

**The Third General Assembly of
International Parliamentarians
Association for Information Technology**

IPAIT III

From 5th to 8th of June, 2005

Chamber of Deputies

Brasilia, Brazil

Algerian Parliamentarian Delegation's remarks

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Information and communication technologies are shaping a new life for humankind. And even nations are evolving at different paces, the ICT revolution is spreading world-wide, introducing the new concept of the "Information society" which is defined by the massive usage of the information in all acts of life by means of technology.

However, if the Information society shows such a real development in developed countries that it brings a new way of life for their citizens, its very limited presence in the developing countries stays confined into some sectors of activity having a high capacity of use of ICTs such as high education, research, air transports and finance. Sectors such as education and administration that have most influence on citizens still remain relatively closed to the ICT penetration.

Algeria gathers some assets that allow her to be in the international information society development dynamic if some regulatory and organisational conditions could be fulfilled and supported by a political willingness from the national authorities.

The Digital divide which measures the technological gap between developed and less developed countries is now the core of the political debates when it comes to ICT issues and how to reduce this digital divide.

We all agree that bridging this gap demands to put forth efforts in four main directions:

1. Developing basic interconnection infrastructure
2. Setting up clear and adequate legislative and regulatory frameworks
3. Developing institutional and human capacities
4. Developing the contents

It is obvious that our country shows a lack in the field of Its and the universal indicators of development are proving it:

Some figures about Algeria	
Population	32 millions inh.
Teledensity (fixed lines)	2,34 millions subscribers (7,33%)
Teledensity (mobile phones)	21,87%) 7 million subscribers
Penetration rate of PCs	7,1 PC per 1000 inh.
Internet users	3 millions users
ISPs	32 operational ISPs although 50 agreed ones
Web sites	3.000
Internet bandwidth	200 Mbps
Cyberspaces	5.000
Online Media	20 daily journals and 3 national TV and 4 Radio channels

Being aware of the necessity of going towards the building of an ICT based society and economy, the Algerian Government with the support of the legislative body has expressed its strong willingness of taking the challenge of building an Information society and its readiness to set up all the necessary steps for the realisation of this project. Therefore, it has already undertaken a set of measures, decisions for the promotion of introduction and the use of ICTs in different fields of activity and for putting ICTs at the reach of all.

Liberalization of the telecommunications sector and Internet activity

Building an information society calls to the availability of an infostructure and infrastructure with all the telecommunication components, the subsequent computer hardware and software and also the set of laws and regulations. But infrastructure (hardware, cables, bandwidth, satellites, phone lines, optic fibre, etc..) must be prior to any other action.

For many years, the organization of the telecommunications sector was not able to face the national increasing demand on conventional telephone lines, mobile phones, optic fibres, satellites and data networks.

The presidential elections of April 1999 in Algeria resulted in the appointment of a government broadly committed to an ambitious liberalization agenda, including the telecommunications and postal sectors. Since project approval in June 2000, implementation has proceeded smoothly, beginning with the establishment of the independent regulatory body (ARPT) in May 2001. In the telecom sector, a second GSM license was successfully awarded in July 2001 through a competitive and transparent bidding process and the Government has confirmed its commitment to awarding a third GSM license to a private operator in december 2003. In addition, the Government plans on awarding two VSAT licenses and two licenses for rural telecommunications operators in 2005.

Internet Service Providing activity has also benefited from the liberalization law. More than 50 private operators got an agreement from the government to act as ISPs. Although the majority of the ISPs is not yet operational, already the competition raised among these actors is bringing a tariffs policy enhancing massive Internet access.

Setting up national bodies or commissions in charge of ICT/IS issues

A global vision of the information society and the implementation of any co-ordinated national action plan needs to be thought by an adequate an high level board. Algeria's government and especially the Ministry of high education and scientific research recently created a national committee in charge of the ICT issues. This Pilot committee created on 11-04-01 is a workgroup endowed with the following missions :

- Animate national debates on all related ICT/IS issues
- Conduct a global reflection and give advice on ICTs/IS
- Participate to the establishment of a national ICT/IS policy
- Implement ICT/IS projects

Besides, a specialized agency ANVREDET "The national agency for the technological development, although recently created, is expected to play an important role in promoting research efforts and technological development.

Other specific workgroups and committees have been set up in different sectors of activity by the corresponding ministries and governmental departments, that, henceforth, creates a national concerted dynamic for the promotion of an Algerian Information society.

More recently, the new appointed Government gave a special attention to ICTs issues. A new ministry of telecommunications and ICTs has been created, putting therefore into concrete its willingness of a real and effective undertaking of the ICTs issues.

Improving human skills & adapting training contents to the ICT context

The nation development process basically implies the development and the qualification of its human potential by endowing it with the necessary and adequate skills that help it to solve the problems of the society and to build the nation.

On this crucial issue, the Algerian Parliament strongly defends the option of the education system revision and that of the reinforcement of the human resource at all levels.

The ICT concept led to the necessity of the update and even the total revision of scholar programs and educative contents and also the definition of new curricula at different stages of education (primary school, secondary school, university) in order to meet with the needs of a new technology based society.

Reinforcing human skills and creating new ones are the ways to enable citizens to the use of new technologies. The specific solutions and actions to implement must be the result of an national thinking effort and not the fact of partial and punctual rearrangements. Some unavoidable steps:

- Adaptation of the current contents
- Opening new specialties and programs (master on ICT, security, Infography, Multimedia, ...)
- Massive introduction of new technologies in the training process as a content, a pedagogical and management tool

Beside the Governmental effort, many private schools have opened their classrooms to ICT specialized training (Training on Internet, Web design, networking, Multimedia, communication, etc.), therefore, offering a variety of specific contents.

The political field didn't remain in the margin of these technological evolution. Indeed, The Algerian Assembly has recently set up the Institute for Training and Legislative Studies (ITLS) with the heavy task to accompany the elected representatives in their legislative missions. A big part of the training program 2006 which is aiming at upgrading and improving the qualifications of the National Assembly Human Resources is dedicated to the use of ICTs.

Governmental support to national ICT based projects

Through governmental grants and with the support and approval of the Parliament, national end-users oriented projects have been implemented by different appointed official institutions.

Here are some relevant examples of actions undertaken under the aegis of the Algerian government:

- **Academic research Network:** This is one of the most important projects led by the Ministry of High education. Its objective is the establishment of an interconnectivity of the entire academic and research institutions all over the country (universities, institutes, research centres, etc...). This internet connectivity would allow an internet access with a high speed. Besides, this is laying the framework for supporting high level applications such as tele-training and virtual library. As of today, all the universities have their internet connection and access. Some of them are already installing their own intranets. Lately, the Ministry signed a contract that approved the grant of 2Mb leased lines to the benefit of 86 universities involved in the ARN Network for a period of two years.
- **Virtual Library for Human and social sciences:** In order to offer a general access to specialized information and documentation, the sector of Higher education has launched a sectorial project of Virtual Library dedicated to human and social sciences involving 30 university libraries all over the country. This Project is coordinated by the Ministry of Higher education.
- **National information funds :** The web revolution gave rise to a new battle of contents that our country can't stay aside from, in order to promote our own resources, to put forward our cultural specificity and also to avoid being just information consumers. As well as setting up national information deposits by providing online contents contributes to the universal information heritage.

- **Library management modernization:** In the information field, a national project aiming at the modernization of library management has been launched a few years ago. Presently, the majority of university libraries run this program that allowed to all the beneficiaries to introduce a modern, standard and computerized tool of data processing and library management. This global approach favours interlibrary exchanges prior to any the information sharing and to the contribution to the world-wide information flows.
- **Internet for All initiative:** In 1999, the Government launched the project of setting up 100 cyber-centers in the capital city in order to popularize the use of Internet by the public at large. In the context of the lack of telephone lines and high costs of PCs, this initiative, which targeted young people, was a great success. This pilot action was such a great success that more that 3000 cyber-spaces are now open all over the country. This led to a very rough competition in terms of access tariffs that put the internet at the reach of more people. The average cost is 1USD/hour of connection.

The Ministry of Telecommunications recently announced that the telecom sector will benefit of a special budget (24 milliard DA) in the framework of the national plan for the economic growth (2005-2009).

- **CYBER-PARK:** Another Governmental initiative in the field of ICTs is that of the creation of an IT Node inside the capital Algiers. The Algerian Parliament militates in favour of the extension of this initiative to the 48 main regions of the country and build them in industrial areas by creating technological nodes with high employment capacity able to provide technological support and expertise to the industrial sector.
- **INTRANEFP and TRABIANET networks:** These two national specialized networks are respectively dedicated to the Professional training sector and to the education sector. Through these projects, all the institutions of these sectors (administrations, training centres and schools) are being massively endowed with computers and are being connected to the internet and having their own intranets, thus creating virtual communities. The implementation of such ambitious projects also implies an important investment on human resources prior to any sustainable development.
- **National Health Network and Virtual Hospital:** Algerian Health Ministry is undertaking a national health Network by connecting the most important hospitals all over the country. It also aims at setting up medical information systems, tele-health applications, and medical databases for prevention purposes, emergency management, first aid information, epidemiological analysis, etc. And in the framework of the Euro Mediterranean initiative called EUMEDIS (launched in 2000 by the EC), Algeria is actively participating to several regional projects in the

filed of Health (EMISPHER project, EMPHIS project, Euro med Virtual Hospital).

- **Specialized Inter-banking Network:** The financial sector also became aware of the ICTs stakes and challenges. The willingness of automation and standardization of the inter-banking transactions is being concretized by the NIS project. This will doubtless pave the way for the implementation of more sophisticated applications such as e-commerce and e-payment.
- **Le National File of Criminal record:** The sector of Justice has endowed itself with a powerful tool for the administration of the criminal records at national level. A networked system Hosted by the National Centre for Criminal Records is now enabling to any citizens from any place of the country to immediately (in less than 20 mn) get a copy of its criminal record, operation which, by the past, obliged the applicant to move to its native town for this procedure.

Many applications has also been developed in order to computerize the management of different services such as Human resources file, decision making tools, etc.

The sector is also undergoing the establishment of the Justice network by the interconnection of the Justice courts, the central administration and other penitential establishments.

- **E-Government project:** Governmental Intranet Network is an ambitious project planned by the Algerian Government to modernize the State institutions and lead the Politics administration to enter the Information society era with the aim to bridge the gap between the Administration and the citizens. Around fifty of institutions are concerned. Among the principal services expected by this network: a unified and secure mailing service between the governmental administrations, the publication and the diffusion of documents, the shared diary, the directories management, other management applications, the electronic form management, videoconference services, Governmental web gates and access to Internet.
- **ICTs in the Parliament's activities:** Following the instructions of the Algerian Assembly's President, to foster and generalize the use of Information and communication technologies in the Assembly activities, a working group has been installed within the assembly and has been appointed to undertake the infrastructures diagnosis, the evaluation of the services provided and the proposal of new technological configurations according to the expected services such as :
 - Improving the attractivity of the Assembly's web site by creating communication areas open to citizens to exchange and post inquires and address parliamentarians about different issues
 - Endowing each parliamentarian and civil servant with a secure email

- Promoting the adequate environment in order to allow each parliamentarian to create its own website
- Enabling a physical Intranet and internet connectivity in all the Assembly's premises (meeting rooms, halls, conference rooms, offices, etc...)
- Defining new procedures for the dissemination of the internal documentation (Law projects, Reports, legislative texts, ..) by electronic means. For that, the Assembly has given a laptop to every deputy. **This new procedure will also permit to any citizen which can access to Internet services to participate by his proposals and remarks on the law projects or commissions reports using The Assembly web site forum or email.**
- Developing a digital library including all the conventional documents (books, serials, etc..) and the other materials produced and delivered by the Assembly
- Setting up a broadband e-learning platform to sustain the training activities of the Institute Training and Legislative Studies of the National Assembly
- Realizing a multimedia system for the online broadcasting of the plenary assembly's sessions. **This system is already working and put the Government in front of a political and technical challenge: he has to work to permit to a large number of citizens to access to Internet.**

Presidential program for the growth revival 2001-2004: Scientific research

One of the Government's concerns of today is the Information society building issue and the ways to reduce the digital divide. But in the Algerian context, this has two meanings: not only have we to bridge this gap that separates us from developed countries but the concern is also to bridge it inside the country itself between urban and rural areas in terms of communication infrastructure and new technology access and services.

In the framework of the presidential program for the growth revival (2001-2004), it was stressed that the human resources and the reinforcement of the installations of knowledge production will be given a special attention. Especially in the field of new technologies that generates value added products.

Beyond the fact that the realization of these installations and their equipment will ensure the valorisation of high level human resources, it will contribute to the promotion and to the development of the ICTs. Besides, this program will stimulate excellence nodes implementation, study, expertise and engineering capacities by the mobilization of thousands of national competencies.

In this three-year term program, a governmental budget of 12,4 Billion Algerian Dinars (0,16 Billion US dollars), approved by the Parliament in the 2001 Finance Law, will grant 4 mains sub-programs, which are:

Program	Grant (billion dinars)	%
ICTs	6,4	51,62%
Space technologies	2,5	20,16%
Biotechnology	0,4	03,22%
Others	3,1	25,00%
TOTAL	12,4	100%

1- ICTs in research and high education : Intranet/Internet

Globalization induced a knowledge competition among nations and the scientific community is the first concerned by this battle. This is why the development of ICTs should target this part of the population with the following objectives:

1. Provide the future managers and professionals with the new ICT tools
2. Introduce multimedia tools in the training process
3. Promote access to universal information through Internet as a systematic prior approach to any decision making and reflection.

The key actions carried out in this part of the program are:

- Give to each university teacher and researcher one PC and one Internet access
- Endow 100 academic institutions (universities & research centres with local networks, and Internet servers

2- ICTs for the disenclosment of isolated areas: Tele-health

The very wide area of the Algerian territory, the unequal distribution of specialised doctors, the high cost of patient transportation, the isolation of the general practitioners from their specialised colleagues are some of the obstacles that do not favour an equal access to specialised medical services, an optimisation of the national resources and also a continuous training of the generalist practitioners. The Algerian Parliament supports the ICT option as one of the response to these obstacles.

As part of this second sub-program, some actions are underway :

- Massively introduce the computer in hospitals for isolated areas.

- Create a health Network
- Set up a video transmission system linking 50 hospitals for tele-diagnosis, tele-radiology applications

3- ICTs for the disenclosment of isolated areas : Tele-training

Algerian high education suffers from the disparity of the teachers distribution all over he country. More than 60% of the universities run with a small number of professor degree teachers, added to that, a lack in the pedagogical staff for some disciplines and branches. This situation leads to the necessity of an adequate organization of the human resources to make it reachable wherever it is located in the country. Introducing ICT in the Health sector will assuredly help to solve a part of this critical situation. Among the actions planned in this program :

- reduce the lack of high level training staff especially in some disciplines through the introduction of the new technologies in 50 universities and constitution of a virtual campus with potential of content providing.

4- National Network for value added software linked to NICTs

Building an Information society essentially relies on the provision of massive information and contents. It is then essential to have the good tools to manage and offer this information. Today, the international software market is dominated by the products of a handful of big companies from developed countries and leave very little room for local products. This phenomenon doesn't favor the promotion of local software production and even threatens the preservation of economic, social and cultural specificity of the majority of nations that remains almost exclusively consumers in this field.

The aim of this part of the program is to change Algeria from an exclusively ICT consumer to a producer of value added software. It is expected to equip 55 high education institutions by workstations for software design. The expected results from such an action is the promotion of the local software industry, the provision of a technological support to SMEs as well as it will stimulate employment creation by the absorption of hundreds of graduates that come out from Algerian universities each year.

These are only some of the most relevant projects that are underway at national level and under the Government financial grant and aegis. But it's worth saying that a huge number of other projects are implemented in different places and areas by public or private operators.

Promotion actions and dissemination

Be it the fact of the Government or that of private institutions, a very favourable climate has fostered a dynamic of promotion of ICTs through the organization of annual and regular events dedicated to internet,

multimedia and ICTs in general. Shows, fairs, seminars, fora, meetings and other scientific and technological events are regularly gathering thousands of professionals and international experts sharing ideas and experiences with the national public. Not less than 2 events per month are being held.

But in spite of this stimulating environment, larger awareness programs should be built and more demonstrative actions must be envisaged in other contexts.

Creation of a national observatory for the IS : a tool for policy and decision making

The objective is to build an inventory of projects as well as to assemble national data concerning promotional activities undertaken by public authorities and private actors, be they national, regional or local. Other aims are to monitor and to analyze new regulatory developments in the field of telecommunications and Information Society as well as to present a mapping of the actors, notably the public or private Network facilities offering Information Society infrastructure, services and applications. Decision makers will rely upon the releases of this observatory to establish and update the national ICT/IS policy.

International co-operation

International cooperation, setting up relationships between nations and especially with those which took advance in the field of ICTs is an opportunity not to miss.

European Union, international organizations (UNIDO, UNESCO, UAF), regional ones (G8, G15,...) or national institutions are dedicating more financial grants for ICT based cooperation projects covering training, technological transfer, experiences exchange or cash support for projects.

Among the most recent experiences (1999-2005) led between Algeria and other countries, it worth mentioning:

- EUMEDIS or Euromediterranean initiative of the European Commission for the promotion of ICTs in the euromed. Region. 25 countries involved in more than 22 regional ICT based projects in 5 fields of interest: Education, Health, Commerce, Industry and Tourism.
- NEPAD initiative : The New Partnership for Africa's Development (NEPAD) is a vision and strategic framework for Africa's renewal in which the Information and communication technologies has a big part in the action plan
- TRANSFER, a wide range training program on ICTs with the international Francophony Agency)
- GIPI (Global Internet Policy Initiative) on Internet Policy Issues in Algeria: a one-year pilot program in Algeria that will focus on reform of the legal and policy framework for Internet usage in the country.

Funding for the project is being provided by the Middle East Partnership Initiative (MEPI) of the U.S. Department of State.