

AISI-Connect National ICT Profile TUNISIA (TN)

GENERAL DATA	ICT-INFRASTRUCTURE	ICT POLICIES
Capital: Tunis	Fixed lines (K) '98: 752	Competition in local loop: Monopoly
98 Population (M): 9.34	97-98 % Fixed Line Growth: 0.15	Competition in telephone terminals: Yes
Currency: TND	98 Mobile Lines (K): 39	Independent regulator: No
Exch rate (/US\$): 1.43	Mobile Line Growth (%):	Private Wireless Data allowed: No
Currency Stability:	Cities with Internet POPs: 7	Independent Internet VSAT Allowed: No
97 GDP US\$/person: 2144.0	Local Call National Internet: Yes	VSAT License Fees:
97 Total GDP (\$B):	Dialup Internet subscribers: 30000	Satellite Phone access: No
Local Stock Exchange: No	International Bandwidth (Kbps): 7020	Universal Service Obligations:
Personal Safety: 4	Internet Hosts: 53	IAP License Fees (\$/yr):
Political Stability:	Internet domains:	Private Phone Kiosks: No
Tertiary ICT Students:	Dialup Internet Cost 20hrs/mnth (\$): 30	Public VOIP Allowed: No
ICT Training seats:	64K Local Internet link (\$/mnt):	Business Ownership Rules:
ISDN: No	64K Internat Internet Link (\$/mnt):	Repatriation of Profits Rules:
VPN Services: No	Local phone call cost (US\$/hr: 1.5	Restrictions on market entry:
UNDP Human Devel Index:	Monthly tel line rental (\$/mnt):	Export Credit Guarantees:
.	Telephone waiting time/Wait List:	.
.	Internet Access Providers 5	.
.	Mobile Operators:	.
.	Fixed Line Telecom Operators:	.

[Key to table values](#) All figures above in US Dollars (\$)

ICT Profile:

Internet:

A new organisation - the Agence tunisienne internet (ATI) was recently set up to manage internet services in the country as part of its mandate to catalyse Tunisia's 'Information Society'.

<http://www.ati.tn/> Lamia Chaffai Sghaier lamia@ati.tn

Established in '96, ATI took over operation of Tunisia's national Internet backbone and the .tn top-level domain (TLD) from the **Institut de recherche scientifique en informatique et**

télécommunication (IRSIT). ATI does not provide access to the end-user but provides access to the various suppliers who perform this function. Seven organisations manage Internet access for various public sectors:

Agence tunisienne internet (ATI) for public institutions

Institut de recherche scientifique en informatique et télécommunication (IRSIT) for research centers

Centre de Calcul Khawarezmi (CCK) for universities

Institut National du Bureautique et Micro Informatique (INBMI) for secondary and primary schools (EDUNET)

Centre Informatique du Ministère de la Santé Public (CIMSP) for health establishments

Institution de la Recherche et de l'Enseignement Supérieurs Agricoles (IRESA) for agricultural institutions

Tunisie Telecom for telecommunication agencies

There are two ISPs providing private sector and personal access: **Planet Tunisie** and **3S Global Net** (Standard Sharing Software):

ATI operates POPs in seven towns across the country and provides international connectivity via Sprint to the US and via Telecom Italia to Italy. Internet access is available via a local call across the whole country.

The majority if not all research centers, education institutions, health institutions, governmental institutions and ministries (<http://www.ministeres.tn/>), private companies are connected to the Internet and the push for increased home use is now on.

In 1998 the government announced that up to 80% of IRSIT would be open for purchase by the private sector.

An index of Tunisian web sites called Nadhor is hosted multimedia company MRS at:

<http://www.tunisienet.com/> From the Telecom Observatoire:

"Malgré des baisses importantes depuis 1997 du prix des abonnements Internet et de la minute de connexion facturée par Tunisie Télécom, Internet reste en Tunisie 18 fois plus chers qu'en France. Profitant des caravanes informatiques (cf brève du 02/09/99 «Caravanes informatiques en Tunisie») qui sillonnent actuellement le pays (grande manifestation de sensibilisation des hommes d'affaires sur les avantages des nouvelles technologies de l'information, opération se déplaçant de gouvernorat en gouvernorat jusqu'à octobre), le fournisseur privé d'accès Internet PlaNet Tunisie compte lancer une promotion de grande envergure pour décider les personnes encore hésitantes. Il projette d'annoncer 50% de réduction sur les abonnements d'un an contractés pendant la dernière semaine des caravanes Internet. (C. Chahed, c.chahed@lemel.fr) "

Telecommunications:

The telecommunications sector is regulated by the **Ministry of Communications**.

The PTO and sole supplier of basic telecommunications services is the **Office national des télécommunications** (ONT), also called **Tunisie Télécom**.

The importance of the telecommunications network for socio-economic development is recognized by the government. It has charged the PTO with developing an advanced and pervasive network and also given it a wide range of public responsibilities, such as to contribute to the development of

scientific research in the area of telecommunications. Liberalization of the sector is still being discussed.

The 9th economic development plan aims to install 450 000 new lines to connect 800 000 new subscribers and complete its creation of a 300 000 subscriber GSM mobile telephone network and tender for a second GSM licensee. Siemens, Alcatel and Ericsson are the major suppliers in the telecoms sector.

The terms of the mandatory Internet contract gives the government the right to inspect the users' premises to ensure compliance with the contract. Rates have fallen to as low as 25 dinars /month.

The broadcast media are operated directly by the Tunisian Broadcasting Authority (ERTT) and private broadcasting is not permitted.

Tunisia is connected to a number of marine fibre optic telecom backbones, including a dedicated cable to Italy, the SEA-ME-WE and TAT networks. Due to its proximity to Europe and other Arabic countries it is able to make use of Eutelsat and Arabsat, as well as Intelsat for satellite communications. Terrestrial cable links connect Tunisia to Algeria, Libya and Morocco. An international ISDN link with Germany is in place and Tunipac provides X.25 data services for 1500 customers. A GSM cellular telephone service was started in 1998. is under development.

Tunisie Telecom has been expanding the telecom network in the rural eastern half of the country, and has been upgrading existing switches and exchanges. Tunisia's domestic transmission network presently makes extensive use of microwave radio links, and also uses microwave links to communicate with its immediate neighbours, Algeria and Libya. For other international communications, Tunisia relies on satellite networks and is a member of ARABSAT and INTELSAT.

Nationwide frame-relay and ATM services are being planned.

Communication Costs:

The cost of Internet access is 21 Dinars per month (unlimited access), plus 40 Dinars for software and installation. (1 Dinar = 0.8USD)

Calls to the Internet are a fixed price throughout the country regardless of the distance dialled - 0.15FF per minute.

National ICT Activities:

Following a presidential initiative, ATI was created to promote Internet services in Tunisia. (see above).

A national commission for electronic commerce and EDI was created in November 1997 to plan the infrastructure for electronic commerce in Tunisia which should be operational by the end of 1998. Its workgroups are studying different aspects of electronic commerce (legal, financial, security etc). During a conference held in March 1998, recommendations were submitted to the government and six pilot projects have been defined.

Six pilot projects (<http://www.ecom.tn>) were launched and put into operation in May 1999. They are a set of virtual stores offering a wide range of tunisian products, such as crafts, goods, clothing, foodstuffs, tourism packages, hotel reservations.

During a cabinet meeting held in mid May 1999, major decisions aimed at boosting electronic commerce in Tunisia were taken. They include:

1. Revision of procedures connected with foreign trade with a view to boost exports via the Internet

network and to facilitate the action of electronic commerce operators.

2. Launching of pilot projects that will open virtual shopping centers to export tourist products, handicraft and agricultural and industrial goods.
3. Implementing of a "strategy of awareness" and training, via the organization of seminars and training courses in all regions.
4. Further developing the national communications network with a view to adapting it to the demands of electronic exchanges via information networks.
5. Putting the finishing touches to legal framework regulating this activity so that Tunisian law will be in tune with this new mode of commercial transaction, particularly as regards to legalization of the electronic means of identification (digital signature and certification) and breaches of trust.
6. Creation of a permanent ministerial committee, supported by a technical commission of experts and specialists, to guarantee permanent follow-up of these recommendations and ensure coordination among all partakers.

EDI projects are being studied in various sectors such as banking, textiles and telecommunications. One of the main EDI projects is the "Single Batch" aimed at facilitating foreign trade procedure by setting up an EDI server center to allow various agents (trade organizations, customs, banks, forwarders etc...) to exchange foreign trade operations documents. Moreover, a Web/EDI interface will allow importers, exporters and forwarders to carry out foreign trade operations via the Internet network without needing EDI expertise.

The Institut de recherche scientifique en informatique et télécommunication (IRSIT). IRSIT has a long history of ICT involvement and has established Réseau national pour la recherche et la technologie (RNRT) in '93 which connects 22 research institutions in Tunisia. RNRT is being developed in conjunction with the **Secrétariat d'État à la recherche scientifique et la technologie** (SERST). IRSIT is also the national focal point for the regional arab network RAITNET assisted by the **Centre de la Ligue arabe**. INRIA has an active collaboration programme with IRSIT in a number of areas including the establishment of RNRT. <http://www.irsit.rnrt.tn/> or Ext.rel@irsit.rnrt.tn

The **Centre de Calcul Khawarezmi**, Campus Universitaire Tunis, is responsible for the universities network - the Réseau national Universitaire (RNU) which connects 87 higher academic institutions, including 21 via leased line.

INBMI's Education Network EDUNET has connected 350 (87%) of the secondary schools, and 50 technical schools. It aims to connect 500 primary schools in 1999. From the Telecom Observatoire: D'après une récente dépêche de l'agence Tunis Afrique Presse, «tous les lycées en Tunisie (environ 400) ont été connectés pendant l'année scolaire coulée au réseau Internet». Maintenant, les autorités tunisiennes ouvrent le chantier des écoles primaires et des collèges, apprend le ministre de l'Education, Abderrahim Zouari, lors d'un point de presse tenu la semaine dernière à Tunis. Ainsi, durant l'année scolaire 1999-2000, «d'autres efforts seront déployés en vue d'assurer la connexion de 250 écoles, soit 40% des établissements de cette catégorie». «Plus de 1700 comptes de messagerie sont actuellement ouverts au profit des enseignants et des responsables éducatifs», ajoute la dépêche de la Tap, en précisant que «ce nombre devra dépasser 5000 durant l'année scolaire en cours». D'autre part, la rentrée 1999-2000, l'enseignement de l'informatique sera généralisé au niveau de la 3e année secondaire des sections technique et économie et gestion. Enfin, note la dépêche, «la généralisation à l'ensemble des sections est prévue durant l'an 2000-2001». (C. Chahed, c.chahed@lemel.fr)

CIMSP's Health Network RNS (**Reseau National de Sante**) provides connectivity to 64 hospitals, including all university Hospital centers and 10 regional hospitals. It aims to connect all hospitals by the end of 1999.

The National Agricultural Network (AGRINET) connects 14 higher agricultural institutes as well as

7 regional research centers. It also provides connectivity to the various departments of the Agriculture Ministry as well as its various representations throughout the country.

Centre de documentation nationale (CDN) is the IIP focal point for UNESCO, has developed a guide to information services in Tunisia and a number of databases including ITARAT on government, and ASSO on associations. CDN has also developed biographic data on informatics professionals. CDN is also the sub-regional focal point for La Francophonie's BIEF programme and is developing a database server covering Djibouti, Égypt, Lebanon, Marocco, Mauritania and Tunisia with 25 local partners and the focal points in the 5 other countries.

The **Centre national universitaire de documentation scientifique et technique** (CNUDST) has a broad mandate to develop national policy in this area and to support the exchange of information in spheres of scientific research and technical and higher education.

Responsible to the **Ministère de l'Enseignement supérieur et de la documentation scientifique et technique**, CNUDST is the focal point for one of the 12 centres nationaux pilotes sectoriels (CNPS), each of which will build sectoral networks coming together as the Réseau national d'information et de documentation (RNID). CNUDST will be responsible for the Réseau universitaire d'information (REUNI) and also assists with the provision of access to CD-ROM and online databases.

The **Centre national de documentation agricole** (CNDA) provides access to agricultural databases and is the CNPS for its sector.

Other CNPS are:

- Centre d'études et de documentation pour le développement culturel (CEDODEC).
- Centre de recherche, d'études, de documentation et d'information sur la femme (CREDIF)
- Centre national d'information de la jeunesse (CNIJ)

The **Conseil national des archives** is responsible for national archives policy and comprises 8 representatives from the principal ministries, 3 researchers, a representative from the association of archivists, the Premier Ministre and the **Directeur général des Archives nationales tunisiennes**. The national Archives have financial autonomy under the Premier ministre. The archives are in the process of computerisation and linking to Minitel. Two databases are planned initially - Kitab (books, documents and monographs), and Dhakra (mémoire).

The **National Library** also serves as the public library system and falls under the **Ministère de la Culture**. Bibliographic databases have been established using CDS-ISIS and there is a project to digitise ancient documents and develop catalogues of manuscripts.

Each university has a **bibliothèque universitaire centrale** (BUC) which is responsible for all local documentary activities and is part of a national electronic network of BUCs in the country.

The **Institut supérieur de documentation** (ISD) carries out training of documentalists.

The **Conseil supérieur de la communication** is responsible for national policy on information and documentation.

The **Centre national de l'informatique** (CNI) has established a bilingual (arabic-french) email system with assistance from IDRC.

The **Ministry of Environment** is being assisted by the UNDP's SDNP project to improve access to environmental and sustainable development information.

The **Centre National de l'Information Scientifique et Technique** (CNIST) provides access to videotex databases.

The **Ministère des Affaires Culturelles** has established the TOURATH database on national cultural heritage.

The **Ecole Nationale des Sciences de l'Informatique** (ENSI) has doctoral programme in 'informatique'. ENSI is collaborating with the **Faculte des Science** (FIS) and INRIA in the delivery of a doctoral programme in informatics (CFDI).

Ecole Nationale d'Ingenieurs de Tunis (ENI) hosts the Conference Internationale des Formations d'Ingenieurs et Techniciens d'Expression Francaise, supported by AUPELF-UREF.

The **Institut Supérieur Technique de Gabes** (ISTG) has an informatics unit.

At the **Faculte des Sciences de Tunis** (FST) one of the three programmes offered is the training of Informatics engineers.

The **Centre Syfed de Tunis** established by AUPELF-UREF/REFER has full Internet connectivity provided by ATI.

The **ORSTOM/RIO** node has a leased line Internet connection to ATI.

There are a number of other institutions in Tunisia concerned with ICTs, all of which have Internet connectivity:

Direction Générale de l'Informatique
Secrétariat d'Etat à l'Informatique
Conseil Supérieur de l'Informatique et des Télécommunications
Conseil Supérieur de la Recherche
Centre d'Études et de Recherche en Télécommunications
Institut National du Bureautique et Micro Informatique
Institut national de la recherche scientifique et technique
Centre National de Teledetection
Ecole Normale Supérieure d'Enseignement Technique

Societe de l'Informatique, de Management et de Communication (SIMAC)

General information about Tunisia is provided through the Tunisia Online.

<http://www.tunisiaonline.com/>

Tunisian TV and radio are also on the web: <http://www.radiotunis.com/> and <http://www.tunisiatv.com/>.

Tunisian companies are using the web to promote their products and services, for example through Invest in Tunisia - <http://ww.investintunisia.tn/>

A Y2K Millenium Bug site has been set up at <http://www.an2000.tn/>

The **CEPEX Centre de promotion des Exportations** makes available on its site a database "Tasdir Net" of Tunisian exporting companies. <http://www.cepex.nat.tn/>

Travel and tourism is also being promoted through the web - <http://www.tourismtunisia.com/> and many Tunisian hotels and restaurants are online - <http://swww.abounawas.com.tn/>,

<http://www.orangers.com.tn/>, <http://www.ahlan.tourism.tn/essaraya>

Organisational Activities in the ICT Sector:

Arab Satellite Communications Organisation (ARABSAT) Formed in 1976, it was not until 1985 that ARABSAT launched its first two satellites. Unfortunately it was discovered at the time that only three groundstations were ready to start operations. This caused considerable financial difficulties to the project for some time. Now 18 Arab countries make use of the satellite services including a half dozen in Africa. The satellite covers the whole of Africa in the S band and north Africa in the C band. Despite its initial financial problems, ARABSAT still maintained its commitment to reducing costs for the broadcast media by leasing transponders for TV programme exchange at a fixed annual rate, regardless the number of broadcasts or participating earth stations. Also, four transponders are provided to transmit 20 TV stations in digital compressed mode at no extra charge.

El Taller Active in assisting in establishing local NGO networking capabilities.

Institut Massmedia Studies the impact of new ICT technologies.

Regional Institute for Informatics and Telecommunications (IRSIT) Created in 1986, IRSIT promotes and develops the potentials and capacities in the fields of informatics, telecommunications and associated technologies. Relevant research and services include: Text-to-Speech synthesis, computer aided translation, Arabic/Latin VideoTex, Internet Access, telephone network, Arab character recognition, management and multimedia development tools. ext.rel@irsit.tn

Tunisian Ministry of Communications Responsible for national government ICT policies.
<http://www.pttnet.tn> communications@ministeres.tn

Agence Tunisienne d'Internet The government agency charged with managing the national Internet backbone. This currently operates at 7Mbps and will be upgraded to 34Mbps by end of 2000. Activites:

- gérer le domaine TN.
- assurer la veille technologique
- offrir les accès Internet à tous ceux qui le demandent
- établir le cadre juridique et aider à l'implantation et à la mise en place de fournisseurs de services Internet (FSI ou ISP)
- réunir autour d'elle toutes les entreprises spécialisées dans le domaine de l'informatique et du développement afin de régler le service et préparer un plan d'action commun.
- héberger dans ses machines des serveurs et des pages Web
- créer, dans ses machines, des sites miroirs pour faciliter la navigation et minimiser l'utilisation de la bande passante allouée aux services Internet
- programmer des cycles de formation
- organiser des manifestations diverses : séminaires , forums , journées portes ouvertes, salons, cyber spaces ... etc ... ATI Recently launched a site to announce government tenders - <http://www.appel-d-offres.tn/> and another one on telecenters - <http://www.telecentres.tn/> or contact M. Nouredine Bouderriga (E-mail: <http://www.ati.tn/> Lamia Chaffai lamia@ati.tn

Planet Tunisie One of the two licensed commercial ISPs. <http://www.planet.tn/commercial@planet.tn>

Standard Sharing Software An IT company with one of the two commercial ISP licenses, the service is called the 3S Global Net. <http://www.gnet.tn> support3s@gnet.tn

[Aster Informatique Cybershop](http://www.cybershop.com.tn/) Ecommerce site. <http://www.cybershop.com.tn/>

[Banque centrale de Tunisie](http://www.bct.gov.tn/) <http://www.bct.gov.tn/>

[La Banque du Sud](http://www.banksud.com.tn/) Banque du Sud est la première à ouvrir le bal pour les banques de dépôt.
<http://www.banksud.com.tn/>

Source:

AISI-Connect database - <http://www2.sn.apc.org/africa> Telecom/GDP stats source: ITU/World Bank. Internet hosts:
Network Wizards

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