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SURVEYING AND OVERVIEW ON EFFICIENT TECHNOLOGY & RESEARCH PAPERS

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Abstract: Here in the research papers we have surveyed on theConsumers of electric power always want fastest &most, high efficient & faultless technology which are 4G Analysis, Witricity,the optical fiber technology, Biometric Palm Prints, And Digital Terrestrial Broadcasting Technologies. Here are the five papers that are reviewed and a brief verification and description on each papers are overviewed here.

Keywords: **Witricity, Microwave Power transmission (MPT), Nikola Tesla,Wireless Power transmission (WPT), Lunar, Tesla Coil, Biometric Palm Prints,,the optical fiber technology,4G Analysis,Digital terrestrial television broadcasting (DTTB)technologies, DTTB standards comparison.**

1 INTRODUCTION

Here in the papersa brief verification and description on each papers are overviewed. Here The brief analysis Of each papers and Surveying is done accordingly on the experiments done and technology invented.

Some of the basic papers elaboration is given here as follow:-

1. **The Witricity: Revolution in Power Transmission Technology**
2. **New-generation optical access system based on the thin film filter technology**
3. **Analysis of SIP-based mobility management in 4G wireless networks**
4. **Biometric Palm Prints Feature Matching for Person Identification**
5. **Digital Terrestrial Broadcasting Technologies and Implementation Status.**
6. **Radio-wave transmission**
7. **Electromagnetic induction/Magnetic resonance**
8. **Capacitive coupling**
9. **Laser/infrared optics transmission**
10. **Microwave**

- **Fuelled by the advancement of wireless technologies andthe emergence of multimedia data services, cellular wirelesssnetworks have evolved to their third generation (3G) in just two decades.**
- **Multimodal biometric systems have recently attracted the attention of researchers and some work has already reported in literature. Most of the reported work has**

bimodal biometric system such as Finger prints, Face recognition, Iris, Hand and Palm print recognition

- **The digital broadcasting has revolutionarised the broadcasting industry changing its perception that has existed for decades, increasing extensively the carrying capacity of a frequency channel for broadcasting stations, introducing mobility and facilitating convergence of data transmission, broadcasting and telephony.**
- **The number of consumers of the optical fiber technology has grown rapidly due to benefits of broadband connections**
- **Witricity may be defined as the way of efficient transmis-sion of electric power from one point to another through vacuum or atmosphere without use of wire or any other substance which make a physical connection. It is not a new idea.**

CONCEPT OF THE TECHNOLOGY

Basic idea of inductive coupling is parallel to the mechanical resonance in which the oscillation frequency of two different identical system matched for the example lets think about the vibration of glass window if one vibrate then the identical glass also starts vibrating, or if one pot in the kitchen vibrate then another identical pot starts vibrating with same frequency.

The same concept is used here in electrical oscillator. We make two identical electrical pendulum when one starts oscillate than other identical pendulum tank circuit start vibrate with same frequency this device works not only as receiver but also transmitter [3,4]. This is known as inductive coupling. It can also be used as a rectifying antenna or Rectenna.

In this Rectenna oscillates at the resonant frequency between the inductor (energy stored in the magnetic field) and the ca-pacitor (energy stored in the electric field) and is dissipated in the resistor.

THE NEED FOR A WIRELESS SYSTEM OF ENERGY TRANSMISSION

A great concern has been voiced in recent years over the ex-tensive use of energy, the limited supply of resources, and the pollution of the environment from the use of present energy conversion systems. Electrical power accounts for much of the energy consumed. Much of this power is wasted during transmission from power plant generators to the consumer. The resistance of the wire used in the electrical grid distribu-tion system causes a loss of 26-30% of the energy generated. This loss implies that our present system of electrical distribu-tion is only 70-74% efficient.

A system of power distribution with little or no loss would conserve energy. It would reduce pollution and expenses re-sulting from the need to generate power to overcome and compensate for losses in the present grid system.

The proposed project would demonstrate a method of energy distribution calculated to be 90-94% efficient. An electrical distribution system, based on this method would eliminate the need for an inefficient, costly, and capital intensive grid of cables, towers, and substations. The system would reduce the cost of electrical energy used by the consumer and rid the landscape of wires, cables, and transmission towers.

There are areas of the world where the need for electrical power exists, yet there is no method for delivering power. Africa is in need of power to run pumps to tap into the vast re-sources of water under the Sahara Desert. Rural areas, such as those in China, require the electrical power necessary to bring them into the 20th century and to equal standing with western nations.

Figure1: Some Products Of Wiricity Available In The Market
Source:Paper 2

BIOMETRIC PALM PRINTS FEATURE MATCHING FOR PERSON IDENTIFICATION

The Paper Was Proposed By Dr. Vikas T. Humbe andMr.Shriram D. Raut. The Biometrics identification of an individual is can be done by physiological or behavioral characteristics; where the palm print of an individual can be captured by using sensors and is one of among physiological characteristics of an individual. Palm print is a unique and reliable biometric characteristic with high usability. A palm print refers to an image acquired of the palm region of the hand.

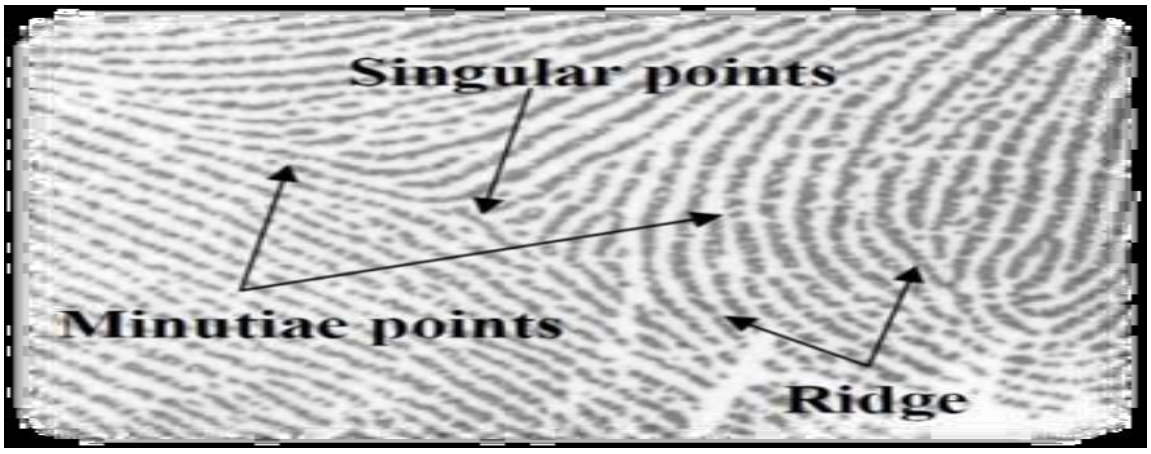

Figure2:Biometric Palm Scanning

NEW-GENERATION OPTICAL ACCESS SYSTEM BASED ON THE THIN FILM FILTER TECHNOLOGY

The Paper Was Proposed By O. Ozoliņš*, V. Bobrovs, Ģ. Ivanovs and I. Ļašuks . Telecommunications Institute, Riga Technical University . The number of consumers of the optical fiber technology has grown rapidly due to benefits of broadband connections .Due to enormous amount of data to transmit, telecom providers are forced to adjust their employed optical fiber access systems to manage these challenges .One of the most common passive devices for multiplexing/de-multiplexing (mux/de-mux) of optical signals in the systems based on WDM is the TFF due to its design flexibility and technological maturity for achieving low loss, high isolation and wide bandwidth. A TFF can be made to have excellent wavelength stability, which makes this device an appropriate passive component.

ANALYSIS OF SIP-BASED MOBILITY MANAGEMENT IN 4G WIRELESS NETWORKS.

The Paper Was Proposed By Nilanjan Banerjee, Wei Wu, Kalyan Basu, Sajal K. Das.Providing seamless mobility support is one of the most challenging problems towards the system integration of fourth generation (4G)wireless networks. Because of the transparency to the lower layer characteristics, application-layer mobility management protocol like the Session Initiation Protocol (SIP) has been considered as the right candidate for handling mobility in the heterogeneous 4G wireless networks.SIP is capable of providing support for not only terminal mobility but also for session mobility, personal mobility and service mobility.

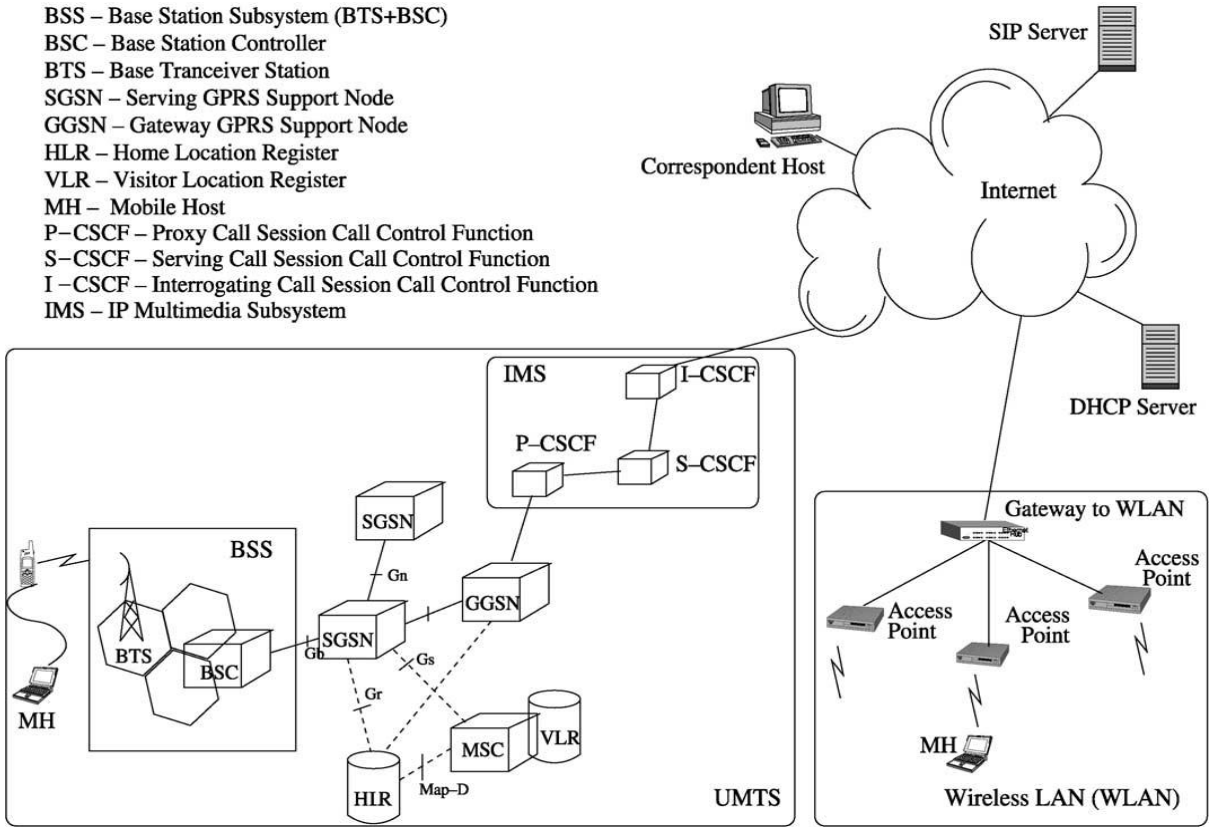

Figure3:4G Analysis

DIGITAL TERRESTRIAL BROADCASTING TECHNOLOGIESAND IMPLEMENTATION STATUS

The Paper was Proposed By Nerey H. Mvungi, Justinian Anatory, and Fatuma Simba. Digital broadcasting has been an area of active research, development, innovation and business models development in recent years. This paper presents a survey on the characteristics of the digital terrestrial television broadcasting (DTTB) standards, and implementation status of DTTB worldwide showing the standards adopted. It is clear that only the developed countries and some in the developing ones shall be able to beat the ITU set analogue to digital broadcasting migration deadline because of the challenges that these countries faces in digitizing their terrestrial broadcasting

CONCLUSION

- Here We Conclude that after getting a brief verification from these papers based on the technology, different innovations and inventions are taking place on each and everyday. Hence these Papers Suggest How These all technology works and innovations are taking place on daily basis.
- It is now a reality that electrical energy can be economically transmitted without wires to any terrestrial distance. This technology would reduce the cost of electrical energy for consumers and get rid of the landscape of wires, cables, and transmission towers etc. It has negligible demerits which was found insignificant and biologically compatible.
- Hence, we Conclude That These Are The Research papers and Their Description Are Given In These Section.

REFERENCES:

[01] The Third Generation Partnership Project (3GPP), http://www.3gpp.org.

[02] The European Telecommunications Standards Institute, http://www.etsi.org.

[03] Conference proceeding: Chin-Chuan Han, Hsu-Liang Cheng, and Kuo-Chin, "Personal Authentication Using Palm Print Features." ACCV2002: The 5th Asian Conference on Computer Vision, 23–25 January 2002, Melbourne, Australia.

[04] Conference proceeding: Kuanquan Wang, Xiangqian Wu, "A Novel Approach of Palm-line Extraction", Proceedings of the Third International Conference on Image and Graphics (ICIG"04), 0-7695-2244-0/04 © 2004 IEEEATSC, "A/53: ATSC Digital Television Standard Parts 1-6", *A/53 Part1-6 ATSC Document*, 3 Jan. 2007.

[05] ATSC, "Standard for Coding 25/50 Hz Video", *A/63 ATSC Document*, 7th May 1997.

[06] ATSC, "ATSC Standard: Video System Characteristics of AVC in the ATSC Digital Television System", *A/72 Part 1 ATSC Document*, 29 Jul.2008.

[07] Agilent Technologies (2006).Agilent 86038B Photonic Dispersion and Loss Analyzer. (2nd ed-n) Germany: Agilent Technologies Manufacturing GmbH, p. 350.

[08] Arabshahi H, Asmari M (2010). Optimum designing of thin film filter layers of SiO2 and SnTe based on optical particle swarm opimizer. Int. J. Phys. Sci., 5(01) 057-061.

[09] Cisco Systems (2010).Cisco visual networking index – forecast and methodology 20092014.White pp. 11–17.Dutta AK, Dutta NK, Fujiwara M (2003). WDM TECHNOLOGIES: Passive Optical Components. USA: Academic Press, p. 551.

[10] Nikola Tesla, "The Transmission of Electrical Energy Without Wires as a Means for Furthering Peace," Electrical World and Engineer.Jan. 7, p. 21, 1905.

[11] N.Tesla of NY invented "Mthods of utilizing energy", U.S. PATENT OFFICE, Patent no. 685,958, Patented on 5 Nov. 1901,application filed on 21 March, 1901, S.N. 52,154