**Convergence, its nature and levels of convergence**

The ability of different networks and user equipment to carry similar services & the ability of one network or user equipment to carry different services. Handsets that carry voice, data and video services. Cellular networks carrying streaming video in broadcast mode and broadcasters being able to provide data services on unused portions of their spectrum.

**Towards multi channel environment**

* Same services via different networks and technologies
* Same terminals use different networks
* Same customized services in different countries

**Possibility of various networks platforms to provide practically the same set of services. Unification of user’s devices, such as telephone, PC and TV set in the form of a single terminal**.Convergence is the coming together and integration of two or more technologies. Digital television, computers and telecommunications being combined is an example of convergence.

**Device Convergence**

* Endpoints (devices) are converging.
* Integrated service platform for phone, Internet, music, video games, and PDA functions allows end users to access a variety of services that would require multiple terminals previously.
* Computer with multimedia player/soft phone.
* GSM Wi-Fi handsets.
* GSM DVB handsets

**Network Convergence**

* Convergence of service platforms.
* The integration of voice, data and video networks' transport and signaling infrastructures in a single unified networking system, often referred to as a "multi service network“
* Broadband wireless technologies delivering both fixed and mobile services.
* IP multimedia subsystem (IMS), an enabling service platform which offers to support both fixed and mobile services.

**Services Converged**

* Service providers have the capabilities to provide different services that could only be provided by one service provider previously.
* Cable TV service provider deploying VOIP to offer voice service.
* 3G service provider offering broadband internet access.
* Digital terrestrial TV offering mobile data service.

**Media convergence?**

* Convergence of media occurs when multiple products come together to form one product with the advantages of all of them.
* Media Convergence is gathering and dissemination of news across a multi-media platform.” - Traci Mitchell.
* Media Convergence is the process of combining and presenting of different media (multimedia) into a single delivery system. The Internet is an example of convergence.
* Data and Voice Services - from separate voice and data services to multimedia applications (IP-Telephony, Web Contact Centers)
* Fixed and Mobile Networks and Services - from separate ones to the single infrastructure: CAMEL, VHE, IPv6, IMS
* Public and Corporate Networks – from dedicated networks to open networks
* Phone, TV and Computer Terminals – from separate devices to combined multimedia terminals
* Broadcasting services-from broadcasting services to Web-based TV services: IATV, VoD, WebTV
* For the consumer: more features in less space.
* For media companies: remaining competitive in the struggle for market dominance.
* An ever-wider range of technologies are being converged into single multipurpose devices.

**Convergence within Journalism**

In the converged media organizations of the future, the journalists who best understand the unique capabilities of multiple media will be the ones who are most successful, drive the greatest innovations, and become the leaders of tomorrow, (Kawamoto, 2003: 72)

Therefore it is important for journalists to understand what convergence within the media is and how it affects journalism.

Kawamoto describes convergence as the melding or blurring of historically discrete technologies and services. (Kawamoto, 2003: 4) Convergence is occurring on many levels. Convergence within content, within the newsroom, within the way news is disseminated and within the way information is collected.

A good example of where convergence within journalism has been successful is Media General in Tampa. The company combined three of its branches newspaper Tampa Tribune, television station WFLA-TV and web site TBO.com- into the one building. The television and news staff still operates independently but share resources and communicate with one another. The branches all cross promote each other, the website has its choice of content from both the news and television branches and reporters from the tribune are often interviewed by the television station for its newscasts (Thelen, 2002: 98).Different journalists mean different things when they talk about convergence. But generally, convergence takes three forms.

**Newsroom convergence**

In a converged newsroom, journalists from different media (TV, radio, newspaper, online) all share the same workspace instead of occupying separate offices in separate buildings. One of the most notable examples is the News Center in Tampa, Fla. In 2000, the staffs of the Tampa Tribune, WFLA-TV and TBO.com — all owned by Media General Inc. — moved into a huge $40- million facility with a TV studio on the first floor and a joint newsroom above it. Sharing a newsroom encourages cross-platform cooperation. When editors from different media attend the same meetings and plan coverage together, they can steer each story to the format that tells it best.

**Newsgathering Convergence**

Here, reporters, editors and photographers collaborate on story production. In its simplest form, news crews might share a helicopter to report on a flood. A TV newscast might borrow one of the newspaper’s graphics. A TV reporter might cover an event for broadcast, and then write a longer story for the Web site. With training, print reporters learn to deliver TV news reports; photojournalists shoot photos, video and conduct interviews. In other words, journalists multitask in multimedia, whether it’s one story produced by a team of TV, print and online staffers — or one reporter preparing variations of one story for several different media.

**Content convergence**

This is where the final story is presented in multimedia form, combining text, images, audio, video, blogs, pod casts, slideshows — the options are continually expanding. At present, content convergence is still in its infancy, but you can glimpse the future on innovative Web sites. Imagine, years from now, a new hybrid medium combining the audio and video of TV, the responsiveness and resources of the Web, the portability and print quality of newspapers. Editors and reporters will become “content producers” trained to choose the most effective, entertaining storytelling techniques from a vast menu of multimedia options.

**Media convergence**

**Text + photos + audio + video + graphics = multimedia.**

Suppose you decided to profile, a brilliant painter/composer. Which medium, or media, would produce the best story? To display his paintings, you’d use photographs. To present his music, you’d use audio recordings. To show him at work — conducting a rock band or painting — you’d use video footage. To explain the meaning and impact of this art, you’d use text. In short, to create the ideal profile, you’d need multimedia, Cross-platform journalism, Media convergence. Whatever you call it, it’s an idea whose time has finally come. Stories once trapped on paper can now be posted online; stories once confined to text and photographs now integrate audio, video and interactivity. Technological innovations are transforming 21st-century journalism. Your job, your newsroom, even the stories you write will soon change dramatically. Kawamoto makes a prediction about where convergence will take journalism over the next decade:

1- Content management systems will be created within media companies that will be able to store content in digital formats allowing it to be delivered relatively easily to different platforms.

2- Wireless internet access will be proliferated either through cellular telephone systems or through more localized wireless networks that in turn connect to the wired internet.

3- Television sets will transform to take on more and more attributes of computers. Technology convergence will enter the living room by allowing televisions to connect with the internet creating the ability for viewers to receive and store digital content, and the ability for viewers to interact with content on the screen. This area has already begun to take off with the invention of digital broadcasting and products such as TiVo.

4- A new generation of portable devices will be created that come closer to replicating the advantages of paper by being lighter and having longer battery life. These devices could be descendants of today laptop computers, personal digital assistants or cellular phones.

**Vision of a Converged World**

* Consumers use a single terminal point to access any desired information available on any network without limitations.
* Media convergence is prompted by the development of information technology.
* Convergence will lead to:
* Reformulation of media economics and politics
* Reorganization of media companies
* Radically change media environments in the name of digitalization
* With the advent of IP technology, competition in telecom services becomes a global phenomenon and is no longer confined to within the national or regional boundary.
* The potential for change will be felt in different ways and at different levels (e.g. technology, industry, services and markets).
* Regulators and the policy makers need to put in place a forward looking and adaptable regulatory framework, or they will be left behind and become irrelevant.
* The unrestricted exchange of information through transmission of images, text, voice or other forms of data, the info-communications infrastructure will improve the productivity of knowledge-based activities and help to bring about an Information Society. Efforts will continue to be needed to equip workforce with the skills which the Information Society requires.
* This will open opportunities and challenges especially to the developing countries.
* The global nature of communications platforms today, especially the Internet, is providing a key which will open the door to the further integration of the world economy
* Telecommunications, media and information technology sectors are seeking cross-product and cross-platform development as well as cross-sector share-holding.

**Examples of new products and services being delivered include:**

* Home-banking and home-shopping over the Internet
* Voice over the Internet
* E-mail, data and World Wide Web access over mobile phone networks, and the use of wireless links to homes and businesses to connect them to the fixed telecommunications networks

**More examples:**

* Data services over digital broadcasting platforms; iTV
* On-line services combined with television via systems such as Web-TV, as well as delivery via digital satellites and cable modems;
* Web casting of news, sports, concerts and of other audiovisual services.

**Advantages of Convergence**

Technology is so positive, it allows for interactivity-real time-and promotes public dialogue and communication.” -Larry Pryor

Convergence is collaborating in a way that best tells the news.”

**Challenges for Convergence Market**

∗ Convergence phenomenon requires adaptation of new approaches to be applied to issues of market entry; licensing; customers; pricing.

**Training**

∗ Convergence reporters must be trained to report in multiple media. They should be multi skill able to work in a converged media environment. If necessary, a convergence reporter might file a brief for the Web, edit video for television and then write a story for the next day's paper. Convergence reporters often specialize in a single medium, but their familiarity with other forms of storytelling gives them an edge in today's ever-changing media landscape.

**Digitalization?**

Digitization is the process of converting information into a digital format. In this format, information is organized into discrete units of data (called bits) that can be separately addressed (usually in multiple-bit groups called bytes). The process by which all these separate media become digital and come to be delivered via the global network is known as Digital Convergence.

**Digital Divide**

The term 'digital divide refers to the gap between those people with effective access to digital and information technology, and those without access to it. It includes the imbalances in physical access to technology, as well as the imbalances in resources and skills needed to effectively participate as a digital citizen. In others words, it’s the unequal access by some members of the society to information and communications technology, and the unequal acquisition of related skills. Groups often discussed in the context of a digital divide include socioeconomic (rich/poor), racial (white/minority), or geographical (urban/rural). The term global digital divide refers to differences in technology access between countries. Many expressions were used to describe the dichotomy of people’s participation or not in the Information Society such as information poor/ rich or have/ have not, but the most widely spread now is the "Digital Divide". Used by most international organizations, this expression has become the reference term. At first, some narrower definitions of the digital divide were focused only on access to computers and Internet but access alone does not bridge the technology gap. As a result, definitions are much wider today. "The term **'digital divide'** describes the fact that the world can be divided into people who do and people who don't have access to - and the capability to use - modern information technology, such as the telephone, television, or the Internet. The digital divide exists between those in cities and those in rural areas. It also exists between the educated and the uneducated, between economic classes, and, globally, between the more and less industrially developed nations".

* "The digital divide is the "Differences based on race, gender, geography, economic status, and physical ability:
* In access to information, the Internet and other information technologies and services
* In skills, knowledge, and abilities to use information, the Internet and other technologies".

**Access:**

When looking at access, you can see that the Internet is expanding its territory so rapidly that soon you might be able to get it anywhere and in multiple forms (you can already find it in mobile phones or digital Televisions). However, today it is still mainly through computers that one can access the web. Either you can buy your own computer to access Internet but this is not affordable for all. Governments aware of this financial problem are pushing for installation of computers in public spaces, such as libraries or post offices. The market also tries to answer this new demand by the creation of cyber cafés. -Their success relies on fast access connections at low price and a 24 hours opening and clearly show that there is a demand for such access. These different approaches might well be part of the answer to bring access for all. A study done in the UK shows that the success of bringing a new audience to the Internet primarily relies on the social environment, as well as on the staff support you can get. Therefore, it is challenging the value of attempting to extend access via unstaffed Internet access points (Milne, 2000, p57).

**Necessary knowledge to use Internet:**

There are user’s needs for information and training in order to participate in the Information Society, and this is definitely another major risk of exclusion. Learning the potentialities of the information and communication technology may be a bigger barrier for new users than lack of technical access. For example, people who are not computer literate have no chance to take advantage from the Internet. The education system must be the main provider of this new knowledge.

Moreover the fantastic pace of evolution of information technology obliges any participant in the Information Society to continually improve one’s knowledge; learning does not stop once one has completed a training course. In addition, mastering the Internet, one needs formal training, but knowledge also develops through learning by doing (Milne2000); one can improve it by trying things out, sharing one’s problems and seeing what others are doing. All this will contribute to a lifelong learning society where people will have to continuously learn to master these constantly changing technologies, and therefore to be able to participate in their society.

**Content**

Finally to participate, people must have access to information that is relevant for them; the contents can be found on the Web will determine the success of this participation. Currently on the web, more websites are in English (bridges.org, 2001, p20). The dominance of English, and especially US content, makes it less useful to other countries. English speakers were the first users of Internet, so the predominance of their language was natural. So there is a necessity to have more variety in languages on the Web. Additionally, non-English countries produce less local content making the Internet less relevant to their lives. It is also necessary that users become content creators as well by the creation of their own websites. By doing that, they participate in the construction of the Web and produce sites that might interest others.

There are two different forms of Digital divide, one between countries but also between groups within a country. Bridges organization extensive report puts it in these terms "Real disparities exist in access to and use of information and communications technology (ICT) between countries (the "international digital divide or global digital divide") and between groups within countries (the "domestic digital divide")".

**International Digital divide:**

The International Digital Divide, also sometimes call the global DD, is easy to understand but hugely difficult to overcome. Firstly, this divide is an infrastructure problem. For example, in all of Africa, there are fewer phone lines than in New York City alone and owning a phone is seen as a luxury item. The costs are enormous and this is why developing countries need support otherwise they might not even be able to give access to their population. The structural problem is not the only one.In developing countries, the majority of people besides wealthy individuals cannot currently afford the technology, even when it is available, so usage remains low. Poverty is the greatest barrier to Internet growth in Developing countries. Costs to access Internet are in comparison to developed countries much higher and therefore unaffordable.

**Domestic Digital Divide**

The domestic digital divide is more complex to define, because multiple factors are involved. Access within countries can be looked according following socio-economic factors:

* Age
* Income
* Geographical location
* Education
* Gender
* Disability

**Income**: It is interesting to notice that socially excluded people have mostly a low income and once more,this economic factor could affect their participation in the Information Society. Income is the first factor of exclusion, because even if computer prices and access costs drop by a large margin, they would still be inaccessible to poor people who need to cover their basic needs first.

**Age:** There is a normal difference because ICT are easily used and adopted by younger generations andthey benefit from their school training.

**Geographical gap**: there is a difference in use between different parts of same countries. It is easier to getan Internet access in cities and this trend might not be changed soon.

In Fact, the new fast access technologies to Internet such as the optical fibre for example, are mostly available in urban areas and there is a risk that this divide increases. This is why there is a necessity of national planning at a country level to insure that all areas have the same possibilities.

**Education**: is closely correlated with employment and income. Those with higher levels of education aremore likely to have ICT at home and at work. The less educated people show least interest in getting on-line, may be because they do not see the interest for them. All these questions related to the domestic Digital Divide are mainly studied in developed countries but there is evidence indicating that these inequalities are far more pronounced in developing country where small elite own everything and cumulate the advantages leaving most of the population with very little.

**Disability:** Internet and Information Technologies are promising for people with disabilities because itcan assist them in overcoming their handicaps, however the potential may not be realized if they cannot afford assistive technologies or if accessibility of equipment or web-content is not ensured.

**Gender:** Women have less access to the IT use and skills. Also Working women have lower levels of ITuse and skills than working men.

**Concrete examples of the global digital divide**

In the early 21st century, residents of First World countries enjoy many Internet services which are not yet widely available in Third World countries, including:

Affordable and widespread Internet access, either through personal computers at home or work, through public terminals in public libraries and Internet cafes, and through wireless access points; E-commerce enabled by efficient electronic payment networks like credit cards and reliable shipping services; Virtual globes featuring street maps searchable down to individual street addresses and detailed satellite and aerial photography;

Online research systems like LexisNexis and ProQuest which enable users to peruse newspaper and magazine articles that may be centuries old, without having to leave home; Price engines like Froogle which help consumers find the best possible online prices and similar services like Shop Local which find the best possible prices at local retailers; Electronic services delivery of government services, such as the ability to

Pay taxes, fees, and fines online.