African Telecommunications: Towards a Renaissance

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International Telecommunication Union (ITU)

AfriTel 99
Driving Wireless Basic Telephony for Africa
11-12 February 1999, Cape Town, South Africa
Background

• “African Telecommunication Indicators 1998”
  —ITU Report
• “The African Connection”
  —Report of the African Ministers of Communications

www.itu.int/ti/publications/#AF98
Renaissance

ren·ais·sance (rènˈə-sāns, -zāns, rènˈə-sānsˌ, -zānsˌ, rī-nālˈsens) noun

1. A rebirth or revival.
2. **Renaissance.** a. The humanistic revival of classical art, architecture, literature, and learning that originated in Italy in the 14th century and later spread throughout Europe. b. The period of this revival, roughly the 14th through the 16th century, marking the transition from medieval to modern times.
3. Often **Renaissance** . a. A revival of intellectual or artistic achievement and vigor: *the Celtic Renaissance*. b. The period of such a revival.

[French, from Old French, from *renaistre*, to be born again, from Vulgar Latin *renāscere*, from Latin *renāscī* : *re-*, re- + *nāscī*, to be born.]
Economic renaissance

**GDP growth, Developing regions, 1998 % change**

- **Africa**: 3.6
- **Middle East**: 3.3
- **Asia**: 2.6
- **Americas**: 2.5

**20 fastest growing economies, 1999 GDP growth**

- **Dom Rep.**: 6.8
- **China**: 6.7
- **India**: 6.5
- **Ireland**: 6.1
- **Mauritius**: 6.0
- **Uganda**: 6.0
- **Senegal**: 5.7
- **Cameroon**: 5.1
- **Macedonia**: 5.0
- **Cuba**: 5.0

*Source: International Monetary Fund. www.imf.org/external/pubs/ft/weo/weo1298/index.htm*

*Source: Economist Intelligence Unit. www.eiu.com/pressrelease/WOUTPR99.html*
Telecom renaissance

• African telecom sector booming
• Various telecom market segments in Africa—fixed, mobile cellular, Internet—growing at highest rates of decade
• Africa has highest growth rate in telecoms among all world regions
**Fixed line growth**

- Africa currently experiencing its highest growth rate in main telephone lines of the decade
- 5 PTO privatizations in 1996-97 compared to just one between 1990-95
- Installed base of 15 million lines (end ‘97) will double by 2003

*Source: ITU.*
Fixed line growth drivers

- Economic upswing
- Internet
- Telecommunication liberalization

Main telephone lines per 100 inhabitants. 4 “privatizers”.

Source: ITU.
Mobile cellular growth

- Over 70% growth in 1997 and probably 1998
- 19 new private operators in last two years
- 1 million subscribers in '96, 2 million in '97, almost 4 million in '98 and probably over 7 million at end of 2000

Source: ITU.
Mobile cellular growth drivers

• Substitute
• Rapid deployment
• Competition
• Strategic partners
• GSM / Roaming

**Substitution chart:** Variety of market structures / reasons:

- DR Congo: War (cellular only way to communicate)
- S. Africa: Success of GSM duopoly
- Cote d'Ivoire: high substitution after just a little over a year
- Ghana: 3 operators
- Malawi: monopoly

**Mobile cellular as % of total telephone subscribers, 1997**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR Congo</td>
<td>34%</td>
</tr>
<tr>
<td>South Africa</td>
<td>26%</td>
</tr>
<tr>
<td>Gabon</td>
<td>20%</td>
</tr>
<tr>
<td>Côte d'Ivoire</td>
<td>19%</td>
</tr>
<tr>
<td>Ghana</td>
<td>17%</td>
</tr>
<tr>
<td>Malawi</td>
<td>16%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>16%</td>
</tr>
<tr>
<td>Mauritius</td>
<td>14%</td>
</tr>
<tr>
<td>Gabon</td>
<td>14%</td>
</tr>
<tr>
<td>AFRICA</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Source:** ITU.
Internet

- **Internet hosts**: By mid-1998 there were about 150,000 Internet host computers in Africa.
- **Internet Service Providers**: Around 400 African ISPs by the end of 1998.
- **Internet users**: By the end of 1998, there were over 1 million Internet users on the continent (850,000 in South Africa).

Regulatory trends

- Regulatory reform gathering momentum:
  - Separation of posts and telecom
  - Creation of regulators
  - Privatization
  - Introduction of competition

Number of African telecom regulatory agencies

Source: ITU.
International traffic

- Africa highly dependent on international telephone revenue
- Accounting rate issue of important concern
- ITU country case studies for Africa:
  - Lesotho
  - Mauritania
  - Senegal
  - Uganda
  (www.itu.int/wtpf/cases/index.htm)

Senegal. Sources of telecom revenue, 1996

- International calls 25%
- Net settlements 29%
- Domestic revenues 46%

Source: ITU Senegal Country Case Study.
www.itu.int/wtpf/cases/Senegal/index.htm
Universal access

- Universal access more relevant for Africa than universal service
- Distance and time from telephone relevant indicators
- Widespread public telephone availability cornerstone of universal access policy

Payphones as % of main telephone lines, 1996

<table>
<thead>
<tr>
<th>Country</th>
<th>Payphones as %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senegal</td>
<td>6.2%</td>
</tr>
<tr>
<td>Mauritania</td>
<td>3.1%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>2.9%</td>
</tr>
<tr>
<td>Mali</td>
<td>2.7%</td>
</tr>
<tr>
<td>Kenya</td>
<td>2.3%</td>
</tr>
<tr>
<td>South Africa</td>
<td>2.2%</td>
</tr>
<tr>
<td>Namibia</td>
<td>1.9%</td>
</tr>
<tr>
<td>Morocco</td>
<td>1.9%</td>
</tr>
<tr>
<td>Comoros</td>
<td>1.8%</td>
</tr>
<tr>
<td>S. Tomé</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

Source: ITU.
The African Connection

• Originated at African Ministers Workshop in preparation for Africa Telecom ‘98
• “Road Map” for enabling Africa’s launch into the “Information Age”

Full report available at: http://www.telecom98.co.za/africonnect.html
The African Connection - Contents

• Special Programme for Least Developed Countries & Rural Telecom Development
• African Telecom Policy and Regulatory Framework Development Programme
• Human Resources Development Programme
• Programme for Financing and Funding Telecom Development in Africa
• African Telecom Priority Projects
• Programme for the Development of the Information Society in Africa
LDCs & Rural Telecom Development

- Sector restructuring
- Identify priority project areas
- Rural telecommunication development
- Technical assistance

33 of 48 LDCs in Africa
Telecom Policy & Regulatory Framework Development

• Comprehensive and coordinated telecom policy at continental level
• Establishment of national regulatory agencies and regional associations
• Coordinated frequency management
• Rapid implementation (by June 2000)
Human Resources Development

- Database of African telecom experts
- Database of human resource needs
- African Human Resource Development Policy
- African Centres of Excellence
- Network of human resource institutions
- Common accreditation and certification
Financing & Funding Telecom Development in Africa

- Measuring levels of investment
- Development of African Telecommunications Indicators
- Exchange of information and expertise on financing

Source: ITU.
Telecom indicators more appropriate to African conditions

- Households with a telephone
- Towns with telephone service
- Payphones: Per inhabitant, Per main line
- Distance from a telephone
- Time from a telephone

South Africa 9 million households

- Have telephone 29%
- No access 18%
- Nearby 6%
- Not Nearby 5%
- Another phone 5%
- Nearby Public phone 36%
- Neighbours 6%

Source: Statistics South Africa. 1997 Census in Brief.
African Telecommunications
Priority Projects

• Tele-medicine and Tele-health
• Tele-centres
• Tele-education
• African Centres of Excellence
• Terrestrial Telecommunications Infrastructure Development
• Development of and Access to the Internet in Africa
• Tele-Agriculture
Development of the Information Society in Africa

• Develop an Information Society policy framework for Africa
• Networking between African Governments using electronic means
• Convergence of broadcasting and telecommunications
Conclusions

• There is an African Renaissance but...
• ... affordability is an issue...
• ...plus Africa is not the OECD...
• ...these must be dealt with for renaissance to be sustained.
Affordability

South Africa. Telephone service affordability

% of households that could afford telephone service at differing monthly costs
Threshold: 3% of monthly income

GSM monthly cellular tariffs.
January 1999, 100 minutes, US$

<table>
<thead>
<tr>
<th>Country</th>
<th>Cost per month</th>
<th>% GDP per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>$59</td>
<td>196%</td>
</tr>
<tr>
<td>South Africa</td>
<td>$35</td>
<td>16%</td>
</tr>
<tr>
<td>Namibia</td>
<td>$40</td>
<td>22%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>$78</td>
<td>1168%</td>
</tr>
<tr>
<td>Morocco</td>
<td>$64</td>
<td>59%</td>
</tr>
<tr>
<td>Malawi</td>
<td>$11</td>
<td>72%</td>
</tr>
<tr>
<td>Madagascar</td>
<td>$47</td>
<td>225%</td>
</tr>
<tr>
<td>Cote d'Ivoire</td>
<td>$68</td>
<td>124%</td>
</tr>
</tbody>
</table>

Source: ITU.
Recommendations

- Cooperation between government, operators and informal sector
- International, regional & bi-lateral organizations should contribute resources to developing regulatory expertise
- Community access
- Long term view
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