

# TUNISIA

## Tunisia ICT Status and International Cooperation in ICT Development

# ASIA

# AGENDA

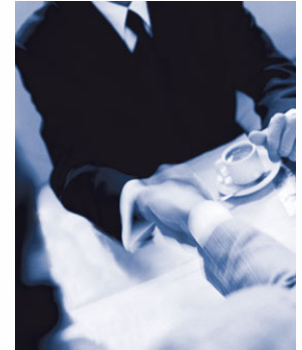
- 1 Introduction
- 2 National ICT Strategy
- 3 International cooperation in Tunisia
- 4 International Cooperation and The WSIS
- 5 Regional cooperation in globalization era

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- **International cooperation among all stakeholders is vital for ICT development**
- **the strengthening of international cooperation and solidarity aimed at enabling all countries to develop ICT infrastructure and ICT-enabled services that are viable and competitive at national and international levels.**
- **Meeting the challenges in globalization era : the importance of strengthening regional and sub-regional cooperation among countries**



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**An ambitious strategy for the development of ICTs was established, based on the four following main lines:**

- **Legal and statutory framework**
- **Infrastructures for the knowledge economy**
- **Capacity Building Plan**
- **Promotion of the private sector**





## Legal and statutory framework

### ● A developed institutional framework :

Telecom reform : Telecommunication Act [www.infocom.tn](http://www.infocom.tn)

- **Regulation organs:** National Telecommunications agency, National agency of frequencies, National agency of electronic certification, Computer security agency

- **Operators and specialized institutions :** 2 mobile telecom Operators, 2 VSAT Operators, TV broadcasting office, Telecom research and studies center, Central technological pole in Tunis linked to regional cyber-parks specialized in ICTs.

Electronic Business & interchange Act (Aug., 2000), National certification authority ([www.certification.tn](http://www.certification.tn))  
IT Security Act (Jan., 2004) & National IT Security Agency (ANSI)

### ● e-commerce :

- Recognition of electronic documents and signatures
- Electronic payment platform : bank cards, electronic purse : e-dinar
- Electronic signature platform : PKI infrastructure

Personal Data Protection Amendement of the Constitution (May, 2002), Bill in Process  
Intellectual Property Rights : 1994 Law on IPR, under Revision





## Infrastructure: Fixed Telephony Network

- 100% digitalized fixed telephone network offering POTS and ISDN services
- 1.250.000 telephone fixed lines
- 34.800 subscribers in the rural areas
- 11.348 Public Telephone Centers "Publitels" serving more than 38.000 terminals (payphones and faxes).
- 12,49 lines / 100 inhabitants as a telephone density, expected to reach 24 lines / 100 inhabitants at the end of year 2009.
- Network operators: 2
  - Tunisie Telecom (PSTN)
  - Divona Telecom ( VSAT) since 2004
- International IP links for call centers







## Infrastructure: Mobile Telephony

- Two digital cellular mobile telephony networks based on GSM standard with a total of 5.6 millions subscribers
- Operators : 2 ( penetration rate : 56%)
  - Tunisie Telecom since 1998 with an initial capacity of 50.000 lines ( penetration rate : 34%)
  - Tunisiana (Orascom ) since 2002 ( penetration rate : 22%)
- Market shares :

	2002		2004		2006	
	Suscribers	%	Suscribers	%	Suscribers	%
Tunisie Telecom	561434	100	2970998	69,92	3400000	60,10
Tunisiana	0	0	1278047	30,08	2257662	39,90

- GPRS and MMS services introduced in 2005
- 3G Trial Networks (UMTS) were set up in 2005 for the second phase of the WSIS covering Tunis, Hammamet and Sousse





## Infrastructure: Internet & Data Transmission

- International bandwidth supplied by Tunisie Telecom to ATI:

- 380 Mbits/s at the end of 2004
- 900 Mbits/s in 2006
- 2.5 Gbits/s in 2009



- A data transmission network using various technologies (LS, ADSL, Frame Relay, Vsat...)



- Internet Service Providers:12

- 7 community ISP (Health, resarch, education, universities...)
- 5 general ISP



- Internet public centers : 305



- Internet surfers: 1 Million





## Accessibility

- **Basic Education : ICT in all schools (primary and secondary) :**  
One PC per classroom by 2009
- **Internet culture dissemination :**
  - Internet and Computer Bus Labs
  - Centers for children and specific groups
- **360 Community access centers**
- **A Community Access Center per village by 2009**
- **A Children Computer Center per Governorate (25)**
- **«Family PC» program**
- **An e-mail address for each citizen by the end of 2009**

[www.internetbus.tn](http://www.internetbus.tn)

[www.cnipe.nat.tn](http://www.cnipe.nat.tn)

[www.jeunesse.tn](http://www.jeunesse.tn)

[www.pcfamilial.tn](http://www.pcfamilial.tn)





## Capacity Building

### ● Scientific and Technological Research :

- 1% GDP in 2004
- 1.25% GDP by 2009



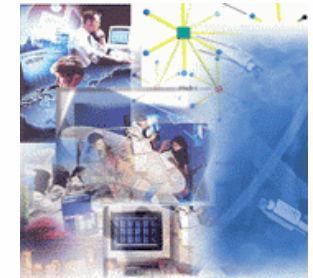
### ● Education :

[www.mes.tn](http://www.mes.tn)

- 10% of the students are in ICT branches, 50 thousands by 2009
- ICT compulsory in all fields

### ● Continuous and Vocational Training : [www.edunet.tn](http://www.edunet.tn)

- Public and private institutions
- « Passport for the Information Society » Program



### ● Additional training :

[www.emploi.nat.tn](http://www.emploi.nat.tn)

- Better chances for employment : (National Employment Fund)



## Human Resources Development



COUNTRY	WORLD RANK	SCORE
FRANCE	4	6.1
RUMANIA	5	6.1
HUNGARY	11	5.7
<b>TUNISIA</b>	<b>13</b>	<b>5.7</b>
GERMANY	20	5.5
CZECH REP	29	5.3
SPAIN	32	5.2
ITALY	33	5.2
POLAND	34	5.2
MOROCCO	37	5.2
TURKEY	51	4.7

Human Resources qualification , 2004 Davos World Economic Forum



## ICT Private sector Promotion

- **Tunisia: A regional pole for promising sectors**
  - A greater role for promising and innovative activities and services, with such activities constituting 18% of the GDP in 2009
  - Encouragements for young people establishing projects in the field of communication technologies
  - Reinforcing the national network of teleworking centers around El-Ghazala Technological Park, through the establishment of a teleworking center per Governorate by the end of 2009
  - Reinforcing e-government by deploying theGov Intranet and updating applications
  - Tunisia Host The ICT Arab Organisation Created in April 2006
- **Incentives & Financial support :**
  - RITI : Venture Capital fund for ICT Innovating projects
  - Tax exemption for venture capital institutions
  - Grant of 50% of the total investment amount for ICT business projects in villages
  - Income Tax relief for exclusively exporting companies over a 10 year period
  - Corporate income tax relief proportional to exports turnover for partially exporting companies



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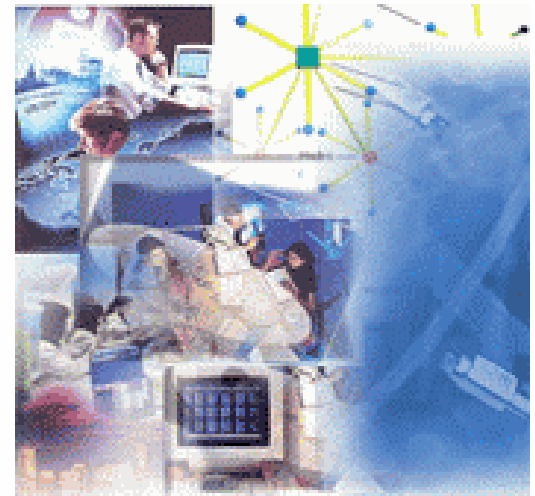
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## Multilateral cooperation

During the last few years, Tunisia strengthened efforts to integrate the Knowledge Globalization, tightening ties with regional groups and International Organisations acting in the ICT field like :

- The United Nations Organization
- International Telecommunication Union
- Universal Postal Union
- European Union
- The World Trade Organization
- The World Bank
- The Arab League
- Arab Maghreb Union
- RASCOM
- PAPU
- Community of Sahel and Sahara States...







## Triangular cooperation

I believe that the appropriate role for Tunisia in the continuing development of the information society in Africa should be the role of leadership.

Dr. Jerome Karle  
Nobel Laureate

- Tunisia acquired a rich experience in telecommunication, postal services, implementation and management of technological parks.. and has engaged in helping Less Developed Countries reduce the digital divide separating them from the rest of the world. Tunisia has become an ICT Regional Center.
- The favorable geo-strategic position in Africa and the Middle East, combined with expertise and know-how is helping it become a regional Hub bridging the gap between Developed Countries and LDCs, and responding to LDCs specific needs in technology transfer, training, and development
- A triangular cooperation has been initiated between Tunisia, the African countries and Korea, the European Union, Japan and Canada.





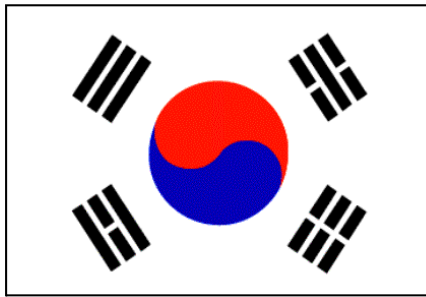
## TUNISIA KOREA cooperation

- Despite their geographical distance, Tunisia and Korea have old excellent relations which were established at the diplomatic level since March 31, 1969
- Korea is also n 1 in the world in terms of broadband internet service penetration rate, CDMA handset market dominance, TFT-LCD's market dominance as well as several other IT products.
- Korea is also seen worldwide as a leader and a focal point of knowledge, contributing substantially in scientific researches and innovation,
- Tunisia is keen to take benefit from the rich and successful experience of Korea in ICT's sector





- **Tunisian Minister of Communications Technologies, Mr. Montasser Ouaili, paid recently three visits to Korea, respectively on November 2004 and on May 2005 and 2006.**
- **A Memorandums Of Understanding has been signed in order to reinforce bilateral cooperation, enhance cooperation between private sector and research and training centres**
- **Creation of a working team in charge of the elaboration of a cooperation program and ensure its follow up.**





## Case Study : Project 09-TUN/98/01

- **ITU/Tunisia (CERT- Telecommunication Research and studies centre)**
- **Project : 09-TUN/98/01**
- **Objectives :**
  - **Equipment plan :**
    - **Studies for national networks deployment**
    - **Technical acceptance of equipments**
    - **Equipments homologation**
  - **Strategic Plan :**
    - **Elaborating strategic studies**
  - **A reference center for studies in the regional scale**





## Case Study : Project 09-TUN/98/01

### Project Outcomes :

#### Set Up of a type approval lab

#### The CERT has developed necessary Expertise to ensure :

- Studies for all operators and all technologies
- Planning and dimensioning of GSM Networks
- Evaluation of QoS for GSM networks
- Strategic studies :

- Voice over IP technologies
- Maghrebin Telecommunication satellite
- Internet Qos

#### Piloting the project of installation of the Tunisian experimental mobile third generation network UMTS

#### Preparation of Major international events

#### A reference center for studies in the regional scale

- Mali, Tchad, Senegal...
- Node of the excellence center for the arab region





## Case Study : CERT - DGACPT

- **(CERT- Telecommunication Research and studies centre/ DGACPT- Regulator of Republic of Congo)**
  - **Elaboration of the new national frequency plan for the digital radio-broadcasting (bands III, IV and V) (in accordance with the recommendations of the intermediary session of the regional conference about radio-communications (Geneva 2004)**
    - **Digital television: DVB-T (fixed, mobile or portable reception)**
    - **Digital radio T-DAB**
  - **Set up of a system of automated management and control of the radioelectric spectrum**

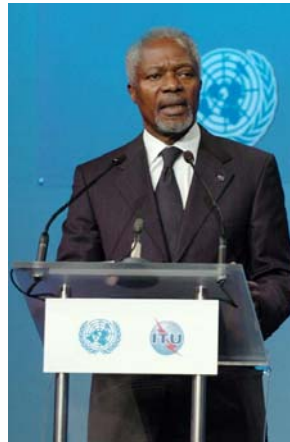


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- **Tunisian Initiative (Minneapolis 1998)**
- **ITU council decision to organize a summit in two phases (2001)**
- **Phase 1 ( Geneva Dec 2003 )**
  - **Adoption of a Declaration of Principles and Action Plan**
- **Phase 2 (Tunis Nov. 2005 )**
  - **Adoption of Tunis Commitment, Tunis Agenda for the Information Society**







## Cooperation in WSIS Texts

### ● Plan of Action *Document WSIS-03/GENEVA/DOC/5-E*

#### C11. International and regional cooperation

International cooperation among all stakeholders is vital in implementation of this plan of action and needs to be strengthened with a view to promoting universal access and bridging the digital divide, *inter alia*, by provision of means of implementation.

- a) Governments of developing countries should raise the relative priority of ICT projects in requests for international cooperation and assistance on infrastructure development projects from developed countries and international financial organizations.
- b) Within the context of the UN's Global Compact and building upon the United Nations Millennium Declaration, build on and accelerate public-private partnerships, focusing on the use of ICT in development.
- c) Invite international and regional organizations to mainstream ICTs in their work programmes and to assist all levels of developing countries, to be involved in the preparation and implementation of national action plans to support the fulfilment of the goals indicated in the declaration of principles and in this Plan of Action, taking into account the importance of regional initiatives.

“Cooperation” was used 26 times





## ● Declaration of Principles *Document WSIS-03/GENEVA/DOC/4-E*

### 11) International and regional cooperation

60. We aim at making full use of the opportunities offered by ICTs in our efforts to reach the internationally agreed development goals, including those contained in the Millennium Declaration, .....

61. In order to build an inclusive global Information Society, ..... Therefore, while appreciating ongoing ICT cooperation through various mechanisms, we invite all stakeholders to commit to the “Digital Solidarity Agenda” set forth in the Plan of Action. ....

62. Regional integration contributes to the development of the global Information Society .....

63. We resolve to assist developing countries, LDCs and countries with economies in transition through the mobilization from all sources of financing, .....

64. The core competences of the International Telecommunication Union (ITU) in the fields of ICTs—assistance in bridging the digital divide, international and regional cooperation, .....

“Cooperation” was used 13 times





## ● TUNIS AGENDA FOR THE INFORMATION SOCIETY

*Document: WSIS-05/TUNIS/DOC/6(Rev.1)-E*

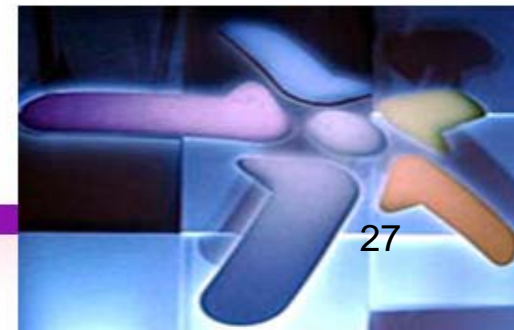
9. We call upon the international community to promote the transfer of technology on mutually agreed terms, including ICTs, .....to take advantage of technology in their pursuit of development through, inter alia, technical cooperation and the building of scientific and technological capacity.....

69. We further recognise the need for enhanced cooperation in the future, to enable governments, on an equal footing, to carry out their roles and responsibilities, in international public policy issues pertaining to the Internet, but not in the day-to-day technical and operational matters, that do not impact on international public policy issues

71. The process towards enhanced cooperation, to be started by the UN Secretary-General, involving all relevant organisations by the end of the first quarter of 2006, will involve all stakeholders in their respective roles, will proceed as quickly as possible consistent with legal process, and will be responsive to innovation. Relevant organisations should commence a process towards enhanced cooperation involving all stakeholders, proceeding as quickly as possible and responsive to innovation. The same relevant organisations shall be requested to provide annual performance reports.

“Cooperation” was used 28 times

(9,18,27,40,41,45,47,51,53,54,69,71,83,86,88,90,91 and 119)





● **TUNIS COMMITMENT** *Document WSIS-05/TUNIS/DOC/7 -E*

9. We reaffirm our resolution in the quest to ensure that everyone can benefit from the opportunities that ICTs can offer, by recalling that governments, as well as private sector, civil society and the United Nations and other international organizations,.....

16. We further commit ourselves to evaluate and follow up progress in bridging the digital divide, ..... including the Millennium Development Goals, and to assess the effectiveness of investment and international cooperation efforts in building the Information Society.

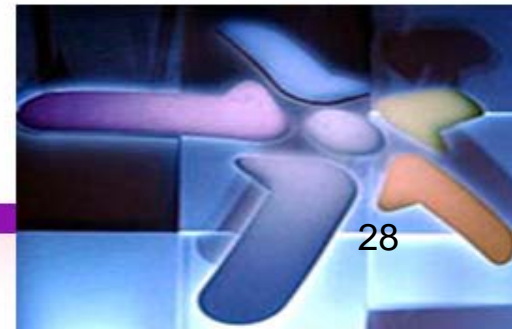
30. Recognizing that disaster mitigation can significantly support efforts to bring about sustainable development and help in poverty reduction, we reaffirm our commitment to leveraging ICT capabilities and potential through fostering and strengthening cooperation at the national, regional, and international levels.....

31. We commit ourselves to work together towards the implementation of the Digital Solidarity Agenda, as agreed in paragraph 27 of the Geneva Plan of Action.....

33. We acknowledge that, while technical cooperation can help, capacity building at all levels is needed to ensure that the required institutional and individual expertise is available.

37. We are convinced that our goals can be accomplished through the involvement, cooperation and partnership of governments and other stakeholders.....

“Cooperation” was used 7 times



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## Need of Regional cooperation in Africa

There are a wide variety of economic and non-economic reasons for a horizontal cooperation among countries in Africa.

- **The increasing digital divide,**
- **The unsatisfied demand for ICT services,**
- **The capacity limitations of individual countries.**

A horizontal cooperation makes capitalizing on combined productive capacity, economies of scale and scope possible. It makes dealing with regional disparity easier.



## Landscape of cooperation in Africa

- **The level of Pan African bodies like the African Development Bank (ADB), African Union (AU), African Telecommunications Union (ATU) and Economic Commission for Africa (ECA).**
- **Regional initiatives such as the Regional African Satellite Communication (RASCOM), the New Partnership for African Development (NEPAD) and the E-Africa Commission**
- **Regional Economic Communities (RECs) like the Common Market for Eastern and Southern Africa (COMESA), the Arab Maghreb Union (AMU), the East African Community (EAC), the Economic Community of West African States (ECOWAS), the Economic Community for Central African States (CEMAC), the Indian Ocean Commission (IOC), the South African Development Community (SADC) and the Inter-Governmental Authority on Development (IGAD).**
- **Thematic institutions like the African Advanced Level Telecommunications Institute (AFRALTI) and L'Ecole Supérieure Multinationale des Télécommunications (ESMT)**



## Gaps for efficient cooperation in Africa

- **The effort towards regional cooperation and integration in Africa has a fairly long history. From the Congo Basin Treaty that emerged from the Berlin conference of 1884 to the South to the treaty that established the African Union in 2001, the African continent has been consummated with regional cooperation and integration.**
- **The World Bank estimates that there are more than 200 regional cooperation organizations in Africa of which more than 80% are inter-governmental.**
- **As a result, there has been a proliferation of schemes operating within the same geographic area with overlapping membership and duplication of mandates, which made regional investment, trade and political and economic integration rather slow.**





## Towards an efficient cooperation

- **implement appropriate regional, sub regional and national programs which can bring potential benefits to the members.**
- **strengthen intra regional and inter regional cooperation on various issues of interest through appropriate sub regional and regional programs and inter regional dialogue.**
- **establish closer relationships with funding agencies for resource mobilization and for developing joint programs.**
- **strengthen relationships with concerned UN agencies and other international, regional and sub-regional organizations for achieving synergy of efforts.**