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A RESEARCH FOR THE NEW GENERATION OF MOBILE SOLUTIONS WITH TECHNOLOGY-MANAGEMENT AND EVOLUTION COMPONENT

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Prof. Dr. Akın MARŞAP

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Tez Savunma Tarihi :12/04/2016	
1)Tez Danışmanı: Prof. Dr. Akın MARŞAP	
2) Jüri Üyesi : Yrd. Doç. Dr. Kenan SİVRİKAYA	
3) Jüri Üyesi : Yrd. Doç. Dr. Fatih Turan YAMAN	

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ABBREVIATIONS

IEEE **:**Institute of Electrical and Electronics Engineers
LAN **:**Local Area Network
WLAN **:**Wireless Local Area Network
GSM **:**Groupe Special Mobile
GPS **:**Global Positioning System
Mbps **:**Mega Bits Per Second
SIG **:**Special Interest Group
AFH **:**Adaptive Frequency Hopping
WIMAX **:**Worldwide Interoperability For Microwave Access
NLOS **:**Non-Line of Sigth
LOS **:**Line of Sigth
1G **:**One Generations
2G **:**Two Generations
3G **:**Three Generations
4G **:**Four Generations
MIMO **:**Multiple input/Multiple Output
AES **:**Advanced Encryption Standard-advanced Coding Standard.
DES **:**Data Encryption Standard
IDEA **:**International Data Encryption Algorithm
RC4 **:**Rivest Cipher 4
FHSS **:**Frequency Hopping Spread Spectrum
DSSS **:**Direct Sequence Spread Spectrum
ISM **:**industrial, scientific and medical
CCK **:**Complementary Code Keying
OFDM **:**orthogonal frequency division multiplexing
FBCE **:**First Baptist Church of Eunice
AP **:**Access Point
API **:**Application Programming Interface
APR **:**Annual Percentage Rate
AAA **:**Authentication, Authorization and Accounting
GSM **:**Global System for Mobile Communications
CDMA **:**Code Division Multiple Access
GPRS **:**General Packet Radio Service
ISP **:**Internet Service Provider
IMS **:**IP Multimedia Subsystem
ETA **:**Estimated Time Of Arrival
TACS **:**Total Access Communication Systems
NMT **:**Nordic Mobile Telephony
MS **:**Mobile Station
LTE **:**Long Term Evaluation
WiMax **:**Worldwide interoperability for Microwave Access
OFDM **:**Orthogonal Frequency Division Multiplexing
OFDMA **:**Orthogonal Frequency Division Multiple Access

MANs **:**Metropolitan Area Network, Cellular Network,
PAN **:**Personal Area Network
UMTS **:**Universal Mobile Telephone System
HSDPA **:**High Speed Downlink Packet Access
HSUPA **:**High Speed Uplink Packet Access
HSPA **:**High Speed Packet Access
EV-DO **:**Evolution Data Optimized
3GPP **:**The 3rd Generation Partnership Project
LTE **:**Long Term Evolution
UMTS **:**Universal Mobile Telephone System
IPTV **:**Internet Protocol Television
HDTV **:**High- Definition Television
SDTV **:**Standart - Definition Television
QPSK **:**Quadrature Phase Shift Keying
QAM **:**Quadrature Amplitud Modulation
UGS **:**Unsolicited Granted Service
RTPS **:**Real-Time Polling Service
N**R**TPS **:**Non Real-Time Polling Service
BE **:**Best Effort

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YENİ NESİL MOBİL ÇÖZÜMLERE YÖNELİK TEKNOLOJİ-YÖNETİM VE DEĞİŞİM ÜÇGENİNDE BİR ARAŞTIRMA

ÖZET

Teknolojik gelişmelerin etkileyici bir biçimde ilerlediği çağımızda Yeni Nesil Mobil teknolojiler hayatımızın vazgeçilemez bir parçası haline gelmiştir. Yeni Nesil Mobil teknolojileri ile yüksek hızla bilgi erişim maliyetlerinin düşmesi ve Kablosuz ağ teknolojisine sahip dizüstü bilgisayar, akıllı cep telefonu, tablet bilgisayarlar, Ipad gibi taşınabilir cihazların yaygınlaşması, her yerden bilgiye erişim imkânı sağlamıştır.

Hayatımıza giren çevirmeli internet erişim ağlarından, geniş bant erişim ağına geçişin arkasından "her yerde, her ürünle, kesiti olmadan bağlantı" sloganı ortaya çıkmıştır. Bu sloganın getirisi olarak kullanıcıların mekândan bağımsız bir biçimde iletişim hizmeti alması için mobil geniş bant kavramı doğmuştur. Bu noktada talepleri karşılamak adına çok yeni teknoloji olan Mobilite karşımıza çıkmaktadır. Mobil teknolojiye giriş yapılmadan önceki teknolojilere genel bir bakış atılmasında fayda görülerek 1G‟den Mobilite'ye kadar olan sistemler incelenmiştir.

Yeni nesil mobil teknolojilerin hayatımıza getirmiş olduğu kullanma ve yönetimsel kolaylıklarıyla birlikte teknolojik gelişmeleri ve etkileri ele alınmıştır. Mobil teknolojinin hayatımıza getirmiş olduğu kesintisiz bağlantı hizmetinin kolaylıkları, kullanışlılığı, avantajları, dezavantajları ve hangi bölgelerde kimlerin nasıl kullandığı hakkında bilgiler verilmektedir.

Ayrıca bu çalışmada dünyada mobil haberleşme sistemlerinin tarihsel gelişimi incelenmiş ve bu gelişim üzerinde başlıca kilometre taşı teknolojiler ve anahtar teknikler hakkında bilgi verilmektedir.

Anahtar Kelimeler: *Değişim, Yüksek kapasiteli bilgi, Teknoloji, Yönetim*

A RESEARCH FOR THE NEW GENERATION OF MOBILE SOLUTIONS WITH TECNOLOGY-MANAGMENT AND EVOLUTION COMPONENET.

ABSTRACT

New Generation of Mobil Solution technologies are become an New Generation of Mobil Solution technologies are become an necessary part of our life. The New Generation of Mobil Solution technologies with decreasing the costs of high-speed Information access as well as Wireless network Solution technology, laptop, Smartphone, tablet computers like the İpad, the spread of portable devices, has provided the opportunity to access information from nearly everywhere.

As It provides access to any information without Considerable effort and time; it plays a major role in business, education and social life of individuals. After the transition from dial-up Internet access networks to broadband access networks, it's the motto "connect anytime, anywhere seamlessly" has arised. At this point the new technologies for Mobility meet the demands we have encountered. It was thought to touch on the previous technologies of Mobile technology before entering into it to be beneficial and the technologies from 1G to Mobility are explained in summary of the work.

The new generation of mobile technology use has been brought to our lives and technological developments and their effects are discussed together with the administrative ease. Mobile technology is brought into our lives the seamless connection of the service facilities of its usefulness, advantages, disadvantages, and which areas of who provides information about how you use it.

Also in this study, the historical development of mobile communications systems in the world and this is a major milestone on the technologies and the development of key information about the techniques.

Keywords: *Evaluation, High-capacity information, Technology, Management.*

1.INTRODUCTION

Wireless communication technologies, connection with point-to-point or into a network structure. Today we commonly used communication cable or fiber is similar to the structure offers high-speed broadband wireless access. With the great advances in communication technology, it is rapidly expanding all over the world of wireless communication systems, mobile systems anytime, from anywhere to communicate with each other and they want to reach the internet. Therefore, wireless network services, and RFID systems, location and regardless of location, without time constraints, can be identified through the object of mobile systems will be able to help facilitate access to information about traceability and objects.

Manage dynamic data from users of this data into a database system running in the background. Software wireless network with dynamic labels, stops in the middle of the flow of data between the backend systems with network and manages the dynamic data flow. Filtering, device integration and control, data management, encryption, security, must fulfill also the function as required protocol definitions. Backend system SQL, MySQL, Oracle, PostgreSQL, DB2 as the standard database management systems or similar products to them.

System Management should include the following basic characteristics:
Label and device management: the user to configure the device for tracking objects and data, offering deployment opportunities, the commands are issued to the public via the label on the wireless network interfaces.

Data Management: Object of dynamic data capture or data from other labels may lead to intelligently filter and appropriate goals.

Application Integration: Solutions for messaging, data routing and existing supply chain management, ERP, WMS, CRM systems can provide connectivity features needed to add the dynamic RFID data into.

Changing needs for information everywhere and always covering transport of the Authority, the period of rapid growth and change who networking technologies play an important role. Institutions to be more competitive, to capture new business opportunities, to improve the efficiency of their employees, business partners and their networks and communication technology in today's business environment it requires its suppliers to work more integrated every day. Ethernet, FDDI, Frame-Relay, DSL, many network technologies such as wireless communication, with increasing bandwidth reshaping business models, services, while offering enables a very fast way to move data.

Mobile technologies are a dizzying development is concerned. Parallel to the developments in mobile technology, formerly "it cannot be" called many applications it is possible to carry out over the wireless network. This is particularly ERP and other programs that use the wired network infrastructure, creating institutions in terms of efficiency and eliminate the necessity as well as creating a cost advantage. If we look at the individual user side is now clear that the only hardware that connects computers to the wireless network. Every day is observed increase in the number and variety of compatible devices on the network use. This attention also brings along new applications of mobile technologies in the infrastructure. Mobile technology in order to offer Internet users in the framework of wireless solutions that facilitate the relationship with living vision of wireless networking technology has taken many important steps and continues to work in this field. Plug & Share technology with USB printers and USB disks can be shared on the network becomes connected to the modem. So users can use the wireless network as a share point. AirTouch technology with the push of one button users can build the most secure encryption techniques and wireless networks, eliminating the necessity to extend the network to get technical support, "he said.

Users can now access from any device that uses the fast and secure information while trying all the planning of this new technology because of economic factors on the one hand, commissioning and must be provided in a faster and less costly compared to the previous the operation. These changes are reflected in the network technology has now begun to talk of even 1 Gbps Internet connection at home. 40-100 Gigabit Ethernet technology, speed output, began working on terabit Ethernet standard. One of hundreds of feature phone application to your cell phone, able to carry 100 Mbps with 4G now in our pockets. This brings both high-bandwidth data centers to provide a common platform to serve the technology infrastructure used in both wide area networks along. In particular, next-generation networks, data, voice and video to integrating, established to support an integrated network infrastructure. The location of the video is also becoming increasingly important in business.

We can say that close to a large part of future corporate network traffic will only create a video.

2. GENERAL KNOWLEDGE

2.1. New Generation Of Mobil Solutions

2.1.1. What is New Generation of Mobil Solution?

The term New Generation of Mobil Solutioning refers to technology that enables two or more computers to communicate using standard network protocols, but without network cabling. Strictly speaking, any technology that does this could be called New Generation of Mobil Solutioning. The current buzzword however generally refers to wireless LANs. This technology, fuelled by the emergence of cross-vendor industry standards such as IEEE 802.11, has produced a number of affordable wireless solutions that are growing in popularity with business and schools as well as sophisticated applications where network wiring is impossible, such as in warehousing or point-of-sale handheldequipment. [http:// www. Vicomsoft .com/ learning-center/wireless-networking/#1, Ad: 05.02.2015].

2.1.2. History of Mobil Technology

The first radio waves were discovered in 1887 by Heinrich Hertz. Evidence of this is it's not about the thought of any significance was the first. in 1896 the first wireless telegraph apparatus developed by Guglielmo Marconi on traveling to Italy from UK to show the authorities went to demonstrate. For establishing the first wireless telegraph in June the same year, followed by 2 to 3 km and 4 km from the highway I was forwarded up to. Two years later, in 1898, Tesla has conducted test of remote-controlled bot but unfortunately at that time, a lot of people I was thinking with your brain power.

In 1906, Reginald Fesssender Amplitude Modülasyonunu was developed.

In 1921 developed the short wave radio. Why it is called short wave light wavelength with 25.820 MHz and 2310 MHz range for short stays by high frequency radio wave frequency since.

The frequency modulation schemes in 1931, Edwin Armstrong was developed. This development is on the FM radio frequency digital information transfer is known to be accepted as a key.

Above we list as a result of advances in wireless communication in 1971 as the ancestor of today's New Generation of Mobil Solutions actually accepted ALOHANET was founded the network. This date for a New Generation of Mobil Solution is considered Christ.

In World War II, the United States army that data transfer has been using radio signals for the first time. A very serious encryption that uses radio waves to transfer data with the technology they have developed. This technology of America and was used quite a lot during the war by the allies. This development is a group of researchers at the University of Hawaii in 1971, has been a source of inspiration and the first packet-based wireless communication network has provided to establish. This is the first known New Generation of Mobil Solution, ALOHANET name local area network (WLAN-Wireless Local Area Network) has been. This is the first WLAN dual 3-directional star topology uses 7 consisted of from the computer. ALOHANET's on-site computers were built on the island of Hawaii, four separate State on the island of Oahu, was the central computer. Here is the emergence of the wireless network Solution, this development is assumed. As a result, improvements have continued between the years. [http://en.kioskea.net/contents/831-wireless-networks, Ad: 12.02.2015].

1982 to de Groupe Special Mobile (GSM) was created. GSM was first in 1990, Lband elephants (digital radio) employees a degree of Global position system ni (Global Positioning System-GPS) released. The following year the first GSM call Finland elephants was carried out.

In 1983, IEEE data transfer of 2.94 Mbps IEEE 802.3 standard Ethernet technology which provides levels created as.

In 1992, also known as IEEE Wi-Fi has created the 802.11 standard. The original had a maximum of 2 Mbps bandwidth.

In 1998, Ericsson, IBM, Intel, Toshiba and Nokia Bluetooth Special Interest Group (SIG) "created and Bluetooth (IEEE 802.15.1) u released 1.0. All hardware

handshake with a procedure referred to as a process to define each other, can be defined as a protocol that allows.

In 1999, introduced the limit of 802 .11b at 11Mbps. in October 2009, to 802 .11n 600 Mbps speed with standard were included.

Nowadays, the IEEE 802 .11n standard on IEEE 802.11 x standard has identified as the final draft.

In 2001, the WIMAX (Worldwide interoperability for Microwave Access), also known as IEEE 802.16 standard was created.

In 2003, Bluetooth 1.2 interaction (interference) which reduces the Adaptive Frequency Hopping (AFH) has developed the technique.

In 2004, announced the data transfer speed of up to 3Mbps Bluetooth 2.0 enabled.

Published in 2004, is the new version of today's most engaging technology to WIMAX into the Non-Line of Sigth (NLOS) sees the transmitter's and receiver's status, known as known as the structure up to 56 kilometers of Highway coverage and speed of up to 75 Mbps WIMAX wireless 5ağlarda is the latest technology has been developed.[IEEE Committee, (2008)].
Mobile WIMAX is in the period ahead, which presumably brought to final shape in 2010, mobile systems to 4 g (four generations) will be created as.

2.1.3. New Generation Mobile Technology Standards

Wireless Network Solutioning standards since 1997, Institute of electrical and Electronics Engineers, IEEE (Institute of Electrical and Electronics Engineers), has been developed by the. Is the General name of the standard IEEE 802.11 was developed. 802.11b standard for wireless local area network, WLAN (Wireless Local Area Network), represents the rules used when communicating over. IEEE working at a frequency of 2.4 gHz, covering a maximum of 75 meters, in the range of 1 to 2 Mbps data transmission rate as a result of technological development, this standard offering to become inadequate, with 802.11 x has started to develop a series of standards called. Although there are difference basically uses the same protocols 802.11 family. 802 .11A, 802 .11b, 802.11 g and 802 .11n newly developed the most widely used of these are standard.

[http://resources.wimaxforum.org/resources/documents/marketing/ whitepapers. Ad: 12.02.2015].

2.1.3.1. 802.11a

With the arrival of the 802.11 standard becomes insufficient, first emerged in 1999, improved version. This standard is basically similar to the 802 .11b operates at 5 gHz frequency, though. 54 Mbps data transfer rate, this standard, the outdoor areas can be employed to cover a maximum of 100 meters.

Apart from other Wireless Network Solutioning standard 802 .11A the advantage the basic support with more capacity (throughput) and is more channel capacity, thus allowing the use of more bandwidth.

Unlike other standards work on a 5 gHz 802 .11A are of this standard has provided several advantages and disadvantages. The positive side of the broadcast on this frequency, bluetooth, microwave and wireless telephony, as well as other electronic devices due to the use of different frequency range channel capacity increases, and the data transmission rate could be even higher. However, the 5 gHz frequency of obstacles like the wall of publications made by the more closed areas, due to the absorption of 802.11A coverage lower than other standards.

Finally, this technology who require high data transmission speeds and video distribution systems are used as active. The more expensive devices, although preferred by enterprise users in business life.

2.1.3.2. 802.11b

The 802 .11b standard 802 .11A released in 1999 together with But according to the 802.11A is much more widespread in a short period of time has been used all over the world. like 802 .11b, 802.11 2.4 gHz frequency band and 11 Mbps data transmission rate can go up. When they first came out with the data transmission speed of 802.11b access ethernet technology have become competitors in the spread of the use of a New Generation of Mobil Solution and played a big role.

The most important advantage provided by the 802 .11b coverage is that much of the distance. due to the broadcast at a frequency of 2.4 GHz is approximately EUR 38 meter indoor areas can cover 150 meters of open spaces in the area to the. Also in terms of cost and other standards are quite convenient.

However, bluetooth, microwave ovens, and cordless phone with the same frequency

in different electronic devices, such as the study of signs to each other in this proliferation. As a result, the data transmission speed and bandwidth 802 .11A is less than.

As a result, 802. 11b typically office environments, hospitals, warehouses and factories is well suited for use in environments such as. Especially conference rooms, work spaces and the dangerous points in the network connection cables for the provision of appropriate technology. In short, 802. 11b, mobility is required and medium-speed network connections are used in areas where it is needed. [www.tk.gov.tr. Ad:25.09.2011].

2.1.3.3. 802.11g

In 2003, the Wireless Network Solution standards developed by the IEEE 3. next-generation technology. 802 .11b operates in the 2.4 gHz frequency, like they are in. 802.11 g standard is an extension of the 802 .11b standard as a basis, but the data transmission speed and the bandwidth used is significantly ensured development. Judging from this angle, 802.11 g, 802 .11a and 802 .11b for the enabled property, it can be said that a unified version of the.

The most important property owned by 802.11 g 802 .11b preserving coverage reached (38 meters in open areas, closed areas, 150 metres) data transmission speed on average 22 Mbps is transportation. This speed to maximum 54 Mbps 802 .11A is in reach.

This standard works with 802 .11b devices from time to time alignment problem due to the use of living has spread too much. However, the price is higher than 802 .11b also reduces the preferable.

Finally, high speed video and multimedia applications that require speed and due to the width of the field covered by the 802.11 g standard is well suited. [www.ieee.org/index.html. Ad:13.08.2011].

2.1.3.4. 802.11n

Over time, increase the number of users, and users wanting to use different applications more bandwidth, more accessibility and increased demands, such as the wider coverage area. To this end, the IEEE 802 .11n standard since 2003 started to work to improve.

Multiple-input/multiple-output, 802 .11n is MIMO (Multiple input/Multiple Output), through a protocol called the 2.4 GHz and 5 GHz frequency of use both at the same time. MIMO technology, the information to be forwarded to split up into pieces to be sent to the other side through different antennas provide. Other standards through an antenna devices running a publication, while 802 .11n technology and send-side network devices when purchasing 2 or more broadcast side uses multiple antennas and multiple combine publications received/sent. The data sent from the walls, doors and other objects reflected and follow different routes receiver antenna at different times, and as soon as we get multiple times. MIMO technology using in their favor this marker to strengthen and further provides the forwarding.

The 802 .11n standard data transfer rate will be the average levels of 130 Mbps. Even theoretically could reach up to 600 Mbps speed and coverage indoors and 250 meters to 70 meters, outdoor areas can be up. One of the most important features of this technology is used to operate in a manner that is compliant with standards.

2.2. Wireless Communication Technology

2.2.1. Introduction

Wireless communication technology, its simplest definition, a point-to-point or network structure in the form of connection is a technology that provides. From this perspective, the wireless communication technology, nowadays commonly used in fiber optic communication cable or similar structures. Wireless communication technology distinguishes the point is; use air as the transmission medium. Cables, electric, flow, transmitting wireless and optical transmission systems in certain frequency transmits electro-magnetic waves.

2.2.1.1. Accessibility

Specially authorized people access to what they need and what they want to reach the required product or service at the moment and is a guarantee to be available.

Mentioned features can be provided with cryptographic algorithms. Nowadays commonly used algorithms are generally divided into two groups according to the characteristics of the key used to encrypt is reserved. These are termed as symmetric and asymmetric key cryptography [Şahinaslan,Ö., ġahinaslan, E., Kantürk, A., page:1-6, (2010)].

2.2.1.2. Symmetric-key cryptography

In the late 1940s Caulde Shannon has published the theoretical foundations of cryptography are symmetric or secret key articles has created. This work is the basis for many modern symmetric switching method has been the system's Cryptography http:// kryptophone. kryptotel. net/ faq/ encryption/ index .html. Access date: 05.03.2015]. The only symmetric-key systems, also called secret key cryptography systems. In the figure 2.1 as is seen in this system, the sender and receiver side with the same key and/or other easily obtainable from a key switches it is possible to do both encryption and decryption. Secret key this key is used is called.

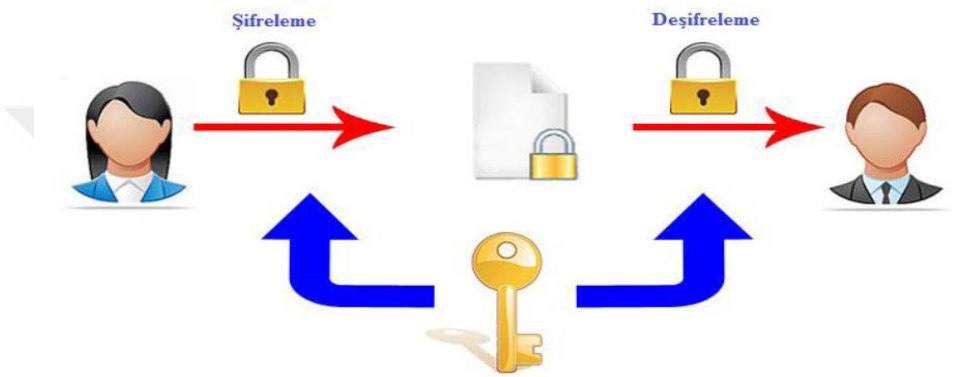


Figure 2.1: Symmetric-key cryptography

Cryptography systems are divided into two groups as the encryption block andflowing.[http://kryptophone.kryptotel.net/faq/encryption/index.html.Ad:05.03.2015].

2.2.1.3. Block Cipher

Block cipher blocks into fixed-length data to be encrypted is determined by dividing the symmetric key is encrypted. Block cipher with an exact multiple of the length of the selected block will be uncompressed data requested is not to include a sufficient number of meaningless data bit is complemented. Follow the data is encrypted separately with a loop blocks are created. Especially large size is preferable to encrypt the data on the card. The most remarkable examples of the block cipher is

AES (Advanced Encryption Standard-advanced Coding Standard.) [Cho, J., Soekamtoputra, S., Choi, K., Moon, J., page: 1378-1383, (2013)]. DES (Data Encryption Standard) [Raphael, C., Kuching, W., page: 528-530,(2007)]. And IDEA

(International Data Encryption Algorithm) [Biryukov, A., Nakahara, J., Yıldırım,.M., page: 561–570, (2013)]. is the algorithms.

Abe Encryption; Modulus of each step of the data flowing encryption encrypts a bit. The best method for high-speed encryption communication flowing is one of them. Especially hardware encryption block encryption the relatively good performance. The most basic example of RC4. (Rivest Cipher 4) [Tomasevic, V., Bojanic, S., Taladriz, O.N.,page: 1715-1727, (2007)]. A5/1, A5/2 [Biryukov, A., Shamir, A., Wanger, D., page: 1-18, (2000)]. Panama [Daemen, J., Clapp, C., page: 60-74, (1998)]. is the algorithms.

2.2.1.4. Asymmetric Key Cryptography

Asymmetric (open) to solve cryptographic systems, encryption and password keyed switches used are different from each other. In such systems, each user has a pair of keys including clear and specific. The most important feature of this key key none of both encryption and decryption operations is not available. If a switch opens the encrypted, but other key. Open one of these keys is known by everyone. The private key is only known by the key owner. There is also a private key for the public key belongs to the person based on the calculation of the theoretically very is difficult. This difficulty switches or discrete logarithm problems factorization between solution provides mathematical methods such as difficulty. [Dulaney, E., page: 307-309, (2011)].

In many countries, especially in the 2.4 Ghz frequency band is available and shall be exempt from licensing. Wi-Fi coverage type "hotspot" (wireless internet in public areas, or of network services are provided.) called for regions, unlicensed wireless internet in public areas, or of network services are provided. bandwidth usage was very common in terms of condition. That is IEEE 802 .11b/b/a/g standard that the widespread use of radio waves is the most important cause.

2.2.1.5. Economy

The New Generation of Mobil Solution is one of the reasons for the widespread adoption of the use of other important is this: the end user because of their large volume production products to extremely inexpensive? Capital investments and more efficient and more traditional wired communication rate flexibility. Standardization and interoperability with different vendor products New Generation of Mobil

Solutioning product prices dropped. At the same time, the facilities to his entire world has penetrate quickly [http://www.bilgiustam.com/kablosuz-ag-sistemi-nedir-nasil-calisir/, Ad:02.02. 2015].

2.2.1.6. IEEE 802.11 Standards

The IEEE 802.11 standard for wireless local area networks access on introduced. Since its inception to the present day technology and increased access speed and distance accordingly developed. Today is the final version of 802 .11n as used and rate of 54 Mbps and 100 m distance access has been working with. Meaning of wireless connection Wireless Fidelity commercial circles is the abbreviation of the word Wi-Fi has been touted as.

There are 5 kinds of IEEE 802 .11 standard;

802.11 legacy (802.11 Legacy)

In 1997, the first group of the 802 .11b standard. 2.4-2.5 GHz ISM band is working in infrared, frequency hopping spread spectrum (Frequency Hopping Spread Spectrum-FHSS) and even sequential spread spectrum (Direct Sequence Spread Spectrum – DSSS) uses three different physical communication method.

802.11A

In 1999, has introduced a degree of IEEE 802.11A. 5 GHz ISM band. 5 GHz ISM band operation in 2.4 GHz band wireless telephone, microwave oven can generate as many device interaction allows you to stay away from. Maximum 54 Mbps transmission rate as high as 5GHzfrekansındaki marks, although the walls and similar objects by pointing in the 2.4 GHz according to schemes due to access more absorbed in the distance is a maximum of around 35 m indoors. A degree of external spaces enables you to access up to 100 m.

802.11b

The 802.11b IEEE 802.11A has been published on the same date with by operates in the 2.4 GHz ISM frequency band. Physical transmission layer provides communication method with DSYS. 802.11b complementary code keying (Complementary Code Keying-CCK) forwarded information on the net using the modulation rate of 5 Mbit/s up to the levels. Maximum rate of 11Mbps data transmitted to a competition. Interior 11 Mbit/s, with a top speed of 30 m and 1Mbit/s speed with up to 90 m from the access provided. A degree of external spaces

are provided access to up to 120 m. Indoor 2.4 GHz devices like microwave ovens, Bluetooth that works with can interact.

802.11 g

IEEE 802.11 g standard was introduced in 2003. operates in the 2.4 GHz ISM frequency band Net audio data rate is the maximum which can be reached without the FEC encoding and 22Mbit/s data rate of 54 Mbit/s to stop. Physical layer FBCE, DSYS or TKA-based works. OFDM-based runs, 6, 9, 12, 18, 24, at a rate of 54 Mbit/s speed 36,48 or runs. 45 m indoors outdoors 90 m has up to a degree of access. 2.4 GHz band resulting from the interaction from other devices to this problem there are also standard.

802. 11n

Introduced in October 2009 by the IEEE Committee. works in the 2.4 GHz and 5 GHz ISM bands. 20 Mhz and 40 Mhz can work two different tape 20 MHz operating band 75 Mbps forwarding rate, interval reaches 140 Mbps transmission speed of up to. In the interior space 70 meters and provides access to the data is up to 250 metres outdoors. Improved the speed of data transmission and access to distance ensures that used multiple-input multiple-output (MIMO Multiple Input Multiple Output) technology. This technology is used in more than one antenna in the direction of the transmitter and receiver. [IEEE standart 802.16, 2004].

Table 2.1: Like other technologies, Wireless Network Solution standards such as the IEEE 802.11 family of protocols have evolved over the years

802.11 standard version	RF Band (GHz)	Max Speed (Mbps)	Typical Speed (Mbps)	Approx. Indoor range (m)	Approx. Outdoor range (m)
a	5	54	25	40	100
b	2.4	11	6	70	150
g	2.4	54	25	80	200
n	2.4 or 5	600 (4x4 @	75 (1x1 @ 20	100	250

[http://www.rtcmagazine.com/ articles/view/102698, August 2012, Ad:05.03.2015].

2.2.1.7. Access Point

Many so-called wireless access operators deploy the wireless access points (AP) as to the front end that is the point of presence for them the networks. From a logical

standpoint the API is a layer-2 device that Provides layer-2 of functionalities such as media the AccessControl, layer-2 resource management, layer-2 framing, layer-2 authentication to the users and at the same time deals with layer-3 functions In practice, the APR can vary from cheap and dumber devices (what the industry has started The calling light-weight access points) to rather than complicated devices capable of performing many more advanced functions, such as the sophisticated interactions with AAA servers that are providing the system administrator with added many tools such as the simple network management protocol facilities [Madjid N. and Mahsa N. page: 114,2005].

Figure 2.2: Access Point – AP
[http://hendri.staff.uns.ac.id/2009/12/mengenal-access-point-ap/ Ad:06.02.2015].

2.2.1.8. Wireless Card

A specific frequency that can receive radio signals from them, transfer them to a computer by converting digital information, and also converting to digital information the computer radio signal broadcast is a unit capable of hardware.

2.2.1.9. Safeguard

Hardware firewall devices or software that we can call as anti-viruses are programs that we can call. These are located on the network, users are used to check whether they are authorized to use the network. This is the New Generation of Mobil Solution security-enhanced.

[http://www.arduino.cc/en/Main/ArduinoWiFiShield,Ad:06.02.2015]

2.2.1.10. Anten

Electromagnetic waves are spread or used to capture electronic circuit elements. Access points or wireless modems are used.

Depending on the receiver and the transmitter antennas running. They tried their energy, frequency, depending on the donor an adjustable power gets from the oscillator. A small part of the rest of the energy is spent to heat permitting antenna by spreads in the space. Depending on the recipients used antennas is caught in a vacuum electromagnetic energy that passes through a transmission line receiver circuit.

Antennas emit signals, depending on how "open" and "one way divided open in every direction". The only way a signal strength of the antennas, and transmitting in the longer distance. The antennas in all directions is equal in all directions gives the signal strength as well.

[HYPERLINK "http://anten.nedir.com/"http://anten.nedir.com/, Ad: 06.02.2015].

2.2.1.11. New Generation of Mobil Solution/Network Topologies

a) Temporary Wireless Network Solutions: Ad-hoc networks, the way an access point Wireless Network Solution is used for the wireless clients without communication is the topology. two or more wireless clients to communicate in this way is also referred to as peer-to-peer connection shape and structure is the smallest Wireless Network Solution in this way.

This connection to any client for Wireless Network Solution devices in the topology (mobile phone, notebook computer, desktop computer) can communicate with any client within the network, can send data or receive data.

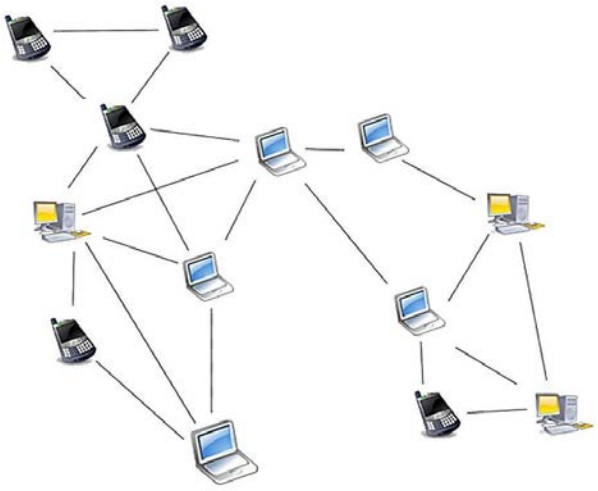


Figure 2.3: Temporary Wireless Network Solution Topology

[http://www.slideshare.net/ Garry54/computer-networking-chapter-6-wireless-and-mobile-networks?qid=e707e9 fb-7b79-43df-b3f9-09eee643f31& v=default&b= & from_search=1, Ad: 06.02.2015].

b) Ad-hoc wireless connection topology: A client devices communicate directly with each other within the cell structure. Easy and quick to set up a Wireless Network Solution is beneficial. By contrast, the absence of an existing infrastructure, power capacity and bandwidth is limited, because it does not have a device that controls the communication such as the access point on the network connection for the low quality of this connection is the drawback.

[http:// www. slideshare. net/Garry54/computer-networking-chapter-6-wireless-and-mobile-networks?qid=e707e9fb-7b79-43df-b3f9-109eee643f31&v=default&b=& from_search=1, Ad: 06.02.2015].

c) Enable Wireless Network Solutions: Sufficient technical basis networks for small networks are insufficient for large networks, although a useful structure is a structure. Enabled Wireless Network Solutions (infrastructure-based Wireless Network Solutions), is more suited to large-scale networks. Enabled Wireless Network l Solutions, a network to check for an access point (AP-Access Point) is located. Access point (AP) wireless device which controls when to speak. Wireless Network Solution devices, infrastructure uses an access point, as this device communicates with each other by connecting to the network with. Enabled networks, the most commonly used in the home and environment is network topology

[MEB, Ad: 06.02.2015].

To solve the problem of directory-enabled networks, coverage is most commonly used. In daily life we use cell phones and PDAs with base stations to their customers are. Other networks such as the internet and base stations are affiliated. GSM (Global

System for Mobile Communications) cell phone technologies such as this style works with networks. Base stations are typically designed to cover the whole country networks. The number of base stations in densely populated areas according to rural areas more. Because of densely populated high-rise buildings and other obstacles to the spread of radio waves also prevents serious degree.

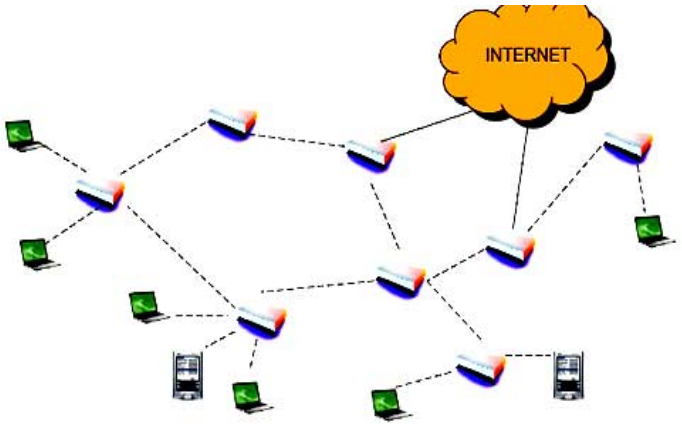


Figure 2.4: Enabled network example

[http://www.avisionng.com/globalcorp/ find_us/broadband-wireless-solution/ solutions /wireless-mesh-networks/,Ad:6.02.2015].

d) Temporary and comparison of directory-enabled networks: Ad-hoc mode use a Defragmenter does not require temporary provides convenience in setting up a small network. Infrastructure mode the unifying can receive a wide range of the region from the property will be used. Whereas a limited Ad-hoc mode connection (between a small number of computers) is in question.

Ad-hoc mode, packets are assemblers via the moved higher performance but it applies to a small number of users. Contains a large number of users on Wireless Network Solutions infrastructure mode provides better performance.

Ad-hoc mode network topology can vary from the system the continuity of the connection is taken as a priority. In this mode the topology When the data transmission and data transmission distance in unexpected changes may occur. Infrastructure mode is less with the problems encountered in this format.

Many a computer from Ad-hoc network, computersbec ause the venture will use the same frequency to correspond the maximum amount of the range and communication performance is decreased. Infrastructure mode, these problems are minimised. Ad-hoc mode of administration and ensure the safety of the central device.

It is difficult because of the absence of. In order to measure the performance of the network administrator and to take the necessary security measures in the format is not possible.

Infrastructure mode is more useful in terms of management and security.

A small number of users to Ad-hoc mode is lower than the cost. If Infrastructure mode for many users, they are cheaper.

e) Adequate technical basis Wireless Network Solutions: Adequate technical basis Wireless Network Solutions or Explorer equalization/detection networks without any infrastructure as autonomous, self-organized and can capture networks. So to create an ad hoc network does not require a central administration or infrastructure. On a network, each node to other nodes in the message routing process is responsible for them. This type of network is not on the network, the router in a router takes up the position of each node. This is a lot of network mobility in a network topology often and unpredictable changes observed.

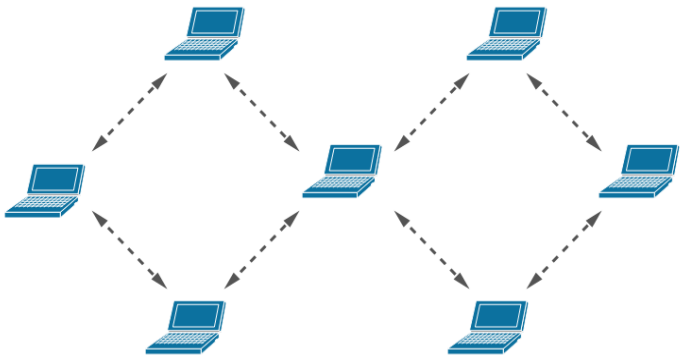


Figure 2.5: Example for Adequate technical basis Wireless Network Solutions. [MEB, Ad: 06.02.2015].

Two or more wireless client peer-to-peer connection to connect to each other with the shapes through the smallest New Generation of Mobil Solution structure is created. Therefore, do not have the network access point (AP) was created and was established as a temporary network is doing. Therefore this type of networks is also called an ad hoc network. [MEB, Ad: 06.02.2015]

2.2.1.12. Hybrid Wireless Network Solutions

Hybrid Wireless Network Solutions-enabled Wireless Network Solutions and Adequate technical basis networks in a structure should be used with occurs. Therefore, access base stations in mobile networks using hybrid networks can be extended to many regions in places. Other networks such as the internet, then the base station provides access to the. [MEB, Ad: 06.02.2015].

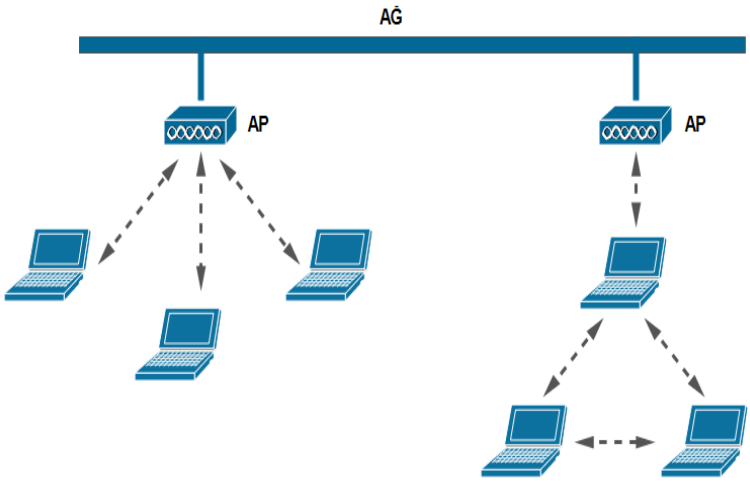


Figure 2.6: Hybrid Wireless Network Solutions
[MEB, Ad: 06.02.2015].

2.2.1.13. Wireless Wide Area Networks

WWAN technologies enable users to establish wireless connections through remote public or private networks, allowing you to. These connections, the wireless service providers offer more than one antenna station and satellite system through the use of a large number of city and country can cover large geographic areas into zones. Current WWAN technologies water, second generation systems is recognized as the. The base 2 g systems, global system for Mobile communication (GSM-Global System for Mobile Communications), cellular digital packet data and code division multipleAccesssystemcovers.

[http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87 .mspx?mfr=true Ad: 06.02.2015].

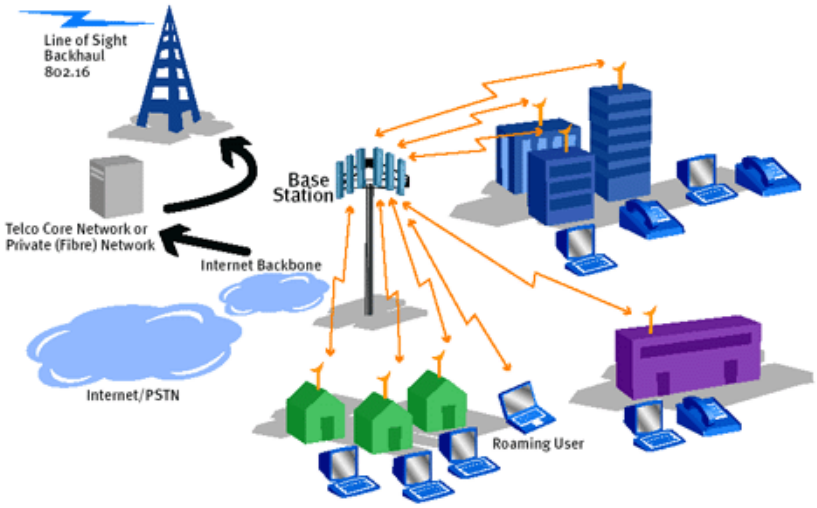


Figure 2.7: Wireless Wide Area Networks

[http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87.mspx?mfr=true Ad: 06.02.2015.

With this system the only base station with home users, companies and other users of single-point to all fluent serviced.

The advantage of managing a single center will be brought under the control of the data at each point. It will also reduce the cost of Internet and data sharing with all in one place.

2.2.1.14. Wireless Metropolitan AreaNetworks

Wman technologies enable users within a metropolitan area to establish wireless connections between. In addition, WMANs use either, the primary leased lines for wired networks can serve as backups. WMANs use either radio waves or infrared for data transfer uses to warm up. [http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87.mspx?mfr=true Access date:06.02.2015].

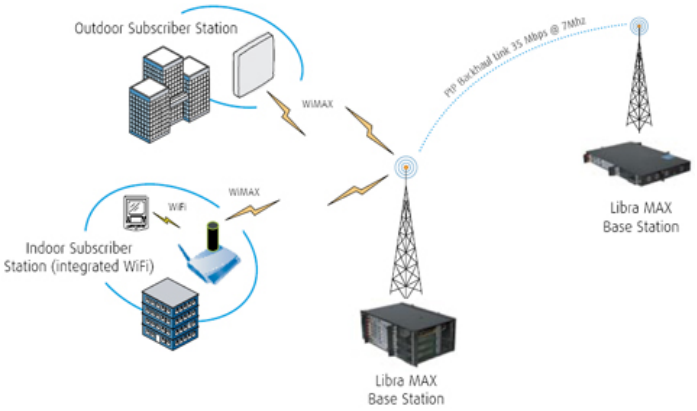


Figure 2.8: Wireless Metropolitan AreaNetworks [http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87.mspx?mfr=true Ad:06.02.2015].

2.2.1.15. Wireless Local Area Networks

WLAN technologies, users within that local area (the company is a public area, such as the campus building and airport), allowing them to establish a wireless connection. WLANs, extensive cabling would be prohibitive, temporary offices, or can be used in other areas, users at different locations within a building and got to work at different times or to supplement an existing local network. [http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87.mspx?mfr=true Ad: 06.02.2015]

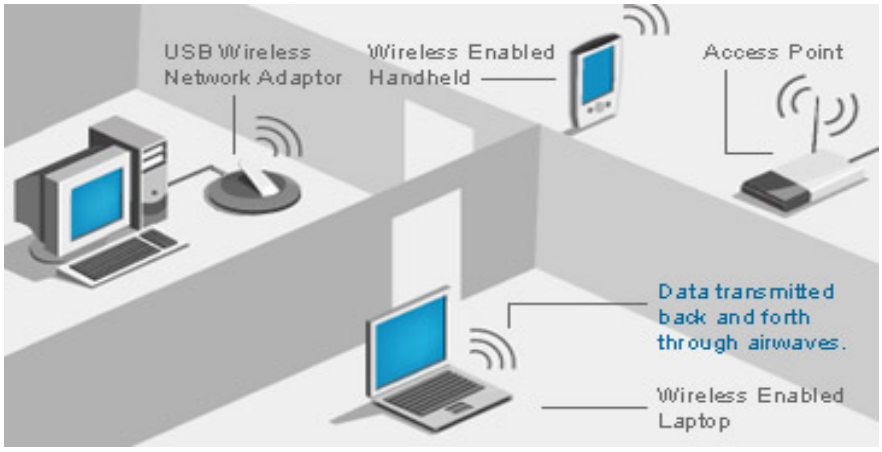


Figure 2.9: Wireless Local Area Networks

[http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87.mspx?mfr=true Ad: 06.02.2015].

2.2.1.16. Wireless Personal Area Networks

WLAN technologies, users within that local area (such as a partner company, the campus building and the airport area), allowing them to establish a wireless connection. WLANs, extensive cabling would be prohibitive, temporary offices, or can be used in other areas, users at different locations within a building and got to work at different times or to supplement an existing local network. [http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87.mspx?mfr=true Ad: 06.02.2015].

Figure 2.10: Wireless Personal Area Networks

[http://www.microsoft.com/technet/prodtechnol/windowsserver2003/tr/library/ServerHelp/fbf4ab12-723a-4c53-bcdd-01cabe9d7b87.mspx?mfr=true Accessdate:06.02.2015].

2.2.1.17. Advantages and disadvantages of New Generation of Mobil Solutions

Advantages of New Generation of Mobil Solutions

a) Mobility: Wireless local networks, network users no matter which point of coverage, even in motion provides access to real-time information.

b) Cost: To build a New Generation of Mobil Solution to a wired network, the quantity to be spent as the first, although more life phase consumption is very small. Long-term gains, it manifests itself in dynamic environments that require relocation.

c) Installation Flexibility: quick and easy installation of New Generation of Mobil Solution systems, wiring from the walls and ceilings also eliminates the requirement. New Generation of Mobil Solution technology provides access to cable out of the reach of the network.

d) Extensibility: new node to an existing New Generation of Mobil Solution or New Generation of Mobil Solution access point, it is much easier to be added. So it's kind of up to thousands of users from the user with the least amount of networks can easily be extended.

Disadvantages of New Generation of Mobil Solutions

a) Speed: New Generation of Mobil Solutions, data transfer rate is much slower than a wired network. Most New Generation of Mobil Solution data communication speed 1-54 Mbps while between wired networks, this figure varies between 100 Mbps and Gbps.

b) Security: New Generation of Mobil Solutions are a security risk. Because an access point an attacker on the network device can function as a task of the. Users who connect through this device, there is a risk of information theft.

c) Configuration: New Generation of Mobil Solutions, wired networks configuration operations are complex and difficult. Configuration operations for expertise may be required.

d) Obstacles: The walls of the room to signal obstacles such as large amount of degradation of the quality of leads. Changing the locations of the devices within the network data transfer rate of negativity are livable. [KHUDAYDAD M.,2014,5].

2.3. Mobile Communication

2.3.1. What is the Mobile Communication

Since the first human need of communication for which there is a requirement. Information and communication technologies with the presence of wired media shipments sent to users of voice communication. However, the current form of communication with "mobility" of people who could not agree with each other, and in this case the increase of new technologies has been demonstrated. At first, as the basis for wireless communication techniques provided in wired environments began to shift. Nowadays, the number of users that use mobile communication, go very high levels reached 6 billion by the end of 2011 to the user.[http://www.itu.int/ITU-D/ict/statistics/ material/pdf/2011%20Statistical%20highlights_June_2012.pdf, 2012. Ad:05.03. 2015].

In addition to the process of people mobilize in touch is a big pool of data the concept of development of the internet which brings the door continues. The importance of the concept of time for people who have less access to information increases, internet users have become an indispensable part of it. In particular, providing quality service and faster broadband with the provision of technology; the

Internet is an alternative way of communicating information about achieving and instead has become a necessity.

The 3rd generation mobile communication technologies I mean IMT-2000 family of standards and related technology with the use of access to the internet via mobile devices, service is provided. Establishment of two-way communication, cellular phone and access to the Internet with mobile devices, followed by the telecommunications sector, which constitutes the cornerstone of stone. Fixed access-mobile access to telecommunications services and infrastructures in order to work with fixed-mobile convergence is an approach often used nowadays. This convergence over users ' computers, along with their social, commercial, and educational activities of independence won with mobile devices is carried out.

However, this comes with a fixed access technologies that support the services and applications to be available via mobile devices, the need for fast and high quality internet access has given birth. An increase in user demand, wireless mobile communication system for 3. Generation and a limitation of requiring higher bandwidth mobile technology as a reflection of the emergence of 4. Next-generation mobile broadband communication technology has been developed. End of 2011 according to the data available about 1 million 4th Generation mobile broadband users, and this figure is increasing day by day in the near future is expected from computers to mobile smart phones using the internet to registration. [.[http://www.itu.int/ITU-D/ict/statistics/material/pdf/2011%20Statistical%20highlights_June_2012.pdf, 2012. Ad:05.03.2015].

2.3.2. Mobile Government Response Model

Governments implement mobile technologies either as a response to those complementing mobil government efforts or as a response to take advantage of the benefits of mobility. The model highlights three interrelated issues: First, it identifies unique characteristics of mobile government developments. Second, it highligths the various pressures bureaucratic governments face in adopting mobile technologies. Finally, based on examination of various mobile government applications; it specifies the response of governments to address those pressures. As you can see from Figure 2.11 governments are giving more priority to satisfying the requirements of external stakeholders such citizens and businesses rather than intragovernmental

agencies, units, departments, and so forth at local, state, and national levels [Kushchu, I., & Borucki, C. (2004)].

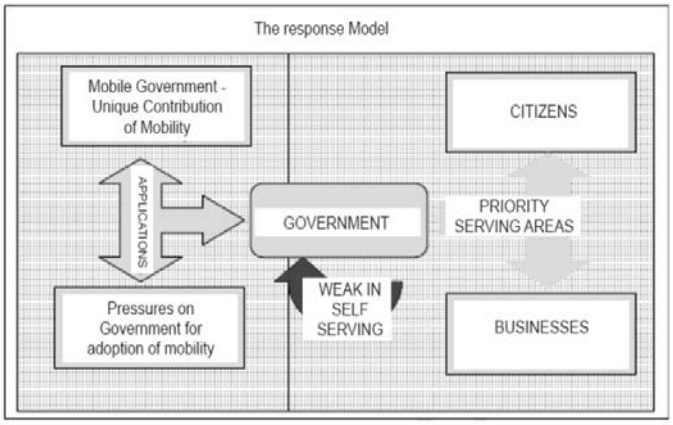


Figure 2.11: A Mobility Response Model for Government
[Kushchu, I., & Borucki, C. (2004)].

a) Upgrading efforts: Upgrading mobile government applications to confront technological and user expectation pressures. This increases the value of electronic government applications by adding the “anywhere” component to the “anytime” value proposition. Mobile government applications includes complementary mobil government applications.

b) Innovative efforts: Building new mobil goverment applications that carry unique characteristics of mobile Technologies. This creates a new value with theimplementation of unique mobile applications, and new kind of services that is not dependent on e-gov applications. [Kushchu, I., & Borucki, C. (2004)].

2.3.3. Wireless/Mobile Technology Trends

Complexity of the mobile phones is ranked by generations. First Generation mobile phones began to increase in the 1980s with the introduction of "cellular" phones based on cellular networks with multiple base stations located relatively close to each other, and protocols for the automated "handover" between two cells when a phone moved from one cell to the other. At this time analog transmission was in use in all systems and data transmission was not available. In Figure 2.12 the functionalities of the systems can be seen.

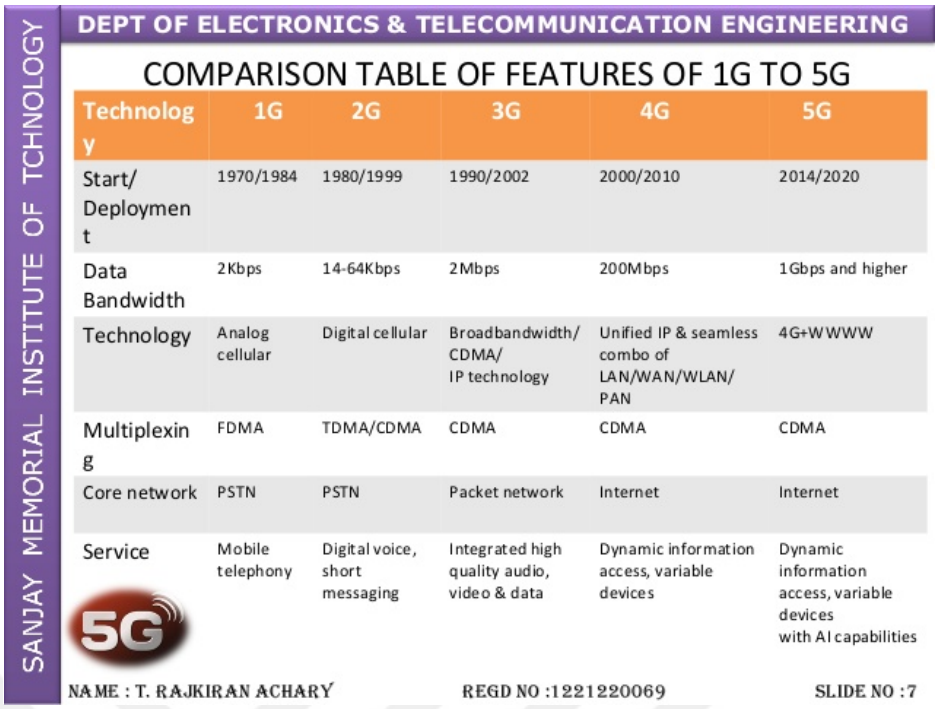


Figure 2.12: Functionalities of the Systems

[http://www.slideshare.net/raj2203/5g-by-rajkiran Ad:15.02.2015].

Systems such as GSM, IS-136 , iDEN and IS-95 called Second Generation mobile phone systems [Chang, A., & Kannan, P. (2002)]. These systems were introduced in the 1990s. They were characterized by digital circuit switched transmission and the introduction of advanced and fast phone to network signaling. Second generation ofwireless/mobile technology includes cellular phones, pagers, wireless-enabled laptop computers, PDAs, wireless local area networks, and GPSs, with the wireless service providers' technology enabling transmittal of voice and text/data working fairly well. Turkey is currently using 2.5G mobile phone systems. This system is implemented a packet switched domain in addition to the circuit switched domain. 2.5G phones does not necessarily provide faster services, however it provides some of the benefits of 3G and can use some of the existing 2G infrastructure in GSM and CDMA networks. It is important to note that 3G technology is fully compatible with GSM, in other all words.

3G mobile phones support GSM [HYPERLINK http://www.gsmworld.com/ index.shtml http://www.gsmworld.com/index.shtml, Ad:15.02.2015]. GPRS is a 2.5G technology used by GSM operators in Turkey. GSM has become the world's fastest growing communications technology of all time and the leading global mobile standard, spanning 214 countries. Today, GSM technology is in use by more than

one in five of the world's population - by the end of first quarter of 2007 there are over 2,8 billion cellular subscribers. In the world, GSM subscribers have reached to 2.3 billion, representing approximately 80% of the world's cellular market. With the arrival of Third Generation technology, wireless devices can be content rich, enabling transmittal of content rich graphics, video, and other information at speeds up to 2 Mbps. Currently, technology such as Bluetooth can provide short-range wireless connectivity that can link several types of devices enabling seamless interactions among various devices. 3G technology can further extend the similar functionality and coverage [Chang, A., & Kannan, P. (2002)]. 3G provide the ability to transfer simultaneously both voice data and non-voice data such as downloading information, exchanging email, and instant messaging.

The venue will allow quick communication of independent uninterrupted in 2020.

2.3.4. Characteristics of Mobile Technology

In this section, we analyze the key characteristics of wireless/mobile devices and technology and the characteristics of the environment within which the applications are embedded.

a) Device Characteristics: Primarily, one of the key characteristics of the wireless environment is “accessibility”. Citizens are able to reach and access government services at any time and from any place. Not only citizens benefit from this property but also employees and government agencies benefits from this in a way that they are able to access each other at any time. Secondly, wireless devices are “distinctly personal”.

This is a very important property due to its usage can be reached instantaneously by a government because the device can be associated with particular citizen/consumer rather than a household or IP address. This creates more efficient channel for organizations to provide services and reach consumers/citizens faster. Lastly, wireless technology is “location aware” [Chang, A., & Kannan, P. (2002)]. Government or organizations can track citizens/consumers easily as log as the wireless device is on. This can be useful in an emergency situation when the user of the device needs to be located or helped. On the other side, this is also an invasion of privacy.

b) Usage Characteristics: It is very important to consider the current form and technology capacity of the wireless/mobile devices. Small size of the devices seem to be convenient for the users, however limited size of user interfaces prevent to display information-rich content in a useful way. Laptops have appropriate monitor to display such information in an efficient way, however they are not as handy as small size devices. Also, the bandwidth over the air for wireless transmission is another constraint for the users today. These constraints limit customers' capabilities for processing and storing information and data, and also limit wireless technology to text-based and less information intensive exchanges.

c) Environmental Characteristics: In the context of the characteristics of the wireless/mobile environment, three significant issues need to be considered. These are security, privacy, and application [HYPERLINK http://www.gsmworld.com/ index.shtml http://www.gsmworld.com/index.shtml Ad: 10.02.2015].

2.3.5. Main Types of Wireless Technology

Two main types of wireless technology are available to municipatilies in implementing a large-scale New Generation of Mobil Solution. These technologies are local area networks (LANs) using Wi-Fi technology or metropolitan area networks (MANs) using Wi-Max technology. Like every other technology these technologies have benefits and weaknesses.

a) Wi-Fi Technology and Brief Description of IEEE Wireless Communication Standards: Wi-Fi is a promising short-range high-speed wireless access method using the IEEE 802.11 standard for mobile communication. This standard operates on three different levels. First standart to be released was 802.11b and this standart provides transfer speeds up to 11 mbps and operates in the 2.4 GHz range. Several years later, 802.11a which operated in the more expensive 5.0 GHz range was released and enabled transfers speeds up to 54 mbps. Recently, 802.11g has been introduced and it operated in 2.4 GHz range which was relatively cheap to 5.0 GHz range, however it still provided transfer speeds up to 54 mbps.

Advantage of Wi-Fi technology is that it is relatively inexpensive to other technologies. Main disadvantage of Wi-Fi is the limited signal range. After approximately 30 meters signal starts to degrade. An effective operating area of Wi-Fi is a little more than one city block (9,500 m2) [http://www .gsmworld.com

/index.shtml Ad:10.02.2015]. If a municipatliy chooses Wi-Fi technology for deployment, then that municipality will have to put one node on approximately every corner in the covered area. Large portion nodes will need to be hard wired to an Internet server. Another disadvantage of this technology is that, as more and more users access the system Wi-Fi performance starts to decrease. In order to solve this problem, several Wi-Fi nodes will need to tie directly into an Internet server, giving the New Generation of Mobil Solution several access points needed to cope with the anticipated volume. Today, there are many Wi-Fi hotspots on trains and in coffee shops, bookstores, hotels, airports, train stations, stadiums, and educational institutions all over the world. Users can use mobile devices, appropriately-equipped laptops and PDAs to stay connected to the Internet or a local area network (LAN) without Ethernet wiring with Wi-Fi technology [http://www.gsmworld.com/ index.shtml Ad: 10.02.2015]. In addition to this, many governments around the world are implementing Wi-Fi pilot applications and trials to show leadership in using this technology.

b) Wi-Max Technology: WiMAX, the Worldwide Interoperability for Microwave Access, is a telecommunications technology aimed at providing wireless data over long distances in a variety of ways, from point-to-point links to full mobile cellular type access. MANs uses WiMAX which is based on the IEEE 802.16 standard. WiMax has much greater effective operation area than Wi-Fi with up to 30 miles under ideal conditions. There are two main applications of WiMAX today: fixed WiMAX applications are point-to-multipoint enabling broadband access to homes and businesses, whereas mobile WiMAX offers the full mobility of cellular networks at true broadband speeds. Both fixed and mobile applications of WiMAX are engineered to help deliver ubiquitous, high-throughput broadband wireless services at a low cost. As you can see from the Figure 2.13 WiMax operates in one of two ways. Firstly, through line of site from one tower directly to another, up to 30 miles under ideal conditions. A steady stream of data is beamed from these towers. Distance may change depending on external conditions such as weather. Secondly, Wi-Max operates is through non-line-of-sight when it is not rely on line of sight, similar to the way Wi-Fi works [Coaker, B. & Deans, C. (2007) (pp.357-375)]. From the Figure, there is a visual explanation of WiMax. Internet Backbone, ISP Network, WiMax Transmitter, Backhauls, LANs are some components of WiMax system.

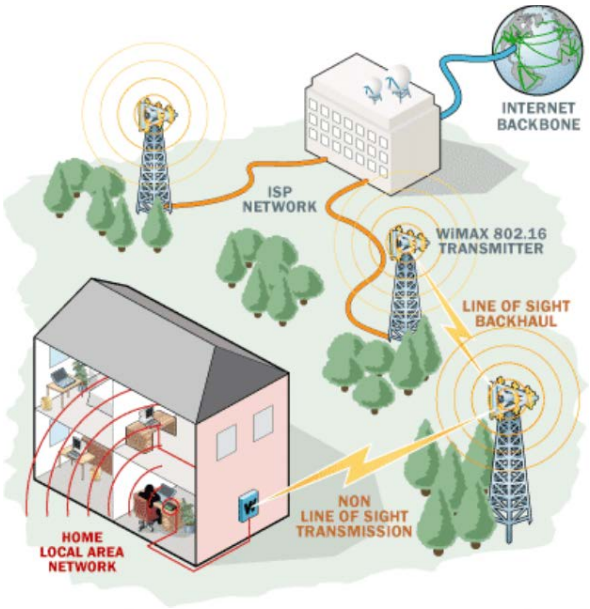


Figure 2.13: Settlement of WiMAX Technology
[http://www.gsmworld.com/ index.shtml Ad:10.02.2015].

According to this operation, its effective distance is cut to about a 5 mile radius that entire city can be covered with four to six towers strategically placed to provide maximum coverage. Also, since the line of sight aspect of WiMax can carry such high capacities, very few towers (possibly only one) will need to be hardwired into an Internet server.

2.3.6. Spectrum Management Policies and Practices

There is a need for efficient frequency spectrum management policy in the deployment of a wireless data access service [Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003)]. For instance, taking consideration into Wi-Fi, even though there are only three channels that an IEEE 802.11b access point can use, governments must be very carefully plan and implement when they assign channels. An effective spectrum management policy ensures that channels are assigned to the network of access points in a manner that minimizes interference and maximizes the performance and coverage for end users [http://dsppsd.pwgsc. gc.ca/ Collection/Iu105-2015E.pdf, Ad: 11.02.2015].

Besides Wi-Fi equipment, there are many devices, for example Bluetooth wireless devices, cordless phones, microwave ovens, wireless cameras, wireless headphones, and even certain fluorescent lighting than can interfere with each other due to utilizing in the same IMS frequency band. The spectrum management policy must

ensure that all these devices optimally utilize and share the frequency band. Moreover if a spectrum management policy is not adequately implemented, an employee could easily set up his or her own access point without proper site planning or approval from the network security and information management groups. If there are no security measures for this access point, it may become entry point for intruders into the government networks.

2.3.7. Mobile Communication Uses

2.3.7.1. Applying Wireless/Mobile Technology to Government

With the improvement in e-gov and high-tech mobile devices, mobile government applications seem to be inevitable in the coming decade. The potential for wireless/mobile applications within government is vast Considering the high mobility of targeted employee of government, deploying widespread wireless/mobile environment will be very important step for governments to improve their employee efficiency. For instance, governments' workforce involved in law enforcement and compliance enforcement, transportation and logistics, and health and social services can be a very good example for government departments that have high mobility workers. This indicates that the potential for deploying wireless technology for intra-governmental applications is significant.

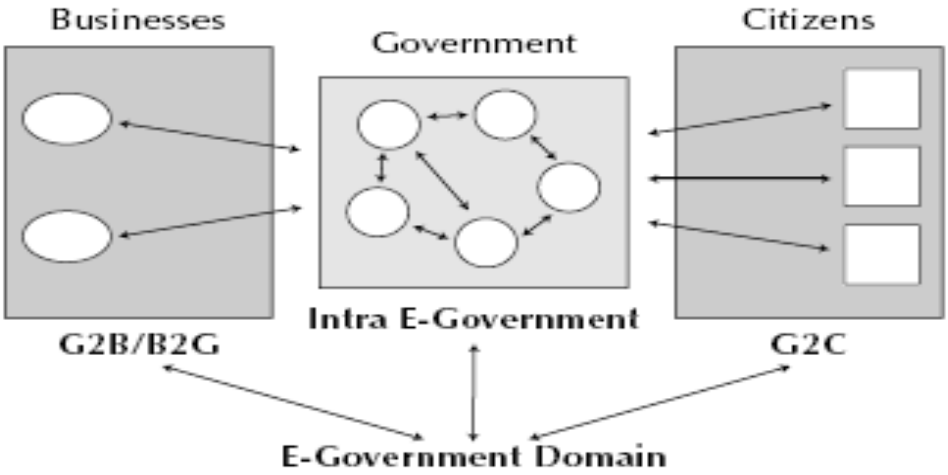


Figure 2.14: Scope of E-Goverment

[http://www.slideshare.net/shravan.bhumkar/role-of-egovernance-in-bharat-nirman Ad: 11.02.2015].

2.3.7.2. Types of Mobil Government Applications

There already exists various m-gov applications and business models in the areas oflaw enforcement, education, transport, health, and firefighting [http://www.europemedia.net/shownews.asp?ArticleID=14482 Ad: 11.02.2015]. In the following section, a number of m-gov applications from various countries are briefly presented in order to familiarize the reader with what is actually involved in mobil government. Mobil government can be applied to four main purposes in the public sector, as summarised below:

Mobil Communication

Government applications can be grouped into a few categories. The most common category is called G2C. The next category is called G2B. The last category, called G2G, is the category in which authorities are connected to each other [http://www.europemedia.net/shownews.asp?ArticleID=14482 Access date: 11.02.2015]. Moreover, the services can be grouped along the rising complexity into three different categories: Information, communication and transaction. The easist one to accomplish is the information services. Communication services enable interaction with the authorities, but it does not finalize processes for instance with an electronic signature. This can be possible in transactional services that with an accepted e-Signature, informational or communicational session can be closed.

Mobil Education

a) Giving Morale: In Knowsley, SMS messages are sent as a motivation tool for secondary school students (tips about efficient test preperation, wake-up phone calls for permanent late-goers). It is aimed to increase average grades and morales of the students.

b) Tracking Truancy: In Yishun City School (Singapore), East Riding (Great Britain), and Ireland Schools, SMS messages are sent to the parents in case a student is absent.

c) Support for university education: Universities in London receive motivation SMS messages regarding their interest in further education, mainly university education.

d) Test results: In Great Britain, France and South Africa, students can receive their university test results (Bradford University) by SMS.

e) Information channel for university students: In Leeds University and Univesity

of London, students are able to receive information academic life, preparation for future occupation, extracurricular activities, interesting and discounted tips and information. In National University of Ireland, students receive information about jobs, scholarships, education, extracurricular activities and SMS invitations to interesting events.

Mobil Safety

a) Crisis information channel: In West Midlands, deaf or citizens with hearing difficulties have a problem, can send a message to central poliçe mobile number /service for help. In Amsterdam (Holland), citizens are able to receive caution message.

b) Floods warning systems: In Malaysia, citizens receive warning messages by automated measuring devices in the case of increased water supply. In Great Britain, citizens receive information messages about emerging floods via SMS, e-mail, fax, and digital TV in case of emergency. On the other hand, citizens in Henan can receive SMS messages to government about emerging bad weather.

c) Special notification cases: Citizens in USA and London can receive messages about potential terrorist threats/attacks in the case of terrorist acts.

d) Preventing bogus phone calls on emergency line: Citizens in Amsterdam, can receive information messages missing phone in the case of theft.

e) General fight against crime: Citizens in Manila (Philippines) and Leicestershire (Great Britain) can send/receive messages to police department about suspicious activities in their areas. In Ireland, citizens are able to send a photo of wanted criminal act/thief by MMS. A couple of thieves caught in Italy by sending a MMS photo.

f) Search for missing children/citizens and criminals: In Germany, police can send descriptive message about missing person to bus/taxi drivers. In Sussex (England), citizens can register on special mobile number to receive SMSmessages with description of missing child from Sussex police department.

Mobil Democracy

Currently, there are no significant experiments with mobil democracy in developing/transitional countries. However, situation is different. For example, in UK experiments with electronic voting are made, including voting via mobile phones. This enables to discover more convenient ways to involve citizens in

political decisionmaking. Top questions are security and secrecy. The system has to ensure that the message sender is a registered voter, and that no-one abuses the system to vote more than once or vote in place of another person. For instance, voters in Liverpool and Sheffield in May 2002 local elections were given PIN numbers to use if they want to vote by text message [http://www.europemedia.net /shownews. asp?Article ID=14482 Ad: 11.02.2015]. Besides technical issues, there is the problem of the voters' willingness to use mobile phones and SMS to vote. Latest studies in Scotland and Wales have shown a general interest in electronic forms of voting, including mvoting. However, another recent UK study [Kushchu, I., & Kuscu, H. (2003). (pp. 253-260)]. finds, alongside this overall willingness to vote electronically and an interest in m-voting, that many citizens appear unwilling to use voting via text message as an electronic voting method. According to this study, willingness changes according to voters' age. While younger respondents, and those that used text messaging, may find this as an easy option to vote, but others may not. These findings may well have wider implications for all uses of mobil goverment.

Mobil Administration

M-gov also provides opportunities to improve the internal operation of public agencies. There are very few examples of such applications in developing/transitional countries. M-administration applications can provide a seamless environment for government employees to stay connected from any device. Up-to-date government-toemployee information and services can be provided at any time, whether the data they need is on the Internet, on their network, or on a portable device under their control.

Mobil Health

Health online or electronic health is a current priority for many governments. However return of investment for such services is difficult to measure [Kushchu, I., Arat, S., & Borucki, C. (2007),(pp.134-154)]. M-health or mobile e-health applications do not only support healthcare in any particular healthcare environment (hospitals, clinics, long term care facilities, homecare), but also can either eliminate or greatly reduce the use of paper forms. Moreover, significant issues that can affect the pattern of m-Health applications are as follows: usability, adoption, interoperability, change management, risk mitigation, privacy and security, and return on investment [Kushchu, I., & Kuscu, H. (2003). (pp. 253-260)].

2.3.7.3. Municipal Services

E-Municipality, cloud computing and virtualization, call centers and CRM usage.[TBD. (2010)].

2.3.7.4. Intelligent Transportation

Rail system, Metrobus and auto, air and sea transportation in the Computing systems of logistics to the role of Smart City, traffic, emergency, Intelligent road infrastructure in the use of it.[TBD.(2010)].

2.3.7.5. Citizenship Services and information

In the cities, create Mobile health, healthy life flow of citizens interested in access to public service, citizenship service portals. [TBD.(2010)].

2.3.7.6. Public Communication

Telecommunications, Broadband and New Generation of Mobil Solutioning, Application strategies.[TBD.(2010)].

2.3.7.7. Smart Structures

Home and building automation systems, security systems, smart buildings, architectural design, energy efficiency, lighting systems, closed circuit camera systems, environmentally friendly (green buildings). [TBD.(2010)].

2.3.7.8. Mobile Tracking Systems

Mobile data communication system to your car's GPS satellite in place of the Earth has been determined through the GSM network at the same time provides the central computer or on the internet map monitoring. n this way, the vehicle's route, speed, ETA is seen by the Center to every moment of information such as, automatic or manual, on-demand by controlling, operating costs to reduced minimized. The mutual information exchange feature in this system, there is also a central invoice between stock list, bar code will permit the transfer of such knowledge forms a reliable, fast, and error-free communication is ensured. Thus, the more we give an example. Mobile communication areas increasing.[TBD.(2010)].

2.4 Mobile Communication Enterprise Brought Innovations To The Companies.

2.4.1 Productivity, Motivation

Mobile devices, bringing mobile into the enterprise network extensions employees in order to participate in the production is available from anywhere. Even if the user over instant, practical and safe e-mails they can't receive replies. A single device, able to meet the needs of telephone, internet and calendar. Without space and time limit will have an easy access to information. Assume that we use IBM Lotus email program used in this solution the calendar, contacts, and emails can be reached anywhere, because to sync all of your desk thanks to the mail program and the mobile device, using properties of the same information we have provided to you. [IBM (2010)].

2.4.2 Saving

Mobile devices, bringing into the corporate network extensions, mobile communication costs under control, mobile employee productivity and increase the ability to respond to the customer. Businesses invest in expensive redundant infrastructures obligation, all forms of communication through software, bringing together enable effective cooperation at a lower cost. Ipsos Reid since 2007, according to a study conducted by the firm of users daily with productive time in the last 60 minutes, dead-time of dialing on the Blackberry. Which corresponds to Semiretirement on a regular basis this week.

This research was supported by RIM in North America, Europe, Asia Pacific and Latin America in total 1335 it manager was made with. Employees with your Blackberry just this 60 min., but also gaining 38% indicated that they provide a gain of teamwork. In other words, the average days with underutilized 54 minutes he was up to the time of the year 196 did you know labor? [http://tr.Blackberry. com/services/server/ domino/,Ad: 09.02.2015].

2.4.3. Administrative Convenience

Also to be considered in the process of mobilization can be managed dimension. Hundreds of mobile user configurations, constraints, in addressing, security settings, Server installation and version management as the center couldn't do the mobile users, will create a serious burden on the system management. BES, Blackberry as great package for those who use these functions can use as the Center. All of the

settings in the policy by downloading the user password to the package except the login screen without showing anything, you can complete your deployment. Mobile applications are also involved, is gaining more importance in the manageability. Applications and application components in a version update, messaging components is carried out more frequently.

2.4.4. Business continuity

Mobile users can use to establish a connection with each other, all roads, phones, computers, and the web into a single identity and communication that spans embargoed status is integrated in a single environment used. This way you can benefit from the geographical to circumvent limits on software, so no matter which devices are used and no matter where you go, team members and business partners, you can continue your connection. In the near future, experts working in a workplace environment where mobile environment of people from everywhere can follow their jobs than didn't show up for work and business continuity for non-mobile users spend their time spoken to pass in front of the business environment. This also positively affect business continuity.

2.4.5. Mobility, Security

Within the company and between companies with high level of security, you can set up the efficient communications. Real-time availability information and e-mail, instant messaging and you can communicate using voice mail. You must be in the Office to sustain your business, or you do not need to find an internet connection. External threats protection of your company's communication, which simplify their work, and in the meantime you can feed the integrated tools that power comply with the legal requirements, if it works with are provided. This built-in safety features, the incoming and outgoing e-mail account your business from spam, viruses, phishing scams, email policy violations, and instant messaging-based allows protection from malicious software. Anytime, anywhere when you carry your Office as well as job, you make it easier your life.

The importance of the data that your organization performs each activity one more step to the fore.

As a matter of fact, it departments is also a big shift on this issue, namely the provision of data takes place on the administration.

As you can see, you use all those gigantic systems has a single purpose, is the right way to manage information. Institutions with data at their disposal data are obtained by the institution they produce knowledge and every day a lot of data that are being processed to be used as needed through the IT systems, stacking, and validating.

The information at any time and from anywhere, quickly provides the right to terminate your access to IT. Technological developments in the field, depending on the time and space to people without the dialog no longer dream of both, mobile communication, also referred to by name, carried out thanks to mobile phones.

Now the old Pcmcia and so on extra cards with mobile no need you to connect. [http://tr.Blackberry.com/services/server/domino/, Ad: 09.02.2015].

2.4.6. Green Technology

Today, green technology increasingly used the statement of the province. This term is less energy, less paper used for terms like spending.

We came out of a document in an Office environment taking the printer to fax rather than e-mail, we should use the possibilities now. Fax, most experts say the statement was no longer with the outmoded.

Documents is green instead of current pollution we still passes even in time to adapt. Enterprise companies are using this method to both save money and waste and nature under the name of peace with the campaigns and events by organizing users and all in an effort to raise awareness of people. We work at the firm in this way users announcement e-mail informing we are warned with.

As paper documents, as well as our computers or as a file instead of to bring mobile device would be the right thing in our store. Even within the company, employees are hard copy it? soft copy it? use statements. Documents on computer sends me the soft copy is desired if you they are. In this direction, under the name Enterprise companies in document management, applications are used. In our company we use these applications in the us.

Companies such as IBM, are now developing applications in this direction are given speed. Document management and storage of all documents in electronic form with the desired time, proves to be able to access from anywhere. [http://www.zurich. ibm.com/st/energy/, Ad: 09.02.2015].

2.5 Growing Up To Day Mobile Technologies

2.5.1 1G Technology

The first generation of Wireles Network Solution is the name given to the standards. in the 1970s, 1 g phones appeared. These are analog transmission system and according to the previous model had less weights. 1 g systems are among the most popular are AMPS (advanced mobile phone system), TACS (total access communication systems for wholesale) and NMT (Nordic Mobile Telephony), respectively. 1 g 30% the size of the annual phone market with his look from the ' 60s up to 50% of the output. As of the 1990 total subscriber count almost 20 million visitors just smell.

Wired communication to overcome the dependency constraint of the place brought the first wireless systems, and the most important problem that arose; the small coverage area and at the same time a special frequency to each user, which causes the fixed telephony is the use of the applicable analog approach. This period corresponds to the technology used and the 1980s 1. Generation is named after him. 1 g is focused entirely on sound transmission uses an analog approach to transmission. The most common standard at the beginning of this technology, advanced mobile phone service comes from.[D. O'Mahony, Volume: 2, 1998].

Figure 2.15: Car Phone [D. O'Mahony, Volume: 2, 1998].

2.5.2 2G Technology

1 g as in cellular network uses my site.

2 g according to the superiority of analog 1 g from the publication is digital broadcast was passed. Digital technology in mobile phones, through the same channel

connection and status data paths. When establishing a connection to the data (or voice) is done through a stream channel. As long as each user data and channel holding, does not share. Therefore, the speech cannot be externally to this channel for the duration of the intervention. Also digital technology through the use of the higher sound quality, higher capacity, providing security and encryption method in the transmission network, the transfer of data has been possible as little as knowledge. 850/900 MHz frequency designed to run a 2 g standard GSM, upon the increasing number of users have been moved to the 1,800 MHz band. In this way, multiple users at the same time with the increasing frequency of cell communication front is opened but I mean decreased range of base stations. [D. O'Mahony, Volume: 2, 1998].

• GSM: Global System for Mobile Communications, or GSM (global system for mobile communications), mobile phone communications protocol. GSM cellular and digital system. By dividing to cells under areas are planned. GSM, across the globe, first introduced in Finland. Finland, weather conditions and geographical structure and placement need to be pretty messy due to contact with an alternative system people wired mobile system and encourage studies on the first experiments on the system in 1982 began to be made.

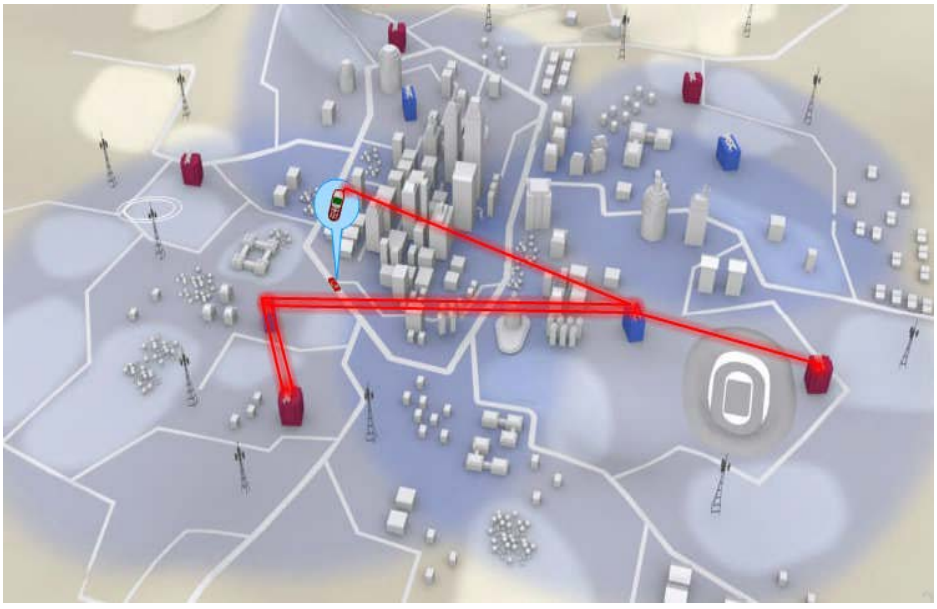


Figure 2.16: GSM system elements [D. O'Mahony, Volume: 2, 1998].

2.5.2.1 GSM system components include:

a) Cell*:* A GSM radio cells adjacent to the network such as honey honeycomb shaped designed and this covers all service area with the cells.

b) BTS (Base Transceiver System) – base station: a group of radio channels each cell that uses the BTS has to. BTS, technological network interface and is placed in the center of the cell.

c) Ms (Mobile Station)-mobile phone: in terms of power and application given that there are different types of mobile station. The SIM card and creates a mobile station with the mobile device. o BSC (Base Station Controller) – base station controller: controlled a a group of BTS, BSC. This depends on the manufacturer, the number of base stations.

d) MSC (Mobile Services Switching Center)–a certain number of communication mobile services are a BSC, MSC powerplant*:* depending on the works. Mobile phone, GSM network is continuous with the nearest base station contact World War II. GSM network consists of a large number of cells. Each a cell in a specific geographic area. In this field, through all of the phones calls from BTS. Mobile When they act as free with the phone belongs to a cell from a BTS When it doesn't break any other cell in the dialog and other cell BTS communication is continued.[F. Hillebrand, F. Trosby, K. Holley, and I. Harris, eds., John Wiley & Sons, 2010].

2.5 G and 2.75 G: GPRS and EDGE technologies with the addition of the 2 g standard.

e) GPRS*:* supports 9.6 Kbps data transmission GSM,. 1 g to 2 g from transition times that even if enough data transmission over time with the start of the Internet became popular, HSCSD fell short and After GPRS standards has been developed. AS HSCSD is at the same time, with the user able to provide many of the 43.2 Mbps data transmission channel.GSM offers When not in use, as is also the case even while waiting for ready line busy led to the development of the GPRS standard. Push to Talk (PTT asshole to talk) basically relies on to GPRS.

f) EDGE: changing the modulation type is called GSM, EDGE technology improved, so in theory a second 380 Kbps data transmission contexts..[F. Hillebrand, F. Trosby, K. Holley, and I. Harris, eds., John Wiley & Sons, 2010].

2.5.3 3G Technology

Search such as edge and GPRS are evolutionary step after 3. Generation mobile communication technologies have emerged and this technology International Mobile Telecommunications-2000 (IMTS-2000) has been a member of the family. The International Telecommunication Union (International Telecommunication Union-ITU) defined by the IMTS2000 family of standard GSM EDGE, 3 g, UMTS, CDMA2000, and WiMax technologies, DECT is a class that collects under the umbrella.

Unlike generations of 3 g call a new generation with different technologies cause proclamation new is providing value-added services. with 3 g high data speed and more via broadband access has started. Multimedia applications, mobility, high quality, universal, variable speed options and transmission of sound instead of the advantage of 3 g data transmission-oriented architecture are. Despite all these positive contributions, 3 g, 2 g is not create the effect of a large revolution. As 3 g cause it's taking longer than expected to be available late, license rights for operators high fees and brought innovations to users can be expected to compensate you for any claims. [S. Frattasi, H. Fathi, F.H.P. Fitzek, M. Katz, R. Prasad, IEEE Network Magazine, Volume: 20(1), 2006].

The purpose of this technology is a high-quality audio-video-data transmission and is to provide a seamless quality to encompass the global communication. 3. generation, 2nd generation system is a linear extension of and expected development.

3 g technology allows high-speed access and IP-based services are combining the Internet, has become one of the popular mobile devices in service. Also mobile technologies with packet-switched circuit-switching approach approach devices use bandwidth only when the exchange of data in terms of efficient communication occupy and resources are emerging. 3 g makes efficient bandwidth consumption unlike benefited modulation techniques; provides bandwidth activity, reduces and avoiding infection were due to the noise from complicating the spread spectrum-frequency range propagation started using the techniques. [M. Steer, IEEE Microwave Magazine, Volume: 8, 2007].

Table 2.2: Comparison of mobile communication technologies (Except 4 g) [İnternet:

TECHNOLOGIES				
GSM GPRS		WCDMA UMTS	HSPA HSDPA	HSPA+
Max download speed	10-150 Kbps	384 Kbps	14 Mbps	28 Mbps
Max upload speed	10-150 Kbps	128 Kbps	5.7 Mbps	11 Mbps
Delay time	600 ms	150 ms	100 ms	50 ms
3GPP Releases	Rel97	Rel 99/4	Rel 5/6	Rel 7
Start dates widespread	1991	2003/4	2005/6	2008/9
Access methodology	TDMA FDMA	WCDMA	WCDMA	WCDMA
Bandwidth	200 KHz	5MHz	5 MHz	5MHz
Modulation Type	8-PSK GMSK	QPSK	QPSK 16-QAM	QPSK 16-QAM

[İnternet: http://bytebeats.com/2011 /07/14/ performance -comparisson-of-gsm-umts-hspa-and-lte/, Ad:09.02.2015].

2.5.4 4G Technology

Fourth-generation mobile phone technology is the name given to the public. Similar to using a cellular network such as GSM standards system with third-generation networks are similar problems emerging in coverage and a more efficient technology. the most important feature of 3 g and 4 g is not possible with the existing networks of fast image transfer is possible. 4th generation wireless technology enables ultra high bandwidth mobile communications field is new and currently is the final stage. The two most important representative of this generation for Worldwide Interoperability Microwave Access (Worldwide interoperability for Microwave Access-WiMax) and long term evolution (Long Term Evalution-LTE) is known by name. 4 g is a fixed point in the data-transmission speed 100Mbps services

to provide an end-to-end services, and to ensure uninterrupted communication everywhere.

WiMAX, a wireless technology standard for members of the family of IMTS2000. This technology has been included in the wide area networks, Third Generation (WLAN) with both in competition and is capable of completing them. WiMAX, a wider coverage area than WLAN and establish a connection-it does not need sight to perform communication. Both fixed and mobile broadband network services that support, even though mobile broadband access market place is much greater. Although to gain access to higher speeds with WiMAX LTE more of operators according to the reason for the adoption by the WiMax LTE's existing 3 g infrastructure is the ability to serve over. Existing UMTS networks to be made small amounts of investments that require migration to LTE operators with changes becoming more attractive. [K. H. Teo, Z. Tao, and J. Zhang, IEEE Signal Processing Magazine, Volume: 24, 2007].

Figure 2.17: Jenerations 1g,2g,3g,4g,5g

[HYPERLINK "http://www.androidsesi.com/ 2015/01/jenerasyon-2g-3g-4g-5g/"http://www.androidsesi.com/2015/01/jenerasyon-2g-3g-4g-5g/ Ad:10.02.2015].

Table 2.3: Bayt [http://tr.wikipedia.org/wiki/Bayt Ad:10.02.2015].

1 Kilobayt = 1 KB = 10^3= 1.024 Bayt
1 Megabayt = 1 MB = 10^6= 1.048.576 Bayt
1 Gigabayt = 1 GB = 10^9= 1.073.741.824 Bayt
1 Terabayt = 1 TB = 10^{12}= 1.099.511.627.776 Bayt
1 Petabayt = 1 PB = 10^{15} bayt
1 Eksabayt = 1 EB = 10^{18} bayt
1 Zettabayt = 1 ZB = 10^{21} bayt
1 Yottabayt = 1 YB = 10^{24} bayt

2.5.4.1. What are 4 g technologies (Hspa + 21/42, Wimax, Lte)

What are the benefits of 4 g technology?

They are connected to the Internet with 4 g technology, especially cell phones and video can provide a pretty big advantage for people watching. Internet browsing, file downloading and uploading, sound transfer provides advantages in applications such as serious. 4 g, usually when large amounts of data transfer is an important advantage. Makes use of all the blessings in the IPv6 technology.

What are the disadvantages of 4 g technology?

Service providers due to the quota system introduced by using high speed internet you can fill very fast quota. If the 4 g coverage in your area that you are sitting in a place you just can't use the 4 g technology.

4 g technologies to the Lte 4 g mobile phones with big load on the battery when you use the 4 g technology, whether it's your battery you endlessly. Battery life, 3 g technology for users who value is sufficient. 3 g is widespread in our country, even the new 4 g looks like a long time, acknowledging that the popularization of.The phones will need more powerful batteries.[http://4g.nedir.com/#ixzz3RHUpBg1g, Ad:09.02.2015].

2.6. Foundatıons Of Wımax

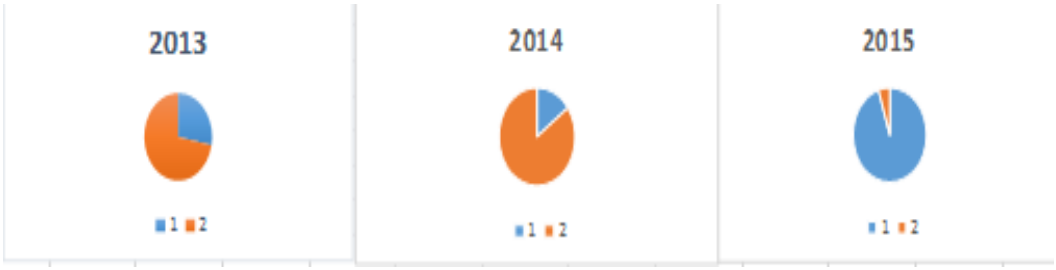
2.6.1. Fixed and Mobile WIMAX

There are two fundamentally different types of broadband wireless services. The First type attempts to provide a set of services similar to that of the traditional fixed-line broadband but using wireless as the medium of transmission. This type, called fixed wireless broadband, can be thought of as a competitive alternative to DSL or cable modem. The second type of broadband wireless, called mobile wireless broadband, offers the additional functionality of portability, nomadity and mobility. WiMAX technology is designed to accommodate both fixed and mobile broadband applications. Table 62.4 shows the basic fixed and mobile wireless broadband standards and Figure 2.5 shows the worldwide revenue share of Fixed and Mobile WiMAX [ANDREWS J.G. et. al., (2007)].

Table 2.4: Basic Data on 802.16 Standards

	802.16-2004	**802.16e-2005**
STATUS	Complated June, 2004	Complated December, 2005
EREQUENCYBAND	2GHz-11GHz	2GHz-6GHz
APPLICATION	Fixed LOS, NLOS	Mobile NLOS
MODULATION	QPSK, 16 QAM-64 QAM	QPSK, 16 QAM-64 QAM
DATA RATE	1 Mbps-75 Mbps	1 Mbps-75 Mbps

[ANDREWS J.G. et. al., (2007)].



1=Mobil, 2=Fix

Figure 2.18: Worldwide Revenue Share of Fixed and Mobile WiMAX [www.wimaxforum.org/technology/documents/wimax_networks_worldwide_11x17.pdf Ad: 11.02.2015].

2.6.2. Differences of Fixed and Mobile WiMAX

The simplest explanation for the difference between the fixed and mobile variants of WiMAX boil down to the fact that the mobile variant enables a hand-over from one base station to another as the user, in one session, moves from the coverage zone of one base station to another. This is also known as “mobility management”. To make this happen, vendors must engineer the mobility management technology into their base stations at considerable cost over the fixed WiMAX technology. From a high view, “mobile” means the service functions at 120 km/h while performing competent hand-overs. Service providers should assess what percentage of their subscribers will require that level of service [http://www.wimaxforum.org/resources/documents/ marketing/ casestudies, Ad: 11.02.2015]. OFDM vs. OFDMA Orthogonal Frequency Division Multiplexing (OFDM) breaks the wireless carrier into 256 sub-carriers. Fixed WiMAX uses OFDM.

2.6.2.1. This has two greatest advantages

It reduces inter symbol interference (also known as multipath). Improves propagation of the signal, especially in non-line of sight (NLOS) coverage zones. Orthogonal Frequency Division Multiple Access (OFDMA) breaks the carrier into even more sub carriers (up to 2048 sub carriers). The advantage of this is better propagation and potentially improved building penetration (although other factors such as frequency and power come into play here as well) relative to OFDM. The use of OFDMA should also enable the use of smaller, less costly subscriber devices including PC cards and USB devices. The mobile variant of WiMAX uses OFDMA [http://www.wimaxforum.org/resources/documents/marketing/casestudies, Ad: 11.02.2015].

a) **Costs:** A fixed WiMAX base station might have a street price of $5,000 (depending on volume of purchase) whereas mobile WiMAX base stations start at $50,000. The service provider must weigh cost benefit of the more expensive base station relative to their markets (enterprise E1 substitute, residential “DSL killer”, mobile data, etc). A fixed WiMAX subscriber unit is an external device which carries a price tag of about $500. Compare that to mobile WiMAX PC cards that will reportedly retail for $200 [http://www.wimaxforum.org/resources/documents/marketing/casestudies,

   Ad: 11.02.2015].

b) Quality of Service: The fixed variant of WiMAX categorizes traffic. This means traffic such as voice get priority over data. The service provider should weigh this in their infrastructure decision-making as the added category for prioritizing traffic may not prove that valuable in comparison to a fixed environment using external subscriber devices. Data is the first choice for Mobile WiMAX [http://www.wimaxforum.org/ resources/documents/marketing/casestudies, Ad: 11.02.2015].

2.7. Wimax Comparison

WiMAX is not the only solution for delivering broadband wireless services. Several solutions, particularly for fixed applications, are already in the market. There are standards-based alternative solutions that at least partially overlap with WiMAX, particularly for the portable and mobile applications. In the near term, the most significant of these alternatives are third-generation cellular systems and IEEE 802.11-based Wi-Fi systems. Figure 2.19. shows the evolution of MANs (Metropolitan Area Network), Cellular Network, LAN (Local Area Network) and PAN (Personal Area Network) [www.itu.int/ITUD/ict/newslog/content/binary/ Ad:11.02.2015_3].

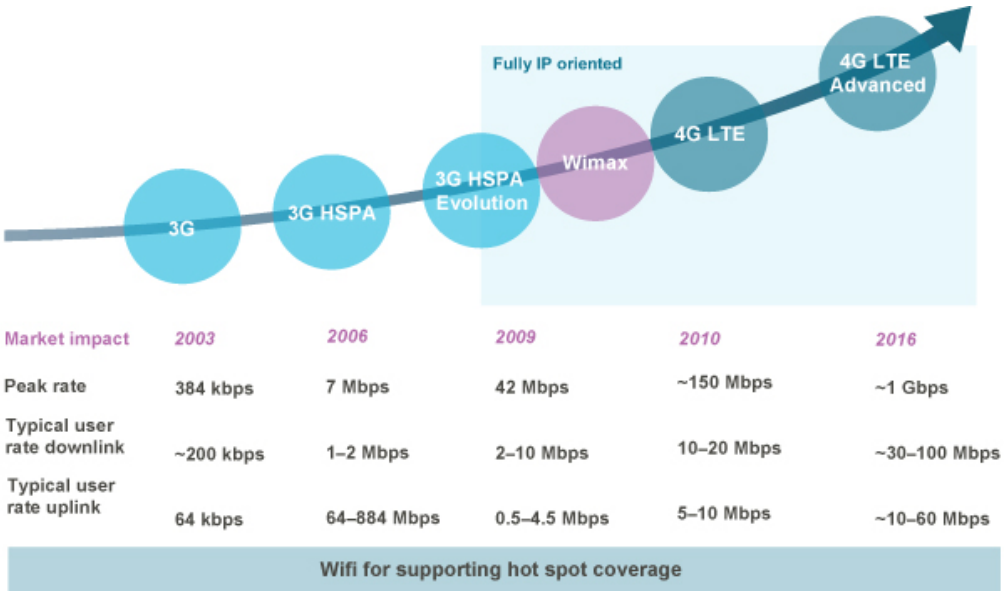


Figure 2.19: Evolution of MAN, Cellular, LAN and PAN [www.itu.int/ITU-D/ict/newslog/content/binary/, Ad:11.02.2015_3].

WiMAX, based on the IEEE 802.16 family of standards, is a solution that can offer wireless broadband Internet access to residences and businesses at a relatively low cost. The standard supports shared transfer rates up to 75 Mbps from a single base station, which can offer broadband access without requiring a physical connection from the end-user to a service provider. Service delivery to end clients is likely to be roughly 300 Kbps for residences and 2 Mbps for businesses. One of the promises of WiMAX is that it could offer the solution to what is sometimes called the 'last-mile' problem, referring to the expense and time of connecting individual homes and offices to trunk lines for communications. WiMAX promises a wireless access range of up to 50 kilometers, compared with 100 meters for Wi-Fi and 15 meters for Bluetooth. To understand what WiMAX brings to the figure we need to understand what additional features it provides over existing technologies. Existing broadband wireless access technologies that are closest to WiMAX with respect to service features are Wi-Fi and third-generation mobile. [www.itu.int/ITU-/ict/newslog/content/binary/ Ad:11.02.2015_3].

2.7.1. 3G Cellular Systems

Around the world, mobile operators are upgrading their networks to 3G technology to deliver broadband applications to their subscribers. Mobile operators using GSM (global system for mobile communications) are deploying UMTS (universal mobile telephone system) and HSDPA (high speed downlink packet access) technologies as part of their 3G evolution. HSDPA is a downlink-only air interface, capable of providing a peak user data rate of 14.4 Mbps, using a 5 MHz channel. It should be noted that HSDPA is a downlink-only interface; hence until an uplink complement of this is implemented, the peak data rates achievable on the uplink will be less than 384kbps, in most cases averaging 40 Kbps to 100 Kbps. An uplink version, HSUPA (high-speed uplink packet access), supports peak data rates up to 5.8 Mbps. HSDPA and HSUPA together are referred to as HSPA (high-speed packet access). EV-DO (Evolution Data Optimized) is a high-speed data standard defined as an evolution to 2G systems. Standard supports a peak downlink data rate of 2.4 Mbps in a 1.25 MHz channel.

Typical user-experienced data rates are in the order of 100 Kbps to 300 Kbps. It can also support uplink data rates of up to 1.8 Mbps. In addition to providing high-speed data services, 3G systems are evolving to Support multimedia services. EV-DO

enables voice and video telephony over IP. Multicast and broadcast services are also supported in EV-DO. Similarly, development efforts are under way to support IP voice, video, and gaming, as well as multicast and broadcast services over UMTS/HSPA networks. It should also be noted that 3GPP (The 3rd Generation Partnership Project) developed the next major revision to the 3G standards. The objective of this longterm evolution (LTE) is to be able to support a peak data rate of 100 Mbps in the downlink and 50 Mbps in the uplink. In order to achieve these high data rates, the air interface is based on OFDM similar to WiMAX [www.itu.int/ITU-D/ict/newslog/content/binary/, Ad:11.02.2015].

2.7.2. Wi-Fi Systems

Wi-Fi has become one of the most popular forms of wireless local area networking, which has high speed. However, the popularity of Wi-Fi has exposed its primary limitation-range. The wireless technology can only serve signals in a ‘hotspot’ with a typical reach of about 300 meters outside or 100 meters indoors. In addition to 3G, Wi-Fi based-systems may be used to provide broadband wireless. Wi-Fi is based on the IEEE 802.11 family of standards and is primarily a local area networking (LAN) technology designed to provide in-building broadband coverage. Current Wi-Fi systems based on IEEE 802.11 support data rate of 54 Mbps and typically provide indoor coverage over a distance of 100 meters.

Wi-Fi has become the great standard for broadband connectivity in homes, offices, and public hotspot locations. In the past couple of years, a number of municipalities and local communities around the world have taken the initiative to get Wi-Fi systems deployed in outdoor settings to provide broadband access to city centers and metrozones as well as to rural and underserved areas. It is this application of Wi-Fi that overlaps with the fixed and nomadic application space of WiMAX. Metro-area Wi-Fi deployments rely on higher power transmitters that are deployed on lampposts or building tops and radiating at or close to the maximum power limits for operating in the license-exempt band. With high power transmitters, Wi-Fi systems can typically provide a coverage range of only about 1600 meters from the access point. They could be deployed to provide broadband access to hotzones within a city or community. Wi-Fi offers remarkably higher peak data rates than 3G systems, primarily since it operates over a larger 20MHz bandwidth

Further, Wi-Fi systems are not designed to support high speed mobility. One advantage of Wi-Fi over WiMAX and 3G is the wide availability of terminal devices. A vast majority of laptops shipped today have a built-in Wi-Fi interface. Wi-Fi interfaces are now also being built into a variety of devices, including personal data assistants (PDAs), cordless phones, cellular phones, cameras, and media players. The large embedded base of terminals makes it easy for consumers to use the services of broadband networks built using Wi-Fi. As with 3G, the capabilities of Wi-Fi are being enhanced to support even higher data rates and to provide better QoS support [www.itu.int/ITU-D/ict/newslog/content/binary/, Ad:11.02.2015].

2.7.3. WiMAX versus 3G and Wi-Fi

How does WiMAX compare with the existing and emerging capabilities of 3G and Wi-Fi? The capabilities of WiMAX depend on the channel bandwidth used. Unlike 3G systems, which have a fixed channel bandwidth, WiMAX defines a selec table channel bandwidth from 1.25 MHz to 20 MHz, which allows for a very flexible deployment. The need for spreading makes very high data rates more difficult in CDMA systems. Another advantage of WiMAX is its ability to efficiently support more symmetric links useful for fixed applications, such as replacement and support for flexible and dynamic adjustment of the downlink-to-uplink data rate ratios. Typically, 3G systems have a fixed asymmetric data rate ratio between downlink and uplink.

What about in terms of supporting advanced IP applications, such as voice, video, and ultimedia? How do the technologies compare in terms of traffic and controlling quality? WiMAX is built to support a variety of traffic mixes, including real-time and non-real-time constant bit rate and variable bit rate traffic, prioritized data, and best-effort data. Such 3G solutions as HSDPA and EV-DO were also designed for a variety of QoS levels. Perhaps the most important advantage for WiMAX may be the potential for lower cost owing to its IP architecture. Using IP architecture simplifies the core network 3G has a complex and separate core network for voice and data and reduces the capital and operating expenses. IP gives WiMAX a performance/price advantage.

IP also allows for easier integration with third-party application developers and convergence with other networks and applications easier. In terms of supporting roaming and high-speed vehicular mobility, WiMAX capabilities are somewhat

unproven when compared to those of 3G. In 3G, mobility was an integral part of the design; WiMAX was designed as a fixed system, with mobility capabilities developed later. In summary, WiMAX occupies a somewhat middle ground between Wi-Fi and 3G technologies when compared in the key dimensions of data rate, coverage, QoS, mobility, and price. [www.itu.int/ITU-D/ict/newslog/ content/ binary/, Ad:11.02.2015].

2.7.4. Why WIMAX

WiMAX, should not be held outside never transport network infrastructure development. WiMAX on the realization of the desired objectives are listed as follows to IPTV. [She, J., Hou, F., Ho, P.-H., Xie, L.-L., vol. 45, no.8, 87–93 (2007)].

2.7.4.1. The Number of Participants to The Maximum Level

Second khalīfah married Imam Alī that IPTV services with time and the success of the publication maintains profitability of applications becomes evident. A new multi-currency IPTV program as soon as the maximum number of participants from each service provider is the clear objective. DSL and cable broadband access, some geographical distance and knows to be possible for the reasons. At the same time, DSL and cable network to internalize the wireless MAN technologies is not so easy and scalable.

An alternative to traditional cable network transport network technology other wireless technologies such as WiMAX, as, great service with more coverage and bandwidth also provides the ease of placement. Altyapını develop and service needed to provide cost, can be reduced in a dramatic way. IPTV services to deliver IPTV over WiMAX is currently on the same infrastructure in terms of the complete development of the maximum number of users to handle, and also in the future mobile users get the same video can provide their content even better.

2.7.4.2. Unified Wireless Broadband Access Network

Telecommunications companies, continuous Triple or quadruple play in seeking ways to provide services and WiMAX, wireless broadband services and mobile services such as Voip telephony services to invest in is a good candidate for. IPTV service, currently spread over WiMAX infrastructure and provide more service,

better service and more in terms of the validity of the cause to get economies of scale.

2.7.4.3. To Support Future Flow

If you need mobility, IPTV currents sort like high quality video content to reach and unplanned HDTV support come to the fore. WiMAX, reserving property with affordable bandwidth and infrastructure-independent development property and 4 different tight QoS endeavoring to be worthy of this with the support of the movements. Service quality, Unsolicited Granted Service (UGS), real-time Polling Service (rtPS), non real-time Polling Service (nrtPS) and Best Effort (BE) consists of 4 different traffic service. Wireless bandwidth transport, implementation of rtPS, scheduled content, IPTV service providers especially for HDTV and SDTV pay is a very good way to support the bandwidth requirement.

Tons of free video on demand offering thousands of content rich portal Internet with Kernel not only IPTV home users, mobile users are also paid from the performance and quality of live content will not be affected in this way to provide access to the unmanaged content, is a very attractive approach. rtps can be set up to support this demand and services, and ultimately the best economy and flexibility without compromising the quality of the content, by transmission of won. Upcoming IPTV service in support of the fashion, common access to the WiMAX infrastructure can be improved in the current IPTV operation is proportional to the long term and for developing economy and creates savings item.

2.7.5. Power Comparisons

Devices using WiMAX technology are in safety standards endorsed by the WHO (World Health Organization) and other health agencies. Those standards take the safety of everyone, including children, into account by providing substantial safety margins. Table 2.5 shows the comparison of WiMAX with other wireless technologies in scope of transmission powers.

Table 2.5: Transmission Power Values of Wireless Equipments

		Real World (avg)		Theoretical (max)		Availability
		Download	Upload	Download	Upload	
2.5G	GPRS	32-48Kbps	15Kbps	114Kbps	20Kbps	Today
2.75G	EDGE	175Kbps	30Kbps	384Kbps	60Kbps	Today
3G	UMTS	226Kbps	30Kbps	384Kbps	64Kbps	Today
	W-CDMA	800Kbps	60Kbps	2Mbps	153Kbps	Today
	EV-DO Rev. A	1Mbps	500Kbps	3.1Mbps	1.8Mbps	Today
	HSPA 3.6	650Kbps	260Kbps	3.6Mbps	348Kbps	Today
	HSPA 7.2	1.4Mbps	700Kbps	7.2Mbps	2Mbps	Today
Pre-4G	WiMAX	3-6Mbps	1Mbps	100Mbps+	56Mbps	Today
	LTE	5-12Mbps	2-5Mbps	100Mbps+	50Mbps	End 2010
	HSPA+	-	-	56Mbps	22Mbps	2011
	HSPA 14	2Mbps	700Kbps	14Mbps	5.7Mbps	Today*
4G	WiMAX 2 (802.16m)	-	-	100Mbps mobile / 1Gbps fixed	60Mbps	2012
	LTE Advanced	-	-	100Mbps mobile / 1Gbps fixed	-	2012+

[http://phanikiran2 informative.wordpress.com/world-information/, Ad :09.02.2015].

To achieve the long ranges it requires, a WiMAX network must have an optimized power profile from the base station to the components in the mobile device. High transmit power is important for long range, but how high can WiMAX go? Designers must find the optimal balance between high transmit power and low power consumption to ensure robust links, high data rates and good range for WiMAX services. Mobile WiMAX networks will achieve coverage of ~1km per base station, and providers will deploy numerous techniques to achieve this long range, including high transmit power, subchannelization and adaptive modulation.

A typical WiMAX base station transmits at power levels of approximately +43 dBm (20 W), and the mobile station typically transmits at +23 dBm (200 mW). There is a large difference between downlink power and uplink power, so while a mobile can easily receive transmissions from a base station, the mobile's relatively low transmit power makes it difficult for the base station to hear it. One way to combat this mismatch is with a technique called subchannelization. In effect, each mobile concentrates its power over a subset of all available subchannels, and the other subcarriers are simultaneously made available to other users.Another technique to address the link imbalance is adaptive odulation. In this case, the mobile transmits

using a lower order modulation compared with the base station. For example, the mobile could transmit QPSK or 16 QAM signals, while the base station transmits using 64 QAM. Because the SNR required to receive QPSK or 16 QAM is lower than 64 QAM, using a lower order modulation allows the mobile station to communicate with the base station using less transmit power.

The SNR required for QPSK is 5 dB, for instance, compared with 10.5 dB for 16 QAM and 20 dB for 64 QAM modulation. If the mobile station transmits with QPSK, the base station can tolerate 5.5 dB more link loss than with 16 QAM. When subchannelization and adaptive modulation are combined, a network operator can effectively balance the uplink and downlink budgets, and the network will operate bidirectionally. [http://phanikiran2informative.wordpress.com/world-information/, Ad :09.02.2015].

3. MATERIAL&METHOD

3.1 Research Group

This research data service provider in the Internet and IT firms were obtained through a survey in which 95 people applied to work as a manager or specialist who at various levels. 82 of them achieved a full return of completed questionnaires and it has an average age of 37.19±7 answers they gave to questions of the questionnaire evaluating this group has carried out research.

3.2 Measuring Tool

The research data were obtained and developed on a Likert-type questionnaire composed of 30 questions. After survey prepared questions, it was decided primarily on the questions reviewed by an expert to survey techniques in preparation for the types of questions. After this stage in related research institutions, the task of which was built five different people a question in terms of assessing the technical content. The final step is added to the test 7 questions to determine the demographic structure of the group, the test and test seven demographic and 30 research topics, including removing a total of 37 questions in three different Turkish language specialists reviewed by questions and language value-entertain the stipulated done that expert advice after the regulations have been implemented. The validity and reliability of the test has also been conducted.

3.3 Analysis of Data

The data obtained are then developed by Microsoft Corporation loads of entertainment to be transferred to Excel software package SPSS 17.0 descriptive statistics and percentage (Frequency) were analyzed with methods

4. FOUNDINGS

The findings obtained in this study are presented below in the form of statements and explanations.

Table4.1: Results of the Research Group on the Demographic Characteristics

PARAMETER		**N**	**%**
GENDER	Male	26	31,7
	Female	56	68,3
AGE	23-33	24	29,3
	34-44	45	54,9
	45 ≥	13	15,9
MARİTAL STATUS	Maried	44	53,7
	Single	33	40,2
	Divorced	5	6,1
EDUCATİON	Collage	8	9,8
	Bachelor's Degree	60	73,2
	Master Degree	14	17,1
LEVEL OF INCOME	3000 <	17	20,7
	3001 – 5000	43	52,4
	5001 >	22	26,8

As shown in Table 4.1 in the study group and 68.3% female and 31.7% male, 29.3% in the 23-33 age range, 54.9% and 15% in the 34-44 age range , 9 to 45 and over age range, 9.8% of collage the 73,2's% and 17.1% of university-owned postgraduate education, 20.7% less than 3000, 3001-5000 52.4% and 26.8% were found to have more than 5001 income.

Table 4.2: Research Group "I think it is very easy to use mobile service" Findings Regarding the Distribution of the answers to questions

ANSWER CHOICES	**GENERAL**		**23-33 Age**		**34-44 Age**		**45 ≥**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Strongly Agree	39	47,6	16	66,7	19	42,2	4	30,8
Agree Very Low	12	14,6	4	16,7	5	11,1	3	23,1
Agree	30	36,6	4	16,7	20	44,4	6	46,2
Very Low Disagree	1	1,2	-	-	1	2,2	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.2 shows the overall distribution seen as the research group "I think it is very easy to use mobile service" the answer to the question Strongly Agree by 47.6% "agree" answer is given, this proportion is 66.7% 23-33 age range; In the 34-44 age group the rate of 44.4% "agree" and 45 years and above the rate of 46.2% "agree" were added.

Table 4.3: Research Group "I think that mobile internet is a very reliable service" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	27	32,9	12	50,0	11	24,4	4	30,8
Agree Very Low	16	19,5	5	20,8	9	20,0	2	15,4
Agree	29	35,4	4	16,7	19	42,2	6	46,2
Very Low Disagree	6	7,3	1	4,2	4	8,9	1	7,7
Strongly Disagree	4	4,9	2	8,3	2	4,4	-	-

Table 4.3 shows the overall distribution seen as the research group "I think that mobile internet is a very reliable service" the answer to the question agree by 35.4% when given in the rate 23-33 age range 50,0% "Strongly Disagree", 34-44 years in the group rate of 42.2% "agree" and 45 years and above the rate of 46.2% "agree" were added.

Table 4.4: Research Group "As my hands begin to use mobile data services it is sufficient for manual use only" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	22	26,8	12	50,0	6	13,3	4	30,8
Agree Very Low	25	30,5	8	33,3	15	33,3	2	15,4
Agree	20	24,4	1	4,2	15	33,3	4	30,8
Very Low Disagree	13	15,9	3	12,5	8	17,8	2	15,4
Strongly Disagree	2	2,4	-	-	1	2,2	1	7,7

Table 4.4 shows the overall distribution seen as the research group "As my hands begin to use mobile data services it is sufficient for manual use only" 30.5% rate to the question "Very Low agree" answer is given, this proportion is 23-33 years of age 50.0% "Strongly Disagree ", and 33.3% in the 34-44 age group" Agree "and"

Disagree Very Low ", aged 45 years and above the rate of 30.8%" Strongly Agree "and" Agree "was found in the form.

Table 4.5: Research Group "Easily winnable the ability to use mobile services" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	33	40,2	11	45,8	18	40,0	4	30,8
Agree Very Low	19	23,2	9	37,5	8	17,8	2	15,4
Agree	24	29,3	4	16,7	15	33,3	5	38,5
Very Low Disagree	6	7,3	-	-	4	8,9	2	15,4
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.5 shows the overall distribution seen as the research group "Easily winnable the ability to use mobile services" 40.2% rate to the question "Strongly Agree", 23-33 age range at a rate of 45.8% "Strongly Agree" and 34-44 age range 40.0% percent "strongly agree" answer is given, aged 45 years and above 38.5% "agree" were added.

Table 4.6: Research Group "Use of mobile services, my personal information will not result in leaking to others" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	32	39,0	10	41,7	18	40,0	4	30,8
Agree Very Low	14	17,1	6	25,0	8	17,8	-	-
Agree	22	26,8	3	12,5	13	28,9	6	46,2
Very Low Disagree	12	14,6	4	16,7	5	11,1	3	23,1
Strongly Disagree	2	2,4	1	4,2	1	2,2	-	-

Table 4.6 shows the overall distribution seen as the research group "Use of mobile services, my personal information will not result in leaking to others " % 39,0 rate to the question "Strongly Agree", 23-33 age range by 41.7%, "Strongly Agree" and 34 in the -44 age group the rate of 40.0% "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "agree" were added.

Table 4.7: Research Group "I think it is high speed mobile internet" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	28	34,1	8	33,3	17	37,8	3	23,1
Agree Very Low	10	12,2	2	8,3	6	13,3	2	15,4
Agree	29	35,4	7	29,2	17	37,8	5	38,5
Very Low Disagree	15	18,3	7	29,2	5	11,1	3	23,1
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.7 shows the overall distribution seen as the research group "I think it is high speed mobile internet" rate of 35.4% to the question "agree" answer is given, this proportion is 23-33 years of age 33.3% "Strongly Disagree", 34-44 years in the group by 37.8% "Strongly Disagree" and "agree", 38.5% aged 45 years and above "Agree" was found in the form.

Table 4.8: Research Group "Providing information and services that need mobile internet" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	36	43,9	12	50,0	22	48,9	2	15,4
Agree Very Low	7	8,5	2	8,3	3	6,7	2	15,4
Agree	35	42,7	9	37,5	17	37,8	9	69,2
Very Low Disagree	4	4,9	1	4,2	3	6,7	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.8 shows the overall distribution seen as the research group "Providing information and services that need mobile internet" 43.9% rate to the question "Strongly Agree", 23-33 age range, 50.0%, respectively, "Strongly Agree" and 34-44 age ratio in the range of 48.9% "Strongly Agree" answer is given, aged 45 years and over 69,2% "Agree" was found in the form.

Table 4.9: Research Group "Technology enables people to having more control over their daily lives" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	42	51,2	19	79,2	18	40,0	5	38,5
Agree Very Low	4	4,9	4	16,7	4	8,9	8	61,5
Agree	33	40,2	1	4,2	21	46,7	-	-
Very Low Disagree	3	3,7	-	-	2	4,4	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.9 shows the overall distribution seen as the research group "Technology enables people to having more control over their daily lives" rate of 51.2% to the question "Strongly Agree" and 23-33 age range at a rate of 79.2%, "Strongly Agree" the answer is given, while in the 34-44 age group by 46.7% "agree" and 45 years and above the rate of 61.5% "Very Low Agree" has been added.

Table 4.10: Research Group "Technical support lines do not help me, because I know my information is not explained in a way" Findings Regarding the Distribution of answers to questions**.**

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	26	31,7	9	37,5	15	33,3	2	15,4
Agree Very Low	11	13,4	3	12,5	6	13,3	2	15,4
Agree	41	50,0	8	33,3	24	53,3	9	69,2
Very Low Disagree	3	3,7	3	12,5	-	-	-	-
Strongly Disagree	1	1,2	1	4,2	-	-	-	-

Table 4.10 shows the overall distribution seen as the research group "Technical support lines do not help me, because I know my information is not explained in a way." rate of 50.0% to the question "agree" answer is given, this proportion is 23-33 years of age 37.5% "Definitely I do not agree ", while the 34-44 age group the rate of 53.3%" disagree "and 45 years of age and over 69,2%" Agree "was found in the form.

Table 4.11: Research Group of "Sometimes, I think that the technology system designed to be used by ordinary people." Findings Regarding the Distribution of the answers to Questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	29	35,4	12	50,0	14	31,1	3	23,1
Agree Very Low	12	14,6	4	16,7	5	11,1	3	23,1
Agree	35	42,7	6	25,0	22	48,9	7	53,8
Very Low Disagree	6	7,3	2	8,3	4	8,9	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.11 shows the overall distribution seen as the research group "Sometimes, I think that the technology system designed to be used by ordinary people" rate of 42.7% to the question "agree" answer is given, this proportion is 23-33 years of age 50,0% "Strongly Disagree" while in the 34-44 age group the rate of 48.9% "agree" and 45 years and above the rate of 53.8% "agree" were added.

Table 4.12: Research Group "With the latest technology products and services it is much easier to use" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	34	41,5	12	50,0	17	37,8	5	38,5
Agree Very Low	9	11,0	3	12,5	5	11,1	1	7,7
Agree	31	37,8	8	33,3	18	40,0	5	38,5
Very Low Disagree	6	7,3	1	4,2	4	8,9	2	15,4
Strongly Disagree	2	2,4	-	-	1	2,2	-	-

Table 4.12 shows the overall distribution seen as the research group "With the latest technology products and services it is much easier to use" rate of 41.5% to the question "Strongly Agree" and 23-33 age range, 50.0%, respectively, "Strongly Agree" answer given, while in the 34-44 age group the rate of 40,0% "Agree" and 45 years of age and above 38.5% "Strongly Agree" and "Agree" was found in the form.

Table 4.13: Research Group "I prefer to use the newest technology available" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	35	42,7	14	58,3	17	37,8	4	30,8
Agree Very Low	9	11,0	3	12,5	4	8,9	2	15,4
Agree	34	41,5	5	20,8	22	48,9	7	53,8
Very Low Disagree	3	3,7	1	4,2	2	4,4	-	-
Strongly Disagree	1	1,2	1	4,2	-	-	-	-

Table 4.13 shows the overall distribution seen as the research group "I prefer to use the newest technology available" rate of 42.7% to the question "Strongly Agree" and 23-33 age range at a rate of 58.3%, "Strongly Agree" answer is given, 34 in the -44 age group the rate of 48.9% "agree" and 45 years and above the rate of 53.8% "agree" were added.

Table 4.14: Research Group "I think it is working to encourage new mobile technologies" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	37	45,1	13	54,2	19	42,2	5	38,5
Agree Very Low	14	17,1	4	16,7	9	20,0	1	7,7
Agree	30	36,6	7	29,2	16	35,6	7	53,8
Very Low Disagree	1	1,2	-	-	1	2,2	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.14 shows the overall distribution seen as the research group "I think it is working to encourage new mobile technologies" rate of 45.1% to the question "Strongly Agree", 23-33 age range at a rate of 54.2%, "Strongly Agree" and 34-44 age ratio in the range of 42.2% "Strongly Agree" answer is given, aged 45 years and above the rate of 53.8% "agree" were added.

Table 4.15: Research Group "I think that technology itself was so helpful, to be informed about the new mobile technology" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	41	50,0	18	75,0	19	42,2	4	30,8
Agree Very Low	5	6,1	1	4,2	4	8,9	7	53,8
Agree	32	39,0	4	16,7	21	46,7	2	15,4
Very Low Disagree	4	4,9	1	4,2	1	2,2	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.15 shows the overall distribution seen as the research group "I think that technology itself was so helpful, to be informed about the new mobile technology" 50.0% rate to the question "Strongly Agree" and 23-33 age range at a rate of 75.0%, "Absolutely I agree "answer is given, while in the 34-44 age group by 46.7%" agree "and 45 years and above the rate of 53.8%" Very Low agree "has been added.

Table 4.16: Research Group "New mobile technology gives me more freedom of movement" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	41	50,0	17	70,8	20	44,4	4	30,8
Agree Very Low	6	7,3	2	8,3	4	8,9	7	53,8
Agree	24	29,3	3	12,5	14	31,1	2	15,4
Very Low Disagree	10	12,2	1	4,2	7	15,6	-	-
Strongly Disagree	1	1,2	1	4,2	-	-	-	-

Table 4.16 shows the overall distribution seen as the research group "New mobile technology gives me more freedom of movement " 50.0% rate to the question "Strongly Agree", 23-33 age range at a rate of 70.8%, "Strongly Agree" and 34 in the 44 years age group the rate of 44.4% "Strongly Agree" answer is given, the rate of 53.8% over 45 years and "Very Low Agree" it has been added.

Table 4.17: Research Group "Many of the new mobile technology moves people to notice you start to use health or safety risks" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	32	39,0	10	41,7	20	44,4	2	15,4
Agree Very Low	11	13,4	4	16,7	6	13,3	1	7,7
Agree	34	41,5	9	37,5	17	37,8	8	61,5
Very Low Disagree	4	4,9	1	4,2	1	2,2	2	15,4
Strongly Disagree	1	1,2	-	-	1	2,2	-	-

Table 4.17 shows the overall distribution seen as the research group "Many of the new mobile technology moves people to notice you start to use health or safety risks" rate of 41.5% to the question "agree" answer is given, this proportion is 23-33 years of age 41.7% percent "Strongly Agree", in the 34-44 age group the rate of 44.4% "Strongly Agree" and 45 years and a rate of 61.5% on the "Agree" was found in the form.

Table 4.18: Research Group "New mobile technologies now and I think the future of technology" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	44	53,7	20	83,3	20	44,4	4	30,8
Agree Very Low	5	6,1	1	4,2	3	6,7	1	7,7
Agree	32	39,0	3	12,5	21	46,7	8	61,5
Very Low Disagree	1	1,2	-	-	1	2,2	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.18 shows the overall distribution seen as the research group "New mobile technologies now and I think the future of technology" rate of 53.7% to the question "Strongly Agree" and 23-33 age range by 83.3%, "Strongly Agree" answer is given, in the 34-44 age group by 46.7% "agree" and 45 years and above the rate of 61.5% "agree" were added.

Table 4.19: Research Group "I think the only option in the new emerging world of mobile technology" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	38	46,3	12	50,0	21	46,7	5	38,5
Agree Very Low	11	13,4	4	16,7	6	13,3	1	7,7
Agree	25	30,5	5	20,8	14	31,1	6	46,2
Very Low Disagree	8	9,8	3	12,5	4	8,9	1	7,7
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.19 shows the overall distribution seen as the research group "I think the only option in the new emerging world of mobile technology" rate of 46.3% to the question "Strongly Agree", 23-33 age range, 50.0%, respectively, "Strongly Agree" and 34 44 age group the rate of 44.4% "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "agree" were added.

Table 4.20: Research Group "I think that provides seamless access to information, communication and new mobile technology" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	38	46,3	15	62,5	19	42,2	4	30,8
Agree Very Low	7	8,5	3	12,5	4	8,9	9	69,2
Agree	34	41,5	5	20,8	20	44,4	-	-
Very Low Disagree	3	3,7	1	4,2	2	4,4	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.20 shows the overall distribution seen as the research group "I think that provides seamless access to information, communication and new mobile technology " rate of 46.3% to the question "Strongly Agree" and 23-33 age range, 62.5%, respectively, "Strongly Agree" answers given, while in the 34-44 age group the rate of 44.4% "agree" and 45 years of age and over 69,2% "Very Low Agree" it has been added.

Table 4.21: Research Group "I think it allows the reduction of the cost of the new mobile technology" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	42	51,2	18	75,0	20	44,4	4	30,8
Agree Very Low	8	9,8	2	8,3	4	8,9	2	15,4
Agree	22	26,8	3	12,5	16	35,6	3	23,1
Very Low Disagree	7	8,5	1	4,2	2	4,4	4	30,8
Strongly Disagree	3	3,7	-	-	3	6,7	-	-

Table 4.21 shows the overall distribution seen as the research group "I think it allows the reduction of the cost of the new mobile technology." rate of 51.2% to the question "Strongly Agree", 23-33 age range at a rate of 75.0%, "Strongly Agree" and 34-44 years the rate was 44.4% in group "Strongly Agree" answer is given, aged 45 years and above the rate of 30.8% "Strongly Agree" and "Agree" was found in the form.

Table 4.22: Research Group "I think the increased network traffic to the new mobile technology that allows easy management" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	39	47,6	14	58,3	20	44,4	5	38,5
Agree Very Low	12	14,6	4	16,7	7	15,6	1	7,7
Agree	27	32,9	6	25,0	15	33,3	6	46,2
Very Low Disagree	4	4,9	-	-	3	6,7	1	7,7
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.22 shows the overall distribution seen as the research group "I think the increased network traffic to the new mobile technology that allows easy management" rate of 47.6% to the question "Strongly Agree", 23-33 age range at a rate of 58.3%, "Strongly Agree" and 34 -44 age group the rate of 44.4% "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "agree" were added.

Table 4.23: Research Group "I think it provides more network users of the new mobile technology" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	37	45,1	15	62,5	17	37,8	1	7,7
Agree Very Low	11	13,4	4	16,7	6	13,3	5	38,5
Agree	27	32,9	3	12,5	19	42,2	1	7,7
Very Low Disagree	5	6,1	1	4,2	3	6,7	1	7,7
Strongly Disagree	2	2,4	1	4,2	-	-	1	7,7

Table 4.23 shows the overall distribution seen as the research group "I think it provides more network users of the new mobile technology" rate of 45.1% to the question "Strongly Agree" and 23-33 age range, 62.5%, respectively, "Strongly Agree" answer is given, in the 34-44 age group the rate of 42,2% "Agree" and 38.5% aged 45 years and above "Very Low Agree" has been added.

Table 4.24: Research Group "I think, Accessibility and flexibility of the new mobile technologies can improve the network fault tolerance, growing businesses can optimize the use of bandwidth and united voice, data and video - they can easily switch to the network" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	39	47,6	16	66,7	20	44,4	3	23,1
Agree Very Low	10	12,2	1	4,2	7	15,6	2	15,4
Agree	30	36,6	6	25,0	17	37,8	7	53,8
Very Low Disagree	3	3,7	1	4,2	1	2,2	1	7,7
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.24 shows the overall distribution seen as the research group "I think, Accessibility and flexibility of the new mobile technologies can improve the network fault tolerance, growing businesses can optimize the use of bandwidth and united voice, data and video - they can easily switch to the network." rate of 47.6% to the questions "Strongly Agree", the rate of 66.7% in the 23-33 age range, "Strongly Agree" and the rate of 44.4% in the 34-44 age group "Strongly Agree" answer is given, aged 45 years and above the rate of 53.8% "Agree "it has been added.

Table 4.25: Research Group "I think, the new standards-based mobile technology created a fully integrated component of the network, such as mobility and IP Communications solutions can be added easily" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	38	46,3	15	62,5	18	40,0	5	38,5
Agree Very Low	9	11,0	5	20,8	4	8,9	7	53,8
Agree	34	41,5	4	16,7	23	51,1	1	7,7
Very Low Disagree	1	1,2	-	-	-	-	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.25 shows the overall distribution seen as the research group "I think, the new standards-based mobile technology created a fully integrated component of the network, such as mobility and IP Communications solutions can be added easily." rate of 46.3% to the question "Strongly Agree" and 23-33 age bracket in% 62.5 percent "Strongly Agree" answer is given, while in the 34-44 age group by 51.1% "agree" and 45 years and above the rate of 53.8% "Very Low Agree" has been added.

Table 4.26: Research Group "I think this new mobile technology is experiencing capacity problems" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	35	42,7	12	50,0	19	42,2	4	30,8
Agree Very Low	16	19,5	4	16,7	10	22,2	2	15,4
Agree	27	32,9	7	29,2	14	31,1	6	46,2
Very Low Disagree	3	3,7	1	4,2	1	2,2	1	7,7
Strongly Disagree	1	1,2	-	-	1	2,2	-	-

Table 4.26 shows the overall distribution seen as the research group "I think this new mobile technology is experiencing capacity problems" rate of 42.7% to the question "Strongly Agree", 23-33 age range in% 50,00 percent, "Strongly Agree" and 34-44 years a rate of 42.2% in the group "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "Agree" were added.

Table 4.27: Research Group "Appropriate equipment for the new mobile technology think it is possible to reach the right capacity" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	35	42,7	14	58,3	18	40,0	3	23,1
Agree Very Low	7	8,5	2	8,3	4	8,9	1	7,7
Agree	32	39,0	7	29,2	17	37,8	8	61,5
Very Low Disagree	7	8,5	1	4,2	6	13,3	1	7,7
Strongly Disagree	1	1,2	-	-	-	-	-	-

Table 4.27 shows the overall distribution seen as the research group "Appropriate equipment for the new mobile technology think it is possible to reach the right capacity" rate of 42.7% to the question "Strongly Agree", 23-33 age range at a rate of 58.3%, "Strongly Agree" and in the 34-44 age group the rate of 40.0% "Strongly Agree" answer is given, aged 45 years and above the rate of 61.5% "agree" were added.

Table 4.28: Research Group "I think I have enough information about the SAR value" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	16	19,5	5	20,8	17	37,8	3	23,1
Agree Very Low	8	9,8	2	8,3	6	13,3	5	38,5
Agree	15	18,3	6	25,0	17	37,8	2	15,4
Very Low Disagree	29	35,4	9	37,5	5	11,1	3	23,1
Strongly Disagree	14	17,1	2	8,3	-	-	-	-

Table 4.28 shows the overall distribution seen as the research group "I think I have enough information about the SAR value" rate to 35.4% to the question "Very Low Agree" and the 23-33 age range, 37.5%, respectively, "Very Low agree" answers given, while in the 34-44 age group by 37.8% "Strongly Agree" and "Agree" and 38.5% aged 45 years and above "Very Low Agree" it has been added.

Table 4.29: Research Group "General experience to the applicability of new mobile technologies that I think is missing" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	36	43,9	15	62,5	17	37,8	4	30,8
Agree Very Low	12	14,6	3	12,5	8	17,8	1	7,7
Agree	32	39,0	4	16,7	20	44,4	8	61,5
Very Low Disagree	2	2,4	2	8,3	-	-	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.29 shows the overall distribution seen as the research group "General experience to the applicability of new mobile technologies that I think is missing" 43.9% rate to the question "Strongly Agree" and 23-33 age range, 62.5%, respectively, "Strongly Agree" answers given, while in the 34-44 age group the rate of 44.4% "agree" and 45 years and above the rate of 61.5% "agree" were added.

Table 4.30: Research Group "I think a very successful project made to the applicability of new mobile technologies" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	31	37,8	9	37,5	17	37,8	5	38,5
Agree Very Low	11	13,4	5	20,8	6	13,3	8	61,5
Agree	31	37,8	6	25,0	17	37,8	-	-
Very Low Disagree	9	11,0	4	16,7	5	11,1	-	-
Strongly Disagree	-	-	-	-	-	-	-	-

Table 4.30 shows the overall distribution seen as the research group "I think a very successful project made to the applicability of new mobile technologies" 37.8% rate to the question "Strongly Agree" and "agree" answer is given, the rate of 23-33 age range, 37.5% percent "Strongly Agree" and 37.8% in the 34-44 age group the rate of "Strongly Agree" and "Agree", aged 45 years and above the rate of 61.5% "Very Low Agree" has been added.

Table 4.31: Research Group "I think that the frequency pollution is the biggest problem the new mobile technology" Findings Regarding the Distribution of answers to questions.

ANSWER CHOICES	GENERAL		23-33 Age		34-44 Age		45 ≥	
	N	%	N	%	N	%	N	%
Strongly Agree	40	48,8	15	62,5	22	48,9	3	23,1
Agree Very Low	5	6,1	1	4,2	4	8,9	10	76,9
Agree	33	40,2	8	33,3	15	33,3	-	-
Very Low Disagree	3	3,7	-	-	3	6,7	-	-
Strongly Disagree	1	1,2	-	-	1	2,2	-	-

Table 4.31 shows the overall distribution seen as the research group "I think that the frequency pollution is the biggest problem the new mobile technology" 37.8% rate to the question "Strongly Agree" and "agree" answer is given, the rate of 23-33 age range, 37.5% percent "Strongly Agree" and 37.8% in the 34-44 age group the rate of "Strongly Agree" and "Agree", aged 45 years and above the rate of 61.5% "Very Low Agree" has been added.

5. DISCUSSION

Research group general distribution of, "I think it is very easy to use mobile service" the answer to the question Strongly agree by 47.6% "agree" answer is given, this proportion is 66.7% 23-33 age range; In the 34-44 age group the rate of 44.4% "agree" and 45 years and above the rate of 46.2% "agree" were added.

Research group general distribution of, "I think that mobile internet is a very reliable service" the answer to the question agree by 35.4% when given in the rate 23-33 age range 50,0% "Strongly Disagree", 34-44 years in the group rate of 42.2% "agree" and 45 years and above the rate of 46.2% "agree" were added.

Research group general distribution of, "As my hands begin to use mobile data services it is sufficient for manual use only" 3 0.5% rate to the question "Very Low agree" answer is given, this proportion is 23-33 years of age 50.0% "Strongly Disagree ", and 33.3% in the 34-44 age group" Agree "and" Disagree Very Low ", aged 45 years and above the rate of 30.8%" Strongly Agree "and" Agree "was found in the form.

Research group general distribution of, "Easily winnable the ability to use mobile services" 40.2% rate to the question "Strongly Agree", 23-33 age range at a rate of 45.8% "Strongly Agree" and 34-44 age range 40.0% percent "strongly agree" answer is given, aged 45 years and above 38.5% "agree" were added.

Research group general distribution of, "Use of mobile services, my personal information will not result in leaking to others " % 39,0 rate to the question "Strongly Agree", 23-33 age range by 41.7%, "Strongly Agree" and 34 in the -44 age group the rate of 40.0% "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "agree" were added.

Adapt to technological developments and is facing a period is considered to be lucky to be integrated more quickly in the new generation. Therefore, compared to the 23-33 age group of 34-44 and 45 and over age group, finding the service easier and more reliable; to have a higher percent of acceptability is believed to be a high

expectation. In other words, this is an important indication that the upper zone of the problems experienced rapid development and rapid changes to adapt to the low confidence in the safety offered by the system be captured today. Similarly, again with only the use of the services guide the development of skills availability and ease of use is thought to be protective in terms of personal information is located above it supports the idea advocated. However, those who are advanced in age, due to a more controlled look, depending on their experience in a virtual environment may have also occurred this consequential differences should be kept away from the attention.On the results obtained in both cases as to offer important perspectives on users, given the market share of web servers serving the company is considered to be useful for experienced users to make efforts to gain the trust.

Research group general distribution of, "I think it is high speed mobile internet" rate of 35.4% to the question "agree" answer is given, this proportion is 23-33 years of age 33.3% "Strongly Disagree", 34-44 years in the group by 37.8% "Strongly Disagree" and "agree", 38.5% aged 45 years and above "Agree" was found in the form.

Research group general distribution of, "Providing information and services that need mobile internet" 43.9% rate to the question "Strongly Agree", 23-33 age range, 50.0%, respectively, "Strongly Agree" and 34-44 age ratio in the range of 48.9% "Strongly Agree" answer is given, aged 45 years and over 69,2% "Agree" was found in the form.

Research group general distribution of , "Technology enables people to having more control over their daily lives" rate of 51.2% to the question "Strongly Agree" and 23-33 age range at a rate of 79.2%, "Strongly Agree" the answer is given, while in the 34-44 age group by 46.7% "agree" and 45 years and above the rate of 61.5% "Very Low Agree" has been added.

Research group general distribution of , "New mobile technology gives me more freedom of movement " 50.0% rate to the question "Strongly Agree", 23-33 age range at a rate of 70.8%, "Strongly Agree" and 34 in the 44 years age group the rate of 44.4% "Strongly Agree" answer is given, the rate of 53.8% over 45 years and "Very Low Agree" it has been added.

All of science and scientific developments are carried out on behalf of an individual

to respond to the need to live a healthier and safer. In this sense, indeed the most important development today is experiencing extremely rapid pace of change in computer technology is the integration of other areas. This is important because the purpose of the speed of service provided faster access to information.

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Research group general distribution of, "Technical support lines do not help me, because I know my information is not explained in a way." rate of 50.0% to the question "agree" answer is given, this proportion is 23-33 years of age 37.5% "Definitely I do not agree ", while the 34-44 age group the rate of 53.3%" disagree "and 45 years of age and over 69,2%" Agree "was found in the form.

Research group general distribution of, "Sometimes, I think that the technology system designed to be used by ordinary people" rate of 42.7% to the question "agree" answer is given, this proportion is 23-33 years of age 50,0% "Strongly Disagree" while in the 34-44 age group the rate of 48.9% "agree" and 45 years and above the rate of 53.8% "agree" were added.

Research group general distribution of, "With the latest technology products and services it is much easier to use" rate of 41.5% to the question "Strongly Agree" and 23-33 age range, 50.0%, respectively, "Strongly Agree" answer given, while in the 34-44 age group the rate of 40,0% "Agree" and 45 years of age and above 38.5% "Strongly Agree" and "Agree" was found in the form.

Research group general distribution of, "I prefer to use the newest technology available" rate of 42.7% to the question "Strongly Agree" and 23-33 age range at a rate of 58.3%, "Strongly Agree" answer is given, 34 in the -44 age group the rate of 48.9% "agree" and 45 years and above the rate of 53.8% "agree" were added.

Research group general distribution of, "I think it is working to encourage new mobile technologies" rate of 45.1% to the question "Strongly Agree", 23-33 age range at a rate of 54.2%, "Strongly Agree" and 34-44 age ratio in the range of 42.2% "Strongly Agree" answer is given, aged 45 years and above the rate of 53.8% "agree" were added.

Research group general distribution of, "I think that technology itself was so helpful, to be informed about the new mobile technology" 50.0% rate to the question "Strongly Agree" and 23-33 age range at a rate of 75.0%, "Absolutely I agree "answer is given, while in the 34-44 age group by 46.7%" agree "and 45 years and above the rate of 53.8%" Very Low agree "has been added.

Research group general distribution of, "Many of the new mobile technology moves people to notice you start to use health or safety risks" rate of 41.5% to the question "agree" answer is given, this proportion is 23-33 years of age 41.7% percent "Strongly Agree", in the 34-44 age group the rate of 44.4% "Strongly Agree" and 45 years and a rate of 61.5% on the "Agree" was found in the form.

Research group general distribution of, "New mobile technologies now and I think the future of technology" rate of 53.7% to the question "Strongly Agree" and 23-33 age range by 83.3%, "Strongly Agree" answer is given, in the 34-44 age group by 46.7% "agree" and 45 years and above the rate of 61.5% "agree" were added.

Research group general distribution of, "I think the only option in the new emerging world of mobile technology" rate of 46.3% to the question "Strongly Agree", 23-33 age range, 50.0%, respectively, "Strongly Agree" and 34 44 age group the rate of 44.4% "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "agree" were added.

Research group general distribution of, "I think that provides seamless access to information, communication and new mobile technology " rate of 46.3% to the question "Strongly Agree" and 23-33 age range, 62.5%, respectively, "Strongly

Agree" answers given, while in the 34-44 age group the rate of 44.4% "agree" and 45 years of age and over 69,2% "Very Low Agree" it has been added.

When digital information technology research group intensively using this technology service provider in providing services units serving individual evaluation due to expert opinion, expect rapid changes according to age which is taking place in the new developments by continuously monitoring the novelty quickly than rates in answer to the expectations of bringing available It is clearly seen.

The most important implication of the use of essential software that enables taken quickly confidence and new software is possible to make use of assessment to support the convenience of the users themselves and the services they provide.

As an important indicator of the results obtained, even if the food ordering today in the digital environment that can be done is a reflection that enters the extent our everyday lives of mobile technology and people to increase the time available to freely efforts, reveals the more support expected from the technology he is using. This is in anticipation, innovation and development of more acceptable to be seen by younger generations who follow more closely integrated into the daily life is regarded as a natural consequence. The strength of the current development as an important indication that another judge by what measure an individual's daily life, evaluated the results can be seen regarding inadequate. The individual's life at this scale integrated Another important result in view reflected with regard to developments in digital technology, help the identification of technological development and sufficiently clear lack of supportive catalogs and is thought to be another question in the same context, prepared for the ordinary people of this catalog.

However, it is considered as another important indicator of the market as concerns use in confidence by closely monitoring of course, experts and technology for the growth of the share of lower dominance to the large group in mind could account may have been due to the need to move or acceptance should not be overlooked that they are in difficulties.

Research group general distribution of, "I think it allows the reduction of the cost of the new mobile technology." rate of 51.2% to the question "Strongly Agree", 23-33 age range at a rate of 75.0%, "Strongly Agree" and 34-44 years the rate was 44.4% in

group "Strongly Agree" answer is given, aged 45 years and above the rate of 30.8% "Strongly Agree" and "Agree" was found in the form.

Research group general distribution of ,"I think the increased network traffic to the new mobile technology that allows easy management" rate of 47.6% to the question "Strongly Agree", 23-33 age range at a rate of 58.3%, "Strongly Agree" and 34 -44 age group the rate of 44.4% "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "agree" were added.

Research group general distribution of, "I think it provides more network users of the new mobile technology" rate of 45.1% to the question "Strongly Agree" and 23-33 age range, 62.5%, respectively, "Strongly Agree" answer is given, in the 34-44 age group the rate of 42,2% "Agree" and 38.5% aged 45 years and above "Very Low Agree" has been added.

Research group general distribution of , "I think, Accessibility and flexibility of the new mobile technologies can improve the network fault tolerance, growing businesses can optimize the use of bandwidth and united voice, data and video - they can easily switch to the network." rate of 47.6% to the questions "Strongly Agree", the rate of 66.7% in the 23-33 age range, "Strongly Agree" and the rate of 44.4% in the 34-44 age group "Strongly Agree" answer is given, aged 45 years and above the rate of 53.8% "Agree "it has been added.

Research group general distribution of, "I think, the new standards-based mobile technology created a fully integrated component of the network, such as mobility and IP Communications solutions can be added easily." rate of 46.3% to the question "Strongly Agree" and 23-33 age bracket in% 62.5 percent "Strongly Agree" answer is given, while in the 34-44 age group by 51.1% "agree" and 45 years and above the rate of 53.8% "Very Low Agree" has been added.

Research group general distribution of , "I think this new mobile technology is experiencing capacity problems" rate of 42.7% to the question "Strongly Agree", 23-33 age range in% 50,00 percent, "Strongly Agree" and 34-44 years a rate of 42.2% in the group "Strongly Agree" answer is given, aged 45 years and above the rate of 46.2% "Agree" were added.

Innovations that ensure the availability of existing technology as preferred development in addition to being subject to their availability is an obvious fact.

Otherwise, the fact that users can bring their significant gains and losses choice of network and bandwidth should not be forgotten. Therefore, in order to get away from the user preferences change frequently confusion, increased software innovation and technology with ease of times an individual's life and is updated with new software updates according to new requirements. The above questions result in the development and software requirements derived from the responses to the digital block considered by most to be ignored evidence that is needed in this area.

The digital media center located at the individual's life is queried individual's life to bring convenience and benefits offered from the new situation it seems to be available by directing a major expectations by users. The individual's age individuals trying to adapt to the rapid development and problems faced by the pace of change in this adjustment process, can increase an individual's life can make it difficult to load and life. In individuals who have experienced expectations attain comfort overcoming these processes and technology is digital technology that this situation arises from the answers given that manufacturers are aware of this fact.

Research group general distribution of, "Appropriate equipment for the new mobile technology think it is possible to reach the right capacity" rate of 42.7% to the question "Strongly Agree", 23-33 age range at a rate of 58.3%, "Strongly Agree" and in the 34-44 age group the rate of 40.0% "Strongly Agree" answer is given, aged 45 years and above the rate of 61.5% "agree" were added.

Research group general distribution of , "I think I have enough information about the SAR value" rate to 35.4% to the question "Very Low Agree" and the 23-33 age range, 37.5%, respectively, "Very Low agree" answers given, while in the 34-44 age group by 37.8% "Strongly Agree" and "Agree" and 38.5% aged 45 years and above "Very Low Agree" it has been added.

Research group general distribution of, "General experience to the applicability of new mobile technologies that I think is missing" 43.9% rate to the question "Strongly Agree" and 23-33 age range, 62.5%, respectively, "Strongly Agree" answers given, while in the 34-44 age group the rate of 44.4% "agree" and 45 years and above the rate of 61.5% "agree" were added.

Research group general distribution of, "I think a very successful project made to the applicability of new mobile technologies" 37.8% rate to the question "Strongly

Agree" and "agree" answer is given, the rate of 23-33 age range, 37.5% percent "Strongly Agree" and 37.8% in the 34-44 age group the rate of "Strongly Agree" and "Agree", aged 45 years and above the rate of 61.5% "Very Low Agree" has been added.

Research group general distribution of, "I think that the frequency pollution is the biggest problem the new mobile technology" 37.8% rate to the question "Strongly Agree" and "agree" answer is given, the rate of 23-33 age range, 37.5% percent "Strongly Agree" and 37.8% in the 34-44 age group the rate of "Strongly Agree" and "Agree", aged 45 years and above the rate of 61.5% "Very Low Agree" has been added.

Although it is known that the technology makes it easy though science is quite a complicated structure. It should be renewed in its development and to promote and protect employees as well as creating new technology where the technology has, from time to time may necessitate the use of different products in itself. Speed module, which will provide benefits in terms of new software in order to use the software that is needed in the system to evaluate at their own pace. The computer is using to exploit the speed of the limited capacity of their computers, a user may need to refresh the new service providers are in. New technology may compel individuals to adapt to change through holistic parallel to its complicated structure.

So when making a request to benefit from both speed internet, just the fact that this request can not be created with the software or the service provider can take in front of the individual.

These findings were obtained for reasons of research that have significantly supports the belief that the appropriate technologies found in nature, supports the overall experience is lacking on the results obtained by this exploitation. Important and successful projects, while emphasizing the lack of overall experience in the question about whether an assessment is made.

More controlled results that can be done to assess individual development and technology users can easily integrate the experience of the younger generation to be more successful or on the contrary is obtained.

Similarly, the younger generation can be observed that the frequency pollution issues in caring obtained different results than experienced individuals.

Renovation of all results obtained with a rather broad range of applications of information technology in the lives of individuals in a holistic evaluation and expansion of the use of new technology development area and it is quite successful in reaching a wider audience. However, large quantities are preferred by individuals in their advanced age, and it is determined that regeneration of the support is sufficiently.

6. RESULTS&SACCESSIONS

Technological developments and the transportation of people using the tools of communicating with each other and receive longer distances in mobility has brought the concept of the request. Nowadays, using mobile communication technologies, as well as audio communication data, online video, internet streaming transmission is ensured. Information disclosure and to access even in determining the balance of power between States played a role in an age when no State wishing to thrive and move forward, to go back to information technology is not a location. To follow the technological developments and management systems to adapt to maintain the development of the State must be one of the priority tasks.

Primarily affecting the economic structure and develop technology and knowledge production schedule of social, political and cultural changes may also cause. All this happened under the influence of the process of change is also the public administration. So far laid out can be expressed with generations of mobile technologies is classified. Analog modulation communication system used 1 g coverage and very low, give each user a certain frequency separation and hücresellikten was just a remote way audio transmission. It then developed along with its most important representative GSM 2 g and digital communications and the increase in quality of voice communication and data transfer is possible together.

After a longer period of time than expected 3 g users have been touted and mobile internet service-broadband internet access-high-quality multimedia applications has been presented to users. 3 g spread on before completion, then brought up the latest trend 4 g and LTE was introduced in some countries users ' experience. They provided access to fixed speed with LTE-ultra mobile broadband access speed is intended to reach. Compared to the new generation 3 g and 4 g is expected to reach higher speeds. However, in the full sense of the theoretical tests and are restricted to limited users from getting rid of a lot of talk about the actual performance of LTE seems not to be possible. From 2010, Wimax and 4 g technology in many areas of

our life together step number of mobile users had experienced a huge increase in those. Especially Mobile technologies in public administration came up with implementing e-government applications is the most concrete example of this. In addition to all of the citizens living in the city and in the countryside in a manner equal to the benefit of information technology in terms of social justice and democracy is a condition sine qua non. A new generation of mobile technology applications in addition to implement these applications reach all citizens living in Turkey and its citizens will use these technologies to solve the State's level of education is one of the most important problem areas.

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APPENDIX

Add: 1 MEASURE TOOLS

SURVEY FORM

A RESEARCH FOR THE NEW GENERATION OF MOBILE SOLUTIONS WITH TECHNOLOGY-MANAGEMENT AND EVOLUTION COMPONENT

The following work İstanbul Aydın University Institute of Social Sciences, English Business Administration Department "A Research For The New Generation Of Mobile Solutions With Technology - Management And Evolution Component " is the study of the master thesis is, the results will be used solely for scientific. Questions will ask you to fill out, thank you for your help.

Graduate Student
Gamze ŞENTÜRK

Thesis Advisor
Prof. Dr. Akın MARŞAP

Age:

Gender: □ Female □ Male

Marital Status : □ Maried □ Single □ Divorced

Education: □Collage □ Bachelor's Degree □ Master Degree

Level Of Income: □ 3000 < □3001-5000 □5001 >

Your organization:

Occupation:

USE OF MOBİLE TECHNOLOGY SERVİCE

		Strongly Agree	Agree very Low	Agree	Very Low Disagree	Strongly Disagree
1	I think it is very easy to use mobile service.					
2	I think that mobile internet is a very reliable service.					
3	As my hands begin to use mobile data services it is sufficient for manual use only.					
4	Easily winnable the ability to use mobile services.					
5	Use of mobile services, my personal information will not result in leaking to others.					
6	I think it is high speed mobile internet.					
7	Providing information and services that need mobile internet.					
8	Technology enables people to having more control over their daily lives.					
9	Technical support lines do not help me, because I know my information is not explained in a way.					
10	Sometimes, I think that the technology system designed to be used by ordinary people.					
11	With the latest technology products and services it is much easier to use.					
12	I prefer to use the newest technology available.					
13	I think it is working to encourage new mobile technologies.					
14	I think that technology itself was so helpful, to be informed about the new mobile technology.					
15	New mobile technology gives me more freedom of movement.					

16	Many of the new mobile technology moves people to notice you start to use health or safety risks.					
17	New mobile technologies now and I think the future of technology.					
18	I think the only option in the new emerging world of mobile technology.					
19	I think that provides seamless access to information, communication and new					
20	I think it allows the reduction of the cost of the new mobile technology.					
21	I think the increased network traffic to the new mobile technology that allows easy					
22	I think it provides more network users of the new mobile technology.					
23	I think, Accessibility and flexibility of the new mobile technologies can improve the network fault tolerance, growing businesses can optimize the use of bandwidth and united voice, data and video - they can easily switch to the network.					
24	I think, the new standards-based mobile technology created a fully integrated component of the network, such as mobility and IP Communications solutions can be added easily.					
25	I think this new mobile technology is experiencing capacity problems.					
26	Appropriate equipment for the new mobile technology think it is possible to reach the right capacity.					
27	*I think I have enough information about the SAR value.					
28	General experience to the applicability of new mobile technologies that I think is					
29	I think a very successful project made to the applicability of new mobile					
30	I think that the frequency pollution is the biggest problem the new mobile					

*** SAR value: Device is the electromagnetic power of the spring.**

Thank You For Your Support

T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ REKTÖRLÜĞÜ
Sosyal Bilimler Enstitüsü Müdürlüğü

Sayı : 88083623-300-1338 11/03/2016
Konu : Etik Onay

Sayın Gamze ŞENTÜRK

Enstitümüz Y1112.130009 numaralı İşletme Ana Bilim Dalı İşletme Yönetimi(İngilizce) Tezli Yüksek Lisans programı öğrencilerinden Gamze ŞENTÜRK' ün **"A Reserch For the New Generation of Mobile Solutions With Technology-Management and Evolution Component"** adlı tez çalışması gereği "USE OF MOBILE TECHNOLOGY SERVICE" ile ilgili anketi 01.03.2016 tarih ve 2016/04 İstanbul Aydın Üniversitesi Etik Komisyon Kararı ile etik olarak uygun olduğuna karar verilmiştir.

Bilgilerinize rica ederim.

Prof. Dr. Zafer UTLU
Müdür

Adres:Beşyol Mah. İnönü Cad. No:38 Sefaköy , 34295 Küçükçekmece / İSTANBUL
Telefon:444 1 428
Elektronik Ağ:http://www.aydin.edu.tr/

Bilgi için: Canan TOPDEMİR
Unvanı: Enstitü Sekreteri

CIRRICULUM VITAE

GAMZE SENTURK

Adress : Universite Mahallesi Hilal Sokak No:30 Kat:4 Daire 8 Avcılar/
TÜRKİYE - İSTANBUL(AVR.) – KÜÇÜKÇEKMECE
Mobile : 0549 870 49 49
E-mail : gamze.senturk@hotmail.com

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*Ability to work in a proactively diverse and inclusive organization, excellent proven interpersonal, verbal and written **communications skills**, Proven **analytical thinking** ability to cope with conflict, stress and crisis situations, **Entrepreneurial spirit** with a track record of surpassing customer expectations, **Competitive** and **Dedicated** with a consummate **professionalism** and exemplary ethics, team player and a **natural leader,** skilled at building top-performing teams focused on impeccable service delivery and accountability for **goal-achievement**, Open to **travel.***

Work Experience:

AUGUST '11- OCTOBER 15 INTERNATIONAL SALES MANAGER / NET İLETİSİM A.Ş

- Collaborates with the general manager in establishing and recommending the most realistic sales goals for the company.
- Coordinate all international sales efforts with our subsidiaries and agents.
- Initiates and coordinates development of action plans to penetrate new markets.
- Assess marketing potential of new and existing markets, considering statistics and expenditures. Visits systematically, existing and new customers to stimulate interest in establishment or expansion of collaboration.

- Capturing and analysing relevant information to inform sales planning. Identifying and converting opportunities for driving sales growth and cross selling. Drive profitable growth of the Regions.
- Creates and conducts proposal presentations and RFP responses, communicates pricing, proposals, negotiates the terms and conditions of the sale, closes the final sale
- Coordinates sales forecasting, planning, and budgeting processes used within the sales organization Proactively monitors and strives to maintain high levels of quality, accuracy, and process consistency in the sales organization's planning efforts.
- Maintains professional and technical knowledge by attending educational workshops; reviewing professional publications; establishing personal networks; participating in professional societies.
- Creates and conducts proposal presentations and RFP responses.
- Confer with clients to obtain and provide information when claims are made on an order and ensure customer satisfaction.
- Maintains sales staff by recruiting, selecting, orienting, and training employees. Coordinates training delivery to sales, sales management, and sales support personnel in the sales organization supported.
- Resolves conflicts involving scheduling, resources, or technical issues in liasion with other sales personnel and production teams to provide excellent customer support, relationship management and product delivery

JANUARY '05 - JUNE '10 GENERAL MANAGER ASSISTANT / FİNANS – ÇÖZÜM FİNANS FAKTORİNG HİZMETLERİ A.Ş.

- Responsible for heavy calendar management, requiring interaction with both internal and external executives and assistants, as well as consultants, to coordinate a variety of complex executive meetings,
- Conducts weekly diary meetings with the General Manager to discuss upcoming engagements, invitations and other requests. And Develops and maintain a system that alerts to upcoming deadlines on incoming requests or events.
- Handles multiple requests for time on General Manager's heavy calendar and utilize strong judgment in managing priorities of requests and escalating as necessary for resolution and/or prioritization.
- Ensures that various administrative tasks are done in an effective and efficient manner, including copying, reviewing outside mail, drafting correspondence, screening phone calls when requested, and maintaining executive files as needed.
- Organizes facilities for local top managerial and regional meetings and/or particular activities when required, including arrangement of conference halls, hotels or company's own meeting room availabilities, receiving necessary support from external agents or working independently depending on the nature of the event,

- Reviews and summarizes miscellaneous reports and documents; prepare background documents and outgoing mail as necessary
- Assists in developing, managing and enforcing company Policies and Procedures, including Job Descriptions, Organization Charts, Reporting, Record Keeping, Filing, etc.

FEBRUARY '04 - DECEMBER '04 CUSTOMER REPRESENTATIVE – DIGICOM ELEKTRONİK PAZARLAMA A.Ş .

- Confers with customers by telephone or in person in order to provide information about products and services, to take orders or cancel accounts, or to obtain details of complaints.
- Resolves product or service problems by clarifying the customer's complaint; determining the cause of the problem; selecting and explaining the best solution to solve the problem; expediting correction or adjustment; following up to ensure resolution.
- Communicates effectively with the General Manager, the Sales Team, and the Production Team, informing and updating them regularly to guarantee that sales and customer objectives are met.
- Attracts potential customers by answering product and service questions; suggesting information about other products and services.
- Recommends potential products or services to management by collecting customer information and analyzing customer needs.
- Prepares reports and follows up the procedures on the applicants' behalf in regards to the demands for being a franchisee or cooperate as a solution partner.
- Responsible for actively ensuring the retention of the organization's customer base which includes promoting the organization to existing customers. Also advises internal staff of advertisements and campaigns that affect retention.
- Co-ordinates the organization's involvement in internal and external trade shows,seminars, training programmes.

JUNE '02 - SEPTEMBER '02 ACCOUNTING INTERN / KARER TEKSTİL İTHALAT İHRACAT A.Ş.

- Assists with month-end financial reports
- Helps with accounts receivable, payable and bank statement reconciliation
- Assists with audits
- Balance sheet reconciliation
- Work with the finance team on yearly forecasting efforts
- Manage the monthly tracking of our physical inventory
- Supports the payment processing team
- Data entry
- Credit checks

Education:

Seminars and Courses :

- ***Avrupa Birliği Sürecinde Uluslar arası Ticaret ve İşletmecilik*** - İstanbul Aydın Üniversitesi 25.04.2009 - 27.04.2009 (16 Hours)
- ***İnsan Kaynakları ve Kalite İlişkisi*** - İstanbul Aydın Üniversitesi 07.03.2009 - 08.03.2009 (6 Hours)
- ***Etkili İletişim ve Beden Dili ve Etkin Performans Yönetimi*** - İstanbul Aydın üniversitesi 10.01.2009 - 11.01.2009 (14 Hours)
- ***Davranış ve İletişim Becerileri*** - İstanbul Aydın Üniversitesi 22.03.2008 - 23.03.2008 (10 Hours)
- **Avrupa Birliği Projeleri Yönetim Teknikleri** - İstanbul Aydın Üniversitesi 01.03.2008 - 02.03.2008 (10 Hours)

Certificate Information :

- Yabancı Diller - (İngilizce Kursu Bitirme Sertifikası) - Burlington School - 29.06.2011
- OKUL BAŞARI SERTİFİKASI - İstanbul Aydın Üniversitesi - 22.09.2008 Academic Year 2008-2009 Güz yarıyılı HONONUR
- Yabancı Diller - (İngilizce Kursu Bitirme Sertifikası) İstanbul Aydın Üniversitesi - 12.11.2007 Business English Basic Course
- Yabancı Diller - (İngilizce Kursu Bitirme Sertifikası) İstanbul Aydın Üniversitesi - 09.06.2008 Level Of THRESHOLD
- OKUL BAŞARI SERTİFİKASI - İstanbul Aydın Üniversitesi - 07.09.2009 2008-2009 Bahar dönemi Yüksek Onur belgesi
- Business and ındustrial Administration - Cavendısh college - 07.03.2011

Interests:

- Sports and outdoor activities : Swimming, Sailing, Football, Tennis, Skiing,
- New Media Tools
- Reading - Current Affairs, Local and Global Media
- Travel
- Music
- Movies
- Photography
- Driving

References:

OMER DEMIR
Netiletisim – General Manager
Tel: 0212 424 26 56
HALUK LEVENT UNAL
Çözüm Finans Fakoring Hizmetleri – General Manager
Tel : 0212 470 06 00
SABRI YIGIT
Digicom Elektronik Pazarlama A.S. - Presidentof Board of Directors
Tel : 2124700600