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**Vidyadaan Institute of Technology and Management, (V.I.T.M.)
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[A]. Patron - in - Chief: – Prof. S.K. Singh



He is the Chairman of Vidyadaan Institute of Technology & Management, Ariaon, Dumraon, District: Buxar, (Bihar), 802119. He has completed his graduation degree in Engineering in Electronics & Communication Engineering, from B.I.T. Sindri, in 1986 and postgraduate in Business Management from X.L.R.I. Jamshedpur, in 2004.

He has 30 years of wide experience in applied Research, Product Development and Program Management besides developing algorithms and their implementation for real-time embedded applications for signal processing in technologies like Software Defined Radio, Digital Subscriber Line, Cable Modem, Meteor Burst Communications and Satellite communications.

Background Highlights:-

- 1986 - 1997, Defence Research & Development Organization (D.R.D.O.) as Scientist
- 1997 - 2006, As Engineering Manager / Program Manager in Multinationals like, Freescale Semiconductor, Ishoni Networks, General Electric Plessey etc.
- 2006 - 2008: Cofounded a Telecom Company Hertz Tele Networks Pvt. Ltd
- 2008 - 2010: Director: Genesis Futuristic Technology Ltd, Noida
- 2010 till date: Founded Vidyadaan Institute of Technology and Management (V.I.T.M.), Buxar
- He had Co-authored a paper on the issue of inter modulation products for D.S.P. based Modulators in 2nd International Symposium on “D.S.P. for Communication Systems” held at Adelaide in 2004. D.S.P. based Modulators: Problems and Solutions.

Message from the Patron - in - Chief's Desk:-

“SANKALAN:- The Journal of Science, Technology & Humanities” (I.S.S.N. Online:- 2455 - 3557) is a Journal started with a goal to publish innovative ideas which proposes value in creating technologies for tomorrow and solving problems of today right from concept to implementation.

This Journal will try to set an example for extending opportunities to scholars of different field to publish their papers with ethics and honesty. I wish a grand success to all the stakeholders of the Journal.

[B]. Director – V.I.T.M., Buxar – Prof. (Dr.) A.K. Verma

He is the Director of V.I.T.M., Buxar, Bihar. He had earned M.Sc. in Radio Physics and Electronics in 1982 from B.R.A. Bihar University, Muzaffarpur, Bihar. Also, he earned Ph.D. in Communication Engineering in 1993 from B.R.A. Bihar University, Muzaffarpur, Bihar. He has 31 years of vast experience in the fields of academics & research.



Background Highlights:-

- Defence Research & Development Organization (D.R.D.O.) as Senior Scientist from 1985 - 1997 and 2003 - 2007
- Department for Development of North Eastern Region (DoNER), Govt. of India, (North Eastern Council, Shillong on Deputation from D.R.D.O.), August 97 - July 2003
- Director, “Genesis Futuristic Technologies Pvt. Ltd” - 2007 – 2010
- Vidyadaan Institute of Technology and Management (V.I.T.M., Buxar) – Director: 2010 till date
- Worked on Microwave and m.m. wave system, V.H.F. / U.H.F. System, H.F. and N.V.I.S. H.F. System (Moving Platform), Buried H.F. Communication System: Link Design, System Integration and Communication Planning and measurement
- Worked on Synthetic Aperture Radar (S.A.R.) Image Processing; Digital Image Processing (Visible and I.R.); Registration; Target Classification; Target Identification; A.I., K.B. & Fuzzy System, Neural Network; S.A.R. Interferometry for D.E.M. Generation; S.A.R. Interferometry: Phase Unwrapping Techniques; Moving Target Identification; Disaster Assessment; Differential S.A.R. Interferometry; Real Time Image Processing Techniques; Remote Sensing Applications for development of various thematic maps and disaster management system.
- Worked on Techno-socio-economic analysis; Modelling the impact of technology for quality of life; Space Technology based Disaster Management System; Information Technology Program implementation, Management of the functioning of Technical / Medical Educational Institutes of North Eastern States; Science and Technology and Earthquake related research program

Message from the Director’s Desk:-

We have started an International Journal – SANKALAN: - The Journal of Science, Technology & Humanities, (I.S.S.N. Online: - 2455 - 3557) this year. I think, this work will enhance the research and academic oriented responsibilities in several disciplines in today's and future era. I also, invite the professionals, research scholars, academicians and the concerned people from various domains to participate by their work and serve the nation and world in the emerging & innovative domains. Lastly, I want to thank the whole team of SANKALAN by whom we have done this unique task. Thank you all.

[C]. Executive Editor / Publisher: - Rahul Rai

He is working as Assistant Registrar at B.I.T. Mesra, Ranchi, Jharkhand. His areas of interest are Analytics, Marketing & Entrepreneurship. He is M.B.A with Distinction Marks from B.I.T.S., Pilani, Rajasthan and B.Tech with Distinction in IT and Management. He has 06 years of industrial experience in Analytics and Research industry.



Background Highlights:-

- Worked as Academic Associate in Department of Management, B.I.T.S., Pilani, Rajasthan
- Qualified All India Level :- U.G.C. National Eligibility Test – Junior Research Fellowship (U.G.C. – N.E.T – J.R.F.) in Management in the year 2013
- Diverse Experience in various domain like Banking, Retail, Media & Marketing
- Awarded Many Prizes and appreciations in the career in several fields till date
- Organized & Participated in several seminars and events till date

Note from the Publisher / Executive Editor’s Desk:-

Wishing you all a great year ahead!!!

Firstly, I will pay my gratitude to Almighty, my parents and all well-wishers with whose blessings and support we are able to start this journal “**SANKALAN:-The Journal of Science, Technology and Humanities**”, (I.S.S.N. Online: - 2455 - 3557) We have started this journal publication under flagship of Vidyadaan Institute of Technology and Management to provide a forum for publishing new findings on Science, Technology and Humanities.

I hope this initiative will bring great value for academicians, researchers, students and all those who are involved in Research & Development work. We do have a highly reputed pool of advisory board members from well renowned universities, who help us in keeping high benchmark for quality and originality of our publications. Hence, I am confident that our mission to be the leading Research Journal in field of science, technology and humanities will very soon become true.

I also feel great about the fact that Vidyadaan Institute for Technology and Management is doing a great job both in field of imparting technical education and providing great placement opportunities for students coming from different parts of nation. I hope very soon Buxar-Land of Rishi Vishwamitra; will soon become educational hub of Bihar.

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[D]. Editor - in - Chief: - Rishabh Rai

He is working as Assistant Professor and Head – (Projects & Research) in Department of Electronics and Communication Engineering at Vidyadaan Institute of Technology and Management, Ariakon, Buxar, Bihar since July 2015. His areas of interest are Digital System Design, Communication Systems, Nanotechnology, Embedded System Design, Wireless & Mobile Communications & Low Power V.L.S.I. Design. He is M.Tech in V.L.S.I. Design specialization with Distinction Marks & B.Tech in Electronics & Telecommunication Engineering with Honours.

**Background Highlights:-**

- Earned 04 Distinction Marks / Honours in the all of the respective academic degrees in the career till date i.e. (Class Xth to M.Tech.)
- Published 17 Technical / Research / Review / Study Papers in several National / International Conferences and Journals till date
- Awarded Honorarium & Appreciated for the Paper Publication by A.K.G.E.C. International Journal of Technology in 2016
- Appreciation for the Academic Performance in M.Tech. – (2013 – 2015)
- Academic Excellence Award , for the aggregate performance in B.Tech (2009 - 2013)
- I.E.E.E. National Merit Award – 2013, for the best Paper Presentation in National Conference - E.T.E.A.T – 2013
- Project Selection in the Sixth Science Conclave – 2013, at I.I.I.T Allahabad
- Amul Vidya Bhushan Award – 2009, for the academic excellence & performance in A.I.S.S.C.E. – 2009

Note from the Editor - in - Chief's Desk:-

Firstly, I am thankful to god and grateful to my venerated parents, and all those whose blessings and constant encouragement have helped me to complete this work, i.e. compilation and finalizing of the current issue of the Journal, “**SANKALAN:-The Journal of Science, Technology and Humanities**”, (I.S.S.N. Online: - 2455 - 3557). Authors are requested to emphasize on novel theoretical standard and downtrodden concerns of the mentioned areas against the backdrop of proper objectification of suitable primary materials and documents. The papers must not be published, copied in parts or whole or accepted for publication anywhere else. For more information and ideas, one must visit the "**Quality & Plagiarism Check**" for such issues, as given in the website www.sankalan.org .

I think that, we provide only quality and original research / technical / review / study / implementation papers in our Journal as we have strictly gone through the Plagiarism policies, which must be followed for anyone in writing any paper. The entire article will must be double blind peer reviewed by our Advisory Board and will be thoroughly checked on the Plagiarism Software if selected, may be published by completing the copyright policies with the Journal. I think that it will really help the academicians / scholars / faculty members / industry delegates & professionals as well as students in finding knowledge and information on several emerging aspects in the world. Lastly, I want to thank all the concerned authorities who are directly or indirectly related to our Journal, and must expect that their co-ordination and support are always valuable and required for us forever.

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“SANKALAN”

The Journal of Science, Technology & Humanities

SANKALAN welcomes and encourages scholarly unpublished papers on various fields of Science, Technology & Humanities from students, teachers, scholars and professionals. The Journal invites the submission of papers that meet the general criteria of significance and academic brilliance. Authors are requested to emphasize on novel theoretical standard and downtrodden concerns of the mentioned areas against the backdrop of proper objectification of suitable primary materials and documents. The papers must not be published in parts or whole or accepted for publication anywhere else.

OBJECTIVES:

- ❖ To develop and promote academic research activities on various contemporary techno-engineering issues and trends in management and humanities.
- ❖ To provide a platform to discuss the problems related to the technical as well as the managerial and research issues.

The most valuable and suggestive comments of all the readers are always awaited and welcomed in order to achieve the ultimate goal. We are looking forward for your contributions. All communications must be made only in electronic form e-mailed to:

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Big Data and Internet of Things Opportunities and Challenges

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Abstract -- Society's embracing of "Internet of Things" is creating a 'Data Tsunami' where digital data is doubling in size every two years. Smart companies are harvesting and using this data to improve market knowledge, enhance competitiveness, and transform their operations and even their business models. It's a disruptive change for business.

And like the Internet and the computer itself, enterprises that learn to use big data and information management for business advantage will thrive in the big data era; those who don't will find themselves outpaced by more nimble competitors.

Index Terms – Data Management, Big Data Analysis, Business Advantages, Research and Development Initiative

I. INTRODUCTION

BIG DATA is data that is too large, complex and dynamic for any conventional data tools to capture, store, manage and analyze. The right use of Big Data allows analysts to spot trends and gives niche insights that help create value and innovation much faster than conventional methods.

The amount of data that's being created and stored on a global level is simply mindboggling. Digital data volume is poised to double every two years in the foreseeable future. By 2020, there will be eight billion people on Earth, using 20 billion devices and communicating with 100 billion connected things -- a phenomenon called 'Internet of Things.'

Thanks to Smartphones, and the emergence of Social Media, the data uploaded on the Web via 'video content' is unprecedented. Collecting, storing, and analyzing big data present new challenges. Right data strategy can improve efficiency and achieve desired results.

Estimated size of the digital universe in 2011 was 1.8 zettabytes (1 ZB = 10^{21} bytes). It is predicted that by 2020, this will grow to 35 ZB. A well-defined data management strategy is essential to successfully utilize Big Data.

To illustrate this point, recall that 'Big data analyses played a remarkable role in Obama's successful 2012 re-election campaign. This was the first U.S. presidential re-election campaign to use Twitter and Facebook for promotion.

The Obama campaign was highly effective in getting out the vote, in using technology to identify voters, and in

capitalizing on growing segments of the voting population – a mindboggling quantum of data.

President Obama won re-election, not by going after independent voters, but by going after emerging groups in the U.S. population. By race, age and gender, voters made clear that America is made up of many parts, and the Obama team captured more of them, and delivered more of them to the polls. Upon re-election, the Obama administration announced the "Big Data Research and Development Initiative", to explore how big data could be used to address important problems faced by the government. The initiative is composed of 84 different Big Data programs spread across six departments

Big data analysis was also in part responsible for the BJP to win the General Election 2014. Today, the same government utilizes numerous techniques to ascertain how the citizens respond to government action, as well as ideas for policy augmentation. All this needs new tools, called, 'Big Data analytics'.

II. VAST POTENTIAL

Enterprises have always sought to mine actionable information from data. But capitalizing on the vast potential value of big data requires a new approach. Traditional data warehouses and business intelligence (BI) tools don't provide answers fast enough. Big data analytics—tools and processes created specifically to turn big data and analytics into business insight—allow business leaders to develop a conversational relationship with data. Right data strategy can improve efficiency, attract customers and boost revenue.

Big data is being generated by everything around us at all times. Every digital process and social media exchange produces it. Systems, sensors and mobile devices transmit it. Big data is arriving from multiple sources at an alarming velocity, volume and variety. To extract meaningful value from big data, one needs optimal processing power, analytics capabilities and skill.

Companies like IBM, Microsoft, HP, Oracle, SAS amongst others are feverishly focused on the field called 'data analytics'— and going by the newspaper advertisements, this is the segment, where tomorrow's job openings will be dominant.

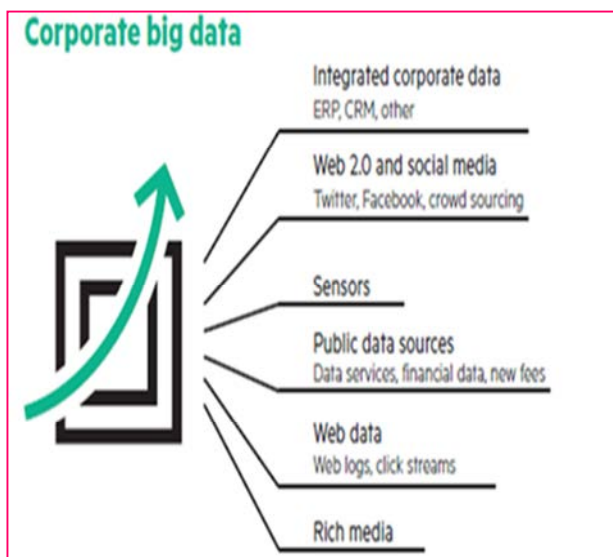


Figure 1. Big data comes from new sources in unprecedented volumes

Big data is a term that describes the large volume of data – both structured and unstructured – that inundates a business on a day-to-day basis. But it's not the amount of data that's important. It's what organizations do with the data that matters. Big data can be analyzed for insights that lead to better decisions and strategic business moves.

According to Gartner, "Big data is high volume, high velocity, and/or high variety information assets that require new forms of processing to enable enhanced decision making, insight discovery and process optimization."

Data Analytics is about delivering 'actionable intelligence' to the right people at the right time. It's about accessing, analyzing, and interpreting your most relevant data – then putting it to work. Big data is changing the way people within organizations work together. It is creating a culture in which business and IT leaders must join forces to realize value from all data.

Insights from big data can enable all employees to make better decisions—deepening customer engagement, optimizing operations, preventing threats and fraud, and capitalizing on new sources of revenue. But escalating demand for insights requires fundamentally new approach to architecture, tools and practices.

As businesses have expanded—and expanded onto the Internet—the volume of business transactions has grown. Walmart is the world's largest retailer, but smaller businesses have also experienced a boom in transaction volumes as a result of Internet initiatives, and they have expanded the data that they collect.

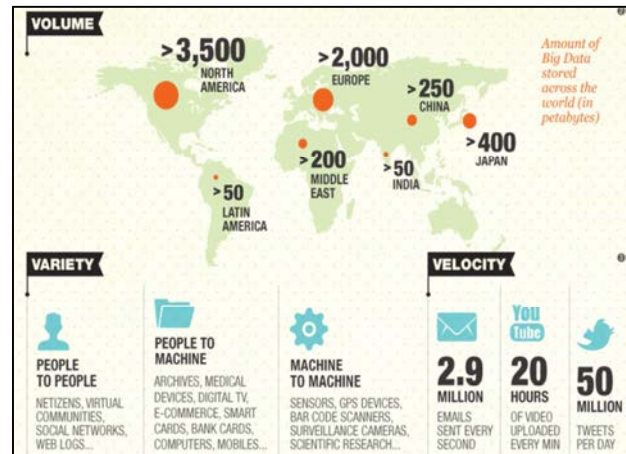


Figure 2. The 3 V's, i.e. Volume, Variety and Velocity is what creates the challenge

Going beyond processing orders, they have implemented new systems to track marketing programs, customer data, warranty claims, complaints, and other information. Much of this data is siloed-stored, managed, and processed by disparate systems. And much big data value is derived from simply bringing together data from many information management sources to achieve a 360-degree view of customers, products, and business operations.

Web-based systems capture not only sales transactions but also the click streams that lead to the sale. Merchandisers can see the other products that purchasers viewed and considered and how they reacted to onsite advertising and promotions. The ubiquity of mobile phones—and accompanying Internet-based ordering and support—has resulted in an explosion in call data records, customer data, and usage information available to telecommunications carriers. Automation in the healthcare industry and the consolidation of care offered through large providers like Hospitals, insurers, and government programs have created massive amounts of data. The financial industry is casting a broad net to capture data that helps identify trends, assess risk, and manage assets.

III. THE BIG DATA OPPORTUNITY

Multimedia files such as video, audio and images are proliferating at an unprecedented rate. Partly driven by the growth of smartphones and the increasing presence of security cameras, the value of rich media has long been known to law enforcement agencies, which now survey a massive amount of video feeds, including videos captured on smartphones and shared via social media, to solve crimes.

Such extremely large data sets can be analyzed computationally in an efficient manner to reveal patterns, trends, and associations, especially relating to human behavior and interactions. Today, much IT investment is going towards managing and maintaining big data.

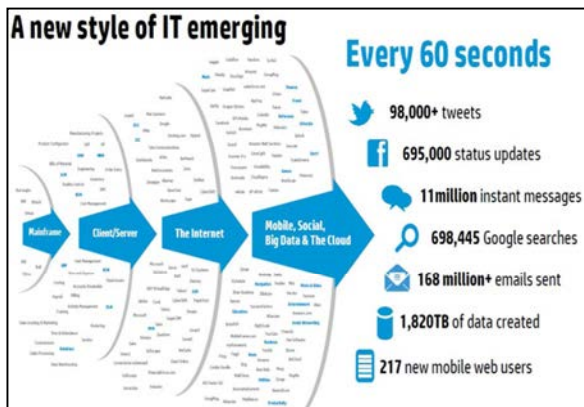


Figure 3. The challenge of managing data creation is mind-boggling.

Advantages that accrue to Enterprises are:

- Competitive advantage
- Data is emerging as the world's newest resource for competitive advantage.
- Decision making.
- Decision making is moving from the elite few to the empowered many.

IV. NEW BUSINESS MODELS

As the value of data continues to grow, current systems won't keep pace. New skills are needed to fully harness the power of big data. Though courses are being offered to prepare a new generation of big data experts, it will take some time to get them into the workforce.

Meanwhile, leading organizations are developing new roles, focusing on key challenges and creating new business models to gain the most from big data. Big data analytics can be leveraged to gain an edge on the competition and increase the bottom line.

From data-driven marketing and ad targeting to the connected car, big data is fuelling product innovation and new revenue opportunities for many organizations.

A. Customer Analytics

Uncover consumer insights with predictive analytics. Effectively improve customer experience, drive customer satisfaction and maximize lifetime value.

B. Fraud Protection

Fraud protection helps prevent fraud and financial crimes that trigger financial losses, erode consumer confidence and drain the potential for core business innovation.

C. Performance Management

Drive financial process efficiency and improve sales margins for incentive compensation.

Sales and Product Analytics

Uncover audience insights and personalize their experiences with advanced analytics and cognitive solutions.

D. Safer Ecosystem

Big Data solutions help government and commercial business leaders detect, disrupt and prevent physical and cyber threats.

E. Risk Management

Make risk-aware decisions and meet regulatory compliance demands through smarter risk management.

F. Background

While the term “big data” is relatively new, the act of gathering and storing large amounts of information for eventual analysis is ages old. The concept gained momentum in the early 2000s when industry analyst Doug Laney articulated the now-mainstream definition of big data as the three:

i. Volume

Organizations collect data from a variety of sources, including business transactions, social media and information from sensor or machine-to-machine data. In the past, storing it would've been a problem – but new technologies (such as Hadoop) have eased the burden.

ii. Velocity

Data streams in at an unprecedented speed and must be dealt with in a timely manner. RFID tags, sensors and smart metering are driving the need to deal with torrents of data in near-real time.

iii. Variety

Data comes in all types of formats – from structured, numeric data in traditional databases to unstructured text documents, email, video, audio, stock ticker data and financial transactions.

G. There are two additional dimensions when it comes to big data:

i. Variability

In addition to the increasing velocities and varieties of data, data flows can be highly inconsistent with periodic peaks. Is something trending in social media? Daily, seasonal and event-triggered peak data loads can be challenging to manage. Even more so with unstructured data.

ii. Complexity

Today's data comes from multiple sources, which makes it difficult to link, match, cleanse and transform data across systems. However, it's necessary to connect and correlate relationships, hierarchies and multiple data linkages or the data can quickly spiral out of control.

When one combines big data with high-powered analytics, one can accomplish business-related tasks such as:

- Determining root causes of failures, issues and defects in near-real time.
- Generating coupons at the point of sale based on the customer's buying habits.
- Recalculating entire risk portfolios in minutes.
- Detecting fraudulent behaviour before it affects your organization.

H. Fraud Prevention Example

As with most credit card companies, Visa Card Company faced the challenge of combatting fraudulent activity while providing seamless service for their customers – tasks that don't always go hand-in-hand.

In fact, when card issuers first started using automated business rules software to prevent fraud, customers reported more frustrating payment rejections on vacations or business trips. The technology that was built to minimize risk had difficulty assessing whether customers were travelling – or someone had stolen their credit cards.

Big data analytics from a company called, SAS changed all this. By implementing analytics, Visa could analyse up to 500 unique variables in real time. This helped it reduce fraud without upsetting customers with unnecessary payment rejections, potentially saving it an incremental \$2 billion of fraudulent payment volume annually.

Today, while you travel SAS tells your financial institution so you're not declined at the point-of-sale. SAS also assists your bank in developing the right strategies for using the 'Visa' card tools and scoring systems.

I. Challenges

Web 2.0 goes beyond letting people access information on the Internet. It has revolutionized how people interact and collaborate with each other, their business partners, distribution networks, and supply chains.

People contribute their own content, and applications get richer as more people use them. Social media is the outgrowth of Web 2.0. Facebook now has more than 1 billion active subscribers, and it's estimated that they share almost

3.3 million individual pieces of content every minute. In that same minute, Twitter users send 347,000 tweets.

V. CONCLUSION

Research on the effective usage of information and communication technologies for development (also known as ICT4D) suggests that big data technology can make important contributions but also present unique challenges to International development. Advancements in big data analysis offer cost-effective opportunities to improve decision-making in critical development areas such as health care, employment, economic productivity, crime, security, and natural disaster and resource management.

However, longstanding challenges for developing regions such as inadequate technological infrastructure and economic and human resource scarcity exacerbate existing concerns with big data such as privacy, imperfect methodology, and interoperability issues.



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The Role of Policies and Their Implementation in Nigeria's Telecommunication Sector

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Abstract: - Telecommunication plays a very vital role on human life. In order to get the best out of it, telecommunication policies are usually set by governments so as to have a guide as well as direction. The role played by the telecommunication policy in Nigeria is being accounted for in this work. Not only this, the factors hindering the fast attainment of the policy objectives were observed, from which it was established that there is interdependence between policies in various sectors of the economy. Thus careful policy implementation in each sector will lead to an overall development that might lead to the attainment of sustainable development goals.

Keywords: - Telecommunications, Service Providers, Policy, Development, Problems

I. INTRODUCTION

The definition of policy by The United Nations Framework Convention on Climate Change (UNFCCC) is that policy is a stated intent to achieve certain goals by a government, either locally, regionally or nationally. A policy is found mostly in the documents of the legislation arm of government and some other important official documents. In order to achieve the goals, the policy must be implemented or enforced.

Policy making is an essential requirement for sustainable development. There are some indicators that show the level of sustainable development. These indicators can be from any of the three categories, economic, social or environmental. A good policy impacts positively on these indicators [1], [2].

Policies can be set in various aspects of human endeavor, such as in agriculture,

transportation, oil and gas sector, education, telecommunications and much more. This paper is focused on the roles of policies and their implementation in Nigerian telecommunications and to be more precise, the service providers such as MTN, Airtel, Etisalat and Globacom.

II. THE NIGERIAN NATIONAL TELECOMMUNICATIONS POLICY

The first policy on Nigerian telecommunications came into existence in the year 1998. Though, it was produced in 1995, its approval was granted in 1998. This was due to difficulties faced by the country, as well as other factors such as economic, social and environmental at that moment. Therefore at the time it was publicized, some parts of the policy were outdated due to the rapid development in the sector both nationally and internationally. This made it a necessity for Nigeria to form another telecommunication policy. At the time of President Olusegun Obasanjo, a week after he took the leadership, he formed a committee to look into the issue of the telecommunications policy in Nigeria. The committee was then chaired by the vice president. The committee worked by consulting stakeholders and the public to receive opinions on the issue by organizing an international workshop. The outcomes of this served as the basis on which the new policy was drafted which was then approved by the president, and by October 1999, it was launched.

The main objective of the policy is to develop the telecommunication sector in Nigeria as rapidly as possible in order to meet up with international standards as well as cope with global developments in the sector. This will lead to national

development, economically and socially as well as connect the nation to the global telecommunications network. The services offered by the telecommunication companies should be of high quality, affordable by the general masses and also reliable. Because the telecommunication sector grows at a very fast rate, long term objectives cannot be formed. Meanwhile short term and medium term policy objectives were formed. Amongst the short term objectives is that projects that will expand networks are to be developed in order to meet up with International Telecommunications Union (I.T.U.) standard of 1 telephone per 100 people inhabiting an area, to improve access to the internet, to stimulate competition in the telecommunications market, to make laws regarding telecommunications, to frequently review the policy as well as regulate the activities of telecommunication operators with the Nigerian Communications Commission (NCC) as the sole regulatory body whose functions are outlined in [3]. The medium term policy was to make accessibility easier for each community within the country, to install both fixed and mobile lines equipments, to satisfy the communication needs of each sector of the Nigerian economy, to develop expertise in the production of telecommunication hardware and software locally, to encourage Nigerian telecommunication companies compete with global ones, to attract investors in the sector and to ensure the protection of each citizen. Later on, the policy was updated but the objectives are identical.

III. TELECOMMUNICATIONS CONSUMER PROTECTION

Nigerian Communications Commission has tried its best to draw the attention of customers/subscribers on their rights when dealing with telecommunication operators. This was done through the establishment of:

- *Telecom Consumer Parliament (TCP)*

This brings together the consumer/subscriber, the telecommunication operators and the regulating body (NCC) to discuss on issues affecting subscribers. It is being broadcast on television and is only in Nigeria that this started, which takes place monthly in each of the six geopolitical zones. The initiative has been well acknowledged by ITU.

- *Consumer Outreach Program (COP)*

This program highlights some issues concerning consumers. It informs consumers about the services it provide, educate them on their rights and also bring

the consumers to face telecommunication operators for questions on issues that concerns them.

- *Customer Care Centre*

This is a unit within NCC. The unit receives complains through emails, postal service, telephone or by an individual. Only problems in which the telecommunication operators are unable to solve or are unwilling to solve are entertained by the unit.

Through this customer care Centre, lots of consumer problems have been solved.

- *Collaboration with Consumer Protection Groups*

NCC has collaborated with a number of such groups in order to ensure that customers are not deprived of their rights pertaining telecommunications service delivery. A memorandum of understanding between NCC and Consumer Protection Council (CPC) has also been signed with the sole aim of protecting telecommunications customers [4].

IV. OUTCOMES OF THE POLICY

With the formulation of the policy and its implementation, it had some positive outcomes to the Nigerian economy in aspects of investments, socio-economic lives of the populace, security and revenue generation.

- *Competition*

With the formation of the policy and the incorporation of amendments, a number of telecommunication operators have emerged that compete with one another through various promotional packages they offer. Direct foreign investments were made due to the enabling environment provided during the implementation of the policy. Thus the policy has yielded some results in aspects of competition within the sector.

- *Socio-Economic Development*

The emergence of telecommunication operators, international business communication was made easier for the Nigerian populace. Employment opportunities which could be direct or indirect have also been provided by telecommunication operators. A lot of people have been employed by the telecommunications operators while the independent ones are either engaged in the business of printing recharge cards or the selling of recharge cards.

So also, availability of mobile phones to even rural dwellers has made business transactions more easily in that sellers can communicate with buyers without physical contact. This helped in reducing rural-urban divide and also helped in reducing time for transportation, with its associated risks. This with other factors led to an increase in the gross domestic product (GDP) in the country. It has also improved communications between relatives, students, professionals, etc. and has helped them a lot in finding solutions to problems.

- *Improvement in Security*

The availability of mobile phones everywhere made the report of crime activities very easy, thereby reducing them. So also, services like car tracking systems are provided by some companies. Through this, a number of stolen cars have been recovered.

- *Revenue Generation*

The telecommunications sector has also provided the government with revenue because each operator purchases a license worth millions of dollars and in addition to it, pays tax regularly [5], [6], [7].

The short term objectives mentioned earlier have been met while some of the medium term policy objectives were met and some were not met. An example of an objective not met is the development of telecommunications hardware and software facilities. So also, our telecommunication companies do not compete with global ones because it takes them time to upgrade their systems. The telecommunication has generations and we are presently in the fourth generation also called 4G, but a few telecommunication companies have 4G equipments.

One objective is to satisfy the telecommunication needs of each sector of the economy. This also has been met to some extent as we can see it in mobile banking, online applications for jobs and schools, payment of bills and so on. Nigeria is mentioned to be amongst the top 10 countries that have a fastest growth in telecommunications [8]. But the development is not as much when compared with global standards because some things are mostly done manually.

Examples include traffic monitoring to find violators of traffic laws, taxing of commercial vehicles in cities etc. These are just examples of jobs carried out by surveillance cameras and telecommunication equipments.

V. PROBLEMS OF TELECOMMUNICATION SERVICE PROVIDERS IN NIGERIA

The telecommunication service providers in Nigeria do not satisfy customer needs. Customers are frustrated by the poor quality of service as well as unsolicited text messages and calls sent by the service providers [9].

A. *Poor Quality of Service*

The telecommunication industry is faced with problems of poor quality of service as customers cannot connect to make calls even though there is network but congestion doesn't allow or at times due to the presence of areas not covered by the network. There is also an issue of interference in which hearing becomes difficult while making voice calls. The condition is worse that subscribers are seeking for compensation from these telecommunication operators but with no response from them. Even the request by the National Association of Telecommunications Subscribers (NATCOMS) yielded nothing and the association decided to report the telecom operators to court.

The only compensation the major companies paid was 1.17 billion naira for their inability to meet a performance criteria set up by NCC, and the compensation was paid to NCC not the subscribers. From the part of the NCC, it was stated that there is nothing like payment of compensation to subscribers in the NCC Act [8]. The problem of poor quality of service is caused by the following:

B. *Vandalization of Telecommunication Service Equipments*

The telecommunication service providers install base stations through which customers connect to while making and receiving calls. These base stations are usually attacked by vandals leading to poor quality of service.

C. *Taxation and Regulation Structure*

The NCC is supposed to regulate the activities of telecommunication service providers. But federal government, some state governments and some local governments try to impose additional taxes on the service providers. This cripples the service roll out in the country thereby leading to poor quality of service. It is evident here that law is being bent.

D. *Lack of Power Supply*

Telecommunication operators rely on electrical power to provide a constant service. Due to the inadequate power supply in the country, they

sought to use generators at their base stations. These generators are powered by diesel which adds to cost. In addition to the cost of diesel, there exists another cost of transporting the diesel. This leads to exorbitant costs in operating the base stations leading to poor quality of service because the money used in operating them could have been used in network expansion which will minimize congestion and lead to a better quality of service [10], [11].

E. Unsolicited Text Messages and Calls

Subscribers/customers are disturbed by the influx of text messages and calls by the service providers in order to advertise some offers through which they gain advantage of the subscriber to make money. Such text messages advertise things like subscription for health tips, business ideas, love tips, sports news and promos. At times the moment a subscriber receives a call and answers, a particular subscription is activated, which is not free, but charged from his/her credit.

Presently, the NCC has given a deadline of 30th June, 2016 for all telecommunication operators to stop unsolicited text messages and calls or they will be fined five million naira. There is also another fine of five hundred thousand naira per day as long as it doesn't stop. The NCC also issued a directive that each of the telecommunications operators should provide a short code of 2442 so that subscribers can choose not to receive such messages and calls by opting into the "DND" option, meaning "Do Not Disturb". It is also the duty of telecommunication operator to inform its subscribers on the availability of this option. The reason for stopping such messages and calls is that they are other sources of poor quality of service [12]. It is a step forward that the activities of telecommunication operators are monitored and there is effort to bring them to order if they violate subscriber's rights.

Later on, it was agreed that the fine has been reduced to 300 billion naira which will be paid on installments [14]. This is a great achievement that NCC is recognized by everyone as the regulator of telecommunication operators which is one of the objectives of the telecommunication policy. Now, MTN has registered most of its subscribers. The expectation is that the problem of these unsolicited text messages and calls will soon become history.

VI. INFERENCE DRAWN FROM THE TELECOMMUNICATION STATUS IN THE COUNTRY

With the problems stated earlier, it is evident that the cause of poor quality of service in Nigeria is not only from lack of policy or lack of its implementation. It is clear that the policy itself depends on factors for proper implementation. Some of these factors are:

- Constant electrical power supply.
- A good legal system in which laws are obeyed and violators of law are punished for their acts.
- Security of the telecommunications infrastructure.

The above factors are lacked in the Nigeria. So, since telecommunication companies are profit making organizations, the observation is that they opt to look for other means of making money to cover up some of the expenses incurred. Thus the adverts through text messages and calls and the overall poor quality of service are due to these factors lacking.

VII. CONCLUSION

The development of the Nigerian National Telecommunications policy and its subsequent implementation has impacted on the Nigerian economy positively by bringing in private telecommunications operators into the Nigerian communications system, aiding in competition between them, encouraging direct foreign investment in the sector, providing job opportunities, reducing the cost and time incurred in businesses, improving the country's Gross Domestic Product (GDP) and has been helpful in sending security alerts.

Thus The National Telecommunication Policy has taken Nigeria a step forward towards attaining sustainable development because it touched both the economic, social and environmental aspects of development. The problems associated with the telecommunication operators were examined and observed to have been developed from lack of power, security and a good legal system. Thus it can be stated that the full implementation of a policy might be dependent on other factors and if traced to the root, it means it is dependent on other policies. Thus the output of the telecommunications policy might have produced a better result had it been that there is a good and well implemented policy on the power sector, a good policy in the security system and so also a good policy in our legal system.

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Gender Inequality and Alexithymia: A Research Based Study on Noble Laureates

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Abstract -- This paper examines two approaches to the analysis of prevailing gender power differences and alexithymia in the society through the study of the works of two Noble Laureates; Toni Morrison, the Afro-American novelist and Elfriede Jelinek, the Austrian writer. “Alexithymia is a personality dimension that involves both cognitive deficits, including difficulties in recognizing, describing, and distinguishing feelings from bodily sensations of emotional arousal, and affective deficits, including difficulties in emotionalizing and fantasizing” (Bermond et al., 2007).

Keywords – Needs of Women, Alexithymia, Difficulties in emotionalizing and fantasizing, Characteristics with respect to women.

I. INTRODUCTION

The first and dominant approach analyses the emotional irresponsiveness of men towards emotional / physical / social needs of women. Second approach examines the disastrous difference in the power practices in society. The guiding principle of this article is the integrated study of socially imposed constraints, reinforcement of traditional gender roles, structured gendered relationships and oppressive patriarchal society with a least emotional response to the declared subordinate status of women. In patriarchy, male privilege has been associated with control over power and production, circulation of pleasure and representation of desires. Social patterns have been designed to accommodate male preferences and modes of gratification. Female sexuality has been relegated to a marginalized position to disallow pleasures and gratification; the woman’s body has been inscribed or ‘imprinted’ by ‘his story’. In all the cultures, woman has always been subjugated by ‘male gaze’ and power practices.

II. BRIEF ANALYSIS

Austrian writer Elfriede Jelinek won the Noble Prize for Literature in 2004. All her writings

Lust, Women as Lovers, The Piano Teacher, Wonderful, Wonderful, Times and Greed are full of tireless fury with the human race. The Noble Prize in Literature 1993 was awarded to Afro-American writer Toni Morrison. Morrison’s consciousness is the consciousness of victimization. It is an apprehension that one is victim because one is African-American, female and stereotyped as a female gender and similar is the approach of Austrian Noble winner Elfriede Jelinek.

Her heroines are a study in a female psyche alienated due to lack of compassionate relationship. This research also revitalizes the existence of those who have been silenced, absent and denied an individual voice. She portrays her woman not only as a prey but also as a woman whose sexuality is considered dangerous, outrageous and a version of identity and self-worth.

Their alternative values directly contravene patriarchal and paternalistic control of men, who ignore, restrain and forbid their women to practice any kind of control over their own bodies. Jelinek’s exploration of women’s sexuality reveals an area related to creative energies, the claiming of identity and the recognition of self-worth.

The fight and the struggle of Jelinek and Morrison remind me two most important feminists of their age who resemble very close to Jelinek and Morrison in the treatment of their subject. One of them is Marry Wollstonecraft, often characterized as the first feminist philosopher. *A Vindication of the rights of women* (1792) is one of the first works that can be called feminist. Wollstonecraft argued that women’s education and upbringing is responsible for their limited expression and expectation. She advocated the need for women to speak out and tell their stories.

And other name is Simone de Beauvoir who fiercely opposed to the image of women in

home and in relation to men. She provided a new dimension to the feminism with the publication of *Le deuxième sexe* (The Second Sex) in 1949. By raising the question over the defined inferior position of women, she writes that “She is defined and differentiated with reference to man and not he with reference to her” [1]. Analogous question is raised by Morrison and Jelinek by describing the sufferings and humiliations of women in most touching manner.

Through their outstanding linguistic abilities in their fiction, the above stated novelists have attempted to portray the dilemmas, the rebellion, the ambitions of women when they have reached the crossroads, though their fiction brutally throws light on the fact that all religions and cultures expect woman to maintain the traditional gender roles heavily loaded against women. To assume that sex signified power in flat, in varying relation of metaphor will always entail a blindness, not to the rhetorical and pyrotechnic but to such historical categories as class and race, before we can fully achieve and use our initiative group of the leverage that sexual seems to offer on the relations of oppressions, we need more and more different more complicated, more daring application of our present understanding of what it may mean for one thing to signify others.

While going through the works of these noble brains, I could measure the anger, disappointment and rage they have expressed through their books and articles. If we throw a glance on literature we may conclude that male authors view the problems prevailing in society from the male angle and their literature dignifies the woman as a matchless domestic creature. Morrison’s consciousness is the consciousness of victimization. It is an apprehension that one is victim because one is female and stereotyped as a female gender and similar is the approach of Austrian Noble winner Elfriede Jelinek. Her heroines are a study in a female psyche alienated due to lack of compassionate relationship.

III. CHARACTERISTICS WITH RESPECT TO WOMEN

Through her every word Jelinek puts a sarcastic question mark on this male dominated society that if woman is such an undignified creature in their dictionary, if they are so emotionless in all their responses towards her every need and wound, if men are so boastful of their manhood on the account of their sperm factory; then why they require women in every walk of their life? Alexithymia and inequality in power distribution is prevailing in our society since ages.

It has been my endeavour to survey these writer’s attempts to bring out gender, race, class and power issues in their respective patriarchies through their works. These laureates not only unfold a radical feminist vision but also interrogate the binaries of male/female, black/white, power/powerless, domination/surrender and so on.

Jelinek’s fictional works each within the framework of its own problem complex presents a merciless world where the reader is confronted with the locked down system of male/female, assault and submission, hunter and prey. “The sex may be largely joyless and unhygienic, in keeping with jelinek’s theme that power and male aggression are the driving force in relationships, but it was explicit enough to leave the Cannes audience speechless”[2].

She further adds that such psychological damages that every society generally inflicts upon the second sex, results in horrible outcomes. What men can do, women can do better. And when it comes to be free, women fall dangerously. Writing about sexuality is still hurtful to men, it could mean women talking about their husbands’ short comings or writing about being bored with them sexually, mentally or spiritually. These novelists portray the nasty side of India’s rich and gorgeous, describing the shocking sex scenes of her heroines and negating the men for their sex centered life provides the proper shape to her novels. They write about women who like herself, flee marriages because they are bored. Acrid, morbid, hedonist, tart, amazon, fire-brand, explosive, misanthropist are but a few unsufficing attributes to these two authors, I have picked up for my analysis. Their themes are brutally open in exposing, particularly a woman, to every kind of exploitation, degradation, and violence.

The Bluest Eye articulates Morrison’s concern for black community, which then manifests itself in a concern for world in general. Morrison has claimed that “love or its absence” is one of her central themes: under the name of love “People do all sorts of things ...The violence is a distortion of what, perhaps, we want to do” [3]. The novel picturises the victimization of a small black girl Pecola. Pecola is obsessed with a myth of physical beauty and as a result plunges into a world of madness. Her self-hate makes her vulnerable to abuse not only from her family but also from the community. Pecola’s life is devoid of love, full of brutality and ugliness. She is a character with totally defenseless approach having no sense of self. Ugliness becomes all-pervasive in her character. She is able to suppress all her emotions and senses; she is able to hide behind ugliness but

she is not able to keep away from seeing the ugliness that surrounds her in her home.

Toni Morrison describes *The Bluest Eye* as a novel “about one’s dependency on the world for identification, self-value and feeling of worth.” The voice of patriarchy shatters her realm, ruins the world of relationships and finally produces conditions of isolation, psychic derangement and silence in Pecola’s life. The brutal patriarchal encounter removes Pecola from the sense that granted distinctions between self and other, between appropriateness and the forbidden just as her father was removed in the early phase of his life.

She remains as cultureless entity in the patriarchal society when she tries to achieve oedipal love for her father. She is left to collect the garbage of life by seeking a pathetic regression to the previous generation.

Morrison mirrors the models of conformity that systems of capitalism inflict and create by reflections emanating from the passions of the non-conforming. Pecola is destroyed by being raped and impregnated by her father Cholly. This disaster shatters the cohesiveness of herself, violates her reflective image and transforms her existence in a big contaminated other. Cholly’s sense of self is just a matter of light over darkness, power over powerless, male over female and the father over daughter.

Morrison through *Beloved* expanded the themes of telling stories untold; the thoughts took the form of the writing in the memory of the millions of lives lost during slavery. The plot revolves around an ex-slave Sethe who would rather kill her own children than risk that they be re-enslaved. She has been depicted as a pathetic figure who is raped by whites and her femininity is torn into pieces. The worst part of this barbarism is the stealing of her milk which was the right of her daughter. A character that is shown as the worthless mud in the wall of the society runs as a contemporary female gender norms.

In *Jazz*, Violet the wife disfigures the face of Dorcas, the mistress of her husband. A female is the foe of a female and both females are the subjects of sexual pleasures for the male society. On the first hand a wife has to fit herself in the role of a faithful spouse, so she has to bear the violence of her husband and on the other hand she has to save the ideal definition of woman.

She reveals that the power in her house lies with men and not with women. She tries to liberate

herself from her given fate and restore her self-respect. She is also a subjugating figure who bears the brutality of male dominating society. She is perfectly fit in a domestic setting and denies the possibility of being a rebellion character.

Lust by Jelinek is an attack on Austrian culture where the silence and the physical muteness of a woman rarely find any space for expression. *Lust* is a pornographic description of sexuality, aggression and abuse. She wonderfully depicts that a woman owns nothing more than the “mute kingdom of her body”. The man’s demand for power, control on violence and the female submission reflects the power structure of the society. “He roasts his hefty sausages in her oven, in its flaky pastry case of hair and skin and his articulated penis roars to a standstill in the lay by of his wife” [4]. Gerti, the wife of Hermann is used as a property and she is not asked ever how she feels about the ways Hermann does with her the nasty sex. She has to tolerate the marital rape by her husband almost twice a day and every night, which is nothing but a sexual abuse for a female.

She is an object for sexual gratification only and wants to liberate herself from that brutality during which Hermann pour his juices into her nastily. She indulges herself in an extra marital love affair with a belief that this time she would be loved for being an important individual and not only a physical body. But dreams shatter when Michael, a student who rescues her from her barbaric husband also represents power of male society only the vigorous use of her physical entity proves again that he is after all a man. Love is again as distant from sex as it was earlier. The relation becomes a love less horror. Once again the norms of gender discourse pictures her as a stereotyped female. The myth of love and defense of woman’s sexuality again faces the reality.

The novel *Women as Lovers* is similar in the nature to the audio play what happened after Nora left her husband or the pillars of the society. This novel depicts those whom with Jelinek empathizes most in the society: women without their own identity. The poor ordinary women are economically dependent on the lowest rung of the social ladder; find themselves in the shadow of their men and watch themselves through men’s eyes. The gender norms for the women society in Jelinek’s writings define that women give birth to children, dress and cook them, gratify their men’s needs and live in a glass show case of femininity without the ~~Vapidly Womankind Themselfs~~ ^{Womankind Themselfs} ~~transforming world.~~ ^{transforming world.} Jelinek is the

In an aggressive tone the novel *Greed* portrays the social dimensions in which the woman is used as an attire to be used and thrown into the gutter, to be exploited both sexually and socially. Kurt Janisch, the typical of Jelinek's men, the policeman, symbol of patriarchal society, is violent, insatiable and possess a greed for domination. Kurt, who goes about sex with Gerti, only wants to get hold of her property; this is the ultimate object of her greed, and the novel superimposes the image of the house with the image of the body.

He prostitutes himself to every woman in the vicinity and beyond, in the hope that they will hand over their property to him one day. He looks at female genitalia in the way as if these doors are permanently open for him. Sex is furtive and bases- "you give each other a good licking"- and love is a common foible, which, for women at least, involve a dangerous loss of selfhood. What women want from their men is neither gentle nor soft nor reasonable- it is just true.

IV. EFFECT RELATIONS WITH WOMEN

The novel *Women as Lovers* was published in 1975. The book presents a group of young characters uncritically adopting the shallow, money-driven conventions that, as Jelinek sees it, regulate sex and marriage in provincial Australia. Jelinek has unremittingly established her genius throughout this work of fiction; she doesn't even spare a moment to satirize the hypocrisy that is as evident in today's world as sunshine itself. She has truly brought out the ignominious life of the married women in her native nation. However, this description applies equally well to nearly all the geographical boundaries across the globe.

"Life seems meaningless without him, even with him life doesn't seem to be very meaningful, at any rate more meaningful than her work in the brassiere factory", "come back, Heinz! I love you, and I need you" [5]. These heart-wringing cries symbolize the helpless love of Brigitte, who is perhaps the self-proclaimed spokesperson of the instigator herself. Jelinek has drained the lion's share of her privileged acumens to produce this one scintilla of a line- wherein she exhibits her earnest yearnings for the man she loves. Her effort is still more commendable in the light of the horrible state of affairs that enshroud her co-protagonist's entire being. Jelinek has illustrated that she does have those unique sparks in her creations that trigger-off a high voltage response for her uneasy stimuli. She has dared to take her soul to these people who are marginalized and downtrodden; and thus, like a thermometer, taken a bit of the oppressive heat that those poor

souls face every day and every night. The passion, the fervour, the authenticity with which she has blasted-off the prevalent assertions that women can never be a part of literary texts is commendable.

The author, in her agonized recitation of the sorry expeditions of the protagonists, has discovered the possibility of authentic identity of women and projects the women characters through the balanced perception. Through her writings in the most oppressive moods, the esteemed instigator has stated that a woman is merely an object of cosmopolitan ridicule and her entire existence is confined to provide sexual gratification only. Thus the belief that "a woman's claim to the rights of creation means first to create self" [6] itself lays emphasis on finding a separate entity in which a woman has to build herself up psychologically even before for right is placed before the society. The question of self is more of a matter of understanding than fulfillment. Jelinek's portrayal of women is an antagonizing set of the social as well as political values. She has attained popularity not only for writing literature with female protagonists but also for projecting the true woman who, de facto, remains in the background. This implies that an ideal woman is not the woman whom she has described, but the woman as it is, and ought to be. The serious issue is that in the projection of mind, soul or the physical entity a 'being'; the inner self is never represented. The reality claims that a human being is divided into so many sleeves among whom it becomes troublesome to say as to which self must be the real one.

In *Lust*, Jelinek has illustrated the debacles, the fiascos and their aftermath that run the life of the bleakest creature that ever treaded this Planet. Gerti, the timorous yet audacious, protagonist of the oeuvre is the unfortunate spouse of Hermann, who "...sings, plays, yells, fucks". Everyday sun rises, with it; raise the hardships of hers that can alone suffice to bring even the Satan to ignominy. Hermann is merely a lesser mortal who is "just a fart in hurricane", and has got just one philosophy to take care of: "it doesn't take long to make merry". Gerti is analogous to a receptor antenna that is bound to the receiver's appalling frequencies that are the habitual springs of inexcusable treatments, whose description even one may regard as grisly. The badly bruised Gerti, then one day, "bares her soul and her bosom with words", to Michael, who didn't went "astray" when it came to rescue her from her regular butcher. That was a day when her esteemed, yet undermined feminism, was put to the extreme batteries. A thoroughly battered soul, amalgamated with a dilapidated physical realm, better known as Gerti,

surrendered all that she had to her saviour. And this pristine operation should not be considered from the point of view of her perfidy, but rather by perceiving that a soul as pure as crystal rain, was asked to emanate from a chunk of charcoal. However, there is still no respite for this poor soul Gerti as Michael, too, is another brute of the same genre as that of Hermann. Devastated and shattered Gerti is left to cry for herself.

“When she bends down she has to spread her legs. Now he can cop hold of her whole fig tree with one hand and set his fingers angrily a-roving. Oh and while she’s at it with her legs apart like that she can stand over him and piss him in his mouth” [7]. The signature approach of Elfriede Jelinek towards one of the nuts and bolts of all living beings, humans and brutes alike, sex- has been more of deference as an art than anything else. She is truly well verse at this elucidation of hers- for she doesn’t consider it forbidden to air her revered analysis regarding this audacious subject. She has very artistically depicted the terrible music that scores of her contemporary women have to face every day. They are taken as wives only for one principle cause: sexual gratification. These wretched, pathetic, dismal creatures are perhaps deserted by the Almighty also- for they are simply forsaken in His kind Kingdom, with nothing to help their undermined souls, that renders them subjugated. “The woman is passive as a toilet, for the man to do his business in. He shoves her head into the bathtub and, his hand clawing her hair, threatens that as you make your bed, so you must cry on it, that’s love. No, cries the woman. She isn’t crying for love” [8].

These sorry tales determine the diluted nerves and murky equations that they have to face day-in and day-out. The protagonist of this novel is no different, at least in the terms of the ghastly courtesies that are always at her disposal because of her husband. Her spouse “is as puffed-up as a pig’s bladder, he sings, plays, yells, fucks”. Murkier become all the dimensions of one’s life when one has a spouse who is so focused with the vision of one’s life! Almost instantaneously, one is strained by an unnatural stimulus to think if for such a fanatically determined spouse, the one at the receiving end is a woman! A meek woman, that is, very politely, the meekest creature Almighty ever created. Sorry tales trail.

Throughout the length and breadth of this opus of hers, Jelinek has portrayed that Gerti is as “passive as a toilet, for the man to do his business in”. Alarms emblazon her morbid-sounding wails, yet she is desperate to vent her agony out. And she discovers Michael the most suitable candidate for

the same, after her entire revered someone who only yells razes feminine-self Jelinek has astonishingly verified the pinnacle of her scholarly insight in this mesmerizing sonata to illustrate Gerti’s affliction and her pining and yearnings for freedom; freedom from regular rapist, who happens to be her spouse also. Marital rape is but one instance of Gerti’s abuse, she is pressed to pose the ultimate ridicule of her crushed subsistence in more ways than one. “The woman has to crook and angle her legs like a frog so that her husband, the examining magistrate, can look into the matter closely” [9]. Not only this, she is forced to oblige him in all the ways she is ordered to, viz. “He stares at her cleft. This is familiar territory now. When she looks away, because she cannot bear his scrutiny and the groping, pinching hands that examine her, he hits her. He wants to see and do everything. He has a right to. There are details you can’t see, and, in the event of there being a next time, a flashlight would come handy” [10].

V. ARGUMENTS ANALYSIS

Aforesaid arguments sponsor a useful and a pretty obvious inference that there are only two distinct ways in which one can dehumanize a woman to such extremes that her entire subsistence, including her feminism is all razed. And these ways are superseded by everything else- they are pornography and marital rape. However, there does exist a subtle distinction between the two; whereas pornography is more centered on the grounds of financial and/or sexual securities, marital rape sabotages the entire being of a woman for merely ego-satisfaction of a sadist. Such a sadist is under a two-way reprimand from the Almighty- for the culprit is not only inflicting pain on someone’s physical domains, but also he is viciously piercing her tender spirits.

These oppressed women suffer both the physical violence to which they are exposed with their men and the powerlessness, which they choose for themselves in their womanly role. Her idiosyncrasy regarding the dismal, rather wretched environment in which her protagonists dwell, questions the reader in his very face: how do you feel now and how would you have felt had the very same things happened to your mother or your sister or your daughter? This one question is found zeroing-in on the reader’s subconscious psyche and Jelinek’s feminism makes one ponder over the “in attendance” conditions of the women, globally. What if we’re cooling our heels in our homes and excusing ourselves from any such botheration, these issues are, nevertheless, staring at us fixatedly. The immaculate polarity of authority distribution has been marring the configuration of

our civilized society since time immemorial; it is so damn wrong, yet no one sees it. Men consistently need some poor soul to exercise their authority on: this satisfies their ego; and women are the most suitable candidates for the purpose- for they are timid, or worse, they can be made timid (by slashing their integrity first as an individual, followed by blasting-off their feminine subsistence).

Beyond doubt the power structure is reflected most clearly in Elfriede Jelinek through sexuality, she is never afraid to present the race, sex, betrayals, social and political bluff. The horrendous and shocking nature of violence against women and the power practices of male organized structure of the society through the gender, specifications make an attack on the darkly satirical critique of the society.

The power of the language is not only used for communication. It is to protest, to project and to create a personality. Language is functional. It is a way of life; it is the identity and individuality of a speaking subject. Jelinek uses language as a means of expression to unsettle the arrogant domain of abusive language. Jelinek's predicament is all the more touching as the female protagonist of *Lust*. Gerti longs for the human touch, sensitivity and companionship of her husband. She fervently longs for his affection and feels that Herman knew nothing that concerns her.

The man compacts, loaded, fresh from the factory waiting to unload. He has been fermenting in his bottle and he wants to uncork the fizz. Tonight, that's right we almost forgot, how we could, tonight is the legally appointed time for the transaction. And the woman waits with her absorbent cloth to soak up everything the man has produced during the day [11].

This instance gives an idea of Gerti's Psychological and emotional alienation from her mate. Through her writings in the most oppressive moods, the esteemed instigator has stabbed that a woman is merely an object of cosmopolitan ridicule and her entire existence is confined to provide sexual gratification only. That's why her texts lay emphasis on finding a separate entity in which a woman has to build herself up psychologically even before get placed in the society. The question of self is more a matter understanding than fulfillment. To quote Shobha De in one of her novels she portrays the hypocrisy and alexithymia of men in every culture.

Women who stray are called assorted charming names. 'Bitch' is one of them. Then they

are 'slut', 'whore', 'nympho' and 'challu'. Men who do the same become heroes to their less adventurous contemporaries [12].

Jelinek has tried to approve the argument of Simone De Beauvoir regarding female sex through the misfortunes of Gerti. Simone argued in *The Second Sex* that in a patriarchy, women have been constructed, as man's "other", denied the right of her own subjectivity. "She is the incidental, the inessential as opposed to the essential. He is the subject, he is the absolute- she is the other." In all her novels Jelinek raises the question over the debased position of women and she applies the language as a tool of criticism against the abusive male society. It may appear strange that at one point she makes a fight to restore women's dignity and at another point she portrays their pornographic sufferings. The answer lies in the efforts of revealing the painful history of the brutality against women in post-war Austria. The real sufferings are portrayed on paper and compel the readers to feel similar anguish and loss.

Gerti also feels the same rejection as her husband's ignorance serves as a cruel repressive force on her sensitive temperament. Her self-esteem undergoes severe battering, for director sees nothing in her to respect, he knows only one thing- how to derive maximum pleasure of her body. What emerges as a close study of Elfriede Jelinek's novel is an understanding of the sufferings of women, which result from uneven power-division in marriages.

A court of no appeal. She is flooded and shat full him, she has to get up and the last of her clothes fall on the floor and she fetches a sponge to clean the Man, that irreconcilable enemy of her sex, of himself and the slime that she has caused to emit [13].

This mammoth male ego, the desire to own and control, spoils the very base of her marriage and carries her on an extramarital affair. She falls in the same unfertile attempt to be loved and graced by Michael who is more fatal to Gerti because of his dual personality. Outwardly he may appear as a man of clear principles but inwardly he too is merciless examiner. Elfriede Jelinek's exploration of female subjugation in patriarchal family structures takes on a larger dimension than the inner psychological world portrayed by Toni Morrison. She constantly focuses on the network of male dominance, power of male repressive forces and its effect on woman. The agony of a woman forced to confirm to a socially prescribed image is best conveyed in the words of Indian

English poetess Kamla Das, the poetess who has fiercely rejected being fitted into any mould.

Dress in Sarees, be girl, be wife, they said. Be embroiderers, be cook, be a quarreler with servants. Fit in oh, [14]. Belong, cried the categorizers.

VI. CONCLUSION

We can view the author's skill as a triangle, the surface of which is covered by offensive language and corner points approach three directions: towards a feminist perspective, a Nazi Past and the contemporary political arena. And every angle of the triangle rebels and protest roars up with more controversial attitude. The woman has always been a matter of choice for men across cultural boundaries. Men need her or love her; it is always in relation to their own gratification. Even when they wrote about her she always has been the 'Second Sex'. To quote Virginia Woolf, through this study I make an attempt to analyze "Imaginatively she is completely insignificant, she pervades poetry from cover to cover; she is all about absent from history" [14]. The historical representation of women in Indian, Afro-American and Western patriarchies, which always have rendered women as the inferior gender and crowned them as a matchless domestic creature.

Silence has always been referred as the most desirable virtue for women. They were punished for their claim to their subjectivity. Women were given their part to play either directly, through pressure or by rituals and laws. It was the patriarchal society in which the female existence was submerged beneath the masculine authority. The mainstream literature that scaled women against financial bequeaths, came out with a subjugated yellow-bellied conclusion of the instability of both. Their mobility created the possibility of loss so both once won over, need to be confined. Deprivation of full human status of women in society made them treated as an object of possession. The theme of Daniel Dafoe's Raxona also sites maid and mistress on the same ladder. Male-authored texts define the qualities of good women as accepting the restrictions and disappointments with their loving submissiveness to their husbands and fathers despite their cruelty towards them. Now the question arises for how long woman has been the object of possessions and uses and abuses in the world. Thus we can conclude that the themes of Jelinek and Morrison as quite useful in the analysis of subjectivity, especially those of which are beginning to note the importance of analyzing gender in relation to

discourses and practice of marginalization, namely those generated with respect to the intersection of class, race, ethnicity, sexuality and nation.

Toni Morrison's approach in interpreting feminine pain and their negative sexuality and Elfriede Jelinek's nudity of male oppressive powers is quite innovative. What they have in common, I believe, is that they both reclaim woman's identity and experience in a holistic way. They both present and represent feminism as the center not as marginals. Their subjective approach crosses the limits of localization and touches the spirit of universalization.

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Performance Analysis of a Low-Power High-Speed 1-bit Full Adder Circuit

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Abstract- Power consumption has emerged as a very important design constraint for integrated circuits (ICs). Static power dissipation has become a major component of total power in Nano metre technology. Full adder is the one of the basic functional part of an ALU. The major power consumption of a processor is lowered by lowering the power consumption of an ALU, and reducing the power consumption by full adder can result in lowering the power consumption by ALU. So the full adder designs with low power characteristics are becoming effective in these days. In this paper a 1-bit full adder is introduced with the using of complementary metal-oxide-semiconductor (CMOS) transmission gate. The design was implemented with use of LT SPICE and H SPICE Tools. The design is implementing on the scale of 45nm Technology. The 1-bit full adder circuit is designed with use of 18 transistors. In this full adder Circuit, XNOR Module is use which are main cause of power consumption, therefore the designing of module such that which minimize the power consumption and finally improve the overall performance of full adder circuit.

Keywords - CMOS, Low Power, High Speed, Transistor, Transmission Gate.

I. INTRODUCTION

Addition is one of the basic arithmetical operations. The task of adder is adding the two binary numbers. In full adder there are three inputs and two outputs. In the three inputs one is the previous carry and in the two output one is sum and other is carry.

The all other arithmetical operation such that multiplication, division, subtraction is done by using addition arithmetical operation. The adder is basic circuit which determines the overall performance of the device. Recently the

design of any VLSI system the low power and high speed is one of the most important factors of device design. Low power consumption is not necessary that input is of low energy, it means that perform the per arithmetic operation circuit consume low power. Use of battery operated device like mobile phone, laptop, notebook and other VLSI device which improve the power consumption and delay. The full adder is one of the important building blocks of all aforementioned circuit [1]. Different logic style, each having own merit and own drawback. [2]. In this paper a 1-bit full adder circuit is design with use of complementary metal-oxide-semiconductor (CMOS) transmission gate with 18 transistors. The Full adder circuit provides the minimum power consume and delay compare to other design. The rest of paper originates as following. In section II explore XNOR module, carry generation module and sum module. In section III describe the proposed full adder. In section IV show circuit simulation, power consumption and delay of the proposed design. Then finally a brief conclusion is given.

II. STRUCTURE OF 1-BIT FULL ADDER

The structure of 1 – bit Full Adder is given as under -

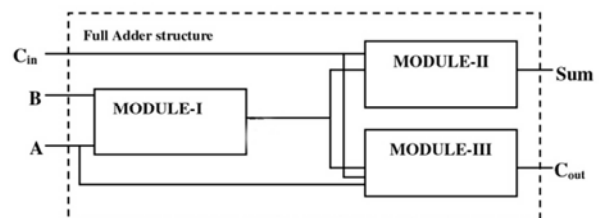


Figure 1. Module Structure of 1-bit Full adder

$$\text{Sum} = (A \oplus B) \oplus C_{in}$$

$$C_{out} = A.B + C_{in} (A \oplus B)$$

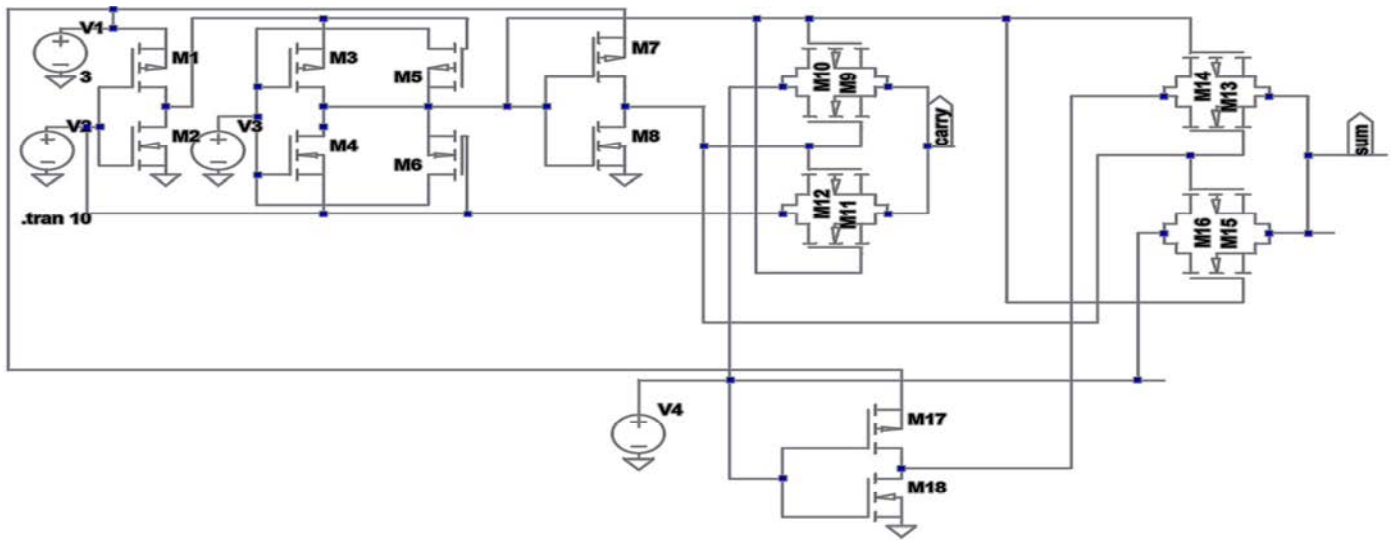


Figure 2. Implementation of Full Adder using 18 transistors

III. XNOR MODULE

In the figure1 module 1 is XNOR Module which are responsible for most of power consumption of the whole full adder circuit. In this design 6 transistors are used to implement modified low power XNOR circuit. As shown in fig (3). In XNOR module when both input are at same voltage level then output in high otherwise output is low.

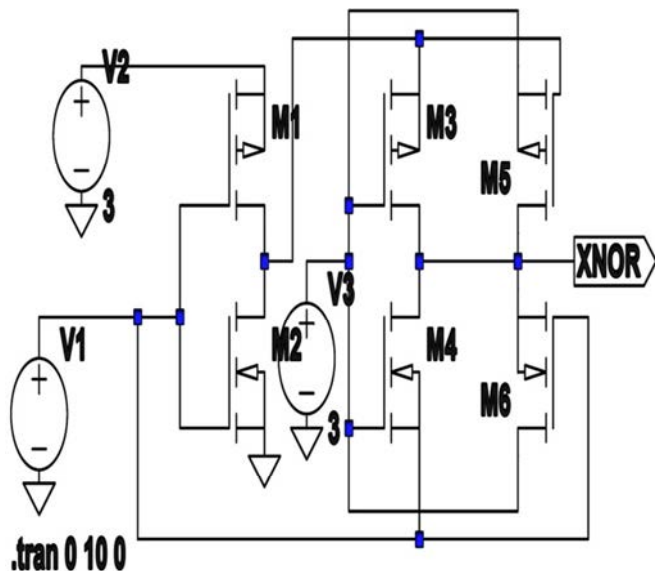


Figure 3. 6 Transistor XNOR Modules

✓ Carry Generation Module

In the fig (1) module-III is the carry module. The Carry generation module is user to generate the carry function. In finger 1 module 1 and module 3 are used to generate the carry function. The carry module is designed such that the carry path length is minimized witch reducing the propagation delay of the full adder circuit.

IV. DESIGN APPROACH OF THE PROPOSED FULL ADDER

✓ 1-bit Full Adder using transmission gate

In this full adder 6 transistors XNOR are used, which improve the power consumption and delay of the circuit. In fig (2) transistor M1, M2 are used for making inverter and transistor M3, M4, M5, M6 are used to make XNOR, so there are totally 6 transistors are used to make Final XNOR circuit. The second stage of XNOR Module are Used to implement sum and carry function. In Fig (2) Transistor M9, M10, M11, M12 are used to generate carry function and Transistor M13, M14, M15, M16 are used to generate Sum function. In Fig (4). Input and Output waveforms for adder with 3v power supply. 18 transistors are used to implement full adder, in this circuit pair of transistors is use to make transmission gate which is used to generate sum and carry function.

V. SIMULATION RESULTS

The simulation result is shown as under-

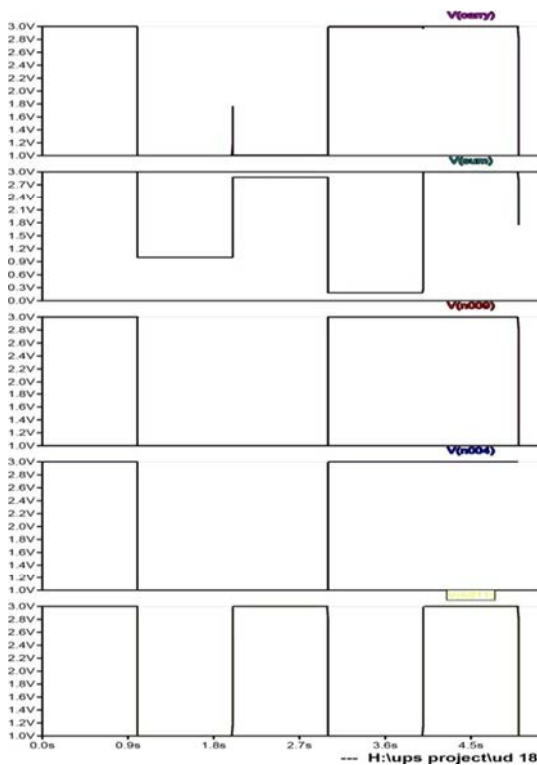


Figure 4. Simulation Result of 18 transistor full adder

✓ Performance analysis of designed Full Adder -

Supply voltage (volt)	Power consumption (μW)	Delay (ps)
1.8	83.93	23.05
2.1	145.45	20.08
2.4	213.99	18.32
2.7	304.41	17.56
3.0	395.37	15.79
3.3	527.72	14.46

Table 1. Power consumption and delay of full adder circuit with different supply voltage

As show in table 1 when supply voltage increases then power consumption will also increase and delay will be decreased.

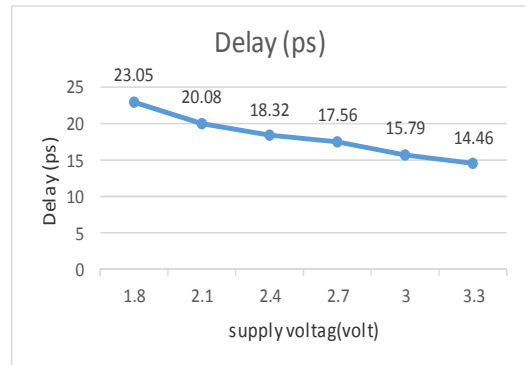


Figure 5. Delay variations of adder with supply

In the above fig. 5 shows that when power supply voltage is increased then the delay of full adder will decrease.

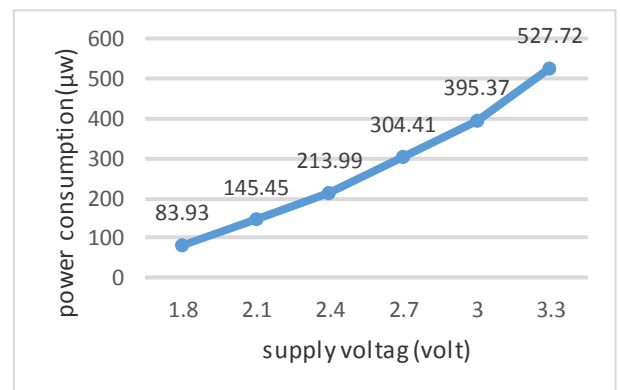


Figure 6. Power consumption variations of adder with supply voltage

In the above fig. 6 shows that when power supply increase then power consumption of full adder will also increase. When supply voltage is 1.8 volt then corresponding power consumption is $83.93\mu\text{W}$, and when supply voltage is 3.3 volt then corresponding power consumption is $527.72\mu\text{W}$.

V. CONCLUSION

In this paper first a full adder module is presented and a different module which requires is explained and after that simulation is done using LTspiceIV and circuit is verified. Power consumption and delay are calculated using H-spice tool. Power consumption for different supply voltages are shown in table 1 as voltage increase power consumption increases and delay decreased.

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- [8] Figure 1. Module Structure of 1-bit Full adder
- [9] Figure 2. Implementation of Full Adder using 18 transistor
- [10] Figure 3. 6 Transistor XNOR Module
- [11] Figure 4. Simulation Result of 18 transistor full adder.
- [12] Figure 5. Delay variations of adder with supply
- [13] Figure 5. Delay variations of adder with supply
- [14] Table 1 Power consumption and delay of full adder circuit with different supply voltage



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Mechanical Characterization of Epoxy Based Thermoset Polymer Composite with Natural Filler

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Abstract: Many researches are being carried out in the field of material science in order to develop new materials which can provide better mechanical properties, low in cost and does not harm our ecosystem. Much attention of the scientists and engineers is towards reinforced polymer matrix composites in which a binder material is taken and reinforcement is done in the forms of particles, fibers and flakes or lamina in order to improve its mechanical properties. Reinforcement with the help of natural filler have many advantages like they are easily available, renewable, bio-degradable and has less weight to strength ratio. In this paper an attempt has been made to develop a composite material using epoxy as a binder material and sugarcane trash as reinforcement in particle form using compression molding process in different wt.% i.e. 10%,15%,20% & 25%. Various tests like tensile test & bending test are performed on the prepared samples and analyzed in detail.

KEYWORDS: Epoxy, Natural filler- Sugarcane Trash, Compression Molding Process, Tensile Test, Bending Test

I. INTRODUCTION

Nowadays composite materials are used in myriad applications in engineering structures that includes automobiles, airplanes, spacecraft, bridges building, sports equipments etc. Composite materials are used tremendously in industries.

Application of composite material was started in aerospace industry in late 1970's but today it is booming inevitably. Also in automobile industries, due to progresses in technology composites are replacing metallic automotive parts.

Natural filler has gained importance as a reinforcement material in the reinforced polymer matrix composite due to increasing concern towards environment. Using natural fillers as additives for composite materials give a satisfactory result for improving their performance and applications due to biodegradability, abundance, low cost and high specific strength. It is also beneficial due to low density; mass of composite is reduced by the use of natural filler [1].

Sugarcane trash is a abundantly available waste material which can be used as a natural filler material in the reinforced polymer matrix composites. It is obtained from the agricultural waste and can be treated as filler material.

Epoxy resins are one of the important class of thermosetting polymers which are widely used as a matrix for reinforced polymer composite materials and also as structural adhesive. It improves resistance to fatigue and micro-cracking and does not form volatile products [2].

According to latest studies on properties and preparation of reinforced polymer matrix composites using natural filler like sugarcane, bamboo, jute, kenaf, pineapple were carried out.[3][4][5] In recent practice it is seen that natural fiber composites are used in both interior and exterior parts in car manufacturing, this fulfills two motives of companies i.e. to reduce the overall weight of vehicle which increases the fuel efficiency and sustainability of manufacturing process is also increased. It is accomplished in many companies like Mercedes Benz, Daimler Chrysler and Toyota and also scoping to expand the use of natural fiber composites.

A. Objective

The main objective is to study and evaluate the mechanical and physical properties of sugarcane trash as a reinforcement material in the epoxy resin matrix. A series of composite material will be developed by varying the wt. % of sugarcane trash i.e. 10%, 15%, 20% & 25% and testing will be performed in order to analyze the mechanical properties of the developed material. The various tests include tensile test & bending test.

B. Material Used

1. Sugarcane

Sugarcane trash is an abundantly available waste material which can be used as a natural filler material in the reinforced polymer matrix composites. The two main constituents of sugarcane trash are cellulose & hemi-cellulose and lignin. Cellulose and hemi-cellulose contributes about 70% of total chemical constituent and lignin acts as a binder material for the cellulose fibers [5]. The selection of the natural filler should be such that it has excellent chemical bonding with the binder material i.e. the affinity of bonding should be good between reinforcement material and binder material [6].

2. Epoxy

Epoxy resins are one of the important class of thermosetting polymers which are widely used as a matrix for reinforced polymer composite materials and also as structural adhesive. It is amorphous, highly cross-linked polymer which possesses various desirable properties like high tensile strength and modulus, good thermal and chemical resistance, dimensional stability, excellent adhesion to different materials and negligible shrinkage [2].

3. Hardener (Araldite HY 951)

Hardeners are used to enhance the physical properties of epoxy resins such as adhesion, impact strength and to alter the viscosity of the polymer matrix. It also improves the life, lower exothermic and reduce shrinkage.

C. Mechanical, Physical Properties and Testings

1. Density and Particle size of sugarcane trash

Sugarcane is obtained by crushing and extraction of juice from the sugarcane, the residue left out in the form of fiber is converted into

particle form by spray dryer method. It is a method of producing a dry powder from liquid or slurry by rapidly drying with a hot gas. All spray dryers are some type of atomizer to disperse the liquid or slurry into a controlled drop size spray. The obtained particle size (in mm) of the sugarcane trash was 2.224mm in length and 0.479 mm in width with projection microscopic method. The density of sugarcane trash was 0.904 gm. /cm³ which were obtained by in-house method.

2. Tensile Strength

Tensile strength of a material is obtained by tension test in which specimen is subjected to uni-axial load until fracture in order to find out various mechanical properties of the specimen such as ultimate tensile strength, yield strength etc. The tension test specimen has two shoulders and a gage in between, shoulders are made large so that it can be gripped firmly in the tension test machine and gage section has smaller area so that the deformation and failure can occur in this area [7].

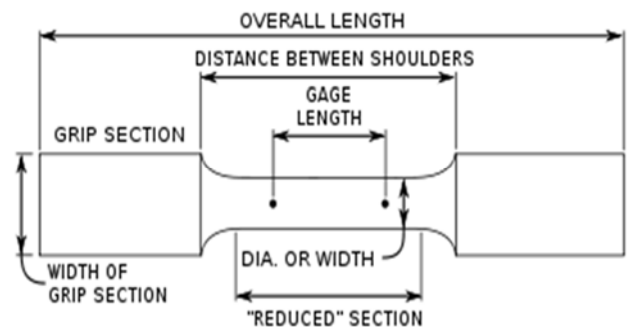


Figure 1. Tensile Test Specimen (Dog-Bone Type) line diagram



Figure 2. Tensile Test Specimen (Dog-Bone Type)

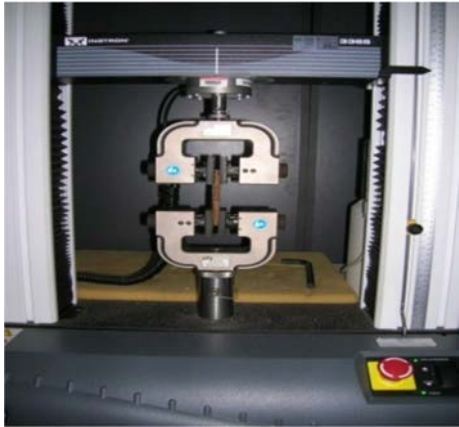


Figure 3. Tensile Testing Machine

II. Bending Test

A three point bending test is performed on the specimen in order to find out the flexural stress of the material. The specimen is placed on two supporting pins and set distance apart and the third pin is lowered from above at constant rate until the specimen gets fracture[8][12].

For rectangular sample under a load in three points bending set-up the formula for calculating the flexural stress is given as:

$$\sigma_f = 3PL/2bd^2$$

- P- Load at fracture point
- L- Length of support span
- b- Width
- d- Thickness

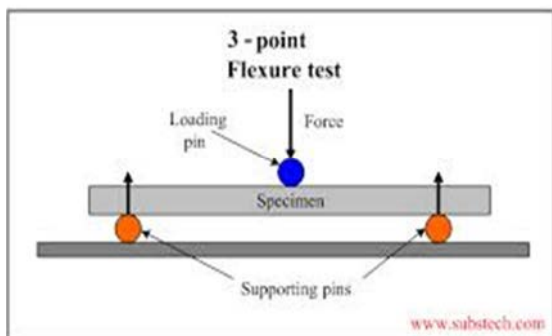


Figure 4. Beam of Material under Bending



Figure 5. Flexural Testing Machine

III. Experiment Procedure

1. Design and Preparation of Mould

For mould preparation a ceramic plate was used over which (mould of dimension 25cm×20cm×0.4cm) was made with overlapping twice the double sided tape of thickness 2mm. A thin sheet is placed in mould first and then epoxy mixture is poured into mould [9].



Figure 6. Design of Mould

2. Preparation of Pure Epoxy Resin

Epoxy resin and hardener were mixed in ratio of 10:1 after separately weighting them an electronic balance [11].

3. Preparation of Composite Specimen

Epoxy mixture is taken in the bowl and thoroughly mixed and added sugarcane particle in mixture according to volume fraction and then continues mixing till its solidification states. Gradually poured the mixture in the mould and spread it in the mould thoroughly. The mould was filled to brim and was placed on flat surface. Sharp

needle was used for punching to remove the excess bubble. Finally covered the mould with OHP sheet and pressure exerted on it by putting weight [14]. Left the mould to cure for 24 hours under normal atmospheric condition. Finally, composite was taken out from mould and stored safely for further test [13].



Figure 8. Mixing of Epoxy resin and Sugarcane Trash

IV. RESULT AND DISCUSSION

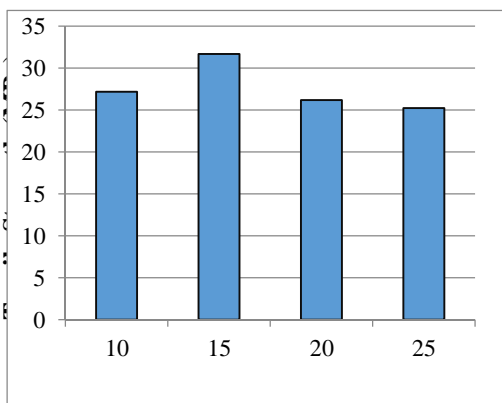
1. Tensile Strength

Dimension of specimen = (17cm*2cm*0.4cm)

Parallel length = 1 cm, Gage length = 9cm, Grip width = 3cm

The table below shows the average value of the tensile strength for three specimens for each wt. % of filler.

Table 1. Tensile Strength

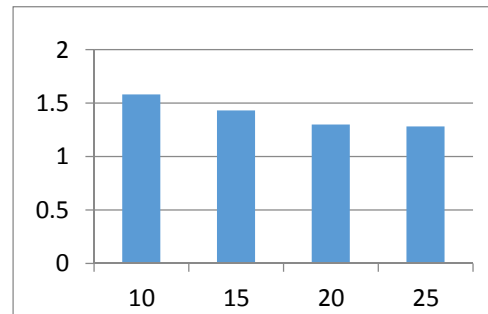
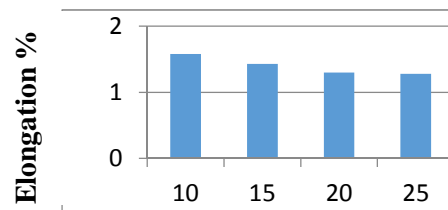


Filler Content (wt. %)

2. Elongation %

S.No	Elongation %	Test Results
1	Sample 1, 10%	1.58
2	Sample 2, 15%	1.43
3	Sample 3, 20%	1.30
4	Sample 4, 25%	1.28

Table 2. Elongation %



S.No	Tensile Strength (MPa)	Test Results
1	Sample 1, 10%	27.17
2	Sample 2, 15%	31.67
3	Sample 3, 20%	26.21
4	Sample 4, 25%	25.23

Filler content (wt. %)

Table 3. Test Results

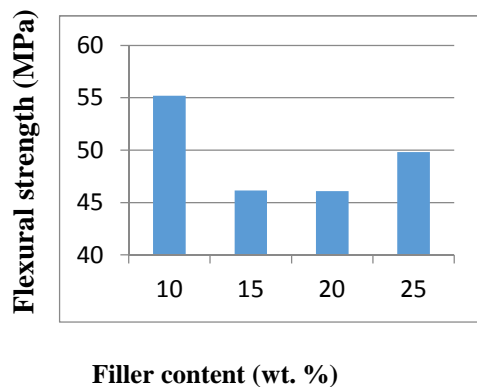
3. Flexural Strength

Dimension of specimen = (12.6cm* 1.3cm*0.4cm)

The table below shows the average value of flexural strength for three specimens for each wt. % of filler.

S.No	Flexural Strength	Test Results
1	Sample 1, 10%	55.20
2	Sample 2, 15%	46.16
3	Sample 3, 20%	46.08
4	Sample 4, 25%	49.81

Table 3. Flexural Strength



V. CONCLUSION

As we get the density of sugarcane trash as 0.904 gm./cm³ so sugarcane trash can be used as filler material because adding this will reduce the weight of the specimen. The composite having 15% filler is showing good result in tensile test has been developed. The composite having 10% filler by weight is showing good result in elongation has been developed.

It is observed that when percentage sugarcane trash increases, tensile strength of the specimen increases upto 15% and then it shows decline. The elongation% decreases as the percentage of sugarcane trash increases. The flexural strength comes out to be maximum at 10% filler content and then it starts decreasing when the percentage of filler content increases.

VI. FUTURE SCOPE

As we all know waste management is one of the biggest challenges of the future. As population is increasing rapidly we have to be ready for an alternative resource which can fulfill the demand of people. Sugarcane trash is an agricultural waste material which can be utilized in the development of material; this will minimize the deposition of waste material which is produced by industries and help in waste management. Since the strength of developed composite material obtained is low, it can be increased by silane treatment of filler material or by using hybrid filler. We can also add thermoplastic like polycarbonate for increasing the toughness of the material.

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(Profile Picture not available)

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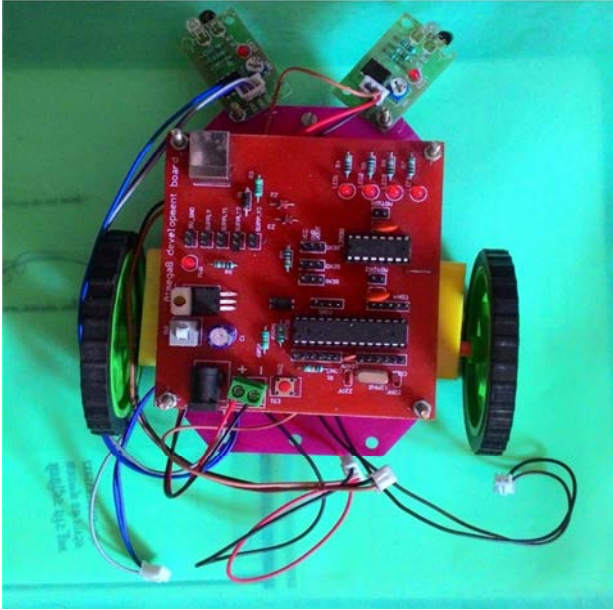
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