

AISI-Connect National ICT Profile UNITED REP OF TANZANIA (TZ)

GENERAL DATA	ICT-INFRASTRUCTURE	ICT POLICIES
Capital: Dar es Salaam	Fixed lines (K) '98: 122	Competition in local loop: Duopoly
98 Population (M): 32.1	97-98 % Fixed Line Growth: 0.16	Competition in telephone terminals: Yes
Currency: TZH	98 Mobile Lines (K): 38	Independent regulator: Yes
Exch rate (/US\$): 450.0	Mobile Line Growth (%):	Private Wireless Data allowed: No
Currency Stability:	Cities with Internet POPs: 2	Independent Internet VSAT Allowed: No
97 GDP US\$/person: 244.0	Local Call National Internet: No	VSAT License Fees:
97 Total GDP (\$B):	Dialup Internet subscribers: 4500	Satellite Phone access: No
Local Stock Exchange: No	International Bandwidth (Kbps): 2048	Universal Service Obligations:
Personal Safety: 14	Internet Hosts: 158	IAP License Fees (\$/yr):
Political Stability:	Internet domains:	Private Phone Kiosks: No
Tertiary ICT Students:	Dialup Internet Cost 20hrs/mnth (\$):	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): 1.94	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

Full Internet access is provided by three 'top-level' ISPs. The national regulator called for tenders for international data carriers in '96 and three licenses were issued for a period of up to 10 years (subject to review after 5 years) to three locally registered companies with international ownership - **SITA**, **Wilken/Afsat** and **Datel**. The regulator has indicated that no more licenses for international data

communications will be issued during this period.

SITA is the well known airline communications co-operative. Datel is a joint venture between TTCL and France Telecom's subsidiary, Nexus International. Currently Nexus has 51% of the shares in Datel but further capital raising efforts are expected to reduce this to 36%, with TTCL at 35%. Negotiations are under way with the Caisse Francaise de Development which may become one of the investors. Datel is also discussing the matter with the IFC.

The cost of the data licenses was USD100 000 plus a royalty fee of 5% on annual turnover. The royalty fee is applicable to all value added services. SITA obtained a closed user group license as well as a public license. Resale agreements can be made with the three license holders for local data services and the TCC does not set tariffs - this is left to the operators unless their tariffs are seen to be causing a disruption in the market. The University of Dar es Salaam also has international data license but this is only for a Closed User Group comprising the University community and so is not liable for the US100 000 licence fee, but is precluded from resale to the general public.

For 2 years the Internet services market was restricted to those who could afford the high costs of leased lines to Datel or Sita (about \$17 000 a month for 128Kbps, \$12K for 64Kbps), but now Wilken has entered the resale market with a more competitive \$5K/month for 64Kbps and has already established a link to ISP Twiga (see below).

The national PTO is monitoring the situation and has not ruled out the possibility of providing wholesale Internet services in Tanzania.

Telecommunications:

Regulatory functions in the telecommunications sector were separated from operations in '95 with the establishment of the **Tanzania Communications Commission (TCC)** as the regulator of the telecommunications and broadcasting sector. The TCC is responsible to the **Ministry of Communication and Transport** is in the process of formulating a national communications policy, a draft of which has already been circulated. The TCC allocates frequencies for radio and TV broadcasting and it has also issued 4 radio paging licenses but none have as yet rolled out their services.

The **Tanzania Telecommunications Company (TTCL)** is the sole provider of basic fixed services on the mainland. Zantel, a private company, operates in Zanzibar. Licensed under value added services are four mobile cellular providers - Mobitel, (an analogue system using TACS), Tritel, (a GSM system), and the TTCL is also installing a GSM system. The country is divided into 4 zones - coastal, northern, central, southern highlands and TTCL has a cellular license for all but the coastal zone where it has a joint venture with Mobitel.

In 1999 a fifth cellular license was made available and the bid was won by South Africa's Vodacom. Planetel Communication Ltd, is Vodacom's local partner. Vodacom Tanzania, the locally registered company, will operate the network and South Africa's Vodacom will hold a 55 percent stake while Planetel, owned by Tanzanian shareholders, will hold a 45 percent stake. The total investment is \$90 million and the service is expected to be operational by the end of the year. The entry of a fifth mobile phone operator in Tanzania is expected to bring down mobile phone rates -- currently between 24 U.S. cents and 39 U.S. cents -- significantly, and help increase the telephone density in the country.

There is a strong likelihood that TTCL will be privatized in the next few years. The TCC is planning to establish a fund to support private sector activities in rural areas which is expected to be contributed to by the operators. In general, the TCC encourages private companies to make joint ventures with the PTO.

The Tanzania Railways Corporation (TRC) has recently lodged an application to the TCC to provide telecommunication services along the central railway line from Dar es Salaam to Mwanza.

The TCC has licensed a number of radio telecom operators which use the HF, VHF, UHF + CB wavebands and it has also has licensed contractors for telecom equipment, a sector which has been extensively liberalised.

The TTCL is currently involved in two projects in data communications. It is the focal point for one of the Telecentre Fund's multi-purpose community telecentre projects being planned in four or five African countries as part of a joint co-operation initiative of the ITU, UNESCO, IDRC and possibly the FAO (other interested partners are also being invited to join). While a final proposal for the project has yet to be submitted, the town of Sengerama near Mwanza has been selected for the telecentre site. It is hoped that the local hospital will become involved along with other users, especially in the fields of business, agriculture, fishing, education and local administration.

Undergoing rapid modernisation, the poor telecommunications infrastructure in Tanzania is no longer be the major barrier it has been in the past to the spread of email and full Internet services. The capital city, Dar es Salaam, has now seen dramatic improvement of the local infrastructure, with many digital exchanges being installed, the availability of two cellular telephone networks, and now, a half dozen Internet service providers.

Nevertheless, network access in areas outside Dar is still very limited. The \$240m multi-donor funded Tanzanian Telecommunications Restructuring Programme (TRP), responsible for much of the improvements in Dar, will also improve the links to many secondary towns and will be engaged in upgrading the network until 1998. Fibre cable is being laid in Moshe and Arusha and the Dodoma-Dar-Zanzibar-Tanga-Moshe-Arusha microwave links are being digitised, as are links to Morogoro and Mwanza. Currently telecommunication links in northern Tanzania (Arusha) are more reliable to Kenya than to the capital in the South.

National ICT Activities:

The **Tanzania Commission for Science and Technology** (COSTECH) is responsible for national research centre and academic networking.

Aside from the activities of COSTECH, there is no high-level national information infrastructure planning and policy development process in Tanzania.

Within its national plan, COSTECH has provided email links to:

- Economic Research Foundation (ESRF)
- Sokoine Univ of Agriculture (SUA)
- Tanzania Food and Nutrition Centre (TFNC)
- National Institute for Medical Research (NIMR)
- Tanzania Industrial Research Organisation (TIRDO)
- Institute of Finance Management (IFM)
- Tanzania Forestry Research Institute-Morogoro (TAFORI)

A number of other institutions have been identified as priorities for future connectivity support:

- The Roman Catholic College-Morogoro
- The Tanzania Christian Refugee Service (TCRS)
- Dar es Salaam Technical College
- East African Institute for Statistical Studies
- University College of Land and Architecture

- Bagomoyo Arts Institute
- College of Business Education (has branches around the country)
- Dar es Salaam College of Accountancy
- The Institute of Social and Welfare

(some pupils already are coming to read email at COSTECH)

The **University of Dar es Salaam** (UDSM) has set up a full Internet service for the campus with support from the Government of the Netherlands. The **Post Office of Tanzania** is planning a large VSAT network which link 17 towns to Dar es Salaam.

The HealthNet node at **Muhimbili University College of Health Sciences**, was the first email provider in the country.

The **African Medical & Research Foundation** (AMREF) office in Ifakara near Lake Victoria is in the process of establishing a SatelLife groundstation. Although this has not yet taken place, the equipment, installation, training and support costs (17 K\$) are to be shared with 5 other initiatives - The Tanzania-Netherlands Project to support AIDS control in Mwanza region (TANESA), Kuliana, the Farming Systems Research (FSR), the Agricultural Research Institute (ARI) and the Training Institute of the Ministry of Agriculture (MATI). About 500Kb per day can be transferred over the satellite link which is expected to be installed shortly.

In Morogoro, the **Sokoine Agricultural University** (SUA) has recently started operating a local email Fido service which originally made daily calls to Muhimbili, but now calls COSTECH due to the telephone line problems and also because of the co-operation now taking place with COSTECH to obtain a full Internet connection with Norwegian funding. This has now been finalised and the Department of Veterinary Medicine has ordered a VSAT link to the US. Phone lines are good and a 14.4Kbps connection can be achieved without difficulty.

CEEST, an environmental NGO, operates a Fido service for some NGOs from Dar

The **Mission Aviation Fellowship** (MAF), the Christian relief organisation, is operates a wireless hub from Dodoma.

The Tanzania **Environment Information Service Project** is being supported by UNDP as part of its SDNP activities.

The **Tanzania Industrial Research and Development Organization** (TIRDO) has a 'power user' and web page developer.

Communication Costs:

SITA: 9.6Kbps International leased line - 4500 USD / month. 64Kbps - 14 000 USD / month.

COSTECH: 20 USD / month and \$0.1 per Kb of international traffic.

Datel 19.2Kbps wireless link: 350 USD/month for each end (700 USD/month total)

Muhimbili: Email - 20 USD/ month. Installation- 50 USD.

UDSM: Users on campus - 10 USD /month. External users - 150 USD / month.

CyberTwiga: Email only - 50 USD / montt. Unlimited Web/Email- 75 USD / month. Setup is free if self-installed. 200 USD for an on-site installation.

Local calls cost 20 TSH /min peak, and 15 TSH /min off-peak - US\$1.94/hour / \$US1.45/hour.

Cellular calls cost 45/40 TSH peak/off-peak)

Organisational Activities in the ICT Sector:

Economic and Social Research Foundation (ESRF) Advising Tanzania PTT on telecoms policy.

Ministry of Industry and Trade

Zanzibar Computer & Communications Services Operates a store and forward Internet service
postmaster@znz.glcom.com

Ministry of Communications and Transport Mr August Kowero

Tanzania Communications Commission Independent Regulator for the telecommunication sector
Mr John Mpapalika

Africa Online Tanzania ISP part of the AfricaOnline group. <http://www.africaonline.co.tz/>

Cats-Net Internet access provider with about 2000 subscribers and a 512Kbps link via VSAT to Taide, the Telenor subsidiary in Norway. <http://www.cats-net.com/>

CyberTwiga (Arusha) CyberTwiga's Arusha POP. <http://www.cybernet.co.tz/>

CyberTwiga (Dar) Tanzania's first commercial full Internet service providing international connectivity via a 64Kbps SITA link, a 256Kbps Simplex link via Interpacket's Espresso service. It has recently established a POP in Arusha (see separate entry) and is providing wireless links using Wi-Lan for leased-line customers. CyberTwiga is also setting up an HF radio email service.
<http://home.twiga.com/>

Internet Africa An ISP. <http://www.intafrica.com/>

MARIE In Arusha, an email service running as a small business by a local farmer. It has been operating for over 2 years, supplying local email services in the Arusha/Moshi area. The service has recently been upgraded to a full Internet link via Datel's service. <http://www.habari.co.tz/> Mr Erik Rowberg postmaster@marie.gn.apc.org

Raha An ISP. <http://www.raha.com/>

TZ Online An ISP. <http://www.tzonline.com/>

Wilken AFSAT (Tanzania) Ltd. A subsidiary of Wilken International, based in Nairobi with a presence also in Uganda, which has traditionally supplied voice radio communications services in East Africa. It has now branched out into data communications and aside from the International data carrier license, it has also obtained a local wireless data transmission license in the 2.4Ghz waveband with which it will connect customers directly to its 12 meter international earth station in Dar es Salaam with a downlink in the USA. <http://www.afsat.com/> Desmond Da Silva infotz@afsat.com

Zanzinet An ISP. <http://ras.zanzinet.com/>

Muhimbili University College of Health Sciences The HealthNet node at the college was the first email provider in the country. In the past, the service suffered from problems with the old telephone exchange in the Muhimbili area, but since then a new digital exchange has been installed and accessibility has improved substantially. The service no longer uses the LEO satellite and connects

daily to the Internet via a call from Satellites in Boston. postmaster@hnettan.gn.apc.org

Tanzania Commission for Science and Technology The Tanzanian national government body with responsibility to co-ordinate the country's science and technology research and education. With initial support from the UNECA's CABECA programme, and later augmented by RINAF, COSTECH has operated a dialup email service since '93 which connects daily to the Internet via a call from GreenNet in London. COSTECH has been planning the establishment of a national Internet backbone service for the research and academic sectors as well as government departments for some time.

It recently was awarded the contract to develop the official government web site with support from the World Bank.

COSTECH has a large training room with 10 Windows95/MS-Office Pro workstations and two servers (one Linux and one Windows NT) in which it has conducted a large number of training courses on networking among the research, academic, government and NGO sectors, with support from UNESCO, COMNET-IT and USAID/GHAI. In '94 and '95 COSTECH held courses in computer skills Tanzanian Women Scientists, Researchers and Technologists and over 80 were trained.

With the ongoing fiscal problems in the Tanzanian government COSTECH is hoping to obtain significant further international assistance to help it meet its objectives to establish national academic research network. Mr Theo Mlaki postmaster@costech.gn.apc.org

University of Dar es Salaam Has set up a full Internet service for the campus with support from the Government of the Netherlands. In August '96 a 64Kbps connection was established to South Africa's academic network - Uninet - via a VSAT connection provided by Panamsat's South African reseller - Transtel. UDSM is in the process of switching to a lower cost, higher bandwidth (128Kbps) VSAT link directly to the US. Because of the problem with phone lines in the area of campus and the lack of campus-wide LAN, UDSM has installed a CIDS metropolitan wireless network hub supplied by CSIR of South Africa. <http://www.udsm.ac.tz/> Bada Mutagahywa bmutag@udsm.ac.tz

HealthNet Users Group Mwanza At the National Institute of Medical Research in Mwanza. Also operates a Satellites LEO groundstation email link. sysop@tan2.healthnet.org

Tanzania Industrial Research and Development Organization Has a 'power user' and web page developer, Mr Makundi. Daniel Makundi tirdo@intafrika.com

Tanzania Environment Information Service Project It is being supported by UNDP as part of its SDNP activities. The project co-ordinator, Mrs Cheche, is also the Research Officer with the **National Environment Management Council Information Centre**. Mrs. Blandina M. Cheche nemceic@intafrika.com

Source:

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

If located in Africa and not listed here, [add your organisation to this page](#).