
2. Business Service Module
3. Cloud customer Module.
4. Infrastructure Service Provider Module.

A Mechanism for Message Authentication and Integrity for Hybrid Crypto Algorithm

Ms. Mubeena Begum
Department of Computer Science & Engineering
Bharat Institute of Engineering & Technology, Ibrahimpatnam, Hyderabad
mubeena@biet.ac.in

Abstract - The immense usage of internet throughout the world has made it necessary to provide confidentiality, integrity and authenticity to the data that is exchanged over the network. In order to provide these functionality, experts often use cryptography, as it makes it possible to perform secure communication of data over insecure channel. Over the years many cryptographic algorithms has been developed to encrypt confidential message in-order to provide security. As integrity and authenticity of the message is equally important, the paper presents a security protocol enhancement that exhibits the properties to protect against attack from tampering, replay and a mechanism of verifying and assuring the source of message. The protocol uses hybrid cryptographic approach and utilizes keyed hash to assure message integrity and authenticity, along with use of Diffie-Hellman and RSA to provide protection against replay and protecting message using encryption respectively. The paper also presents the crypto timing details that were observed after implementing the proof of concept hybrid crypto algorithm.

Keywords: Hybrid cryptography, Key exchange, Asymmetric cryptography, RSA, Diffie-Hellman, Keyed hash

1. Introduction

Cryptography is a branch or part of cryptology in which encryption and decryption of original plain text is performed to make sure that the information is protected in a way that only intended recipients can access it [1]. It consist of the protocols, algorithm and strategies that invariably prohibit or lag unauthorized access to sensitive information and enable verification of every component in a communication [1]. Cryptography algorithms are typically based on two categories [2].

- Symmetric encryption (also referred as conventional encryption and single key) was the only type of encryption in use prior to the development of public key encryption in the late 1970s [2].

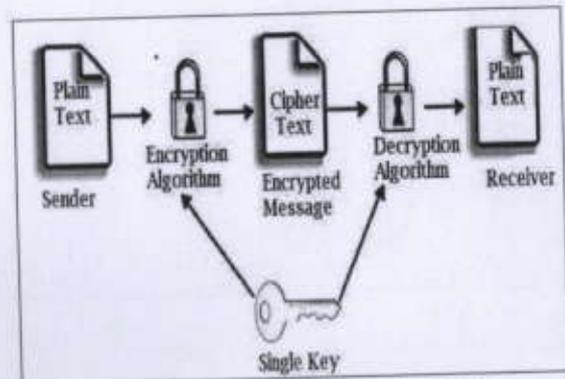


Figure1: Symmetric key cryptography

As shown in Figure 1: in symmetric key cryptography the sender and receiver uses the same key for both encryption and decryption of the original message.

- Asymmetric encryption (also known as public key encryption) uses different keys for encryption and decryption of the plain text [2].

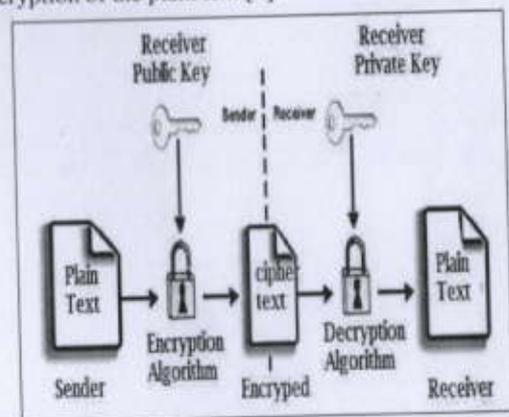


Figure2: Asymmetric key cryptography

In the Figure 2: sender uses a receiver public key to encrypt the plaintext and receiver uses her own private key to decrypt the message. The public key made publicly available whereas private key kept secret. Integrity is one of the five pillars of network security. It refers to a mechanism of ensuring that data is legitimate, correct and secure from unauthorized user alteration.

232

5

Clustering Categorical-Time Evolving Data from K-Means to Rough Set Theory Using Map-Reduce Technique

P.V.N. Muralidhar¹, R. Madana Mohana²

¹Scholar, M.Tech II-II, CSE, Bharat Institute of Engineering and Technology
Ibrahimpattanam-501510, Telangana, India, venkatamurali81@gmail.com

²Associate Professor, Department of CSE, Bharat Institute of Engineering and Technology
Ibrahimpattanam-501510, Telangana, India, rmmnaidu@gmail.com

Abstract— Clustering is used to classify related data items under similar group but it fails to achieve well for big data due to massive time complexity of allocating unlabeled data point into proper cluster is big task in the categorical data domain, where real time data changes for every instance so for such scenarios in this paper using sampling and parallelization techniques from k-means to rough set theory by extending Hadoop Map Reduce programming we proposed to label the unlabeled data points. An analysis of projected approach to evaluate its efficiency over many other algorithms using standard data sets for testing and shows that the proposed sampling and parallelization technique can process big data efficiently.

Keywords - Big Data, Data Mining, Hadoop Map Reduce, k-means clustering, rough set Theory.

1. INTRODUCTION

We are in the world where gigantic amounts of data are collected and analyzing this data is a critical task. In other words we can say that we are living in the data age in which peta bytes (1000 Terabytes) of data is generated from all needs of business, society, science and engineering, medicine etc., Businesses around the world wide are generating large collection of data sets such as sales transactions, sales promotions, stock trading records, product details, company profiles and their performance and customer feedback [1]. For example large stores online and offline like Walmart, amazon, flip-kart, e-bay are handling millions of transactions per day at various branches across the globe. Scientific and engineering applications are generating peta bytes of data by remote sensing, scientific experiments and engineering observations.

The communication networks carry hundreds of peta bytes of data traffic every day. Even the medical and health industry generate large amounts of data by medical records. Web Searches like Google, social media like Facebook, producing images and videos, blogs. These are the list of various sources that generate endless data in huge amounts. The organization face difficulties to create manipulate and manage the large datasets [2]. Thus extracting useful and valuable information from the huge data is difficult and led to data mining. Data mining makes a large collection of data into useful information referred as knowledge.

Clustering is a method for finding a collection of similar objects from a given data set. The algorithms that are developed for numerical data for clustering may be easy to use in normal conditions but not when it comes to categorical data [3], [4], [5]. Clustering is a challenging issue in categorical domain, where the distance between data points is undefined [1]. It is not easy to find out the class label of unknown data point in categorical domain.

Sampling and parallelization techniques accelerate the clustering [6], [7] and the data points that are not sampled are to be allocated into proper clusters. The data which depends on time called as time evolving data [8], [9]. For example, the buying preferences of customers may vary with time, depending on the current day of the week, availability of alternatives, discounting rate etc. [10] Since data is modified and thus evolve with time, the underlying clusters may also change based on time by the data drifting concept [11], [12]. The clustering time-evolving data in the numerical domain [13], [14] has been explored in the previous literature though not in the categorical domain. Categorical attributes also exist in real data with drifting concepts, for example web logs that record the browsing history of users, stock market details, buying records of customers often evolve with time. It is a challenging problem in the categorical domain therefore to evolve a procedure for precise categorization. Previous methods on clustering categorical data focused on doing clustering on the entire data set and drifting concepts were not taken into consideration. The objective is to propose a framework for performing clustering on the categorical time-evolving data.

One of data analysis techniques, rough sets based methods have been successfully applied in data mining and knowledge discovery during last decades [15], [16], [17] and particularly useful for rule acquisition [18], [19], [20] and feature selection [21], [22], [23]. To our Knowledge, most of the traditional algorithms based on rough sets are the sequential algorithms and corresponding tools only run on a single computer to deal with small data sets. To expand the applications of rough sets in the field of data mining and knowledge discovery from big data, we discuss about rough set based parallel methods for knowledge acquisition in this paper. Based on Map Reduce, we design corresponding parallel algorithm for knowledge acquisition on the basis of the characteristics of the data. The proposed algorithm is implemented on Hadoop platform [24] As a result, a rough set based method for performing clustering on the categorical time evolving data is proposed in this paper. This method find out if there is a drifting concept or not while processing the incoming data. However, in the categorical domain, the above procedure is challenging since the numerical characteristics of clusters are difficult to define. In this paper, a mechanism called rough membership function-based similarity is developed to allocate each unclustered categorical data point into the corresponding proper cluster.

Distributed Computing is a technology aimed at solving computational problems mainly by sharing the computation over a network of interconnected systems. Each individual system connected on the network is called a node and the collection of many nodes that form a network is called a

A Novel Approach for Solving the Problems Caused By Search History Using CLIR Tools and Basic Network Security Algorithms

Shahebaz Ahmed Khan¹
Assistant Professor, Dept. of CSE,
AVNIET, Hyderabad

V. Satyanarayana²
Associate Professor, Dept. of CSE,
BIET, Hyderabad

Shaik Abdul Nabi³
Professor and Head, Dept. of
CSE, AVNIET, Hyderabad

Abstract:-The field of computer science has taken the technology to an extent of high peaks by its vast and various applications and innovations in the terms of security, retrieval, data management, mining, softwares etc. When it is considered at any point of implementation of any computer science applications the security is the first and the foremost criteria that has to be considered. Generally, it is known that the retrieval of information and its strategies has been in its advanced stage. The information retrieval in these days is an easier task that has even become familiar to the illiterates and the unknown language users. This has been made possible by CLIR tools in the process of information retrieval. In this paper, it is discussed that what sort of security can be provided to the user from the unauthorized parties from accessing his search history and from this the searched documents. The basic algorithms of security like Pigpen will provide a solution to the problems that arise with the presence of search history in a search engine in the context of security. In this paper, the scope of preserving the confidential documents from being accessed by the unknown or other users can be avoided by the methodology.

Keywords: - CLIR, Pigpen, Search History, Unauthorized.

1. INTRODUCTION

Information retrieval is considered as an art of finding the documents that are of some uncertain structured text that will satisfy the need of information. Moreover it deals with the storage and access to the information. The information Retrieval System uses different retrieval approaches like probabilistic, Boolean, etc[3]. The queries are processed in the natural languages and the required information is provided to the user in the form of the most relevant and ranked documents. The user can access the information to the queries provided by him to the system by various steps and complex algorithms. The general language used by the users to retrieve the information and give the queries is English. The primary goal [1] of Information Retrieval System is to satisfy the needs of the user by reducing the overload of his defined queries. This is done by the most important components of the like crawling, indexing, ranking and relevance feedback system for retrieving the information.

But, when the naïve user who doesn't has any prior or the basic idea of this English language need to retrieve the information, the followed process by the Information Retrieval System is CLIR. This is an acronym of Cross Lingual Information Retrieval. Here, the user query language [2] is different from the language of the documents. The CLIR approach has some basic steps to be performed on both the documents and the query that is defined by the user. But there are some situations where the people come across using of data. These people may be dealing with confidential information and this can be from the source of any search engine. The persons after the considering the need of the information, browse some sites or any other documents. If these are highly confidential that are not to be known to the others and forgets to delete the search history due to which there is a breach to visited information of the document on the site. In such situations what are the information retrieval strategies that can be used so as to make a point of good security to the visited documents by making it not visible without deleting the history searched. For this problem, there is a scope of utilizing some basic ciphering algorithms and then building a cross language tool with its implantation.

2. CROSS LINGUAL INFORMATION RETRIEVAL

In search engines like Google, Bing, Yahoo etc. we can easily retrieve the information needed [1]. Almost all the information in these search engines is available in the language of English. This is a problem to the persons who are unaware of the usage and understanding of the English language. Many Asian, African countries and Latin American countries have a large population where the people use various languages to communicate and the people in the rural areas are completely without any prior knowledge of English language. If these people want to browse the information, then it makes the task difficult to them since the queries cannot be processed in the native language. For this type of problems, Cross Lingual Information Retrieval is the best solution [6]. The CLIR that has been designed accepts the queries in any of the following languages like Hindi, Telugu, Tamil, Bengali, Punjabi, Marathi etc[10]. This will fetch the documents in any of the said languages and processes the output to the user in the desired language that is of the query given one. The modules of CLIR that make it a complete tool are Input processing module, Search module and Output Generation module. The Input Processing module generally processes the given query, Search module is

Data Warehouse Conceptual Schema Modeling and Evaluation Using R

J. Uma Mahesh¹, P. Srinivas Reddy², N. Chandrakanth³, V. Satyanarayana⁴

¹Faculty of C.S.E, Asst Professor, G.C.E.T, ²Faculty of C.S.E, Asst Professor, B.I.E.T

³Faculty of C.S.E, Professor, G.C.E.T, ⁴Faculty of C.S.E, Assoc Professor, B.I.E.T

Abstract- In DWH (Data Warehouse) OLAP (Online Analytical Processing) is a very common way to analyze transaction data by summarizing along different combinations of dimensions. This is a well-accepted field in Business Intelligence / Business Reporting. The main part of OLAP is called "multi-dimensional data model", which consists two types of tables; "Fact" table and "Dimension" table. Fact table contains measures of a transaction and dimension table contains records which describes contextual attributes. This paper gives a study on OLAP operations in R Language (open source) Data Mining Tool and which highlight key ideas in OLAP operations and illustrates how to do this in R.

Keywords- DWH (Data Warehouse), OLAP (Online Analytical Processing), R-Language, MDDM (Multi Dimensional Data Model)

1. INTRODUCTION

OLAP (or *Online Analytical Processing*) has been rapidly growing in popularity due to the increase in data volumes i.e. big data and the recognition of the business value of analytics. In the multidimensional model, data are arranged into multiple dimensions. And each dimension have multiple levels of abstraction defined by concept hierarchies.

1.1. Introduction to R

Useful features of R:

- Effective programming language
- Relational database support
- Data analytics
- Data visualization
- Expanded through the vast library of R packages

The R language is well defined, and typically used for statistics and predictive analytics. Even though, some organizations have been reluctant to use R in production applications because it is memory-bound.

Data sets are now so large -- sometimes exceeding tens of gigabytes and hundreds of millions of rows -- that scalability and performance mature issues, particularly for mission-critical applications with precise deadlines.

2. MULTIDIMENSIONAL DATA MODEL:

The multidimensional data model is an essential part of On-Line Analytical Processing, or OLAP. As OLAP is on-line, it must provide answers promptly; analysts pose iterative queries during interactive session, not in batch jobs that run overnight. And because OLAP is also analytic, the

queries are complex. The multidimensional data model is intended to solve complex queries in real time. In a difficult setting of Multi-dimensional model. Each fact table contains foreign keys that mention the primary key of multiple dimension tables. In the simplest form, it is called a STAR schema. Dimension tables can contain foreign keys that reference other dimensional tables. This provides an involving detail breakdown of the dependent aspects. This is also called a SNOWFLAKE schema. Also this is not a hard rule, Fact table tends to be independent of other Fact table and usually doesn't contain reference pointer among each other. However, different Fact table usually share the same set of dimension tables. This is also called GALAXY schema. But it is a hard rule that Dimension table NEVER points / references Fact table. Each dimension can also be hierarchical so that the analysis can be done at different degree of granularity.

For example, the time dimension can be divided into days, weeks, months, quarter and annual; similarly, location dimension can be broken down into countries, states, cities and etc.

Here we will create a sales fact table that records each sales transaction.

```
# Setup the dimension tables
state_table <-
data.frame(key=c("CA", "NZ", "WG", "ON",
"QU"),
           data.frame(key=c("Printer", "Tablet",
"Laptop"), price=c(225, 570, 1120))

# Function to generate the Sales table gen_sales
<- function(no_of_recs) {
  # Generate transaction data randomly
  loc <- sample(state_table$key, no_of_recs,
               replace=T, prob=c(2,2,1,1,1))
  time_month <-
    sample(month_table$key, no_of_recs,
           replace=T)
  time_year <- sample(c(2012, 2013), no_of_recs,
                    replace=T)
  prod <- sample(prod_table$key,
                no_of_recs, replace=T, prob=c(1, 3, 2))
  unit <- sample(c(1,2), no_of_recs, replace=T,
                prob=c(10, 3))
  amount <- unit*prod_table[prod,]$price sales <-
data.frame(month=time_month, year=time_year,
           loc=loc, prod=prod, unit=unit,
           amount=amount)
  # Sort the records by time order
```

Key-Aggregate Searchable Encryption (KASE) for Group Data Sharing via Cloud Storage

V. Satyanarayana¹, S. Saikrishna², S. Anoop³, K. Bharani⁴, K. Bhaskar⁵, K. Ephraim⁶

¹ Associate Professor, ²⁻⁶ Students

CSE, Bharat Institute of Engineering & Technology, Hyderabad

Abstract- The capability of selectively sharing encrypted data with different users via public cloud storage may greatly ease security concerns over inadvertent data leaks in the cloud. A key challenge to designing such encryption schemes lies in the efficient management of encryption keys. The desired flexibility of sharing any group of selected documents with any group of users demands different encryption keys to be used for different documents. However, this also implies the necessity of securely distributing to users a large number of keys for both encryption and search, and those users will have to securely store the received keys, and submit an equally large number of keyword trapdoors to the cloud in order to perform search over the shared data. The implied need for secure communication, storage, and complexity clearly renders the approach impractical. In this paper, we address this practical problem, which is largely neglected in the literature, by proposing the novel concept of keyaggregate searchable encryption (KASE) and instantiating the concept through a concrete KASE scheme, in which a data owner only needs to distribute a single key to a user for sharing a large number of documents, and the user only needs to submit a single trapdoor to the cloud for querying the shared documents. The security analysis and performance evaluation both confirm that our proposed schemes are provably secure and practically efficient.

Keywords- component; Searchable encryption, data sharing, cloud storage, data privacy

1. INTRODUCTION

Cloud storage has emerged as a promising solution for providing ubiquitous, convenient, and on-demand accesses to large amounts of data shared over the Internet. Today, millions of users are sharing personal data, such as photos and videos, with their friends through social network applications based on cloud storage on a daily basis. Business users are also being attracted by cloud storage due to its numerous benefits, including lower cost, greater agility, and better resource utilization. However, while enjoying the convenience of sharing data via cloud storage, users are also increasingly concerned about inadvertent data leaks in the cloud. Such data leaks, caused by a malicious adversary or a misbehaving cloud operator, can usually lead to serious breaches of personal privacy or business secrets (e.g., the recent high profile incident of celebrity photos being

leaked in iCloud). To address users' concerns over potential data leaks in cloud storage, a common approach is for the data owner to encrypt all the data before uploading them to the cloud, such that later the encrypted data may be retrieved and decrypted by those who have the decryption keys. Such a cloud storage is often called the cryptographic cloud storage [6]. However, the encryption of data makes it challenging for users to search and then selectively retrieve only the data containing given keywords.

A common solution is to employ a searchable encryption (SE) scheme in which the data owner is required to encrypt potential keywords and upload them to the cloud together with encrypted data, such that, for retrieving data matching a keyword, the user will send the corresponding keyword trapdoor to the cloud for performing search over the encrypted data. Although combining a searchable encryption scheme with cryptographic cloud storage can achieve the basic security requirements of a cloud storage, implementing such a system for large scale applications involving millions of users and billions of files may still be hindered by practical issues involving the efficient management of encryption keys, which, to the best of our knowledge, are largely ignored in the literature.

First of all, the need for selectively sharing encrypted data with different users (e.g., sharing a photo with certain friends in a social network application, or sharing a business document with certain colleagues on a cloud drive) usually demands different encryption keys to be used for different files. However, this implies the number of keys that need to be distributed to users, both for them to search over the encrypted files and to decrypt the files, will be proportional to the number of such files. Such a large number of keys must not only be distributed to users via secure channels, but also be securely stored and managed by the users in their devices. In addition, a large number of trapdoors must be generated by users and submitted to the cloud in order to perform a keyword search over many files. The implied need for secure communication, storage, and computational complexity may render such a system inefficient and impractical. In this paper, we address this challenge by proposing the novel concept of key-aggregate searchable encryption (KASE), and instantiating the concept through a concrete KASE scheme. The proposed KASE scheme applies to any cloud storage that supports the searchable group

An Overview of Cloud Robotics

B. K. N. Priyanka

M.Tech Scholar, Department of CSE
Bharat Institute of Engineering and Technology, Hyderabad
kameshwarinagapriyanka9@gmail.com

K. Harikrishna

Assistant Professor, Department of CSE
Bharat Institute of Engineering and Technology, Hyderabad
kharikrishna396@gmail.com

Abstract- The emergence of cloud computing had changed the face of all enabling technologies. This change combines cloud technology to other different systems which makes the new technology in the industry. When cloud technology is integrated with any system results very challenging. Similarly, when cloud system and multi-robot system are merged we can improve the efficiency, cost, compatibility of robots which help in enlightening the robot system in main fundamental for robotics. This cloud robotics have an architecture application like single technique simultaneous localization and mapping (SLAM). All the robots can be controlled and managed by installing ROS (Robot Operating System).

Keywords- Cloud computing, Robotics, Grasping, Robot Operating System

1. INTRODUCTION

The introduction of automation equipment in industrial production in the past few decades has incurred many improvements in the industrial sector. With the development of industrial robots, programmed robots have reached high levels of performance in real-time applications, accuracy, robustness and compatibility. As network technology developed during the latter part of the 1990s, researchers developed and improved the control of robotic network interfaces and their robustness, and the field of networked robotics appeared. A robotic network refers to a group of robots connected through a wired or wireless communication network. With the development of cloud computing, the integration of cloud technology and multi-robot systems allows for the design of multi-robot systems with high performance and high complexity. Cloud robotics is the use of remote computing resources to enable greater memory computational power, collective learning and inter connectivity for robotics applications. When computational or storage demands exceed the on-board capacity of a robot, they are offloaded to the cloud where the massive resources of a data center can supplement their limited local resources.

Robot operating system: Robot Operating System (ROS) is a collection of software frameworks for robot software development, providing operating system-like functionality on a heterogeneous computer cluster.

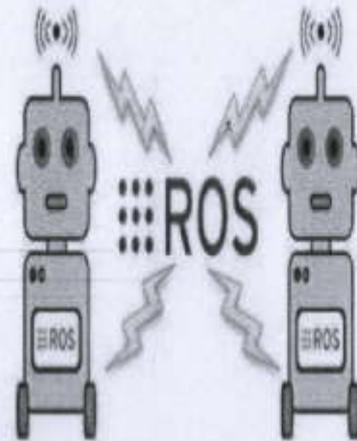


FIGURE 1: ROS BETWEEN ROBOTS

2. CLOUD COMPUTING

[1] Cloud is a network -itself. According to NIST definition is that cloud computing is a model that early acquire on [2]demand access to a configurable computing resources, such as network servers, storage devices, applications and services of the public collection, these resources minimizing managing costs. Cloud computing has been a paradigm shift in the IT. Third party providers are providing storage, software and Infrastructure resources to their customers through services.

Privacy Preserving Applications in Data Mining

B. K. N. Priyanka
M.Tech CSE, Bharat Institute of
Engineering and
Technology
Ibrahimpattam - 501 510, Hyderabad
kameshwarinagapriyanka9@gmail.com

B. Mounika
M.Tech CSE, Bharat Institute of
Engineering and
Technology
Ibrahimpattam - 501 510,
Hyderabad
mounika22994@gmail.com

R. Madana Mohana
Associate Professor of CSE
Bharat Institute of Engineering and
Technology
Ibrahimpattam - 501 510, Hyderabad
rrmnaidu@gmail.com

Abstract — As cloud computing becoming the most popular effective platform for storing, managing and retrieving the data, the main complication that come to light is the uncertainty of redistributed data in cloud environment. This difficulty causes many different questions how to fix the problem. There is a technique that evaluates this issue to overcome is weighted attribute encipher scheme. This paper notes different attribute weights, cipher text threshold access structure based on multi-firm encryption scheme to acquire the fine grained access control in the cloud.

Keywords – data mining, encryption techniques, privacy preserving methods

I. INTRODUCTION

In an identity based encryption scheme, each user is identified by a unique identity string. An attribute based encryption scheme (ABE), [1] in contrast, is a scheme in which each user is identified by a set of attributes, and some function of those attributes is used to determine decryption ability for each cipher text. Most existing ABE encryption techniques have only a single authority to manage both secret keys and public keys. In many situations, however, users have attributes from multiple authorities, and data owners share data with users who are administered by a different authority. To solve this problem, many different multiauthority attribute-based access control schemes have been introduced. Yang et al proposed a scheme called multi-authority data access control for in-cloud storage with efficient decryption. In these schemes a data owner has to be online all the time in order to update cipher text. Most existing multi-authority schemes treat attributes equally and give them the same status in the access control system. In ABE system, users private keys and cipher text are labeled with sets of descriptive attributes and access policies respectively, and a particular key can decrypt a particular cipher text only if associated attributes and policy are matched. In key-policy attribute-based encryption, the access policy is assigned in private key, whereas, in cipher text-policy attribute-based encryption, it is specified in cipher text.

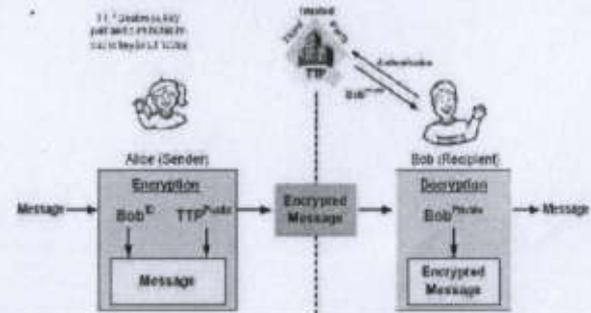


Fig 1: Encryption

As the development of data mining users concerns about data security are the main obstacles that impedes cloud computing from wide adoption. These concerns are originated from the fact that sensitive data resides in public cloud, which is maintained and operated by untrusted cloud service provider (CSP). ABE provides a secure way that allows data owner to share outsourced data on untrusted storage server instead of trusted server with specified group of users. [1] The only method for protecting sensitive data across multiple sites is to encrypt the data before uploading to the server. Data stored on the cloud must be protected through different mechanisms. One of the vital techniques is public key encryption. In the traditional public key infrastructure, the data owner encrypts the data with the data user's public key, before uploading it to the cloud. When a data user sends a request to access data on the cloud, the cloud returns a corresponding cipher text to the data user. The user then decrypts this cipher text with the private key. There are two major disadvantages with this technique. First, for encryption, the data owner must obtain the data user's public key before uploading. Second, because the same plain text is used with different public keys, the storage overhead becomes excessive.

II. DATAMINING

In recent years, privacy-preserving data mining has been studied extensively, because of the wide proliferation of sensitive information on the internet. A number of algorithmic techniques have been designed for privacy-preserving data mining. The data mining has been viewed as a threat to privacy because of the widespread

Isolated Subcarrier Modulation Schemes Approach for LTE System with Effective PAPR Bandwidth Application in UPLINK and DOWNLINK

Mr. Chandika Mohan Babu
 Assistant Professor, ECE
 Bharat Institute of Engineering and Technology
 Hyderabad
 mohantitkgp08@gmail.com

Mr. K. Srinivas Rao
 Associate Professor, ECE
 Bharat Institute of Engineering and Technology
 Hyderabad
 academic.ece@biet.ac.in

Abstract-Long term evolution (LTE) is considered to be a important technology for the next generation of cellular telecommunications to enhance the data rate and bandwidth applications. The 3rd Generation Partner Ship Project (3GPP) produced the first version of WCDMA standard in the end of 1999, which is the basis of the Universal Mobile Telephone System (UMTS) deployed in the field today. This release, called release 99, contained all the basic elements to meet the requirements for IMT-2000 technologies. Release 5 introduced the High Speed Downlink Packet Access (HSDPA) in 2002, enabling now more realistic 2 Mbps and even beyond with data rates up to 14 Mbps. Further Release 6 followed with High Speed Uplink Packet Access (HSUPA) in end of 2004, with market introduction expected in 2007. The objective of Evolved UTRA is to develop a framework for the evolution of the 3GPP radio-access technology towards wider bandwidth, lower latency and packet-optimized radio-access technology with peak data rate capability up to 100 Mbps. When we do multicarrier transmission results in higher peaks in the RF Transmission. High PAPR signal degrades the PA (Power Amplifier) efficiency because PA has to operate in high back-off mode. When we consider the battery of UE which will drain faster due to PA which is a very critical problem in uplink this encourages the device to perform the different techniques which can reduce the PAPR. The result are performed using different SCFDMA scheme with effective quality factor of filter. We conclude maximum transmission can be up to 20 MHz and Minimum Transmission upto 180MHz considering the trade off between PAPR and Out Band Distortion.

Keywords: LTE, UMTS, HSPDA, OFDM, PAPR, SCFDMA.

1. INTRODUCTION

LTE offers several important benefits for consumers and operators Performance and capacity - One of Requirements on LTE are to provide downlink peak rates of at least 100Mbit/s. The technology allows for speeds over 200Mbit/s LTE supports flexible carrier bandwidths, from below 5MHz up to 20MHz. LTE also supports both FDD (Frequency Division Duplex) and TDD (Time Division Duplex). Ten paired and four unpaired spectrum bands have so far been identified by 3GPP for LTE. And there are more bands to come. This means that an operator may introduce LTE in 'new' bands where it is easiest to deploy 10MHz or 20MHz carriers, and eventually deploy LTE in all bands where it is easiest to deploy 10MHz or 20MHz carriers, and eventually deploy LTE in all bands.

2. SCFDMA IN UPLINK

While PAPR is a major concern in portable terminals, Information throughput is an even more important indicator of system performance. As in OFDMA, throughput in SC-FDMA depends on the way in which information symbols are applied to subcarriers. There are two approaches to apportioning subcarriers among terminals. In localized SC-FDMA (LFDMA), each terminal uses a set of adjacent subcarriers to transmit its symbols. Thus the bandwidth of an LFDMA transmission is confined to a fraction of the system bandwidth. The alternative to IFDMA is distributed SC-FDMA in which the subcarriers used by a terminal are spread over the entire signal band. One realization of distributed SC-FDMA. [1]

| Channel bandwidth [MHz] | 1.4 | 3 | 5 | 10 | 15 | 20 |
|--|------|------|------|-------|-------|-------|
| Number of resource blocks (N_{RB}) | 6 | 15 | 25 | 50 | 75 | 100 |
| Number of occupied subcarriers | 72 | 180 | 300 | 600 | 900 | 1200 |
| IDFT(T_s)/DFT(T_s) size | 128 | 256 | 512 | 1024 | 1536 | 2048 |
| Sample rate [MHz] | 1.92 | 3.84 | 7.68 | 15.36 | 23.04 | 30.72 |
| Samples per slot | 960 | 1920 | 3840 | 7680 | 11520 | 15360 |

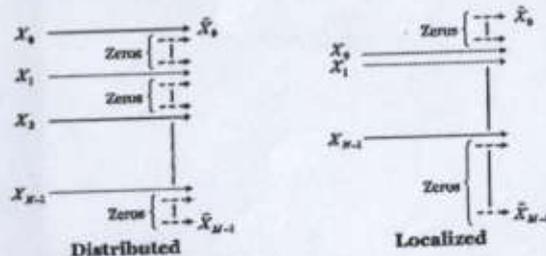


Figure 1: Sub-Carrier allocation Methods

SC-FDMA is interleaved IDMA (IFDMA) where occupied subcarriers are equidistant from each other. Figure 1 shows the two arrangements in the frequency domain. There are three terminals, each transmitting symbols on four subcarriers in a system with a total of 12 subcarriers. In the distributed arrangement, terminal 1 uses subcarriers 0, 3, 6, and 9; with LFDMA it uses subcarriers 0, 1, 2, and 3.[7]

Geolocation Of An EM Emitter Using ES Sensors Mounted On Naval Frigates

Prof. G. Kumaraswamy Rao,
(Ex. Director, DLRL DRDO, Hyderabad)
Director R&D, Bharat Institute of Engg. & Technology, Ibrahimpatnam TS 501510
rao_gksdlrldrldl@yahoo.co.in

Abstract:

Conventionally pulse Doppler Radars are best suited for detecting and locating of moving targets. Shore based search radar or fixed SAM platforms, cannot be detected and located by a active system like Radar. A set of ES Stations mounted on naval frigates located at a distance apart can detect the presence of Radar emission and also compute its location. The present paper discusses the methods adopted for localization of the target and about inaccuracies involved.

Key words: Electronic Support System, Surface to Air Missile, Circular error probability (CEP).

I INTRODUCTION

Conventionally Radars are mostly pulse Doppler Radars. They detect, locate and track moving targets. Targets can be airborne or surface based or seaborne. However due to the fast growing stealth technology, it has become difficult for Radar to detect Long Range targets. Also in an Integrated air defence environment, Radars are subjected to EW jamming. Any moving target needs to navigate. They are invariably mounted with search radars, SSR, TACAN, DME, JTIDS link etc. These systems transmit in space EM Waves. Passive ES systems can detect EM emissions from a long range. Direction of Arrival of signal is determined by an ES station. If two or more stations are geographically located at a distance apart, it is possible to determine the location of target in two or three dimensions. Secondly fixed surface or shore based installations from which radar emissions takes place like sea shore based search radars, fixed SAM platforms, cannot be detected by a Radar. A set of ES stations located

iv. Time Difference Of Arrival (TDOA)

IV. ANGLE OF ARRIVAL METHOD (AOA)

This is also called Triangulation. Two ES Rx are mounted on two frigates. The lines of bearing are determined. The intersection of the lines gives the position location of target. It shown in Fig. No.2.

The fundamental function of Electronic Surveillance is to detect and locate enemy Radars. Knowledge of the location of enemy radar on ground is necessary for attacking the individual Radar mounted on SAM platform with Anti Radiation Missile (ARM). Detection, location

and tracking the airborne Radar through out its journey, provides important inputs to the overall Strategic planning.

II. ES STATION CONFIGURATIONS

The ES Stations are mounted on multiple platforms located far apart in distance. The widely used sensor location configurations are given below:

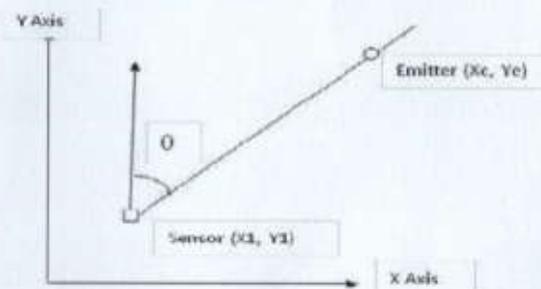
- (i) Ship borne Sensors for locating shore based emitters.
- (ii) Ground based Sensors for locating Airborne emitters.
- (iii) Airborne Sensors for locating Ground based emitters.

III. BASIC EMITTER LOCATION TECHNIQUES

There are number of location determination techniques. Techniques developed for emitter location on earth's surface involve two dimensions. Airborne Radar emissions require determination of third coordinate i.e. height of the Emitter. EW equipment manufactures all over the world employ the following techniques. They are:

- i. Triangulation (Angle of Arrival AOA)
- ii. Scan Phase
- iii. Frequency Difference Of Arrival (FDOA)

Fig. No. 1



At least two measurements at different sensor positions are required to locate the emitter. This is obtained by moving the single sensor or by using more than one sensor.

255

21

A Secured Mechanism for Identifying Malicious Nodes in Wireless Networks

¹N. Sainath, ²Dr. D. Vasumathi

¹Associate Professor, Dept of CSE,

Bharat Institute of Engineering and Technology, Hyderabad, T.S, India

E-Mail: nsainath@gmail.com

²Professor, Dept of CSE

JNTUH, Kukatpally, Hyderabad, T.S, India

E-Mail: vasukumar_devara@yahooo.com

ABSTRACT:

In the present occasions, recent has highlighted the important thing contribution of attribution within systems where utilization of difficult to depend on data could cause disastrous failures. Attribution is going to be monitored for every packet, however essential challenges will arise because of fixed storage, energy additionally to bandwidth limits of sensor nodes consequently, you should produce a light-weight attribution solution by means of low overhead. You need to deal with security needs for instance privacy, reliability additionally to originality of attribution and our goal is always to devise an attribution encoding additionally to deciphering means by which assures protection additionally to performance needs. Inside our work we advise a completely new lightweight method of strongly convey attribution for sensor data. The recommended method is dependent upon in-packet Blossom filters to correct attribution. Blossom filters make well-organized utilization of bandwidth, additionally to yield small error rates used.

Keywords: Attribution, Encoding, Sensor nodes, Bandwidth, Bloom filters, Security.

1. INTRODUCTION

Attribution of knowledge can be a effective approach to consider data reliability, since it reviews good status for possession additionally to actions that are transported on information. While attribution modeling, gathering, additionally to querying were examined broadly for workflows, attribution within sensor systems were not precisely addressed [1]. We examine impracticality of secure additionally to proficient attribution transmission additionally to processing for sensor systems, therefore we utilize attribution to distinguish the attacks of packet loss that are staged by means of malicious nodes. In multi-hop systems, attribution of knowledge will grant base stations to sketch source additionally to forwarding route to data packet. Attribution have to be monitored for every packet, however essential challenges will arise because of fixed storage, energy additionally to bandwidth limits of sensor nodes consequently, you should produce a light-weight attribution solution by means of low overhead. Our objective is always to include provenance system utilizing a secure aggregation method while using intention the aggregation confirmation procedure may be used to ensure data-provenance binding. You should deal with security needs for instance privacy, reliability additionally to originality of attribution and our goal is always to devise an attribution encoding additionally to deciphering means by which assures protection additionally to performance needs [2]. We submit an attribution encoding plan whereby every node on route to data packet embeds attribution information within Blossom filter that's sent altogether with data. Inside

our work we submit a manuscript lightweight method of strongly convey attribution for sensor data. The recommended method is dependent upon in-packet Blossom filters to correct attribution.

2. METHODOLOGY

Important sensor systems are organized in lots of application domain names, and understanding they've collected are utilized within making selections for important infrastructures. Data are streamed from numerous sources completely through intermediary processing nodes that collect information. A malicious challenger might initiate extra nodes in network consequently guaranteeing of high data reliability is essential for accurate making choices process. Sensor systems are employed within several application domain names. Data are produced at plenty of sensor sources furthermore to processed within network at intermediary hops on their own means towards base station that execute making choices. All of the different data sources generate requirement to vow sturdiness of knowledge, to make certain that simply straight solutions is measured within decision procedure. We formulate impracticality of protected attribution transmission within sensor systems, and recognize the lower sides particular with this particular circumstance. A cutting-edge lightweight approach to strongly convey attribution for sensor data along with the method depends upon in-packet Blossom filters to fix attribution. We utilize simply fast message authentication code schemes furthermore to Blossom filters that are constant size data structures that represent attribution [3].

Comparative Analysis of the Fire Bird V Robot Versions

R. Leela Mahesh¹, Pavan Kumar Pagadala², Farhana Bano²
¹Student, ²⁻³Assistant Professor

Department of Computer Science and Engineering
Bharat Institute of Engineering and Technology, Ibrahimpatnam, Hyderabad, Telangana, India

Abstract— In today's world robotics is a fast growing and interesting field. Robot has sufficient intelligence to cover the maximum area of provided space. The main objective of this robotics is to develop robots that will move according to the code assigned to that particular robot. They can be used as service robots, for the purpose of household work and so many other indoor applications. Nowadays, even in ordinary environment, people also require that robots to reduce manpower. And also these robots can be used in extreme conditions where humans have risk in doing that work. The main objective of this paper is to have a comparative analysis of the versions in Fire Bird V robot. Fire Bird V is a robot in research platform that will give us an excellent environment for experimentation, algorithm development and testing. As this robot is used for many experiments there are a lot of versions that are emerged from experimental results. In this we let you know the versions that are currently available and there specifications in hardware and software fields. And finally we shall make an analysis on all these versions.

Keywords: Comparative Analysis, Fire Bird V, Service Robots

I. INTRODUCTION

Robotics is the branch of technology that deals with the design, construction, operation and application of robots. Robots are now widely used in many industries due to high level of performance and reliability. The word -robotl was first used to denote fictional humanoid in a 1921 play R.U.R. by the Czech writer, Karel Capek. Electronics evolved into the driving force of development with the advent of the first electronic autonomous robots created by William Grey Walter in Bristol, England in 1948. Isaac Asimov a renowned science fiction writer came up with the word -robotl. The idea of putting machines to work can be traced as far back as Aristotle (384-322BC) who put forth the notion of pulling machines to work for humans. Designing autonomous robot requires the integration of many sensors and actuators according to their task. The robot acquires information from its surrounding through sensors mounted on the robot. The common used sensing devices are infrared sensor, ultrasonic sensor and charge coupled device (CCD). These sensors are helpful to robots in many ways like sensing any obstacles, sensing colors, sensing temperature, directions, the path it is moving and many more uses are there with sensors. In this versions of all Fire Bird V robots sensors play a vital role. There are almost many common sensors but in some versions there may be upgrading or degrading of some sensors according to the needs of that

robot and the tasks that are done by that particular version of robot. Rather than sensors there are many more devices that are installed in these robots.

Fire Bird V will help you get acquainted with the world of robotics and embedded systems. Thanks to its innovative architecture and adoption of the 'Open Source Philosophy' in its software and hardware design, you will be able to create and contribute too, complex applications that run on this platform, helping you acquire expertise as you spend more time with them. Fire Bird V is designed by NEX Robotics and Embedded Real-Time Systems lab, CSE IIT Bombay.

As a Universal Robotic Research Platform, Fire Bird V provides an excellent environment for experimentation, algorithm development and testing. Fire Bird V is evolved from Fire Bird IV and Fire Bird II which are being used in IIT Bombay to teach embedded systems and robotics. Its modular architecture allows you to control it using multiple processors such as 8051, AVR, PIC and ARM7 etc. Modular sensor pods can be mounted on the platform as dictated by intended applications. Precision position encoder makes it possible to have accurate position control. The platform can be upgraded to tank drive and Hexapod insect or any other desired form very easily. It is powered by high performance rechargeable NiMH batteries. A 2.4 GHz ZigBee module provides state of the art secure and multi-channel wireless communication up to a range of one kilometre.

II. Versions of Fire Bird V Robot

- Fire Bird V ATMEGA 2560
- Fire Bird V ATMEGA 2560 TANK Drive
- Fire Bird V ATMEGA 2560 INSECT
- Fire Bird V ATMEGA 2560 HEXAPOD
- Fire Bird V ATMEGA 2560 4 Wheel Drive
- Fire Bird V ATMEGA 2560 3 Wheel Omni Directional
- Fire Bird V ATMEGA 2560 4 Wheel Omni Directional
- Fire Bird V P89V51RD2

III. Comparative Analysis about Versions of Fire Bird V

1. Fire Bird V ATMEGA 2560 TANK Drive:

The Fire Bird V robot is the 5th in the Fire Bird series of robots. First two versions of the robots were designed for the Embedded Real-Time Systems Lab Department of Computer Science and Engineering, IIT Bombay. These platforms were made commercially available from the version 3 onwards. All the Fire Bird V series robots share the same main board and other accessories. Different family of microcontrollers can be added by simply changing top microcontroller adapter board. Fire Bird V supports

Dynamic Performance and Control of a Fuel Cell Power Conditioning System with Multilevel Converter

K. Prasada Rao and Sukhdeo Sao

Abstract—In this paper, the dynamic performance of a proton exchange membrane (PEM) fuel cell power conditioning system with multilevel converter using reduced number of switches is presented. All auxiliary components need to be controlled for optimum operation of fuel cell when the system experiences varying load and voltage changes. The dynamic performance of the system is examined by three conditions including reference voltage variation, load variation and with non linear load. Dynamic performance of a PEM fuel cell system by simulation using Matlab/simulink is investigated. The simulation results for variation of reference voltage, load variation and with non linear load are presented. Based on these results obtained a suitable power conditioning system as well as a controller can be designed for efficient operation of PEM fuel cell.

Index terms— Boost converter, fuel cell, multilevel converter, power conditioning system, proportional-integral (PI) controller, total harmonic distortion (THD).

I. NOMENCLATURE

| | |
|------------|--|
| I_a | Stack current |
| A_{fc} | Fuel cell active area |
| n | Number of fuel cells in the stack |
| E | Open circuit voltage |
| V_{act} | Activation loss |
| V_{ohm} | Ohmic loss |
| V_{conc} | Concentration loss. |
| I | Cell current density (mA/cm^2) |
| E_0 | Reference potential at unity activity |
| R | Universal gas constant, |
| P_{H_2} | Partial pressure of hydrogen |
| P_{O_2} | Partial pressure of oxygen |
| P_{H_2O} | Partial pressure of vapor |
| f | Switching frequency |

II. INTRODUCTION

The conventional fossil fuel energy sources such as petroleum, natural gas, and coal which meet most of the world's energy demand today are being depleted rapidly. The growing concerns about environmental pollution and energy

shortages have made renewable technologies an attractive option. Fuel cell technology can play an active role in meeting the growing demands for renewable energy. Fuel cell (FC) systems have been showing up as a promising alternative due to their high efficiency, low aggression to the environment, excellent dynamic response, superior reliability and durability in space, automotive, and stationary applications [1]. In particular, proton exchange membrane fuel cell (PEMFC) is considered as a great alternative for distributed sources of energy. PEMFC produce water as by-product waste, operating at low temperatures and allowing fast startup. PEMFC use a solid polymer as the electrolyte, reducing construction, transportation, and safety concerns [1]. A fuel cell is an electrochemical cell that converts a source fuel directly into an electrical current. It generates electricity inside a cell through reactions between a fuel and an oxidant, triggered in the presence of an electrolyte through reactions between a fuel and an oxidant. The reactants flow into the cell, and the reaction products flow out of it, while the electrolyte remains within it. Fuel cells can operate continuously as long as the necessary reactant and oxidant flows are maintained [2]. Photovoltaic, wind energy and fuel cell are most common type of renewable energy sources connected to the grid. DC-DC converters are required to adjust the variable and low quality output voltage of PV or fuel cells. DC-AC converters are also required for PV or fuel cells to generate required voltage and frequency for grid connection [3]. Power flow in fuel cell based multilevel converter is shown in Fig.1. Fuel cells have high power density and efficiency. During transients to prevent membrane damage as well as detrimental degradation of the fuel cell stacks voltage and oxygen depletion, it is necessary to design better control scheme to achieve optimal air and hydrogen inlet flow rates using current drawn from fuel cell [4].

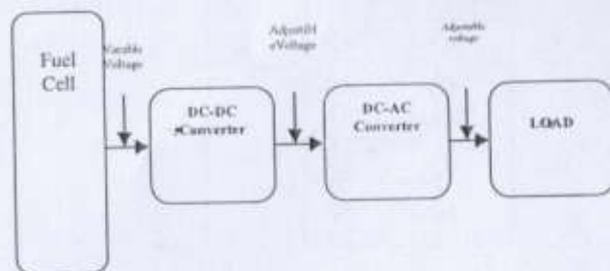


Fig. 1. Power flow in fuel cell based multilevel converter

K. Prasada Rao is with department of EEE, Christu Jyothi Institute of Technology and Science, Jangaon, AP, India (email: prasad319@yahoo.com)

Sukhdeo Sao is with department of EEE, Bharath Institute of Engineering and Technology, Hyderabad, AP, India (email: drssao53@gmail.com)

Empower Different Levels of Confide Concealment in Preventive Data Mining

V. Satyanarayana¹,
M. Shivaprasad²

¹Assoc. Prof, Dept of CSE,
Bharat Institute of
Engineering
and Technology
Ibrahimpatnam
Hyderabad

²Assistant Prof, Dept of CSE
Bharat Institute of
Engineering
and Technology
Ibrahimpatnam
Hyderabad

ABSTRACT

Many organizations are accepted perturbation techniques for privacy data maintenance. Previous techniques have not provided the accurate solution. In real time applications widely introduces the single level trust perturbation approach of data miners. Those data miners are have limited scope in privacy protection. In existing system another way of protection environment is available that is random perturbation. Random perturbation approach analyze the individual perturb values and publish the data. Different users access the data with different patterns. It may chance leakage of internal copies then to get the data loss problems. It has less number of perturb copies and show the results are lower trust. Here we expand the scope to increase the privacy protection with Multi level trust privacy preserving data mining. Malicious user access the different number of perturb copies combine the verification procedure with original perturb data. This is called reconstruction procedure. After verification there is no data release. Most of the attackers are detected here using MLT-PPDM. Here in different number of perturb copies maintain the correlation process and increase the trust levels. MLT-PPDM proposed solution is the robust design and derive the good privacy goal. Our approach prevents all the number of attackers with on-demand perturb approach environment. This is good and accurate model in detection and prevention of data leakage malicious users.

Keywords: Perturbation approach, Privacy data maintenance, Reconstruction procedure, on-demand perturbation.

Introduction

Here we create third parties for verification and release the data. Previous single level third party trust and individual perturb copies based evolution is provides the unpredictability solution in data leakage detection users. Single level trust assumption is the risky process. It is the limited trust value identification by third parties. Present mining department people receives here less number of perturb copies information. Here there is no reconstruction procedure. It does not give the desirable solution. Sometimes internal copies it may chance to leakage here we get the problem like data loss here.

Now here in this implementation we prefer multiple number of perturb copies data miners for increasing the trust levels. High trust levels based environment control the attackers without any data leakage and data loss here. Reconstruction procedure also it may chance to eliminate or prevent the attacker's information in implementation.

In implementation we prefer additive perturbation approach. In original data we add the noisy data create the perturb copy information. We maintain the communication with correlation as a one-one mapping process. This is completely one systematic procedure for detection and prevention of data leakage users. This is great solution with high trust levels.

Related Work

In many number of real time applications researchers are observe the problems. Control the problems with different solutions are available previously. Solutions are available related to different number of categories. First category approach is secure multi party computation environment. We forward the own input to process the data without any inferences. This kind of mutual communication is not trustful. Different users enter the different number of patterns inputs information. This approach is very complex and expensive also.

Secure multi party computations prefer generic algorithms in analysis part environment. These algorithms are mine the data of own inputs information this approach is extraordinary complex and expensive in mining. Secure multi party computations provides the impractical solutions information.

Next secure multi party computations we prefer to implement the horizontal approach for reducing the cost. New algorithms are introduced here. Those algorithms are decision trees, association rule mining, frequent pattern mining and k-means clustering algorithm. These algorithms for mining purpose we use the less amount cost utilization only. This data mining algorithms gives the distrustful results only.

A New Approach for Image Encryption using Modified AES Algorithm

Y.Venkateswarlu
M.Tech, CSE Dept
BIET, Ibrahimpatnam
R.R Dist. 501510, Telangana
Email:
venky123.yvs@hotmail.com

Sai Charan Dhatrika
Assistant Professor,
CSE Dept.
BIET, Ibrahimpatnam
R.R Dist. 501510, Telangana
Email:
s..icharan.dsc@gmail.com

Deepika Puvvula
Assistant Professor
CSE Dept.
ANITS Engineering College
Visakhapatnam- 531162.
Email:
deepikapuvvula@gmail.com

ABSTRACT

Today with the tremendous development of various technologies like multimedia, research on security is becoming more important. In providing security Cryptography places a very crucial role. Even though there are many cryptographic algorithms to provide security, they are not up to the satisfactory level of the users. So there was a need for research on inventing new algorithms or modifying existing algorithms. In this paper we proposed an enhanced AES algorithm for image encryption which can be used to encrypt using AES-128 bit key. The proposed modifications in this paper are: repositioning the image pixels to break the correlation between them, randomization of key and hiding the key value into the encrypted digital image. So the proposed method provides more security.

Key words: Advanced Encryption Standard, Image Encryption, Key hide

Introduction

With the rapid development of multimedia technology multimedia data like images, videos, audios are used in various applications like entertainments, education, advertisements, and politics. There are different types of encryption algorithms available like AES, DES and Blowfish etc. These algorithms are very good at encrypting text data but coming to multimedia data these data is large in volumes and also there is high redundancy. For example, the image shown in Fig:1(a) below is encrypted by AES algorithm directly(ECB mode) and the resultant image is shown in Fig1(b). We can say that Fig1(b) is still intelligible. Hence the security is low. This is happened because the correlation between the adjacent pixels in an image cannot be break by AES algorithm. In real time applications we need better encryption algorithm so we go for new encryption algorithms or modification to existing algorithms.

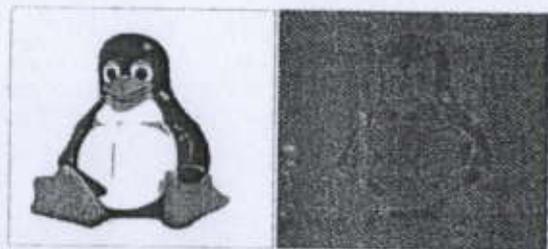


Fig 1: (a) Original image (b) Cipher image

In this paper we introduced a new encryption algorithm as a modification to AES algorithm. The modification is mainly focused on breaking the correlation between the image pixels by shifting pixel position, randomization of key and hiding the key into the encrypted digital image. For multimedia data the correlation between the image pixels is too high, AES cannot break this relation between pixels. In our enhanced AES algorithm we break the correlation between the pixels by shifting the pixel position row wise and column wise. In our proposed method we randomize the key values also.

Collective Details Mining on Top of Big Data With Mutual Adaptive Information Distribution

Mr. Jekkala Chandra Sekhar
Assistant Professor, Dept of CSE
Bharat Institute of Engineering and Technology
Ibrahimpattanam - 501 510, Hyderabad
Email: chandrasedkharj@biet.ac.in

Abstract — Big Data is another term used to recognize the datasets that as a result of their sweeping size and multifaceted nature. Huge Data are in the blink of an eye rapidly reaching out in all science and planning zones, including physical, regular and biomedical sciences. Huge Data mining is the capacity of isolating important information from these broad datasets or surges of Data, that on account of its volume, fluctuation, and speed, it was unreasonable before to do it. The Big Data test is getting the opportunity to be a champion among the most empowering open entryways for the next years. This study paper joins the information about what is Big Data, Data mining, Data mining with Big Data, Challenging issues and its related work. In this paper, we propose Collaborative Adaptive Data Sharing stage, which is a "clarify as-you make" base that supports took care of Data comment. A key duty of our system is the prompt use of the request workload to organize the comment procedure, despite taking a gander at the substance of the file. By the day's end, we are endeavoring to compose the explanation of reports towards creating attribute values for properties that are often used by addressing customers. The goal of Collaborative Adaptive Data Sharing stage is to enable and cut down the cost of making charmingly elucidated records that can be rapidly important for by and large issued semi-composed request, for instance, the ones. Our key goal is to engage the explanation of the reports at creation time, while the innovator is still in the "file time" organize, in spite of the way that the techniques can in like manner be used for post time record comment. In our circumstance, the maker delivers another record and exchanges it to the vault. After the exchange, Collaborative Adaptive Data Sharing stage examines the substance and makes a flexible addition structure. The structure contains the best property names given the file content and the information require, and the most conceivable trademark qualities given the report content. The maker can research the structure, adjust the delivered metadata as-key, and present the remarked record for limit.

Keywords – Big Data, Authorized Auditing, Data Mining, Challenging Issues, Datasets, Big Data Mining, Security.

I. INTRODUCTION

The term 'Huge Data' appeared for first time in 1998 in a Silicon Graphics slide deck by John Mashey with the title of "Enormous Data and the NextWave of InfraStress". Huge Data mining was outstandingly appropriate from the soonest beginning stage, as the primary book determining

'Huge Data' is a Data mining book that showed up moreover in 1998 by Weiss and Indrukya. Of course, the main educational paper with the words 'Huge Data' in the title showed up fairly later in 2000 in a paper by Diebold. The reason for the term 'Enormous Data' is a direct result of the way that we are making a monstrous measure of Data reliably. Usama Fayyad in his invited talk at the KDD Big-Mine' 12Workshop shown bewildering Data numbers about web use, among them the going with: consistently Google has more than 1 billion request for every day, Twitter has more than 250 million tweets for consistently, Facebook has more than 800 million redesigns for every day, and YouTube has more than 4 billion viewpoints for every day. The Data made nowadays is surveyed in the demand of zettabytes, and it is creating around 40% reliably. Another broad wellspring of Data will be made from mobile phones and Big associations as Google, Apple, Facebook, and Yahoo are starting to look unequivocally to this Data to find accommodating cases to improve customer encounter. "Huge Data" is unavoidable, yet still the thought initiates perplexity. Huge Data has been used to go on an extensive variety of thoughts, including: goliath measures of Data, web based systems administration examination, forefront Data organization limits, progressing Data, and altogether more. Whatever the check, affiliations are starting to appreciate and explore how to handle and dismember a limitless show of information in new ways. In doing in that capacity, a bit, however creating social affair of pioneers is fulfilling accomplishment business comes about. In business ventures all through the world, authorities see the need to take in additional about how to abuse Big Data. In any case, notwithstanding what seems like determined media thought, it can be tricky all around information on what affiliations are genuinely doing. Thusly, we hoped to better perceive how affiliations see Big Data – and to what degree they are at this moment using it to advantage their associations. The Big Data is just a Data, available at heterogeneous, self decision sources, in stunning far reaching entirety, which get upgraded in bits of seconds. For example, the Data set away at the server of Facebook, as a substantial partition of us, consistently use the Facebook; we exchange diverse sorts of information, exchange photos. Every one of the Data escape at the Data stockrooms at the server of

Issues On Cloud Computing Security And Threats

N. Aruna jyothi

Assistant Professor, Computer Science and Engineering

Bharat Institute of Engineering and Technology

Hyderabad

Email: arunlucky13@gmail.com

Abstract — Nowadays as cloud computing technology plays a vital role on internet of services. Cloud Computing is referred as a most emerging technology of computing utilities. Cloud computing shifts the computing resources to a third party, reduce the need to purchase, configure and maintenance of those resources with the cost effective utilization of software, hardware, and human effort. Many organizations in need of cloud computing services as it is best in utilization. Cloud computing is using the connected computers via internet to share the resources, software information and other devices on-demand, from the resource pool of the cloud providers. The main thing that grabs the organizations to adapt the cloud technology is cost reduction through optimized and efficient computing. Though the cloud computing has its advantages many IT companies have expresses concern about critical security issues which threatens them such as data security, unauthorized access of network and use of infected application[1]. In this paper, it provides an introduction to cloud computing, characteristics, several cloud service models, deployment models and finally this paper aims to make a survey on cloud system security threats and giving solutions to such threats.

Keywords – Social networks, cloud computing

I. INTRODUCTION

Cloud Computing is a computing model that enables sharing of resources on- demand with cost effectiveness and location independent. In Cloud systems the customers need not to buy any resources in their own instead they can use the resources from the cloud and they can pay for the resource as per the usage. Cloud computing is a technology that offers many advantages like cost saving, flexibility, scalability[1].

Cloud Computing is a general term used to explain a general class of network-based computing that takes place on the Internet, mostly a step on from Utility Computing and a collection of all and networked hardware, software and Internet infrastructure (called a platform). It uses the World Wide Web for communication and provides hardware, software and networking services to clients[8]. These platforms bypass the difficult situation and details of the inherent infrastructure from clients and applications by providing easiest graphical interface or API (Applications Programming Interface). In addition, the platform delivers on demand services, that are permanently on, anywhere, anytime and any place.

Cloud computing provides a centralized pool of configurable computing resources and computing outsourcing mechanisms that enable different computing services to different people in a way similar to utility-based systems such as electricity, water, and sewage. In electricity, for example, people started to connect with central grids, supported by power utilities rather than relying on their own electricity production capabilities. This migration is beneficial in reducing the cost and time of production and in providing better performance and reliability [4]. Similarly, clouds provide their customers with high performance and more reliable computing services such as e-mail, instant messaging, and web services at a lower cost. Cloud computing does not have a common accepted definition yet [5]. The National Institute of Standards and Technology (NIST) [6] defined five essential characteristics of cloud computing, namely: on-demand self-service, broad network access, resource pooling, rapid elasticity or expansion, and measured service. Also, cloud computing is described as a dynamic and often easily extended platform to provide transparent virtualized resources to users through the Internet [7].

II. CHARACTERISTICS OF CLOUD DATA

Cloud computing, applications services and infrastructure defined by number of characteristics

- Remotely hosted: Services or data are hosted on remote infrastructure.
- Ubiquitous: Services or data are available from anywhere.
- Co-modified: The result is a utility computing model similar to traditional that of traditional utilities, like gas and electricity - you pay for what you would want.

General characteristics:

- o Massive Scale
- o Homogeneity
- o Virtualization
- o Low Cost Software
- o Resilient Computing
- o Service Orientation
- o Geographic Distribution
- o Advanced Security

Full Disk Encryption For Analyzing The protection Scheme

A. Lakshmi

Assistant Professor, CSE Dept
Bharat Institute of Engineering and Technology
Ibrahimpatnam - 501 510, Hyderabad

Abstract — Full Disk Encryption (FDE) framework for dissecting the Security of the framework is exhibited in this paper. Late advances in FDE have empowered the utilization of equipment based encryption, disposing of the need to utilize significant CPU time for encryption, expanding execution, and augmenting security. This paper likewise includes the usage of the FDE, examination of Full circle encryption versus record framework level encryption and Boot key issue.

Keywords – FDE, Information security, Authentication, File system level encryption.

I. INTRODUCTION

Full disk encryption is a sort of circle encryption programming or equipment which scrambles all of information that goes onto a circle or plate volume. The expression "full plate encryption" is frequently used to connote that everything on a circle is encoded, including the projects that can scramble bootable working framework parcels. Full-circle encode is as opposed to record framework level encryption, which is a type of plate encryption where singular documents or catalogs are scrambled by the record framework itself. The best approach for enhancing plate get to execution is improving information region. This is on the grounds that the strategy could expand the hit proportion of plate store and lessen the look for time and rotational dormancy. Information moves the much of the time from the attractive circle to the glimmer memory. Because of the information relocation, the greater part of the information gets to can be happy with the blaze memory, which augments the sit without moving time of the plate drive and empowers the circle drive to stay in a low power state for a broadened timeframe. Information privacy on a PC can be accomplished utilizing encryption. Be that as it may, encryption is insufficient under a scientific examination fundamentally in light of the fact that the nearness of scrambled information on a circle can be effectively identified and plate proprietors can therefore be constrained (by law or different means) to discharge decoding keys. To dodge measurable examination, wise data concealing methods that bolster conceivable deniability have been proposed as a contrasting option to encryption; conceivable deniability permits an evader to shroud information in a way with the end goal that can

prevent the very presence from securing the information. Security of data is an issue that has been thought about from numerous years back and by PC frameworks, this idea has increased further significance. Part of research was completed around there a portion of the valuable works are Ming Xu et al displayed a strategy to distinguish the plate bunch estimate in view of information substance for different record frameworks. The principle thought is utilizing the distinction between the entropy contrast appropriations of the non-bunch limits and the group limits to recognize the group estimate. Hassan Khan et al displayed another, conceivable deniability way to deal with store delicate data on a group based document framework. Yuhui Deng et al proposed an Energy Efficient Disk (EED) drive engineering which coordinates a moderately little estimated NAND streak memory into a conventional plate drive to investigate the effect of the blaze memory on the execution and vitality utilization of the circle. Lirong Dai and Kendra Cooper introduced the Modeling and execution examination for security. Jesse D. Kornblum reported the BitLocker Drive Encryption framework included with a few forms of Microsoft's Windows Vista. Yuhui Deng researched some imperative attributes of present day plate drives. In view of the attributes and the perception that information access on plate drives is profoundly skewed, the as often as possible got to information pieces and the connected information squares are bunched into items and moved to the external zones of a present day circle drive. The execution additions are broke down by separating the plate get to time into look for time, rotational inactivity, information exchange time, and hit proportion of the circle store.

II. FULL DISK ENCRYPTION (FDE)

Full disk encryption is appeared in figure 1. The primary favorable position of full plate encryption (encoding all byte information on the circle) is that everything, including the swap space and the brief documents, is scrambled and the choice of which records to encode is not left to clients. Our plan utilizes a symmetric-key encryption calculation, for example, AES in light of the fact that it is a high security calculation and can scramble/decode a circle rapidly. In a full circle encryption, the OS is scrambled in a hard plate. So some

CAD Based Retrieval of Data for SR-SAM Weapon System

Dr. C. S. Krishna Prasada Rao, Former General Manager, BDL, Ministry of Defence,
Dean & Professor of Mechanical Engineering,
Bharat Institute of Engineering and Technology, Ibrahimpatnam, R. R. District, Telangana State.
E-Mail I.D:dr.csk20@yahoo.com

ABSTRACT

Production activities throughout the world are witnessing rapid changes hitherto never witnessed, keeping in tune with never ending and ever changing demands of customers. This demands techno economic modern methods of design and manufacture for customized products. CIM and CAD/CAM, CAE are the universally accepted modern tools to control and integrate production activity right from design, documentation, manufacturing and mass production. In the changing environment Designing, Analysis & Documentation plays a vital role to have more transparency in Designing and detailing of Product Drawings, Tool Drawings, preparation and safe handling of Drawings and various documents for number of projects simultaneously, it is possible only through electronic media. The procedure should be quite adaptable to restrict the access to specified persons only and also to have more control on security and safety aspects. It should be quite Operable and user friendly. Bharat Dynamics Limited is a pioneer in the manufacture of Weapon systems. Weapon systems constitute Missile and ground support equipment from which Missile is launched. The organization manufactures very short range, short range, short range-surface to air missiles (SR-SAM), medium range, long range, IRBM & ICBM Missiles. The paper presents the CAD, CAM, CAE setup, and the Metaphase, a product Data Management Software which are used to support concurrent Engineering process for manufacture of SR-SAM Weapon system. By managing product description information and product development processes in the organisation. Data related to a product like product, tool drawings, Bill of Materials, Process Sheets, Specifications, Flow charts, Standards, QT/AT Documents, Data Sheets, inspection and quality control reports besides the procurement information could be linked and readily made available are dealt.

1. INTRODUCTION

The economics of design are rapidly shifting as engineering costs continue to increase compared with decreasing costs of tools such as computers systems. As such, investments in computing environments emphasize an increase in an overall engineering productivity as the industry continues to benefit from advancements in cost effective, high compatibility Computer aided engineering applications software and computer systems. Computer aided design is a technology and application driven field by utilization of which in industrial environment helps to close the gap between creating the technology and using it. During the last four decades there have been tremendous developments in the field of CAD, CAM and CAE. All these fields have progressed in such a way that a lot of tasks are easily automated. There have been many

advances made in finite element analysis also. The traditional approach for validating the design by building a prototype is avoided and directly product can be simulated to know how it will perform in a virtual environment. Thus, application of FEM range from deformation stresses analysis to field analysis of heat flux, fluid flow and magnetic flux etc.

The Engineering Industry must leverage its information assets, which include a tremendous amount of Engineering skills, drawings, documents etc. Acquisition of tools to efficiently manage, distribute and modify these assets is essential. Of late, the Engineering Design is getting a shot in the arm by the fusion of three apparently different technologies and they are:

1. Computer Aided Design and manufacturing (CAD-CAM), with expertise in solid-surface-modeling, design productivity tools and evolution of direct paths from CAD to analysis/manufacturing.
2. Computer Communication Net work (CCN), bringing about information highways based on high speed satcom and very high speed fibre optic communication enabling cooperative video conferencing.
3. Multimedia Systems and Virtual Reality.

We work with the above fused Technologies except that it is yet to acquire the Virtual Reality centre and video conferencing facilities.



Figure 1. Design Challenges

2. SR-SAM MISSILE

A schematic view of the SRSAM missile with canister is shown in Figure 2.

Augmented Reality

Gowravaram Rashmi

Assistant Professor (CSE), Bharat Institute of Engineering & Technology (BIET), Hyderabad, India.
g.rashmi@bieta.ac.in

Abstract:

This paper presents an overview of basic aspects of Augmented Reality (AR) and the main concepts of this technology. It describes the main fields in which AR is applied nowadays and important AR devices. Some characteristics of Augmented Reality systems will be discussed and this paper will provide an overview of them.

Keywords: Augmented Reality, Virtual Reality, Scientific Visualization.

1. Introduction:

Augmented reality (AR) is a live, direct or indirect, view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or GPS data. Augmentation is conventionally in real-time and in semantic context with environmental elements, such as sports scores on TV during a match. With the help of advanced AR technology (e.g. adding computer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulable. Artificial information about the environment and its objects can be overlaid on the real world.

AR is within a more general context termed Mixed Reality (MR), which refers to a multi-axis spectrum of areas that cover Virtual Reality (VR), AR, telepresence, and other related technologies.

Virtual Reality is a term used for computer generated 3D environments that allow the user to enter and interact with synthetic environments. The users are able to -immerse themselves to varying degrees in the computers artificial world which may either be a simulation of some form of reality or the simulation of a complex phenomenon.



Figure 1: AR example with virtual Chairs and a virtual lamp.

In telepresence, the fundamental purpose is to extend operator's sensory-motor facilities and problem solving abilities to a remote environment. In this sense, telepresence can be defined as a human/machine system in which the human operator receives sufficient information about the teleoperator and the task environment, displayed in a sufficiently natural way, that the operator feels physically present at the remote site. Very similar to virtual reality, in which we aim to achieve the illusion of presence within a computer simulation, telepresence aims to achieve the illusion of presence at a remote location.

AR can be considered a technology between VR and telepresence. While in VR the environment is completely synthetic and in telepresence it is completely real, in AR the user sees the real world augmented with virtual objects.

When designing an AR system, three aspects must be in mind:

- > Combination of real and virtual worlds,
- > Interactivity in real time,
- > Registration in 3D.

Besides the mentioned three aspects, another one could be incorporated: Portability. In almost all virtual environment systems, the user is not allowed to go around much due to devices limitations. However, some AR applications will need that the user really walks through a large environment. Thus, portability becomes an important issue.

2. AR Components:

2.1 Scene Generator

The scene generator is the device or software responsible for rendering the scene. Rendering is not currently one of the major problems in AR, because a few virtual objects need to be drawn, and they often do not necessarily have to be realistically rendered in order to serve the purposes of the application.

2.2 Tracking System

The tracking system is one of the most important problems on AR systems mostly because of the registration problem. The objects in the real and virtual worlds must be properly aligned with respect to each other, or the illusion that the two worlds coexist will be compromised. For the industry, many applications demand accurate registration, specially on medical systems.

2.3 Display

The technology for AR is still in development and solutions depend on design decisions. Most of the Displays devices for AR are HMD (Head Mounted Display), but other solutions can be found when combining the real and virtual world two basic choices are available: optical and video technology. Each of them has some trade-offs depending on factors like resolution, flexibility, field-of-view, registration strategies, among others. Display technology continues to be a limiting factor in the development of AR systems. There are still no see-through displays that have sufficient brightness, resolution,

A Mechanism for Message Authentication and Integrity for Hybrid Crypto Algorithm

Ms. Mubeena Begum
Department of Computer Science & Engineering
Bharat Institute of Engineering & Technology, Ibrahimpatnam, Hyderabad
mubeena@biet.ac.in

Abstract - The immense usage of internet throughout the world has made it necessary to provide confidentiality, integrity and authenticity to the data that is exchanged over the network. In order to provide these functionality, experts often use cryptography, as it makes it possible to perform secure communication of data over insecure channel. Over the years many cryptographic algorithms has been developed to encrypt confidential message in-order to provide security. As integrity and authenticity of the message is equally important, the paper presents a security protocol enhancement that exhibits the properties to protect against attack from tampering, replay and a mechanism of verifying and assuring the source of message. The protocol uses hybrid cryptographic approach and utilizes keyed hash to assure message integrity and authenticity, along with use of Diffie-Hellman and RSA to provide protection against replay and protecting message using encryption respectively. The paper also presents the crypto timing details that were observed after implementing the proof of concept hybrid crypto algorithm.

Keywords: Hybrid cryptography, Key exchange, Asymmetric cryptography, RSA, Diffie-Hellman, Keyed hash

1. Introduction

Cryptography is a branch or part of cryptology in which encryption and decryption of original plain text is performed to make sure that the information is protected in a way that only intended recipients can access it [1]. It consist of the protocols, algorithm and strategies that invariably prohibit or lag unauthorized access to sensitive information and enable verification of every component in a communication [1]. Cryptography algorithms are typically based on two categories [2].

- Symmetric encryption (also referred as conventional encryption and single key) was the only type of encryption in use prior to the development of public key encryption in the late 1970s [2].

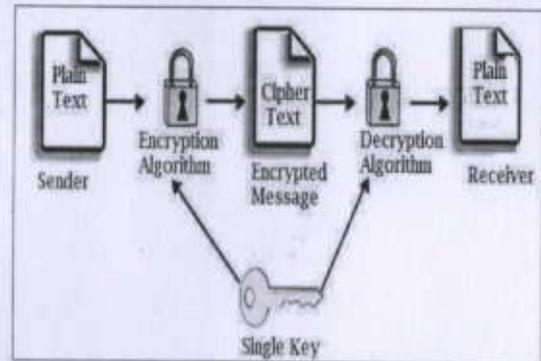


Figure1: Symmetric key cryptography
As shown in Figure 1: in symmetric key cryptography the sender and receiver uses the same key for both encryption and decryption of the original message.

- Asymmetric encryption (also known as public key encryption) uses different keys for encryption and decryption of the plain text [2].

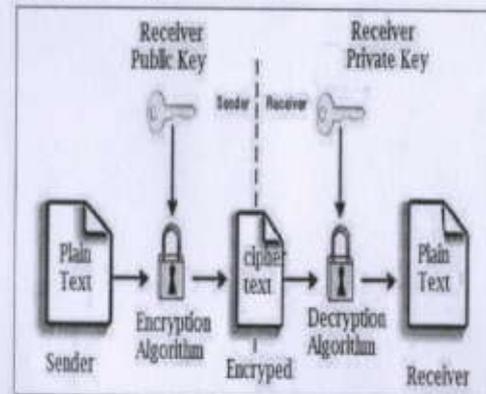


Figure2: Asymmetric key cryptography

In the Figure 2: sender uses a receiver public key to encrypt the plaintext and receiver uses her own private key to decrypt the message. The public key made publicly available whereas private key kept secret. Integrity is one of the five pillars of network security. It refers to a mechanism of ensuring that data is legitimate, correct and secure from unauthorized user alteration.

Multilevel Converter Fed Permanent Magnet Synchronous Motor Drive - Analysis of High Performance

Dr. P. Udaya Bhaskar

Associate Professor & HOD
Department of Electrical &
Electronics Engineering

Bharat Institute of
Engineering and Technology

Telangana, India

B. Navyasree

Assistant Professor
Department of Electrical &
Electronics Engineering

Bharat Institute of
Engineering and Technology

Telangana, India

Dr. C. S. Krishna Prasad Rao

Professor & Dean Admin
Bharat Institute of
Engineering and Technology,
Telangana,
India

ABSTRACT

Multilevel converter technology has emerged recently as a very important alternative of high-power medium-voltage energy control. The advantages of multilevel converter technology are reduced switching losses, improved power quality, better electromagnetic compatibility, and better voltage capability. Several topologies for multilevel inverters have been proposed over the years. The most popular cascaded H-bridge apart from other multilevel inverters is the capability of using different dc voltages on the individual H-bridge cells which results in splitting the total dc voltage conversion amongst higher-voltage lower-frequency and lower-voltage higher-frequency. In this paper Sinusoidal and third harmonic injected carrier based PWM techniques like phase shifted carrier PWM (PSCPWM) and level shifted carrier PWM (LSCPWM) are analysed. The THD levels for different values of modulation index and switching frequency are compared. The level shifted carrier PWM, in phase disposition (IPD), alternative phase opposition disposition (APOD) and phase opposite disposition (POD) modulating technique is analysed using MATLAB/SIMULINK. Finally Better modulating technique is applied to drive the five level cascaded H-bridge fed Permanent Magnet Synchronous Motor drive.

Introduction

Speed and motion control is required in large number of industrial and domestic applications. Ex: Robot, fans, washing m/c, mills etc. Markets for adjustable-speed drives continue to expand steadily in response to the well-recognized opportunities for major efficiency and cost improvements made possible by upgrading fixed-speed industrial process equipment to adjustable speed. Earlier DC motors have been used in industries for variable speed control applications. In 20th century induction motors had been the most popular electrical motors in domestic and industrial application due its simple construction, less maintenance, commutator less or slip rings, low cost and reliability. The drawback of induction motor are small air gap, less power density, the possibility of cracking the rotor bars due to hot spot at plugging and reversal, and lower efficiency and low power factor than synchronous machine. Due to this permanent magnet brushless motor has become more attractive option than induction motors. Other reasons are dropping cost of rare earth magnets and development in

power electronics. The advancement in power electronics technology has made it possible to vary the frequency of the voltage. Thus, it made more extensive use in variable speed drive applications and the control of PM motor has become easier and cost effective, with the possibility of operating the motor over a wide range of speeds while still retain a good efficiency. In normal PM motor the motor is usually fed with pulse width-modulated (PWM) voltages which cause sharp voltage waveforms (dv/dt) which appear across the motor terminals. This may cause the breakdown of motor insulation. In addition, motor damages are reported due to the high-voltage change rates (dv/dt) which produces common-mode voltages across the motor windings [4]. High-frequency switching increases the severity of this problem due to the increased number of times this common-mode voltage is applied in each cycle [1]-[4]. This is a matter of concern for variable-speed medium-voltage drives where the voltage levels are very high. The above problem can be resolved by applying changeable voltage with low



Available online at www.sciencedirect.com

ScienceDirect

Procedia Computer Science 93 (2016) 956 – 966

Procedia
Computer Science

6th International Conference on Advances in Computing & Communications, ICACC 2016, 6-8 September 2016, Cochin, India

Fossil Fuel to Solar Power: A Sustainable Technical Design for Street Lighting in Fugar City, Nigeria

Nallapaneni Manoj Kumar^{a,*}, Anup Kumar Singh^b, and K. Vinay Kumar Reddy^c

^{a,b,c} Department of Electrical & Electronics Engineering, Bharat Institute of Engineering & Technology, Mangalpally, Ibrahimpatnam, Ranga Reddy-501 510, Telangana State, India

Abstract

This paper presents a study on replacing the usage of fossil fuel energy with solar energy for lighting the dark and depressing streets of Fugar city, Nigeria. Fugar city is quite populated area without any street lights, almost every house use fossil energy to light up the streets which they access. The main objective is to select best solution among diesel generators, grid electricity, on-site solar photovoltaics and off-site solar photovoltaics. In order to have a sustainable solution for lighting up 210 LED street lights, the four proposed solutions were analyzed based on their technical feasibility, environmental parameters like CO₂ emission analysis and cost analysis with simple payback periods. Analysis showed that, on-site solar photovoltaics is best among the other three proposed solutions in terms of technical and financial feasibility with almost negligible emissions leading to sustainability.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the Organizing Committee of ICACC 2016

Keywords: Fossil fuels; Diesel generators; solar energy; on-site solar photovoltaics; off-site solar photovoltaics; LED street lights

1. Introduction

Energy, one of the most important needs of human life. It helps in achieving social welfare and economic development among the nations. Most of the countries depends on fossil fuels for their energy needs. Considering

* Corresponding author. Tel.: +91 94919 25258;

E-mail address: nallapanenichow@gmail.com, nmanoj@biet.ac.in.