

AISI-Connect National ICT Profile

COTE D'IVOIRE (CI)

| GENERAL DATA | ICT-INFRASTRUCTURE | ICT POLICIES |
|-----------------------------|---|---|
| Capital: Abidjan | Fixed lines (K) '98: 170 | Competition in local loop: Monopoly |
| 98 Population (M): 16.2 | 97-98 % Fixed Line Growth: 19.0 | Competition in telephone terminals: Yes |
| Currency: CFA | 98 Mobile Lines (K): 91 | Independent regulator: Yes |
| Exch rate (/US\$): 727.0 | Mobile Line Growth (%): 153 | Private Wireless Data allowed: No |
| Currency Stability: -16.0 | Cities with Internet POPs: 2 | Independent Internet VSAT Allowed: No |
| 97 GDP US\$/person: 767.0 | Local Call National Internet: No | VSAT License Fees: |
| 97 Total GDP (\$B): 10.6 | Dialup Internet subscribers: 8000 | Satellite Phone access: No |
| Local Stock Exchange: No | International Bandwidth (Kbps): 512 | Universal Service Obligations: |
| Personal Safety: 3 | Internet Hosts: 629 | IAP License Fees (\$/yr): |
| Political Stability: | Internet domains: 233 | Private Phone Kiosks: No |
| Tertiary ICT Students: | Dialup Internet Cost 20hrs/mnth (\$): | Public VOIP Allowed: No |
| ICT Training seats: | 64K Local Internet link (\$/mnth): | Business Ownership Rules: |
| ISDN: No | 64K Internat Internet Link (\$/mnth): 500 | Repatriation of Profits Rules: |
| VPN Services: No | Local phone call cost (US\$/hr): | Restrictions on market entry: |
| UNDP Human Devel Index: 154 | Monthly tel line rental (\$/mnth): | Export Credit Guarantees: |
| . | Telephone waiting time/Wait List: | . |
| . | Internet Access Providers 5 | . |
| . | Mobile Operators: 2 | . |
| . | Fixed Line Telecom Operators: 1 | . |

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

ICT Profile:

Internet:

The recently liberalised market for value added services in Cote d'Ivoire has resulted in a number of companies moving to establish full Internet services. **AfricaOnline** and **Globe Access** are the biggest, while **NetAfric** and **InterGroupe** are smaller. **AF Net** is a recent strong new entrant into the market.

Recently a national and international Internet hub was established by the PTO - CI-Telecom - with

assistance from USAID's Leland Initiative. CI-Telecom may also begin providing Internet services to end users next year.

Communication costs:

Centre Syfed: free to non-profit organizations

Netafric - Email only: 10 email addresses for 20 000 setup fee, 40 000 /month, 3 000 /hour, 50 email addresses 150 000/month, 2 000/hour. Full Internet + 1 email - 3000/hour 8-18h, 1500/hour 18-8h, or 25 000/month for up to 15hrs, 2000/hr for supplemental hours, or unlimited connection for 35 000/month (45 000/month includes web page). Web hosting -120 000 FCFA/Year for 200Kb, 204 000 FCFA/Year for up to 10MB.

Telecommunications:

The telecommunications sector is regulated by an independent agency - the **Direction de la réglementation générale du ministère des Postes et Télécommunications**.

The telecom operator - **CI-Telecom** continues to retain its monopoly in basic services. In '97 CI-Telecom was fully privatized, with 35% of its shares being retained by the state and 51% being bought by France Cable and Radio (FCR). As part of the deal, France Telecom committed to invest CFA 250 billion (approximately USD 417 million) in the telecommunications network over five years which would see CI-Telecom add 290 000 lines to the existing 140 000.

National ICT Policy Activities:

Cote d'Ivoire has a relatively long history of national information technology policy development. In the late 70's the Government established the **Commission Nationale pour l'Informatique**, (CNI), the **Secretariat General l'Informatique**, (SGI) and the **Commissions Ministerielles de l'Informatique**, (CMI). It also set up the **Commission Nationale pour le Traitement de l'Information** (CNTI) to develop the first National Informatics Plan for '80-85. Shortly after it was dissolved, but research undertaken during the preparation of the 1986-90 Plan produced the following results:

84% of the population has no contact with informatics;

54% had never heard of informatics;

65% thought that informatics, though essential, led to unemployment;

75% were unaware of the institutional framework;

75% of enterprises or organizations had no informatics plan or a master plan;

45% of companies were not capable of being computerised.

The **Conseil National de Normalisation**, was established, replacing the Ivorian Standardisation Office, which had been in operation since 1981. The following activities were initiated but not yet brought to fruition:

A terminology for informatics products

A methodology for formulating master plans. The RACINES method was adopted

Models for files and specifications for information technology tenders

In 1997 an eleven member council, the Conseil National des Autoroutes de l'information (CNAI) was established to advise the Ivorian government on issues related to internet development in the country.

Procedures for computer technology bids for government contracts

The **Programme National de Gestion de l'Environnement et des Ressources Naturelles** (PNGERNAT) is being supported by UNDP's Sustainable Development Networking Programme (SDNP).

The **Ministère de l'Enseignement Supérieur, de la Recherche et de l'Innovation Technologique** is responsible for ICTs in the academic and research sectors; however, there seems to be no national policy on research and academic networking. The director of l'Information Scientifique et Technique, Mr Lamine Konate, who is also director of the **Centre informatique regional de Cote d'Ivoire** (CIRCI) which is the UNESCO project's RINAF focal point.

Centre Africain de Management et Perfectionnement de Cadres (CAMPC) staff attended ORSTOM/UNITAR networking course.

Ecole Nationale Supérieure de Statistique et d'Economie Appliquée (ENSEA). ENSEA has international relations with ENSAE in Paris, CESD in Paris, Centre de Recyclage de Munich, ISSEA in Yaoundé and IAMSEA in Kigali. ENSEA technical staff have attended the ORSTOM/UNITAR West and Central African Internet training course (which also included staff from INP-HB and CAMPC)

The **Ministère de la culture** has established 10 **Centres de lecture et d'animation culturelle** (CLAC) with support from ACCT/La Francophonie.

The **Service de documentation et d'informatisation** of the **Ministère de l'Agriculture et des Ressources animales** (MARA), has a number of ICT projects. MARA also operates the **Laboratoire National d'Appui au Développement Agricole**. Angba.

The **Institut africain pour le développement économique et social** (INADES) operates a computerized documentation centre and is the only African institution offering training for the IBISCUS programme to assist with using ICTs in documentation centres.

The following institutions have centres d'informatique: **Ecole Nationale Supérieure d'Ingenieurs** (ENSI), the **Ecole Nationale des Techniciens Supérieurs** (ENTS), the **Centre de Formation Continue** (CFC) and the **Ecole Préparatoire**.

The **Ecole Supérieure Interafricaine de l'Electricité** (ESIE) is a sub-regional institution which is becoming more involved in ICT issues due to the increasing importance of using the electricity grid for Internet infrastructure.

Other national institutions involved in ICTs:

Centre Ivoirien de Recherches Economiques et Sociales.

Institute Supérieur de Formation aux Metiers de l'Informatique (ISFMI)

Coopération en Centre de Recherche Agronomique pour le Développement (CIRAD)

Ecole Nationale Supérieure des Postes et Télécommunications (ENSPT)

Institut français d'Afrique noire (IFAN)

Ecole Normal Supérieur d'Abidjan (ENS)

Le Centre ivoirien de recherches technologiques (CIRT)

Le Centre d'enseignement et de recherche en communication (CERC)

Institut africain pour le développement économique et social (IADES)

Centre universitaire de formation permanente (CUFP)

Ecole nationale supérieure de statistique et d'économie appliquée (ENSSEA)

Université Nationale de Côte d'Ivoire

Organisational Activities in the ICT Sector:

AFRICOM Planning to establish an Internet service.

Centre Informatique Regional (CIR) UNESCO RINAF Focal point.

ORSTOM Côte d'Ivoire Operates a store and forward Internet service, and provides an email service via its RIO network. postmaster@abidjan.orstom.ci

Regional African Satellite Communication System (RASCOM) The Conference of African Ministers of Transport, Communications and Planning, held in 1976, identified the potential of satellite networks for Africa and resolved to undertake a major feasibility study on the issue. This study became the largest ever undertaken in Africa on telecommunications, involving 600 experts and a survey of 120 000 villages.

The study established the necessity for an African telecommunications satellite programme and RASCOM was borne, becoming operational in late 1993. With 41 African countries as signatories, the objectives of RASCOM are to rationalise existing satellite use in Africa, obtain better rates for its members through volume discounts, and to gain experience with management of satellite resources before preparing to launch their own dedicated satellite systems for Africa.

The first stage in this process has already begun with the pooling of international circuits leased by member countries from INTELSAT. This has released a substantial chunk of spare satellite capacity because many nations have made long term agreements with INTELSAT for more circuits than they currently require. By giving them over to RASCOM to resell in larger pieces, each provider of spare circuits is able to make revenue on otherwise unused capacity.

This strategy has enabled RASCOM to start its first commercial venture. In February 1994 a South African television bandwidth service provider - Orbicom - leased some of the liberated capacity from RASCOM for broadcast purposes. Orbicom plans to create a low cost TVRO (television receive only) network for the region which can be used by television and data broadcasters such as the BBC and M-Net. RASCOM will return a portion of the profits to its members in proportion to the amount of capacity they provided. RASCOM is a fully commercial entity and shares can be purchased by anyone, (at a minimum of \$50 000 and as long as overall control remains in Africa) but there is a

state signatory arrangement through which the bulk of the funds have been raised so far.

RASCOM's second achievement has been the switching of all African TOs to the use of the same INTELSAT satellite. This has been part of the process of freeing up spare capacity, but it has also yielded the further advantage that all African countries can now be reached through a single uplink. As a result the economies of scale for broadcast television and data services has been dramatically improved. With the further legalisation of satellite television reception (TVRO) equipment in Africa, it is likely that regional television and broadcast data services will now be able to find large enough markets to operate economically.

RASCOM now plans to launch a satellite of its own in 1997 in partnership with INTELSAT, but is also known to be developing a relationship with AT&T's Africa-One project.

West African Rice Development Association (WARDA) WARDA is considering upgrading its Internet connection which currently uses cc:Mail over X.25 to CGNET which results in communications costs of over USD 3 000 a month. To reduce this an Integrated Voice Data Network (IVDN) is being planned using a VSAT to provide a 64K leased circuit to the US.

ATTEL Cote d'Ivoire Spécialisée dans la conception, la fabrication et la distribution de matériel de télécommunication, d'équipement de réseaux et de sécurité informatique. Bay Networks, Nortel, SolSoft, CheckPoint, Dell. <http://www.telecom.ci/aviso/business/Attel.htm> attel@aviso.ci

Cote d'Ivoire Telecom The telecom operator continues to retain its monopoly in basic services. In '97 CI-Telecom was fully privatized, with 35% of its shares being retained by the state and 51% being bought by France Cable and Radio (FCR). CI-Telecom plans to add 290 000 lines to the existing 140 000 over the next 5 years. It operates an Internet service called Aviso. <http://www.telecomci.com/>

GS Com Afrique Communications equipment / services supplier gscomafrique@odaci.net

Intelec Communication Communications equipment / services supplier intelec@africaonline.co.ci

SIECMI Agents for Furuno and other telecoms equipment and services in Senegal, Seychelles, Guinee, Ghana and Cote d'Ivoire. mailto:siecmi@aviso.ci

Siemens Telecom Cote d'Ivoire Local office of the German telecom equipment and services provider. <mailto:%20siemens@africaonline.co.ci>

Ministère de l'Agriculture et des Ressources animales Services include the **Service de documentation et d'informatisation** and the **Laboratoire National d'Appui au Développement Agricole** which have a number of ICT projects. <http://www.africaonline.co.ci/AfricaOnline/societes/minagr/minagr.html>

AF Net A recent strong new entrant into the market by this local company is likely to push the existing suppliers into greater competition. <http://www.afnet.net/>

Africa Online Cote d'Ivoire Recently acquired subsidiary of UK based African Lakes. It was the first full Internet provider and is the largest with about 2000 users, also providing leased lines and web hosting services. <http://www.africaonline.co.ci/>

Focas Training and Internet Cafe operator <http://www.focas.ci/> focas@africaonline.co.ci

Globe Access The second largest ISP. A joint venture with French company **Omnes**, provides

leased lines, dialup accounts, web hosting and training. <http://www.globeaccess.ci/>

Institute Internet Une association déclarée à but non lucratif de Droit ivoirien et d'intérêt interafricain. <http://www.regietexas.com/institut> institut@regietexas.com

InterGroupe Provides a dialup service, leased lines, web hosting and training. <http://www.intergroupe.ci/>

NetAfric Provides dialup access and web page hosting. <http://www.netafric.ci/>

PrestaTech Cafe Provides a drop-in Internet Cafe service. pic@africaonline.co.ci

Tex@s Web content development company. <http://www.regietexas.com/> impact@regietexas.com

Bureau National d'Etudes Techniques et de Developpement Public sector support agency <http://www.bnetd.ci/> bnetd@bnetd.sita.net

Centre Suisse de Recherche Scientifique Jakob Zinsstag zinsstag@csrs.ci

Cour d'Arbitrage de Côte d'Ivoire The Court of Arbitration set up to help with domestic and foreign trade disputes. <http://www.caci.or.ci/> info@caci.or.ci

Aide Informatique IT and electronics supplier.

AXIS IT equipment supplier brou@axis.co.ci

CFCD-CI IT and electronics supplier. cfcdci@globeaccess.co.ci

CIPOLIN IT equipment supplier <http://www.telecom.ci/aviso/business/cipolin.htm> <mailto:20cipolin@aviso.ci>

ELECTRO-HALL IT equipment supplier cfao-eh@africaonline.co.ci

Espace Micro IT equipment supplier espacemicro@africaonlineco.ci

Inpros IT equipment supplier inpros@africaonline.co.ci

Lift-Tel IT equipment / services supplier lift-tel@africaonline.co.ci

MCG International Certified Oracle Partner. Gadou Vincent Kragbe <mailto:mcginter@africaonline.co.ci>

Medius IT equipment / services supplier <http://www.telecom.ci/aviso/business/medius.htm> medius@aviso.ci

Oracle Morocco Database software provider's Ivory Coast Office <http://www.oracle.com/info@oracle.com>

Simo PC supplier, agents for Dell Computers. Mr. Robert Delpuch <mailto:rd@Africaonline.co.ci>

Somafor IT equipment / services supplier samor@africaonline.co.ci

SOTEM IT equipment / services supplier sotemwehbe@yahoo.com

Strafor IT equipment / services supplier strafor@africaonline.co.ci

SYSTECH (System Technologie SA) IT equipment provider UNISYS Partners for Cote d'Ivoire Banking solutions Networking Solution Imaging solution HP reseller Internet solution Sales, Services, SAV, Applications Jean VILASCO jvilasco@aviso.ci

UBIZEN - SIT Côte d'Ivoire Consulting in IT projects (conseil et intégration en projets SI) : **networking, system, security, web, and visioconference**. Distributor, value added reseller and system integrator (distributeur, revendeur à valeur ajoutée et intégrateur) : **Cisco, Microsoft, Check Point, Lotus, Red Hat, BreezeCom, and others**. <http://www.sit.ci/> Mounir Diawara info@sit.ci

Xerox Côte d'Ivoire Agents for Xerox document management systems and photocopiers.

Institut africain pour le développement économique et social Operates a computerized documentation centre and is the only African institution offering training for the IBISCUS programme to assist with using ICTs in documentation centres. <http://www.ibiscus.fr%20/guerym@ci.refer.org>

Nouvelles Technologies Formations ICT training company NTF@africaonline.co.ci

Ecole de Technologie Tertiaire Operated by Institut National Supérieur de l'Enseignement Technique, Yamassoukro, the premier networking institution in the country. Bobouo Nakounou bobouo@inset.ci

Ecole National Supérieure des Travaux Publics (School of Public Works). One of the specialised schools on the campus of the Institut National Polytechnique Houphouët-Boigny in Yamassoukro. Sylvain Kacou konand@enstp.ci

Institut National Polytechnique Houphouët-Boigny One of the major networking centres in the academic sector. It has a large very modern campus with a capacity for 20 000 students and staff. It is an ORSTOM/RIO Partner and has a number of specialized schools on campus which have ICT related programmes - **Ecole de Formation Continue et de Perfectionnement des Cadres** (EFCPC), **Ecole Supérieure de Commerce et d'Administration des Entreprises** (ESCAE), **Ecole Supérieure d'Industrie** (ESI), and **Ecole National Supérieure des Travaux Publics** (ENSTP). <http://www.chez.com/inphb/> inphb@chez.com

Institut National Supérieur de l'Enseignement Technique The premier networking institution in the country and the top level domain administrator for .ci. It trains ICT technicians and operates the Ecole de Technologie Tertiaire. Bobouo Nakounou bobouo@inset.ci

Centre de Promotion de Investissements en Cote d'Ivoire A department of the Office of the Prime Minister, to promote investment. Holding the 3rd International Investors' Forum 8-11 November 1999 in Abidjan. <http://www.cepici.go.ci/> info@cepici.go.ci

Centre Ivoirien de Recherches Economiques et Sociales Economic and social research centre. Celestin Kouassi Yao ykouassi@cires.ci

African Development African (ADB) Intergovernmental agency providing development assistance finance to national governments in Africa. <http://www.afdb.org/> Mamadou Traore, webmaster m.k.traore@afdb.org

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

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