

South African Case Study

Regulatory Implications of Broadband
Workshop
ITU, Geneva
2 -4 May 2001

SA demographics

- 1 127 sq/km divided into nine geographic and political regions.
- population 40.5million speaking 11 official languages
- highest Gini co-efficient in the world - poorest 20% of households less than 3% of total income, richest 20% account for 65% of total income
- per capita income of R3500
- GDP around R800 million in last quarter of 2000 with 3% growth rate in 2000
- broadcasting has grown from 0.27% in 1990 to 0.6% of GDP in 1997
- telecommunications grown dramatically to 4% of GDP
- SA spends more on telecommunications as a percentage of GDP than most developed European nations.

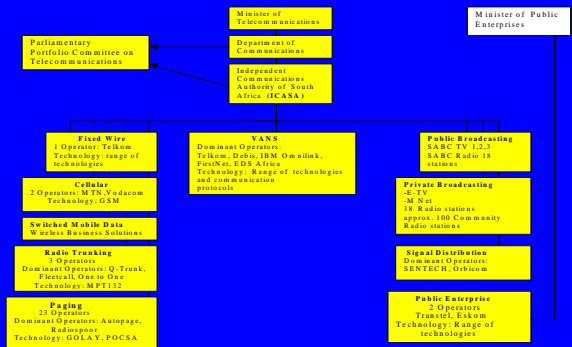
Teledensity

Universal Service and Access* figures for South Africa
* Access measured as 30 minutes walk from a telephone

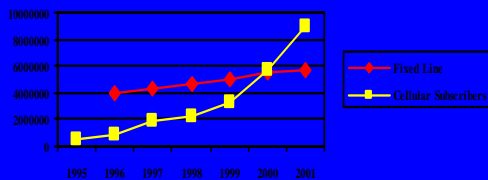
Percentage of households with service and access (fixed and cellular combined)		ALL	AFRICA N	WHITE
ALL	Universal service	42	18	82
	Universal access	80	74	93
URBAN	Universal service	64	32	82
	Universal access	94	93	94
NON-URBAN	Universal service	9	5	84
	Universal access	59	56	98

Source: Peter Benjamin on basis of South African Census October Household Survey 1999.
At Community Projects <http://link.wits.ac.za/Projects>

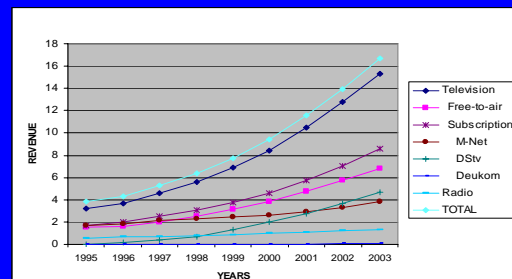
Telecommunications structure



Fixed vs. mobile telephony



TOTAL BROADCASTING MARKET

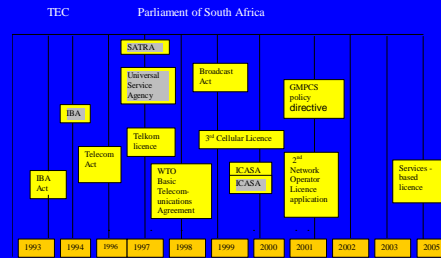


Source: IBCA 1999

New policy directives

- Duopoly in PSTN in 2002
- Set aside for electricity and transport parastatals
- Prohibition on VOIP extended
- Third Generation (3G) and 1800 MHz Radio Frequency Spectrum for PSTNs, Mobile operators.
- Universal access extended by .5% levy on all licensees and exemptions for teledensity areas below 1%.

Timeline of the key events in Telecommunications sector



What is broadband?

- Differing views among respondents from speed to packet switching to different technologies carrying data from any platform.
- SA Government's view: broadband is the ability to provide a multiplicity of services, whether data, voice or video, at any speed,

Current status

- Only existing fixed broadband infrastructure fibre optic backbone of the national telecommunications network
- Telkom intends to extend this broadband network through regional and primary access rings
- Other parastatals such as Transnet and Eskom have installed fibre across the power grid and rail network in South Africa.
- ADSL is being piloted on the copper based access network of the incumbent
- Digital DTH satellite network operating across Africa, Middle East and Europe.
- Undersea cable

DSL dilemma

- Capital outlays high for public entity
- ISDN investment not yet recovered and slow take up due to high cost
- Replacing or reconditioning the copper infrastructure
- Overtaken by alternative technologies - wireless or satellite.
- On line nature of DSL threatens revenues from international, national and local calls.

Public policy on broadband

- Recognition of the importance of a high-speed broadband technology to advance the communications infrastructure.
- Can realise government objectives of providing high bandwidth access to all people for voice, data and video services.
- Broad based Internet access and ICT usage culture among the populace are prerequisites for widespread e-commerce adoption.
- Consideration of a broadband satellite network connecting all schools, colleges, technikons and universities in the country.

Current law and regulation

- Broadband subject of current policy investigation
- Currently telecom and broadcasting legislation silent on broadband specifically.
- GMPS new policy directive instructing regulator to licence effectively as class licence.
- New Broadcasting Act - “multimedia delivery” and establishes Digital Advisory Body to the Minister.

Regulatory implications (1)

- **Regulatory approach and institutions**
 - New regulatory frameworks needed but content and carriage require different regulatory approaches.
 - Equivalent treatment of equivalent services, regardless of the delivery medium and as far as possible technological neutrality
 - In multimedia environment whole new and more flexible regulatory approach required
 - Merged regulator likely to be more effective

Regulatory implications cont. (2)

- challenging to development new all-encompassing regulatory approach
- greater flexibility and imagination needed to ensure equity in service provision, yet not stifle innovation and investment.
- vital to ensure that a sufficient body of operational expertise for all relevant service types and should not be seen to favour one service type above another.

• Old Paradigm

- Infrastructure regulation based on premise of scarce resources
- Content regulation on protection of certain values - difficult to apply in practice in Internet context
- Cross-media ownership regulation to avoid concentration tends to be taken over by anti-trust regulation.
- Service regulation targeted at universal access remains an important issue in ensuring that no infrastructure owner is able to exclude access by the customer to other service providers.

• New paradigm ⁽³⁾

- Tracing and combating of cyber-crime in all its forms
- Commercial issues around e-commerce, such as non-repudiation of a transaction, dispute resolution, jurisdiction rules, taxation, authentication, electronic signatures, etc
- Facilitating self regulation eg. ISP content

Regulatory implications (4)

- **Effective Competition**
 - Traditional key areas of competition not yet dealt with will stifle broadband development
- **Cross ownership**
 - more information than ever before for those with means to access it YET global trend toward greater concentration through merger and acquisitions needed to capitalise broadband companies.
 - best placed are those who can leverage existing business across new platforms
 - anti-trust law

Regulatory implications cont. (5)

- **Infrastructure sharing, standardisation, spectrum**
 - Infrastructure sharing needed where abuse of monopoly position occurring but incumbents largely argued in favour of commercial arrangements.
 - Telecom operators argue for standardisation as it provides economies of scale needed in smaller markets and in consumer interest however, incumbent broadcasters want open standards and proprietary conditional access (or self-regulated).

Regulatory implications (6)

- **Unbundling local loop**
 - Despite low levels of access, unbundling pertinent to developing countries
 - new economy and information society dependent on access to bandwidth
 - wireless may be better option because of quality of copper infrastructure
- **Universal access requirements**
 - USOs should focus on support national delivery
 - Traditional costing need to change to make services more affordable.
 - Requires more 'converged' approach to UA

Regulatory implications cont. (7)

- **Domestic regulation of global network**
 - As long as global networks dependent on national telecom networks domestic regulation possible
 - Content regulation other than for ensuring social justice, would be injudicious use of state resources
 - domestic regulation should create enabling environment for local operators to become globally competitive.

Regulatory implications cont. (8)

- **Technical, institutional and financial barriers**
 - Technically overdue but financial barriers due to size of SA economy
 - Government not played a sufficiently enabling role but minimising institutional barriers and maximising use of broadband by government.
 - Human capital shortage
 - Affordability
 - Lack of content

Conclusions

(9)

- Broadband intrinsic to development of information society and new economy
- Requires sound infrastructure planning and innovative regulation to provide equitable access
- Policy framework to encourage investment with transparent regulatory regime ensuring fair competition and consumer protection
- Basic elements which are currently absent include fair interconnection and facilities regime, tariff regulation and anti-predatory and discriminatory pricing mechanisms.
- Integrated and co-ordinated policies and implementation strategies that include government usage.