TELECOMUNICATION SYSTEMS,
INDISPENSABLE FOR WORLD WIDE COMMUNICATION

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Abstract. The idea of global communication makes the telecommunication system indispensable for the institutions', business' and individuals' survival and it diverts our attention from the fragility of the artificial cyberspace whose existence depends not only on electromagnetic waves but also on computer science. This technology fascinates people and it's also a source of myths.

The idea of global communication makes the telecommunication system indispensable for the institutions', business' and individuals' survival and it diverts our attention from the fragility of the artificial cyberspace whose existence depends not only on electromagnetic waves but also on computer science. This technology fascinates people and it's also a source of myths.

The existing problem is that we always realize too late the difference between the technological and social progress. These two types of progress have the same source, and the social problems can be solved today with the help of modern technology; we can find examples in every society.

The technological phenomenon is irreversible and it is characterized by self regeneration. Every invention in a field leads to inventions in other fields. The technological progress raises problems that can be solved with the help of an always superior technology. This is why we are all fascinated by technology, we believe in its superiority and we do our best to improve it.

The technological phenomenon has always the same characteristics. Regardless of the political structures or of the type of socio-economical structure, technology remains a whole in itself. Technology creates an environment, an atmosphere, a model for the human behavior and human relations, a model which remains unchanged across the world. When one of its negative effects becomes obvious, the technology is replaced with something else, but it's always too late and the long term effects of the new technology can never be anticipated.

John Hunter, telecommunication manager at IBM, defines the global communication system:" A global informational electronic system represents a modern phenomenon created with the help of the common efforts of several nations. It has its own characteristics: many network connections, heterogeneity, a combination of private and public services, a wide management network and architectural structure that will assure the balance between costs

and performance. The systems are various: some are enormous, others are small, and some are decentralized, some are more or less centralized".

The action of this system outruns a lot the economic and production field. A dynamic economy, based on the new technologies, especially on the information technologies, becomes a main actor, with a huge influence in the world. There is no frontier that could stop the information to be immediately transmitted in any region of the world. The influence of the informational revolution on every individual of the society becomes more and more attainable every day. The attempts to persuade the rest of the world to keep quiet, not to tell anything about the negative political consequences of some actions, are not working anymore.

The global communication system owns its existence to a computer network from all over the world and to the interconnections with the telecommunication system:

➢ The deregulation has widened the opportunities of the new services suppliers from all over the world and dramatically increased the competition between the sellers from the telecommunication system;

➢ The computer network is today acknowledged as a strategic necessity for the companies that want to be successful on the markets they are working on;

➢ Many of the technical barriers that were so far preventing the building of fast telecommunications, multi services, capable of satisfying the needs of computers networks are now gone.

These three factors can make some people believe that the edification of the global telecommunication system is still in its earlier stages. But that is not true because the demand for a high-performing global telecommunication system existed since the governments, the armed forces, the industry and commerce discovered its strategic importance.

The convergence of the telecommunication global markets should not be considered an ongoing process but an achieved one. For the national customers of the multinational companies, the concept of "global village" has become a today's reality, in which the world economy and trade depend on the capacity of communicating efficiently and with low costs.

The business world demands more flexible and intelligent networks. It demands image, voice and data, therefore telecommunication services that are at a remarkable level. This demand is contrary to the fact that half of the world population never made a phone call (not to mention those that don't have phones installed in their homes), and also emphasizes the enormous potential and challenges that the regional companies confront with in the line of global market. These demands addressed to the multinational companies raise a series of problems for the telecommunication industry. The development of some efficient ways that will assure the inter-operability between the different networks and equipments is more a political problem than a technical one, and it demands a better cooperation between industries compared to the one that's being done today. According to Peter Radley, CEO of the Mobile Communication company, at Alcatel, "telecommunications have reduced the size of the world for more than a century. The modern correspondent of the sea-borne trade routes of the XVIIIth century which allowed the political influence over the world is obviously represented by the electromagnetic waves carrying the information which is the essence of every business in our world. And the range of technical possibilities and applications of the telecommunications continues to increase. All these multiple options, together with the intensity of political and commercial problems, are tensioning the traditional concerns regarding the cooperation for maintaining the integrity of the world wide network. We have to admit the need for cooperation and opening at higher levels and the realism of the competition at the lower levels of this domain."

In the global telecommunication network, a balance between competition and cooperation is required; while the telecommunication policy in the entire world shifts towards liberalization and stands for the introduction of competition, the participants at this industry must accept the need to cooperate in order to assure an evolution which is compatible with the services and the equipment. And this must be done because even the customers themselves demand it in order to satisfy their needs for the global services.

This need for cooperation in order to achieve a global telecommunication system causes the transformation of telecommunication policies and assumes an effort for standardization. The globalization of telecommunication system requires the creation of new alliances and makes the lines between the national and international telecommunication policies be not distinct anymore. Due to the fall of the industrial barriers, every day new national, regional and international partnerships appear. These alliances have one objective and that is to obtain fast progresses in terms of technology, marketing and sales. They demand an operative cooperation between entities that were not used to work in these domains. The promise of the telecommunication system regarding the stimulation of the economic and social development was made, and the objective regarding the instauration of a society of global information is clear, but what isn't clear is when this promise will be fulfilled and how could this objective be achieved. Factors like assumed obligations regarding the achievement in time and of the resources used in a multidimensional environment in terms of national, regional and international initiatives will have a great influence on the effective spreading of telecommunications.

The standardization effort required for the accomplishment of the promises made by the global telecommunication system raises a diversity of questions. According to Theodor Irmer, head of the Telecommunication Standardization Bureau as part of The International Union of Communication," when the standardization is investigated in detailed, the action of two forces can be found: the telecommunication technologies and the telecommunication environment, governed by liberalization, privatization, regionalization and globalization. Those two forces are interdependent, complementary and they intensify each other. The result is the combined, continuous and very powerful influence on the standardization, modeling the profile, its demands and procedures. As the two forces are not static, but very dynamic due to their fast evolution, the influence over the standardization is the same: continuous, always changing, always offering new challenges and in the same time creating new problems that have to be solved. The present standardization process, governed by technologies, must be transformed into one oriented more towards the market (for example only those standards who's clear priorities and market were already identified should be created). This is what is known as the transition from the standardization "governed by technology" to the one "governed by the market". Not everything must be standardized and even if there is a need on the market, there is one question remaining: which are the priorities for creating a certain standard?"

Although standardization is a point of reference for the cooperation between telecommunication and computer industries, they maintain the possibility for competition in determining the priorities of the standardization. And those that have to pay the price for this competition are the consumers. The specialists from Alcatel realized that 80 years ago it was much easier to make a phone call than it is today. In those days the telephone had only one button and only one handle. Nowadays telephones have so many buttons, with so many combinations that a guidebook is required. These guidebooks are not always explicit, and

they rarely reach the consumers. Therefore the technology, by sophisticating the networks, increased the difficulty for the consumer.

This is just one of the examples which illustrate the lack of correspondence between the technology advances, those who use these technologies and the social use of technology. This lack of connection is often denied and actually hidden by the technology myths and its promises.

The global telecommunication system allows economies which in other times were unimaginable, medical and educational assistance and a research activity at an international level. By extending the global networks, people from all over the world can access the electronic sources of information, and they will use what they need to reduce the total offer of information, because unlike the exhaustible natural resources, the offer of information is increasing when being used. Just by using the existent information other information can be added in de world deposit. This growth of knowledge is called research, and the informational technologies contribute to the spreading of the benefits of this research to more and more people in the world. Let's just think at the impact of the instantaneous information on the whole world. The quick access to information allows us to built homes acceptable in terms of price, to supply food, to take every precaution in case of natural disasters, floods and hurricanes. The available information can save lives by means of preventive medical care, by means of treatments or by means of surgery. And the list of potential advantages can go on.

All these promises are fascinating. But the capacity to predict the effects of the information transfers is as exact as the one of the first explorers regarding the effects of their discoveries on the history of man.

Used as it should be used, the power of the instantaneous information can become the greatest good action ever done by the human being.

Two things are certain:
➢ The impact of the Information Era on the business environment and on the society is and will be deep;
➢ The potential benefits of the informational technologies are limited only by the boundaries of the human mind.

According to what has just been presented, we can create the following image of the actual situation regarding the development of the global telecommunication system.
➢ The global telecommunication system already exists and appeared thanks to:
- the demands of the multinationals that have mobilized the industries from the telecommunication domains.
- the convergence of the efforts of the different industrial, financial and political organisms.
- technological synergy.
- deregulation
➢ The development of the global telecommunication system forces the involved industries:
- to establish a balance between cooperation and competition;
- to take care of the threats against the system integrity;
- to achieve compatibility between the elements of the system;
- to develop a profitable industry, based on standardization;
- to establish priorities for standardization.

➢ The global telecommunication system:
- goes beyond frontiers;
- involves preoccupations of political and commercial order;
- accelerates the increase of the range of technical options, regulatory regimes and telecommunication applications;
- demands the production of complex terminals, hard to obtain;
- will have profound effects, but not known in all domains yet.
➢ The global telecommunication system:
- assumes scale economies;
- will help the medicine, the education and the research;
- promotes the social and economic development;
- stimulates the accumulation of knowledge;
- increases the access to this knowledge
- allows a higher number of people to take advantage of this knowledge;
- allows the building of cheaper homes;
- allows the supplying of healthy food;
- encourages people to take measures against natural calamities;
- can save lives by means of medical care, treatments or surgery;
- facilitates the essential activities of life.

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