

Technology Advancement In Wireless Communication

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Abstract: The technology advancement in growing world has a very broad impact in our life ,and its main concern on student life is given as wireless , whether it is of any area ,any place or anywhere, whether it is an earth or an universe .in this paper my attempt is made to show technologies growth in general communication system .As in past decades technology is growing ,its advancement is also increasing which can be seen in 5G ,my concern is here for advancement seen in 2009-2014.

Keyword: mobile, radio, internet, research, student, economy, medical.

1. INTRODUCTION:

Historically, the growth of technology comes slowly in 1960s and 1970s by cellular concept given by Bell laboratory. With the development of highly, reliable, miniature, solid-state radio frequency hardware in 1970s gave a boon for wireless communication .With the advancement in upcoming years we have: 5G, which has advancement in mobile, internet and radio .Now a days we get more users available for this communication system in student life .it will give more benefits to all fields.

1.1 Mobile telephony in modern era is described by following charts shown below in 2009-2014.

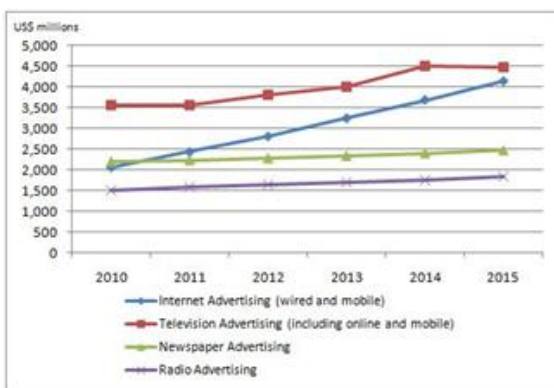


Figure 1: advancement in radio, internet and mobile.

5G:

The new technology advancement seen in mobile generation every 10th year since :1G,introduced by Nordic mobile telephony in 1981.As technologies advance we have 2 G in 1992,3G IN 2001 and 4G systems fully advanced with IMT Advanced standardized in 2012.the mobile generations typically refer to non-backwards –compatible cellular standards following requirements stated by ITU-R, such as IMT-2000 for 3G and IMT-Advanced for 4G.In parallel with the development of the ITU-R mobile generations ,IEEE and other standardization bodies also develop wireless communication technologies often for higher data rates and higher frequencies but shorter transmission ranges. Based on the above observations, some sources suggest that a new generation of 5G standards



Figure 2 : shows that highest growth rate seen in different areas in mobile telephony in 2009-2014 as technology advancement

may be introduced approximately in 2020.^[5] New mobile generations are typically assigned new frequency bands and wider spectral bandwidth per frequency channel (1G up to 30 kHz, 2G up to 200 kHz, 3G up to 5 MHz, and 4G up to 40 MHz), but skeptics argue that there is little room for larger channel bandwidths and new frequency bands suitable for land-mobile radio.^[6] From users' point of view, previous mobile generations have implied substantial increase in peak bit rate (i.e. physical layer net bitrates for short-distance communication). However, no source suggests 5G peak download and upload rates of more than the 1 Gbps to be offered by ITU-R's definition of 4G systems .In 5G:we will get increased maximum throughput ,lower battery consumption ,lower outage probability(better coverage),high bit rates ,cheaper or no traffic fees.

2. TECHNOLOGY ADVANCEMENT IN MOBILE, RADIO AND INTERNET :

2.1 RADIO:

Due to Wi-Fi growth in certain areas a new concept of electronic wizardry found in our homes and offices ,seen in Stone Age .As a research worker visit a Colonial Williamsburg ,who spent time in car means abandoning modern advances like Wi-Fi and iTunes for comparatively ancient technologies like satellite radio ,in-dash CD players ,and tiny navscreens suction-cupped to the windshield .One of the recent technology advancement is seen in Wi-Fi hotspots and cellular radios is seen by Stephen Lawson by which fast-growing mobile data use is driving demand for equipment that can cover indoor spaces and indoor spaces and better serve crowded public places .Wi-Fi access points specially designed for public hotspots offload traffic from cellular infrastructure ,and small cells allow carriers to reuse their licensed frequencies for greater capacity.

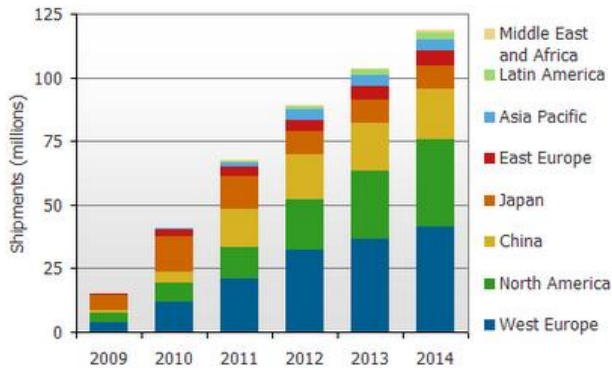


Figure 3: This graph shows the advancement in radio technology is different areas .

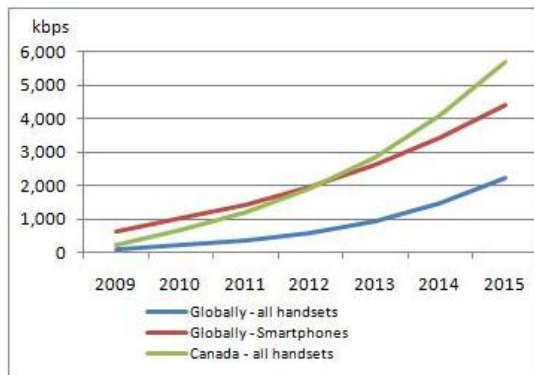


Figure 4: Technology advancement in mobile in 2009-2014.

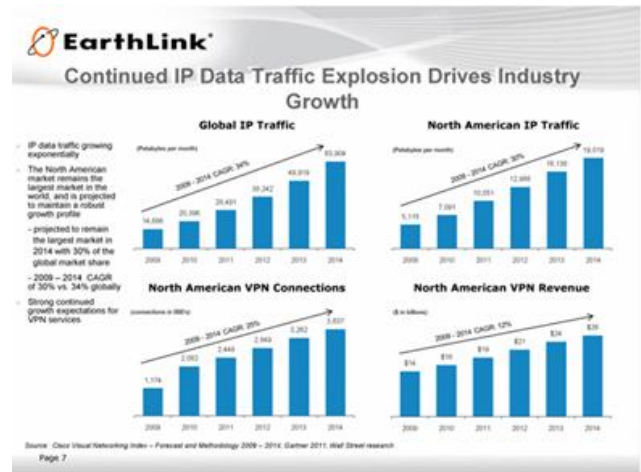


Figure 5 : Technology advancement in internet in 2009-2014

3. CONCLUSION:

Through this paper my main focus is on impact Of technologies in wireless technology in various areas which gave a communication in a broader way .the objective of this paper presents that this communication : Wi-Fi shows in recent decades an advancement in our engineering and without which we can not a better and more innovative life .through my paper, I also conclude that some of other fields also get benefits due to these improvements gave our view a more broader and broader.

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REFERNECES:

- [1]. Akhilesh kumar Pachauri and Ompal singh volume 1, issue 1 august 2012.
- [2]. www.capv.com
- [3]. www.cancerresearchck.org
- [4]. www.crtc.gc.ca
- [5]. www.deanstalk.net
- [6]. www.caranddiva.com
- [7]. www.peconsumerelectronic.blog.spot.com
- [8]. www.faqs.org
- [9]. www.thejuice.bluetangerinesolutions.com,
- [10]. www.cancerrearechck.org
- [11]. www.isprs.org

2.2 MOBILE:

One of the technology advancement is seen in recent cancer research in 2009-2014 plan by UK-CMRL in order to provide access to new reagents ,data technologies and infrastructure that are needed to make the fastest progress in cancer research in order to work with MRC,UCL. Another advancement in mobile mapping technology is developed in these years in which we have penetration of internet mapping ,satellite imaging and personal navigation has opened up great research and business opportunities to geospatial communities by which sensors can mounted on various platforms such as satellite ,aircrafts or helicopters, terrestrial vehicles ,water based vehicles.

2.3 INTERNET:

Since this field has impacted our whole world whether it is science or engineering .now in recent technology advancement we have achieved our top10 goals :.Increased bandwidth ,online video ,ecommerce and online shopping ,online classifieds ,search sites like Google and yahoo ,social network sites ,blogs smart phones ,online collaboration and webinars in 2000-2009.And now as it become an era of internet .Now new research is done in this technology which give product enhancements to wide format aqueous printers that include greater speeds ,higher image quality ,and greater functionality will help drive market growth .