



International  
Competition  
Network

► **Report of the ICN Working Group  
on Telecommunications Services**

APPENDIX III  
Country Studies  
(Jamaica, South Africa, Taiwan, and Turkey)



<b>APPENDIX III</b>
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**Country Studies (Jamaica, South Africa, Taiwan, and Turkey)**

Jamaica, South Africa, Taiwan, and Turkey offered to provide information on the state of competition in their respective telecommunications services markets. Also included in this appendix is the questionnaire sent to these countries, and both their initial and follow-up responses.

**The State of Competition in the Telecommunications Sector in Jamaica**

**1. The State of Competition In the Telecommunications Sector**

**(a) Telecommunications deregulation**

**(i) Which segments of the market are deregulated and to what extent?**

The telecommunications sector is fully liberalised, however only three segments of the sector are fully deregulated. These are: international retail services (fixed and mobile); mobile domestic retail services, mobile termination; and Internet services.

A review of the mobile termination market was recently conducted with a view to re-introducing regulation in that segment.

**For how long have these segments been deregulated?**

All the segments mentioned above except for international retail services have been deregulated since April 2000. International services were deregulated in March 2003.

**What deregulation processes and strategies have been utilized?**

**Who makes the deregulation decision?**

The Telecommunications Act (TA) mandates the Telecommunications Regulator (TR), to conduct market reviews, in consultation with the Competition Authority (CA), to determine which segments are sufficiently competitive and can be deregulated. The TA also gives the Minister the authority to order the Telecommunications regulator to forbear from regulating a segment of the sector.

**What was the role of the competition authority (“CA”) or competition principles in the deregulation process?**

The CA participated in the debates which preceded the liberalization of the sector.

**(ii) What segments have not yet been deregulated?**

Fixed network access and all related services excluding international calls.

**(b) Please describe any other competitive reforms that have taken place?**

No other competitive reform has taken place since liberalization.

**How has the CA or the use of competition principles facilitated such reforms?**

N/A

**(c) Who is the incumbent telecommunications services provider and who are its main competitors?**

The incumbent operator is Cable and Wireless (Jamaica) Limited. Its main competitors are: Digicel and Oceanic Digital in the mobile market and InfoChannel in the Internet market.

**(d) What are the current market shares (incumbent and competitors) in each of the various telecommunications markets?**

The figures we have in-house were received under confidential cover.

**In which markets are the competitors most prominent?**

The mobile market.

**Where do barriers to entry still exist?**

The cost of bandwidth is likely to act as an entry barrier in those segments where it is an essential input. Service-based operators have identified exclusionary behaviour on the part of the incumbent as an entry barrier. The incumbent is still a monopolist provider of fixed network facilities and services.

**How is the mitigation of such barriers to entry being resolved?**

Rate-rebalancing is being carried out in the sector. Local rates have increased since liberalization while international rates have fallen. Internet rates have also fallen.

**(g) What are the general cost trends in the various markets?**

Cost is trending downwards in all markets.

**(h) Has the quality of service changed in telecommunications markets? If so, in what way?**

The quality of service has improved in both the Internet and mobile segments. In the case of fixed and Internet services they are now more reliable. In the case of mobile the number of dropped calls has been significantly reduced.

**(i) Have new technologies been introduced in these markets? If so, what are the general competitive trends with respect to the introduction of new technologies?**

We are not aware of any new technology being introduced.

**How has such technology induced competition manifested itself?**

N/A

**How have the CA and competition principles played a role in responding to such technology induced competition?**

N/A

**2. Governance In The Telecommunications Sector**

**(a) Describe the specific roles of the CA and TR in the telecommunications sector?**

Under the TA the TR is mandated to promote and protect the interest of the public by:

- i. promoting fair and open competition in the provision of specified services and telecommunications equipment;
- ii. promoting access to specified services;

- iii. ensuring that services are provided to persons able to meet the financial and technical obligations in relation to those services;
- iv. providing for the protection of customers;
- v. promoting the interests of customers, purchasers and other users (including, in particular, the disabled or the elderly) in respect of the quality and variety of telecommunications services and equipment supplied;
- vi. to promote universal access to telecommunications services for all persons in Jamaica, to the extent that it is reasonably practicable to provide such access; c) to facilitate the achievement of the objects referred to in paragraphs (a) and (b) in a manner consistent with Jamaica's international commitments in relation to the liberalization of telecommunications; and
- vii. to promote the telecommunications industry in Jamaica by encouraging economically efficient investment in, and use of, infrastructure to provide specified services in Jamaica.

In carrying out its mandate the TR sets price-caps; assesses Reference Interconnection Offers and Interconnection agreements; develops rules in accordance with the TA.

Based on its mandate under the FCA the CA provides for the maintenance and encouragement of competition in the telecommunications sector. The FTC carries out its mandate by investigating anticompetitive behaviour in the sector; assessing proposed rules and regulations for anti-competitive effects and conducting sector inquiries.

**Does the CA only maintain competition, or does it also promote it?**

It also promotes competition.

**(b) Are competition law principles utilized or imputed into the TR's analyses and procedures? If so, how?**

Yes. In making a determination of dominance the TA mandates that the TR utilize the principles established under the FCA.

**(c) Is the TR mandated to forbear from the regulation of specific services or markets?**

No

**(d) What is the role of the judiciary (i.e. the courts) in the telecommunications sector?**

The Courts hear appeals of the CA's ruling. In addition, under the FCA every person who injures another by anti-competitive conduct is liable in damages for any loss caused to that person by such conduct. The claim for such damages is made in the Courts.

Persons affected by the TR's rulings can apply for a judicial review.

- (e) **Are there any other institutions that play a role in this sector? If so, what role do they play?**

Yes. All licences in the telecommunications sector are issued by the responsible minister, currently the Minister of Commerce, Science and Technology. The Spectrum Management Authority is charged with the responsibility of managing and monitoring radio spectrum in Jamaica. The Consumer Affairs Commission addresses consumer protection matters.

- (f) **What role, if any, does self-regulation of market participants (*i.e.* firms) play in this sector?**

None

- (g) **Is there any overlap in jurisdiction between the CA and the TR?**

Yes. Both agencies are charged with the task of promoting competition in the sector.

**How is potential conflict from such overlap resolved?**

The two agencies have established a Consultative Committee. Staff members of both agencies sit on this Committee and discuss matters which could fall under the remit of both agencies and a decision taken on which agency can best handle the matter.

**Describe any case law or other arrangements that address the overlapping jurisdiction issue (e.g. such as cooperation or coordination agreements).**

There are no formal cooperation agreements. The two agencies are currently moving towards formulating such an Agreement.

**If cooperation or coordination agreements are in place, has the use of such agreements changed as competition has evolved? If so, please explain.**

N/A

- (h) **What are the advantages and disadvantages with respect to the current governance model for the telecommunications sector?**

Advantages: - The two agencies provide a system of checks and balances for each other. Further, under the current governance model, access-related matters which cannot be handled by the TR (due to gaps in the access regime as established by the TA) fall under the wider remit of the CA.

Dis-advantage: Under the current governance model, a lack of coordination can result in the implementation of inconsistent remedies by the TR and the CA.

**Additional Questions on the State of Competition in the Telecommunications Sector in Jamaica**

**1. Technology**

- a) The ICN is quite interested in the extent to which new telecommunications technologies are being adopted in member countries. Please describe the extent to which new technologies (VoIP, broadband, fixed wireless such as Wi-Fi and Wi-Max etc.) are in use currently in your country or being contemplated.**

VOIP, broadband, WLL and Wi-Fi are currently being used on a commercial basis. Wi-Max is being currently being tested.

- b) Who is introducing these technologies?**

VOIP: currently being used by the incumbent as well as several Internet Service Providers. Wi-Fi: currently being used by several Internet Service Providers. Hotels are also using Wi-Fi to create hotspots within their environs. WLL: this is being used by one company to provide voice and data services.

**To what extent do these technologies bring competition to the access, distribution network and service markets?**

The technologies discussed above have not yet garnered mass appeal. Therefore, while the potential does exist for these technologies to significantly erode the incumbent's market share in the access, distribution network and service markets this has not yet materialized.

- c) To what extent are new technologies regulated in your country? Please describe the extent of such regulation.**

The Telecommunications Act (TA) is technology neutral and does not provide for the regulation of new technologies. Companies using technologies which require the use of licensed spectrum are monitored by the Spectrum Management Authority (SMA) with a view to preventing interference. The spectrum bands which most of the Wi-Fi users operate were recently designated as licence-exempt. The use of licence-exempt spectrum is on a no-protection from interference basis, however, users are expected to adhere to the standards developed by the Spectrum Management Authority.

- d) To what extent has the competition authority been involved in the introduction of new technologies such as providing advice to the regulator or enforcing competition legislation? Please describe this involvement.**

To date the CA has not been involved in the introduction of new technologies.

**2. Regulation**

- a) Does your country have foreign ownership restrictions with regard to telecommunications? If so, please describe them.**

Jamaica does not have any foreign ownership restrictions.



**b) We understand that the regulator has no mandate to forbear from regulation of the telecommunications sector. Does the legislation have forbearance (deregulation) powers?**

The TA does not contain explicit forbearance measures.

**If not, are forbearance powers being contemplated?**

We are not aware of any discussions surrounding such powers.

**How are decisions made to forbear from regulation in your country?**

Under Section 28(3) of the TA, dominant public voice carrier may at any time apply to the regulator to be classified as non-dominant. If this application is granted then the rules used to regulate “dominant voice carriers” such as competitive safe-guards, indirect access and interconnection pricing rules would no longer be applicable to this carrier. In addition services deemed competitive are not included in the price-cap basket.

**c) Does the regulator mandate interconnection and access to networks owned by dominant firms?**

Yes. Interconnection is mandatory.

**If so, please describe the principles used (including pricing rules) for interconnection and network access. If there is no regulation, how does interconnection and network access take place?**

According to Section 30 (1) of the TA a dominant carrier must provide interconnection to other carriers in accordance with the following principles:

- The terms and conditions under which interconnection is provided should be:
  - i. on a non-discriminatory basis;
  - ii. reasonable and transparent , including such terms and conditions as relate to technical specifications and the number and location of points of interconnection;
- Charges should be cost-oriented.
- No unfair arrangements for cross subsidies;
- Where technically and economically reasonable interconnection services shall be so diversified as to render it unnecessary for an interconnection seeker to pay unreasonably for network components or facilities that it does not require

Section 33 outlines the principles by which a dominant carrier should be guided when pricing its interconnection services. These are:

- costs shall be borne by the carrier whose activities cause those costs to be incurred;
- non-recurring costs shall be recovered through non recurring charges and recurring costs shall be recovered through recurring charges;

- costs that do not vary with usage shall be recovered through flat charges and costs that vary with usage shall be recovered through charges that are based on usage;
- costs shall include attributable operating expenditure and depreciation and an amount estimated to achieve a reasonable rate of return;
- prices for interconnection shall be established between the total long run incremental cost of providing the service and the stand alone cost of providing the service, so, however, that the prices shall be so calculated as to avoid placing a disproportionate burden of recovery of common costs on interconnection services;
- interconnection costs shall include, where appropriate, provision for a supplementary charge, being a contribution towards the access deficit of the interconnection provider.

**d) If network access is mandated, what parts of the network do competitors have mandated access to?**

Competing carriers have mandatory access to trunk-side facilities.

**3. Role of Competition Authority and Regulator in the Promotion and Maintenance of Competition**

**a) We understand your country has established a Consultative Committee to determine which agency (competition authority or telecommunications regulator) can best handle matters of joint jurisdiction. What matters are ordinarily handled by the competition authority and what matters are handled by the regulator?**

The regulator handles issues for which it has an explicit mandate, e.g. interconnection matters. Matters regarding the technical aspects of telecommunications such as determining whether it is technically feasible for a dominant carrier to provide a particular service are also handled by the regulator. The CA handles the majority of issues regarding access services which do not fall within the legislation's definition of interconnection. There are some matters which are handled by both agencies thus taking advantage of each agency's core expertise.

**b) Please provide examples, including matters referred to the competition authority by the regulator.**

Matters referred to the CA include matters regarding the terms and conditions upon which a dominant carrier provides access facilities/services to other service providers. For example, matters which require an assessment of whether the prices at which a dominant carrier sells leased lines to Internet Service Providers are excessive (exclusionary) or predatory would be referred to the CA.

**c) We understand that there are no merger provisions in the *Telecommunications Act* or the *Fair Competition Act*. How are mergers in the sector dealt with currently?**

Currently there is no system in place to deal with mergers and acquisitions. Also there is no requirement for notification of mergers and acquisitions.

**d) Are there plans to incorporate merger provisions in the FCA at some future date?**

Throughout 2006 the Fair Trading Commission will be engaging in discussions with stakeholders to sensitize them as to the purport of merger law.

**e) Please provide examples of situations where the competition authority has examined allegations of anticompetitive behaviour in the telecommunications sector and provide details on the issue and how the matter was resolved.**

From time to time the CA has intervened in conflicts between the incumbent and its competitors, when the incumbent is alleged to be withholding certain services; and have been able to get those services delivered, largely through negotiation.

**4. Universal Service**

**a) Does your country have a universal service policy for telecommunications? If so, please describe how it works in practice.**

Yes, Jamaica has a universal service policy. The TA provides for the establishment of a Universal Service Fund (USF) to provide subsidized access to telecommunications services. The USF is funded from a per-minute levy imposed on all incoming international calls which are terminated on domestic networks. In May 2005 the Minister established the Universal Service Fund Company to manage the USF. The company will collect the levy from telecommunications companies. It will also analyze universal service projects submitted by carriers/service providers and make recommendations for their approval to Cabinet. Once the projects have been approved it will disburse funds to approved projects and monitor the implementation of these projects.

**5. Country Specific Issues**

**In addition to these questions the ICN Telecommunications Working Group would like to know if there are specific issues your country would like the ICN to address so as to assist your country in promoting competition in the telecommunications industry. This might include providing advice on matters unique to your situation.**

It would be useful if the ICN could arrange workshops on analytical techniques commonly used in the assessment of costs in the telecommunications industry. The development of a Manual outlining these techniques would also be a welcome initiative.

## **The State of Competition in the Telecommunications Sector in South Africa**<sup>226</sup>

B Fungai Sibanda, with assistance from James Hodge and Lisa Thornton<sup>227</sup>  
 Edited by Yasmin Carrim<sup>228</sup>

### **1 Policy and Legal Framework**<sup>229</sup>

#### ***1.1 Supremacy of the Constitution***

Since the 1994 elections, South Africa has been a constitutional state.<sup>230</sup> The Constitution provides for three branches of national government, namely, the legislative authority, the executive authority and the judicial authority. In addition there are three levels or spheres of government, namely, national, provincial and local. The regulation of telecommunications generally falls to the national sphere and is regulated primarily by the Telecommunications Act of 1996.

#### ***1.2 National legislation***

All legislation must be consistent with the Constitution. Subordinate legislation, such as regulations, must be consistent with both the legislation it is made in terms of and the Constitution. Hence any regulation made by ICASA<sup>231</sup> in terms of the Telecommunications Act must be consistent with the Telecommunications Act and with the Constitution.

The Minister of Communications is empowered in terms of section 5(4) of the Telecommunications Act to issue policy directions to ICASA. ICASA must carry out its functions in terms of such policy directions. Like regulations, policy directions made in terms of the Telecommunications Act must be consistent with both the Telecommunications Act and the Constitution.

#### ***1.3 National executive authority***

The President of South Africa exercises executive authority together with the other members of the Cabinet by, inter alia, 'developing and implementing national policy'. The Minister of Communications (formerly the Minister for Posts, Telecommunications and Broadcasting), supported by the Department of Communications, is primarily responsible for telecommunications policy. However, other ministries – including the ministers of Trade and Industry, Justice and Constitutional Development, and Public Enterprises – are also involved

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<sup>226</sup> This report has been compiled with the kind assistance of and the use of writings by Lisa Thornton (Lisa Thornton Inc.) and James Hodge (Genesis Analytics).

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<sup>229</sup> This section 1 of this paper has been adapted from L Thornton, 'Telecommunications Law – An Overview' soon to be published in L Thornton (ed) Telecommunications Law in South Africa, by STE Publishers.

<sup>230</sup> The Constitution of the Republic of South Africa Act, 200 of 1993 (known as the interim Constitution) was promulgated in preparation of the historic 1994 democratic elections in South Africa, and has since been superseded by the Constitution of the Republic of South Africa, 1996 (sometimes known as the final Constitution).

<sup>231</sup> Independent Communications Authority of South Africa established in terms of the ICASA Act as independent regulator for telecommunications and broadcasting and successor to SATRA.

in regulating certain aspects of the industry. The Cabinet cluster that the Ministry of Communications belongs to is the economic cluster, which includes the ministries of Communications, Trade and Industry, Public Enterprises and Finance.

National policy is usually articulated in government white papers, such as the 1996 White Paper on Telecommunications Policy (the White Paper). White papers often lead to the promulgation of legislation, which is primarily the responsibility of Parliament.<sup>232</sup> For example, the White Paper on Telecommunications Policy led to the passage of the Telecommunications Act in 1996.

In addition to the ministerial and departmental involvement in policy-making in the telecommunications industry, the President has established the Presidential National Commission on Information Society and Development and the Presidential International Advisory Council on Information Society and Development to advise the government on growth in the information and communications sector.

#### **1.4 Judicial authority**

In terms of section 165(2), (3) and (4) of the Constitution, South African courts are independent and subject only to the Constitution. Their role is to exercise judicial authority over the whole of South Africa.<sup>233</sup> In respect of telecommunications, this is carried out primarily in reviewing administrative acts or decisions in terms of section 33 of the final Constitution ('the right to just administrative action'). South Africa has a well-established legal system.

#### **1.5 Telecommunications policy**

Telecommunications Policy is articulated in the White Paper<sup>234</sup> which deals with, among other things, universal service, market structure, and an independent regulator.

With regard to market structure, the White Paper set out that there would be an initial five-year period of exclusivity for Telkom SA Limited (Telkom), between May 1997 and May 2002, to provide basic services in return for an obligation to roll out services to South Africans who had previously not had access to them. During that period of exclusivity, certain market segments would be open to competition, namely, the customer premises equipment (CPE), private network and value added network services (VANS) segments. In addition, cellular and certain other radio services that had previously been partially competitive – such as paging services – would remain so.

In terms of the White Paper, the resale of telecommunication facilities leased from Telkom by private and VANS operators was to be allowed at the beginning of year four of the period of exclusivity, which was May 2001.<sup>235</sup> Furthermore, at the beginning of year six of Telkom's exclusivity period, which was May 2002, it was envisaged that the following additional market segments would be opened up for competition: local loops, public

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<sup>232</sup> s 43 of the Constitution. In terms of s 85(2)(d) of the Constitution the national executive is responsible for 'preparing and initiating legislation'. The President must assent to and sign legislation into law in terms of s 84(2)(a) of the Constitution.

<sup>233</sup> s 165(1) of the Constitution.

<sup>234</sup> For a discussion of the history of telecommunications policy in South Africa, see RB Horwitz *Communication and Democratic Reform in South Africa* (Cambridge University Press 2001)

<sup>235</sup> The Minister of Communications has lifted these restrictions with effect from 1 February 2005.

payphones, and national long-distance and metropolitan area networks<sup>236</sup>. It was also envisaged that a second full services operator to compete with Telkom would be licensed by May 2003.<sup>237</sup>

## **1.6 Competition policy**

The government's policy document that led to the promulgation of the Competition Act No 89 of 1998 (the Competition Act) was the Proposed Guidelines for Competition Policy – A Framework for Competition, Competitiveness and Development, published by the Department of Trade and Industry in November 1997.<sup>238</sup> It deals with general competition policy, which applies, inter alia, to the telecommunications industry.

## **1.7 National Legislation**

### **1.7.1 Telecommunications Act**

The primary legislation regulating telecommunications in South Africa is the Telecommunications Act. The Telecommunications Act basically does three things.<sup>239</sup> First, it sets out fundamental rules for the telecommunications industry for the provision and licensing of telecommunications services, radio apparatus, spectrum licensing and planning, interconnection and facilities leasing, price regulation and universal service.

Secondly, the Telecommunications Act established two institutions: an independent telecommunications regulator, known as Satra (South African Telecommunications Regulatory Authority), which later became ICASA,<sup>240</sup> through the promulgation of the ICASA Act; and the Universal Service Agency (USA) to, among other things, manage the Universal Service Fund (USF).<sup>241</sup>

Thirdly, the Telecommunications Act also sets out the powers and functions of ICASA to make other rules for the telecommunications industry by, inter alia, making regulations. Regulations are made by ICASA, and approved and published by the Minister of Communications, in terms of sections 95 (radio regulations) and 96 (regulations) of the Telecommunications Act. ICASA is specifically empowered by the Telecommunications Act to make the following regulations, inter alia –

- in terms of section 34(1) – the manner in which applications for certain telecommunications service licences are to be made.
- in terms of section 30(2)(b) – the procedures in relation to applications for frequency use licences.
- in terms of sections 43(3) and 44(5) – rules to be used by the parties in negotiating interconnection or facilities leasing agreements.

<sup>236</sup> Icasa has not issued any such licences as yet.

<sup>237</sup> Icasa has not issued the licence as yet.

<sup>238</sup> Available at [www.polity.org.za/html/govdocs/policy/competition.html?rebookmark=1](http://www.polity.org.za/html/govdocs/policy/competition.html?rebookmark=1).

<sup>239</sup> The major issues covered in the Telecommunications Act are licensing, interconnection, pricing and universal service.

<sup>240</sup> ICASA Act

<sup>241</sup> s 59(4) of the Telecommunications Act. In terms of s 64 of the Telecommunications Act, the President may, any time after 15 November 2001, issue a proclamation for the dissolution of the USA and for its functions to be assumed by Icasa.

- in terms of section 45 – the manner of determining fees and charges for the kinds of telecommunication services licensees where insufficient competition exists, for example for PSTS licensees.
- in terms of section 46 – the way in which telecommunication services licensees keep accounts and records.
- in terms of section 67 – the annual contributions for telecommunication services licensees to the USF.

ICASA also prepares a frequency band plan in terms of section 29 of the Telecommunications Act<sup>242</sup> and prescribes a numbering plan in terms of section 89 of that Act.<sup>243</sup> In addition, ICASA is empowered to make certain licensing decisions.<sup>244</sup> ICASA also holds enquiries, monitors compliance with the Telecommunications Act,<sup>245</sup> considers contraventions by licensees and initiates prosecutions for contraventions of the Telecommunications Act that are listed as offences.

To a large extent, the Telecommunications Act has determined markets on the basis of the type of services that are rendered by licensees. Section 33(1)(a) indicates that licences will be granted only in the categories set out in the Telecommunications Act, namely:

- public switched telecommunication services (PSTS);
- mobile cellular telecommunication services (MCTS);
- national long-distance telecommunication services (subset of PSTS);
- international telecommunication services (subset of PSTS);
- local access telecommunication services (subset of PSTS);
- public pay-telephone services (subset of PSTS);
- international telecommunication gateway services (carrier of carriers);
- multimedia services;
- under-serviced area services;
- value added network services (VANS);
- private telecommunication network services.
- certain deemed services, such as paging.

In addition the Telecommunications Act expressly regulates some competition issues. For example, s 53(1) of the Telecommunications Act provides that ‘[i]f it appears to the Authority that the holder of a telecommunication licence is taking or intends taking any action which has or is likely to have the effect of giving an undue preference to or causing undue discrimination against any person or category of persons, the Authority may, after giving the licensee concerned an opportunity to be heard, direct the licensee by written notice to cease or refrain from taking such action, as the case may be’.

Similarly, s 36(1)(d) provides that ‘[w]here it appears to the Authority that Telkom, in the provision of its telecommunication services, is taking or proposing to take any step which confers or may confer on it an undue advantage over any person who may in future be

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<sup>242</sup> Basically, a frequency band plan sets out how the frequency spectrum may be used: s 29(2) of the Telecommunications Act.

<sup>243</sup> A numbering plan is basically a scheme of identification to ensure that telecommunications is correctly directed to the point of intended reception: s 89(2) of the Telecommunications Act.

<sup>244</sup> s 35(1) of the Telecommunications Act. However, the Minister of Communications makes the decision to grant or not to grant certain licences such as PSTS and MCTS licences in terms of s 35(1)(a) read with s 34(2)(a) of the Telecommunications Act.

<sup>245</sup> See, inter alia, ss 98 and 99 of the Telecommunications Act.

granted a licence in competition with Telkom, the Authority may direct Telkom to cease or refrain from taking such step, as the case may be'. However to a large extent pro-competitive regulation of the sector is done through licence conditions, regulations on price, interconnection, facilities leasing and through reporting obligations.

### 1.7.2 *Competition Act*

Whereas in terms of section 53 of the Telecommunications Act, ICASA has a mandate to look at competition issues to a certain extent, the Competition Act, passed after the Telecommunications Act, on the other hand is not industry-specific, but gives the competition authorities jurisdiction on competition matters across all industries. Section 3(1) of the Competition Act indicates that it applies to 'all economic activity within, or having an effect within' South Africa. It thus applies *inter alia* to the telecommunications industry. This creates an overlap in jurisdiction by the two authorities. Section 3(1A), which was inserted by the Competition Second Amendment Act, 39 of 2000, deals with concurrent jurisdiction and states –

In so far as this Act applies to an industry, or sector of an industry, that is subject to the jurisdiction of another regulatory authority,<sup>246</sup> ..., this Act must be construed as establishing concurrent jurisdiction in respect of that conduct.

A regulatory authority would include, for example, ICASA and the USA. Sections 3(1A)(b), 21(1)(h) and 82(1) and (2) deal with how concurrent jurisdiction is to be exercised. Section 3(1A)(b) provides as follows –

The manner in which the concurrent jurisdiction is exercised in terms of this Act and any other public regulation,<sup>247</sup> must be managed, to the extent possible, in accordance with any applicable agreement concluded in terms of sections 21(1)(h) and 82(1) and (2).

The disadvantages of concurrent jurisdiction in the South African scenario include forum shopping, where industry players approach the authority they think will rule in their favour and by so doing pit one authority against the other; duplication of resources; legal challenges on jurisdictional grounds; risk of issuing conflicting decisions; use of delaying tactics by industry players, etc. Advantages are very few, but include improving the level of cooperation and information sharing

Section 21(1)(h) makes it the responsibility of the Competition Commission to negotiate agreements with other regulatory entities and to coordinate and harmonise the exercise of jurisdiction over competition matters with the relevant industry regulatory authority, and to ensure the consistent application of the principles of the Competition Act. Section 82 also obliges the Competition Commission as well as other regulatory agencies to negotiate the agreement contemplated in section 21(1)(h). It also provides for certain matters to be covered in the agreement. The Competition Commission and ICASA entered into an agreement in terms of sections 21(1)(h) and 82(1)–(3) with effect from 16 September 2002.<sup>248</sup>

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<sup>246</sup> 'Regulatory authority' is defined in s 1(1) of the Competition Act as 'an entity established in terms of national, provincial or local government legislation or subordinate legislation responsible for regulating an industry, or sector of an industry'.

<sup>247</sup> 'Public regulation' is defined in s 1(1) of the Competition Act as 'any national, provincial or local government legislation or subordinate legislation, or any license, tariff, directive or similar authorisation issued by a regulatory authority or pursuant to any statutory authority'.

<sup>248</sup> GN 1747 of 2002, published in GG 23857 dated 20 September 2002.



In terms of subsections (i) and (j) respectively of section 21(1), the Competition Commission also has the responsibility to participate in proceedings of another regulatory authority, such as ICASA, and advise and receive advice from another regulatory authority.

Not unlike the Telecommunications Act, certain basic rules are set out in the Competition Act. Chapter 2 prohibits certain anti-competitive practices. Part A of chapter 2 prohibits agreements or practices between parties in a horizontal relationship if such agreements or practices are anti-competitive. Price fixing, dividing markets and collusive tendering are per se considered anti-competitive practices. Part A of Chapter 2 also prohibits agreements between parties in a vertical relationship if such agreements are anti-competitive.

Part B of Chapter 2 of the Competition Act prohibits abuses of dominant positions. Such abuses include charging an excessive price, refusing to give access to an essential facility, engaging in an exclusionary act, and price discrimination.

Part C of Chapter 5 indicates that complaints may be initiated by the Competition Commission or by any person. It also sets out that complaints must be investigated by the Competition Commission and referred to the Competition Tribunal for adjudication if a prohibited practice has been determined.

Chapter 3 of the Competition Act sets out the rules with regard to mergers, defined in terms of section 12(1)(a) as any transaction ‘where one or more firms directly or indirectly acquire or establish direct or indirect control over the whole or part of the business of another firm’. Mergers generally will not be approved if they are anti-competitive.

The Competition Act establishes the Competition Commission, the Competition Tribunal and the Competition Appeal Court. The functions of the Competition Commission include the investigation of anti-competitive vertical and horizontal agreements and practices, abuses of dominant positions, and mergers.

Part B of chapter 5 of the Competition Act provides the Competition Commission with powers to enter and search under a warrant and the power to summons when investigating compliance with the Competition Act.

The functions of the Competition Tribunal include the adjudication of prohibited anti-competitive conduct and the hearing of appeals or reviews of decisions of the Competition Commission.<sup>249</sup> The Competition Tribunal has wide powers to make appropriate orders, including ordering administrative penalties and divestiture.

The functions of the Competition Appeal Court include the hearing of appeals and reviews of decisions of the Competition Tribunal.

Decisions of the Competition Appeal Court, as well as those of the Competition Tribunal and the Competition Commission, may be ‘served, executed and enforced’ as if they were orders of the High Court. Section 78 of the Competition Act empowers the Minister of Trade and Industry to make regulations in terms of the Act.

## **2 Phase 1 of the Reform Process: Mid to late 1990s**

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<sup>249</sup> s 27 of the Competition Act sets out the functions of the Competition Tribunal.

## 2.1 *The direction of initial reform*

Momentum towards restructuring the telecommunications industry in South Africa came in the late 1980s when the apartheid government investigated the option of having public telecommunications managed as a commercial enterprise. The PSTN was incorporated into Telkom Ltd in 1990. Thereafter, a study by Coopers & Lybrand was initiated to examine the policy options for restructuring the industry to maximise the economic and social benefit, including improving telephone penetration, affordability and service levels. The report offered a number of options but recognised that immediate competition may be unfeasible primarily due to the dramatic rate rebalancing that would have to take place. It therefore envisaged a limited monopoly period but with a *quid pro quo* of network expansion targets. It also recommended some immediate reform, namely that the VANS and customer equipment markets be opened immediately and that mobile cellular operators be licenced.

The Apartheid government adopted this option and started the reform process by liberalising the VANS sector in 1993 and licensing the mobile operators. However at that time the government was engaged in multi-party negotiations to establish a democratic dispensation in South Africa and was eventually compelled to consult more broadly with the ANC. The licensing of the mobile operators was eventually agreed to by the ANC after an empowerment shareholding and public payphone rollout targets were added (see table 1 for licence obligations), and the public monopoly option (which the ANC preferred) was ruled out through inadequate capital funds within Telkom (Horwitz 2001). All other policy reform in the sector was put on hold until a more broadly consultative process could take place driven by the new democratic government.

In 1995 the green/white paper process was initiated leading to the Telecommunications Act of 1996. Whilst this was a broadly consultative process, the market structure discussions were largely shaped by the options put forward in the Coopers & Lybrand report.

The outcome of this process was the Telecommunications Act of 1996. The Act established an independent regulator. The Government opted for retaining the PSTN exclusivity and adopted a policy of “managed liberalisation” which meant a gradual liberalisation of the sector over a number of years.

However, because the PSTN had failed to service black areas adequately under apartheid, there was considerable pent-up demand amongst profitable customers in these areas. It therefore seemed appropriate to have some universal service component to the policy. The delivery of universal service was envisaged through three components of the policy - rollout obligations, community service obligations and the universal service fund to be administered by the universal service agency.

To ensure that the exclusivity period for the PSTN fulfilled the goals of infrastructure rollout, strict licence conditions were placed on the network provider. In particular, the licence conditions included rolling out 2.81 million new lines over the exclusivity period, of which 2/3rds would be in under-serviced areas and for priority customers (see table 1). Financial penalties would be imposed for failure to reach these targets<sup>250</sup>. The targets were set on the basis of what level of teledensity South Africa should have given its per capita income level. The expectation was that South Africa could aim for a teledensity of 20 phones per 100

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<sup>250</sup> Telkom would pay penalties for missing targets of R450 per line for the first 100,000 lines and R900 per line for each extra line missed. If it misses Priority Customer targets the penalty per unit is R4,500, for schools R900, public payphones R2,250 and villages R1,125.

people, double its teledensity at the time. This teledensity target was translated into a specific target in terms of number of lines. The mobile operators were not given specific rollout targets because a) they were licenced prior to the consultative policy process, and b) this was considered a luxury service that did not have mass appeal.

*Table 1: Licence obligations for operators in phase 1*

	Rollout Obligations	Community Service obligations
Telkom	<ul style="list-style-type: none"> <li>• 2.69m lines brought into service of which:</li> <li>• 1.676m in underserved areas</li> <li>• 20,246 for priority customers</li> <li>• 3204 villages</li> </ul>	<ul style="list-style-type: none"> <li>• 120,000 payphones</li> </ul>
MTN	<ul style="list-style-type: none"> <li>• 60% population coverage in 2 years</li> <li>• 70% population coverage in 4 years</li> </ul>	<ul style="list-style-type: none"> <li>• 7,500 community service telephones in underserved areas over 5 years</li> <li>• low community service tariff</li> </ul>
Vodacom	<ul style="list-style-type: none"> <li>• 60% population coverage in 2 years</li> <li>70% population coverage in 4 years</li> </ul>	<ul style="list-style-type: none"> <li>• 22,000 community service telephones in underserved areas over 5 years</li> <li>• low community service tariff</li> </ul>

Source: Telkom, MTN and Vodacom licences

## **2.2 Promulgation of regulations**

The first phase of the reform process also entailed the promulgation of regulations by ICASA in preparation for competition. ICASA is empowered by sections 43(3) and 44(5) of the Telecommunications Act to make rules to be used by the parties in negotiating interconnection or facilities leasing agreements.

### **2.2.1 Interconnection**

ICASA published interconnection guidelines on 15 March 2000, in Government Gazette No 20993. The guidelines provide that an interconnection agreement must be entered into as soon as practicable but no later than three months after an interconnection provider<sup>251</sup> received a request. The guidelines also provide for the non-discrimination of interconnection seekers<sup>252</sup> by an interconnection provider. In instances of inability to negotiate or where agreement on the reasonableness of the request cannot be reached either party can approach the Regulator for mediation before referring the matter to the Regulator for a formal determination.

### **2.2.2 Facilities Leasing**

The facilities leasing guidelines are premised along the same lines as the interconnection guidelines. In terms of the facilities leasing guidelines, promulgated in 2000, a facilities

<sup>251</sup> An interconnection provider is a provider of a telecommunications service who is required to provide interconnection under section 43 of the Telecommunications Act.

<sup>252</sup> Defined as a provider of a telecommunication service who has interconnected or has requested that it be able to interconnect its telecommunication system to the telecommunication system of an interconnection provider.

leasing agreement must be entered into as soon as practicable after the Facilities Provider<sup>253</sup> has received a request for facilities leasing, but in any event not later than three months. This period could however be extended by the Regulator where necessary. All requests for new Facilities Leasing Agreements must be filed with the Authority, and a Facilities Provider of an Essential Facility may not terminate a Facilities Leasing Agreement without the Authority's consent. Parties to the agreement are encouraged to negotiate in good faith and to resolve disputes relating to the agreement. Furthermore, facilities must be provided in a non-discriminatory manner and in no less favourable terms than a Facilities Provider would provide to its subsidiary, associate or any other similar entity.

### **2.3 *The rate regime for PSTS***

Telkom's tariffs have been regulated by ICASA since 1997 as part of the license conditions. Before that, the Minister of Communications approved tariffs. Products are classified as either basket (volume 1) or non-basket (volume 2). Volume 1 products are those that are provided by Telkom only and are not subject to competition. These include line installation and rental; domestic and international call charges, ISDN services and the like. Non-basket services are those that can be provided in competition with other service providers like premise equipment. ICASA employs a price cap form of regulation (generally known as CPI-X) as provided for under the Act and in Telkom's license conditions. The regulation conditions pointed out explicitly that Telkom's average increase in revenue through tariff adjustments for basket related services is limited to CPI less 1.5%. However, Telkom could increase some individual basket services by up to CPI + 5% since January 2003, or 20% before, and still not fall foul of the regulations. Revenue from services in the basket may not be used to subsidize other products and services outside the basket.

In terms of the Telecommunications Act, the Minister had to approve Telkom's tariffs until May 2000, where-after ICASA had to determine the new rate regime. There were delays in approving the new rate regime by the Minister, which was finally approved in December 2001, creating a regulatory vacuum in-between. Telkom challenged the validity of the new regulations. This led to a legal dispute that was finally settled out of court in June 2002.

The Minister of Communications recently published regulations on a new price control regime that provides for the cap to be increased from 1.5% to 3.5% and the inclusion of ADSL products and services in the basket for which there is a price cap, effective from the 1<sup>st</sup> of August, 2005 through to the 31<sup>st</sup> of July 2008. As before, effective August 1, 2005, the price of services in the residential sub-basket, leased lines and the installation and rental of business exchange lines may still not be increased by more than 5% above inflation in South Africa in any year.

### **2.4 *Rate rebalancing***

Traditionally long distance and international calls have been priced at very high levels. Revenues so gotten would then be used to subsidise local calls and telephone line rentals, which were priced below cost. In anticipation of competition Telkom embarked on a tariff rebalancing drive aimed at ensuring that prices were cost based. Tariff rebalancing is also aimed at achieving an appropriate ratio between local and international call charges as well as

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<sup>253</sup> Defined as a provider of a telecommunication service who is required to lease facilities under section 44 of the Telecommunications Act

simplifying the pricing structure. For instance, in 2002, the actual price per minute of a local call increased by 23.9% whereas that of a long distance call decreased by 12%<sup>254</sup>.

*Table 2: Long distance to local call ratio*

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005
Ratio	13.2	9.2	7.7	6.9	5.8	2.7	2.7	2.6	2.2

Source: Telkom annual reports (1997-2005)

Table 2 above shows that the ratio of long distance to local calls has been declining since the tariff rebalancing exercise. Experimenting with tariff rebalancing started in 1995 but became fully implemented from 1997. Falling international and long distance call charges does not suggest that these calls are any cheaper comparatively speaking. Various research reports have shown that telecommunication prices in South Africa are way above international averages<sup>255</sup>.

## **2.5 Rate regime for MCTS<sup>256</sup>**

The initial rate regime for the MCTS licensees was provided for in the MCTS licences, in particular in paragraph 13.<sup>257</sup> Paragraph 13.5 of the original Vodacom and MTN licence provided that the licencees could increase tariff rates by no more than the percentage year on year increase in CPI, unless a greater increase was otherwise approved by the then Postmaster General. Paragraph 13.7 indicated that the base tariff rates were annexed to the licence. The provisions of Vodacom's and MTN's amended licences, in paragraph 13, are substantially similar.<sup>258</sup> Cell C's licence does not include similar rate regime provisions. In issuing the licence, ICASA thus determined not to regulate Cell C's rates.<sup>259</sup>

The rate regime for Vodacom and MTN is a price cap mechanism, not unlike the regime for Telkom. However, the productivity factor is set at 0 percent. It is also different from the regime applicable to Telkom in that the price cap applies to each tariff plan.<sup>260</sup> As a result, there is no need for the imposition of a maximum movement for individual plans. There is thus also no control on a basket of tariff plans that an MCTS licensee provides.<sup>261</sup>

Community Service Telephones<sup>262</sup> (CSTs) by all MCTS licensees are regulated differently from the regulation of commercial rates. Any increase in tariff rates for CSTs must be

<sup>254</sup> See Telkom 2002 annual report

<sup>255</sup> See for instance South Africa Foundation. 2005. Telecommunications prices in South Africa: An international peer group comparison. Occasional Paper, No 1/2005.

<sup>256</sup> This section is taken from a chapter entitled 'Telecommunications Pricing and Regulation' written by Lisa Thornton and James Hodge in a book soon to be launched.

<sup>257</sup> Notice 1078 of 1993 published in Government Gazette 15232 dated 29 October 1993.

<sup>258</sup> Notices 1483 and 1484 of 2002 published in Government Gazette 23760 dated 19 August 2002, Vodacom's and MTN's licences respectively.

<sup>259</sup> Notice 1601 of 2001 published in Government Gazette 22429 dated 29 June 2001. But see para 12 regarding Cell C's tariff filing requirements.

<sup>260</sup> Notices 1483 and 1484 (note \_\_ above) para 13.5.

<sup>261</sup> See Hodge (note \_\_ above).

<sup>262</sup> Community Service Telephone was defined in the original Vodacom and MTN licence as Terminal Equipment which is registered as such by a Licensee in its own records; and is made available to the general public for the provision of the Service, and to this end is freely accessible; and is located in an Under-serviced Area or in a Community Centre; and is provided at tariffs which include a Community Service Telephone Tariff in terms of the licence. Notice 1078 of 1993 (note \_\_ above). The definition in Vodacom's and MTN's

approved by ICASA.<sup>263</sup> Vodacom and MTN are also required to decrease tariff rates for CSTs if interconnection charges and other fees payable by the Licensee to Telkom are less than that provided for at the time.<sup>264</sup>

The establishment of an initial rate regime for MCTS licensees was conducted in absence of much information on which to base determinations such as the determination of an appropriate productivity factor. MCTS was a new market segment in South Africa, so there were no costs or operational history. The initial productivity factor of 0 percent seems relatively lenient but not unreasonable for an initial period where the licensees would have to roll out a new network to cover a significant geographic area and percentage of population. There may also have been less concern about getting the productivity factor correct, given the existence of some competition in the market segment.<sup>265</sup>

## 2.6 *Evaluation of first phase reform (1993-2002)*

The key aspects of the market structure and competitive landscape of first phase of managed liberalisation can be summarised as follows:

- Monopoly PSTN (Telkom<sup>266</sup>) with exclusivity over basics services and infrastructure provision
- VANS – could only provide value-added services, required to lease facilities from Telkom, prohibition on resale and voice
- Mobile (Cellular) services – two national GSM operators, Vodacom and MTN, required to obtain facilities from Telkom
- PTNS – required to obtain facilities from Telkom
- Regulations
  - price regulation for Telkom
  - annual increase for mobiles capped to CPI
  - Interconnection and facilities leasing guidelines
  - Rebalancing
  - COA/CAM – reporting obligations

At the end of the exclusivity period 2002, Telkom had disconnected 1 766 000 lines (Hodge: 2003).

Despite price regulation by ICASA the cost of telecommunications in South Africa is considered to be significantly higher than in most other comparable countries. See Annexure A for more details on trends in prices in telecommunications services.

However mobile services in South Africa have been resoundingly successful. In South Africa, when the first mobile phone operators began business in 1994, the sector's potential

amended licences is the same. Notices 1483 and 1484 of 2002 (note \_\_ above). The definition in Cell C's licence is slightly different. Notice 1601 of 2001 (note \_\_ above).

<sup>263</sup> Notice 1078 of 1993 (note \_\_ above) para 13.6 (Vodacom's and MTN's original licence); Notices 1483 and 1484 of 2002 (note \_\_ above) para 13.6 (Vodacom's and MTN's amended licences, respectively); Notice 1601 of 2001 (note \_\_ above) 12.5 (Cell C's licence).

<sup>264</sup> Notice 1078 of 1993 (note \_\_ above) para 13.10 (Vodacom's and MTN's original licence); Notices 1483 and 1484 of 2002 (note \_\_ above) para 13.10 (Vodacom's and MTN's amended licences, respectively). There is no similar provision in Cell C's licence.

<sup>265</sup> Hodge (note \_\_ above).

<sup>266</sup> Telkom was partially privatised by the government in 1996 by selling 30% of the equity to Thintana Consortium, which included SBC and Malaysia Telecom.

for market growth was projected at 500 000 subscribers by 2003. However, by 2003 there were about 20 million subscribers in South Africa already. In 2004, the saturation level was estimated at 21 million subscribers<sup>267</sup>. Again, growth in the sector has surpassed this level, resulting in mobile penetration increasing from 24.2% to 49.5% between March 2002 and March 2005. As of the beginning of June 2005, Vodacom had approximately 56% market share of total reported customers of 23 million in the South African mobile market, while MTN had approximately 35% market share and Cell C had an estimated 9%<sup>268</sup>. Of the total subscribers, about 85% are on prepaid services and 15% are contract customers<sup>269</sup>.

For a great number of people mobile phones have become a viable substitute for fixed line phones whilst for some the two are used as complements. Factors that would influence consumers to substitute their fixed line phone in favour of a mobile one include better prices, improved network coverage and quality-of-service, and richer mobile phone functionality. Those using the two as complements are influenced by factors such as the reliability and cost of service of fixed line services.<sup>270</sup>

Competition within the mobile phone sector has resulted in innovation, not only technologically, but also in the areas of marketing and billing. Despite this, it is not clear whether there is effective competition, which would benefit consumers in this market. There are some indications that competitive pricing is lacking. Most research papers undertaken on the sector have shown that South Africans pay exorbitant prices, compared to their counterparts in comparable markets. See Annexure A for further details on price trends.

The telecommunications sector has been plagued by disputes in most instances between Telkom on the one side and VANS on the other. There have been disagreements within the industry as to Telkom's exercise of market power in voice services and the degree of encroachment into exclusive terrain by VANS. Telkom has accused the VANS of offering voice services, which, until the 1<sup>st</sup> of February 2005, by 'regulation' should be offered exclusively by the licensed fixed line operator. Voice services include voice over Internet protocol (VoIP). Due to its exclusivity over voice, Telkom is able to offer a bundled package consisting of voice, data and value added services, whereas the VANS can only offer value added services. This gives Telkom a competitive advantage. The VANS counter-accuse Telkom of denying them access to facilities, which in terms of the Act, it is obliged to provide since the VANS, were not permitted to do so. Where facilities are granted, it is alleged that the cost is very high which prohibits fair competition. They also accuse Telkom of leveraging its market power through anti-competitive conduct downstream where it competes with the VANS. This relates primarily to predatory pricing. These accusations have been tested at every possible legal institution governing the sector including ICASA, the Competition Commission and the courts. Although the sector has great potential for growth, the legal wrangling coupled with numerous restrictions on VANS has had a dampening effect on innovation, investment and growth<sup>271</sup>. See Annexure B for a summary of some of the disputes.

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<sup>267</sup> *Engineering News*. 2004. Telecommunications

<sup>268</sup> Mochiko, T. Users happy but services underused. *Business Report*. 10 June 2005.

Vodacom Group Annual Results (2005), MTN Annual Results (2005), Cell C website information.

<sup>269</sup> [www.cellular.co.za/stats/statistics\\_south\\_africa.htm](http://www.cellular.co.za/stats/statistics_south_africa.htm)

<sup>270</sup> For a more comprehensive review of the ICT Sector in South Africa see Gillwald, A & Esselar, S. 2004. South African 2004 ICT Sector Performance Review. Link Centre Public Policy Research Paper No 7. Graduate School of Public and Development Management, University of the Witwatersrand, Johannesburg, South Africa.

<sup>271</sup> See Gillwald and Kane (2003).

### 3 Phase 2 of the reform process: 2001/2

#### 3.1 *The direction of phase 2 reforms*

Phase 2 of the reform process began in 2001 with a process of determining what reforms should follow the end of the exclusivity period of the PSTN in May 2002 (RSA 2001). The policy direction that emerged was part of the gradual 'managed liberalisation' process. The primary components of the policy were as follows:

- A second national operator - the introduction of a single facilities-based competitor with a full PSTS licence, that would include Eritel (the internal telecommunications arm of the state electricity operator Eskom), Transtel (the internal telecommunications arm of the state transport operator Transnet) and a Black Economic Empowerment Partner.
- A single Carrier of Carriers licence - Sentech (the state broadcasting signal distribution company) would be licenced to provide international gateway services to other operators only, and not directly to the end-user
- A single Multimedia licence - Sentech would be licenced to build a network to transport media content (e.g. Internet, video, data)
- Numerous Underserviced Area Licences (USALs) - a number of small and medium enterprise (SME) operators would be licenced to provide local loop public switched telecommunications services to areas with less than 5% teledensity.
- The appointment of a Board by the Minister to oversee the Universal Service Agency
- The inclusion of school internet access as a new universal access goal and the provision of a new e-rate that provides a 50% discount on calls for dialup Internet access in schools.
- The addition of fixed-mobile services<sup>272</sup> to the PSTS licence for both Telkom and the SNO
- The establishment of 2005 as the next phase in the reform process where additional entrants and resale would be examined.

Ayogu & Hodge (2001) argued that this reform was primarily driven by the valuation of state assets. The assets of the state in the telecommunications sector are embodied in Telkom, ESI-TEL, Transtel and Sentech, all of whose values were enhanced by the policy direction. In particular, the gradual rather than instantaneous introduction of competition in all segments of telephony is value maximising to the new entrant, and to the existing incumbent, Telkom, through licensing its entry into previously excluded product lines. In a market with significant switching costs for telephony, exclusivity even if time bound, allows these state-owned enterprises to stake a good share of the market before other private firms enter in 2005/6. Combining these incumbency and first-move advantages tilts the playing field in favour of the firms in which the state has major interests. Even in the case of the SNO in which there will be other shareholders, ESI-TEL and Transtel as designated mandatory shareholders thus enter the partnership from a position of considerable strength. The SNO licensing process has been plagued by delays and commercial and legal complexities and uncertainties. Despite being licensed in 2004 the SNO has not yet commenced operations. Telkom remains the de facto monopoly PSTN.

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<sup>272</sup> Fixed-mobile services are defined as services that allow the subscriber to link to the PSTN from either a fixed or mobile device but the mobile device does not allow call handover to other cells, limiting mobility to the local exchange area.



Running in parallel and overlapping with this policy process was the licensing of a third mobile cellular operator. The initial reform direction anticipated that an additional cellular provider might be viable by 2001, and so built-in a review in 2000. This review resulted in the initiation of a licensing process for the third operator. After considerable delays and litigation (see Ayogu & Hodge 2002 for details), the new entrant (Cell C) finally began services in November 2001.

### ***3.2 Universal Service in the new policy direction***

Expansion of availability and affordability of telecommunications services was championed through the underserved area licences (USALs), the continuance of the USF and any licence obligations for the SNO, Sentech and Cell C. While the licence conditions now place far more emphasis on universal access (i.e. community pay phones and school Internet labs), the USALs focus on universal service (i.e. household ownership).

### ***3.3 Under-serviced Area Licences (USALs)***

The USALs are an attempt to bring investment and competition to delivery of universal service in underserved areas, whilst still limiting the competition for the PSTNs. The PSTN and the mobile networks are already operational in most of the areas for which USALs will be granted. However, the exclusion of USALs from the lucrative components of the market, limit the impact of this competition on the revenues of the PSTN and mobile networks.

By having separate entities that were purely focused on poor areas, one could also confer special treatment on these entities because there is no danger that they use this special treatment to compete unfairly for lucrative components of the market. This special treatment would give them an implicit cross-subsidy from all other operators, allowing them to lower costs and hopefully offer lower prices - enabling a broadening of access to telephony. But by limiting the area of operation, it would not be possible for the USALs to use this special treatment to compete against the other operators for more profitable customers in other areas. The special treatment that has been drafted in the USAL licences and interconnection regulation include (ICASA 2002c & 2003a):

- A token R1 fee for radio spectrum
- No initial licence fee
- An annual licence fee of 0.1% of operating turnover (in contrast to the 1% paid by the SNO)

The USALs also overcome to some extent the problem of inflexible pricing that inflicted Telkom in the first phase. Like Telkom, the USALs have a licence to use wireless technologies. However, because the USALs are likely to use wireless throughout their licenced areas, they will be able to price discriminate to a greater extent than Telkom was able to do. This should hopefully enable them to draw in more marginal users through low access, high usage charges.

Whilst the USALs seem to be a good attempt to inject investment into poor areas, there have been many concerns over the financial viability of these licences. While the operators have been given some advantages to lower costs and improve viability, they have also been limited in other ways that potentially threatens their viability. For instance:

- Access to radio spectrum - wireless is most likely to be the least cost technology and the one that would enable them to price discriminate the most. However, least cost

wireless approach requires not just radio spectrum, but spectrum in specific frequency bands. A particular problem has already arisen whereby one of the cheaper wireless technologies, CDMA, is least cost in the 800 Mhz band<sup>273</sup>. However, this band is already occupied by television, and Sentech is targeting the spare capacity in this band for delivery of its multimedia services. Given the costs of moving television operators from one band to another, and/or fighting a state-owned enterprise for any existing spare capacity, it remains unlikely that they will get access to this spectrum.

- Limitations on scale economies - no single person may have a controlling interest in more than one licensee, limiting the potential for a single firm to have more than one licence<sup>274</sup>.
- Limitations on experience of operators - the operators must be SMEs, with a majority empowerment component and limitations on foreign partnership from having a controlling interest.
- Access to USF - it remains unclear at this point to what extent the operators will have access to the universal service funds for development. The potential operators see revenue from the fund as an important step towards financial viability and section 66 (1f) of the Act permits the use of USF money to assist the USALs (RSA 2001). However, the downgrading of the contribution to the USF to 0.2% means there will be limited funds available for USALs given the other competing interests. One of the limitations of the approach of using licence obligations to deliver community service phones is that it limits the subsidy that USALs are able to tap into to improve their viability.

### **3.4 Further promulgation of regulations**

#### **3.4.1 Supplementary interconnection and facilities leasing guidelines**

The interconnection and facilities leasing guidelines were amended in 2002 for purposes of accommodating the SNO. In addition carrier pre-selection and number portability regulations were promulgated with a view to facilitating competition in the sector.

#### **3.4.2 Carrier pre-selection**

The carrier pre-selection regulations require providing operators<sup>275</sup> to implement call-by-call carrier pre-selection two months after having received a request from another operator and to implement automatic carrier pre-selection ten months after having received such request. A lead-time of 12 to 18 months from the date of the request is estimated by Telkom for implementation of automatic-carrier pre-selection. Regulations indicate that the system set-up costs may be recovered as part of the prescribed annual review of fees and charges, but no further detail is available<sup>276</sup>.

Slamming, which is the transfer of a user from one operator to another without such user's knowledge or authorization, is to be prohibited. Carrier pre-selection is not applicable to mobile cellular operators.

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<sup>273</sup> Qualcomm 2002

<sup>274</sup> ICASA 2003b

<sup>275</sup> Defined as operators obliged to provide CPS phase 1 or 2 to one or more operators.

<sup>276</sup> [www.Telkom.co.za/ir](http://www.Telkom.co.za/ir)

### 3.4.3 *Number portability*

The Telecommunications Act, 103 of 1996, mandates that number portability enabling customers to retain their fixed-line and mobile telephone numbers if they switch between fixed-line operators and between mobile cellular operators will be introduced starting in 2005. ICASA published the regulations for the implementation of fixed-to-fixed and mobile-to-mobile number portability on the 30<sup>th</sup> of September 2005 in the Government Gazette. It is expected that implementation thereof will only begin in the second half of 2006. The implementation of number portability requires the publication of functional specification regulations for fixed and for mobile number portability. Consultation on the mobile number portability functional specification is in progress. The consultation process on the fixed number portability functional specification has not commenced yet. The set-up and per-operator costs are typically the largest cost components of implementing number portability. Similar to carrier pre-selection, there is a risk of not fully recovering system set-up costs. New draft guidelines are expected soon. Although the license for the second national operator has not yet been issued, the statutory deadline remains in force.

### 3.4.4 *Radio frequency*

The mobile operators, Vodacom and MTN as well as Telkom, and the SNO are entitled to apply for licences for the use of 1800MHz radio frequency spectrum and radio frequency spectrum for the provision of third generation services. Vodacom and MTN can now use the 1800MHz radio frequency spectrum and radio frequency spectrum for the provision of 3G. Cell C's existing licence already includes the right to use radio frequency spectrum in the 1800MHz band<sup>277</sup>.

## 4 **Phase 3 of the reform process: 2003-2005**

### 4.1 *Ministerial policy directives*

As alluded to above, the Telecommunications Act allows the Minister of Communications, to, from time to time, make policy directions to ICASA. The Telecommunications Act contains a number of restrictions that can be lifted by the Minister in terms of a proclamation in the Government Gazette. In terms of the authority granted in the Act, the Minister of Communications, announced a policy directive on the 2<sup>nd</sup> of September 2004 lifting certain restrictions contained in the Act<sup>278</sup>. In terms of the policy directive, as of the 1<sup>st</sup> of February 2005:

- Mobile operators may now utilise any fixed lines that may be required for the provision of their services including fixed lines made available by Telkom or any other person providing a public switched telecommunication service. This includes self-provision of such facilities by mobile operators. Section 37(2) of the Telecommunications Act requires mobile cellular telecommunication services (MCTS) licensees to obtain the fixed links (that is the fixed telecommunication facilities, but not the mobile telecommunication facilities) used in the provision of MCTS from Telkom or other PSTS licensees, until a date to be determined by the Minister. The Minister's Notice has indicated that such date is 1 February 2005.

<sup>277</sup> See [www.Telkom.co.za/ir](http://www.Telkom.co.za/ir)

<sup>278</sup> Department of Communications. Press statement. Policy announcement by the Minister of Communications, Dr Ivy Matsepe-Casaburri, 2 September, 2004.

- Value added network service providers may now carry voice using any protocol. A restriction on VANS licensees in terms of carrying voice is found in section 40(3) of the Telecommunications Act, which states that a VANS provider may not permit VANS to be used for the carrying of voice until a date to be determined by the Minister. Thus, where previously VANS licensees could provide any Van services, but could not allow the VANS network to be used for the carriage of voice, now they can provide any Van service including voice Van services.
- Value added network services may also now be provided by means of telecommunications facilities other than those provided by Telkom and the Second National Operator (SNO) or any of them. Section 40(2) of the Act requires VANS to be provided by means of telecommunication facilities provided to the VANS licensee by Telkom, until 7 May 2002, and thereafter by Telkom or the SNO, until a date to be set by the Minister. Thus, as from 1 February 2005, VANS are able to obtain telecommunication facilities over which VANS may be provided from any other player in the industry not otherwise prohibited from dealing in telecommunication facilities, eg MCTS and other VANS licensees and PTNs. Self-provisioning of facilities by VANS is however not currently permitted. The Minister is however expected to lift this restriction in the near future.
- Value added network service providers shall be entitled to cede or assign the right to use, or to sublet or part with control or otherwise dispose of the telecommunications facilities used for the provision of the value added network service, whereas in the past in terms of section 40(4)(a) of the Act, until a date to be set by the Minister, VANS providers may not cede or assign rights to use, or sublet or part with control or otherwise dispose of telecommunication facilities.
- Private telecommunications network operators shall be entitled to resell spare capacity and facilities or to cede or assign their rights to use such facilities or to sublet or otherwise part with control thereof. Section 41(5) of the Telecommunications Act provides that, until a date to be set by the Minister, a PTN provider may not resell spare capacity or cede or assign rights to use the telecommunication facilities or sublet or otherwise part with control of such facilities. Thus, PTN licensees, like VANS licensees mentioned above, as of 1 February 2005, are able to resale or otherwise deal in fixed telecommunication facilities. This provision applies to Transnet and Eskom as well as any other PTN licensee.
- Persons may apply for a licence to provide public pay phone services in any area of the Republic.

Fierce competition is expected in the area of voice provision where VANS will be able to compete with fixed line and mobile operators without any restrictions. The ability to offer voice over any protocol, coupled with facilities based competition is expected to bring down telecommunications costs significantly in South Africa. It is also anticipated that the opening up of the sector will facilitate its growth because the restrictive environment under which telecoms service providers have operated in the past has been growth inhibiting. Moreover, with heightened competition among mobile operators, VANS and fixed line operators should come greater choice, lower prices and better product quality for consumers.

#### **4.2 Voice over Internet Protocol (VoIP)**

Until the 1<sup>st</sup> of February 2005 firms could only use Voice over Internet Protocol for their internal communications only. However, since then, VANS can now offer a voice service in addition to data transmission. According to Forrester's Research, an ICT think tank, about

40% of South African businesses planned to invest in VoIP<sup>279</sup> in 2005. On the same note, of the total number of firms interviewed by World Wide Worx at the beginning of 2005, 31% were already using the technology whilst more than 50% were planning to use it before the end of the year<sup>280</sup>. The technology promises great cost savings especially for high call volume businesses like call centers, due to the need for a critical mass of calls that have to be made before VoIP can be profitable.

Whereas VoIP was still a relatively new technology in 2004, least cost routing, was already extensively deployed. The upgrade to VoIP should therefore be relatively easy for South African firms.

Although VoIP promises to introduce competition into the South African telecommunications market and thereby drive down the cost of telephony, the lack of broadband adoption due to the high cost of bandwidth is still a major factor in using the technology. This is blamed squarely on Telkom's hold on DSL and its control of bandwidth. According to Gilwald and Esselar (2004), lack of competition and the incumbent's fear of cannibalizing its ISDN service offerings have led to a slow introduction of vital new technologies. Furthermore, although ADSL was deployable by Telkom prior to 2002 it wasn't until then that it was introduced, primarily in anticipation of competition. Between 2002 and 2004, there were only 36 000 Telkom ADSL users. A possible solution to this is the unbundling of the local loop, which will require lot of political lobbying as things stand. Gilwald and Esselar (2004), however note that the introduction of the iBurst service to the market in late 2004, Wireless Business Solutions<sup>281</sup>, should have some impact on the market by undercutting the incumbent broadband operators, Sentech and Telkom.

From a regulatory policy perspective, VoIP, although certainly beneficial for competition, could pose challenges, which are not insurmountable when it comes to issues such as numbering and quality of service.

### **4.3 The direction of phase 3 reforms**

The third phase of the reform process also entailed the charting of a national convergence policy. In July 2003, the Department of Communications convened an industry-wide colloquium to discuss the policy and regulatory implications of the convergence of telecommunications, broadcasting and information technology against the backdrop of globalisation, technological advancement; the introduction of new services such as Wi-Fi; rising mobile phone penetration rates; growth of the internet, etc. The discussions were organized into the following four commissions: applications, services, content and infrastructure. The chairpersons and scribes of the commissions later constituted the drafting committee that submitted a report to the Minister. The colloquium concluded that, among other things, there is a need for a new technology neutral licensing regime; spectrum licensing must be transparent and equitable; and that there is a need to strengthen mechanisms for promoting effective competition.

Following the report of the colloquium, the Department of Communications published a draft Convergence Bill for public comment, in December 2003. Thereafter, certain amendments were made to the Bill and it was finally submitted to Parliament for its review and approval

<sup>279</sup> <http://www.savant.co.za/home.asp?pid=1328>

<sup>280</sup> World Wide Worx. 2005. South Africa corporates to leap into VoIP. <http://www.theworx.biz/voip05a.htm> accessed 24 November 2005.

<sup>281</sup> A Data-Switch Telecommunications Network operator (DSTN).

in March 2005. The Bill is currently before parliament's portfolio committee on communications.

#### **4.4 *The Electronic Communications Bill (formerly the Convergence Bill)***<sup>282</sup>

The Electronic Communications Bill (EC Bill) is South Africa's substantive regulatory response to convergence. It repeals most of the existing telecommunications and broadcasting legislation. The Bill deals with market structure and licensing, the radio frequency spectrum and equipment standards and approval. It also regulates with regard to rights of way and related issues for electronic communications network services, for interconnection and facilities leasing, pricing, numbering, and universal service. It delineates the spheres of regulation of ICASA, the independent regulator on the one hand and the Minister of Communications on the other hand. It also has a chapter on transitional provisions dealing mainly with the transition of existing licences to licences in the new regime.

##### **4.4.1 *Market structure and licensing***

Not unlike the Telecommunications Act, it, inter alia, sets out categories of services and deals with licensing issues. In terms of the EC Bill, there will be the following types of service providers as provided for in chapter 3:

- Electronic communications network service licensees;
- Electronic communications service licensees; and
- Broadcasting service licensees.

The service categories are delineated based on a number of definitions, as follows. 'Electronic communication network service' is –

A service whereby a person makes available an electronic communications network, whether by sale, lease or otherwise for that person's own use for the provision of an electronic communications service or broadcasting service ... to another person [for the same purpose] ... or for resale [sic] to an electronic communications service licensee, broadcasting service licensee or any other service contemplated by this Act.

'Electronic communications network' is defined as –

any system of electronic communications facilities (excluding subscriber equipment), including without limitation—

- (a) satellite systems;
- (b) fixed systems (circuit- and packet-switched);
- (c) mobile systems;
- (d) fibre optic cables (undersea and land-based);
- (e) electricity cable systems (to the extent used for electronic communications services); and
- (f) other transmission systems, used for conveyance of electronic communications;

'Electronic communication service' is defined as –

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<sup>282</sup> Thornton, L. May 2005. South Africa's Legislative Response to Convergence.

any service provided to the public, sections of the public, the State, or the subscribers to such service, which consists wholly or mainly of the conveyance by any means of electronic communications over an electronic communications networks, but excludes broadcasting services.

‘Electronic communications’ is defined as –

the emission; transmission or reception of information, including without limitation, voice, sound, data, text, video, animation, visual images, moving images and pictures, signals or a combination thereof by means of magnetism, radio or other electromagnetic waves, optical, electromagnetic systems or any agency of a like nature, whether with or without the aid of tangible conduct, but does not include content services.

Section 7 of the EC Bill provides that ‘no person may provide any service without a licence’. In terms of Chapter 3, services providers must obtain either an individual or class licence, or be exempt from licensing. The legislation also sets out examples of each of the categories: individual, class and exempt.

Individual licences include:

- Electronic communications networks of national or provincial scope operated for commercial purposes
- Commercial broadcasting and public broadcasting of national or provincial scope whether free to air or subscription
- Voice telephony electronic communications services that use numbers from the national numbering plan
- Electronic communications network, electronic communications and broadcasting services where a state entity owns more than 25 percent
- Other services where ICASA finds they have significant social or economic impact

Class licences include:

- Communications networks of municipal scale operated for profit
- Community broadcasting and low power services whether free to air or subscription
- Other services where ICASA finds they do not have significant social or economic impact

Exempt services include:

- Communications services provided not for profit
- Communications services provided by resellers
- Private communications networks (where excess capacity is not resold)
- Local area networks

- Other services as determined by ICASA

The licensing provisions with regard to radio frequency spectrum licences indicate that if one has a service licence or is exempt from such licensing and requires the use of a frequency to provide the relevant service, then that person must also obtain a frequency license. This is not any different from the current regime in terms of frequency use licensing. It has been argued that it is important that the regulator should have the authority to take back spectrum that is not being used so that it can be more efficiently allocated. However, no specific provision has been included in the legislation to give the regulator this authority.

#### **4.4.2 Access - Interconnection and Facilities Leasing**

In terms of the existing telecommunications regulatory regime, interconnection and facilities leasing are regulated similarly but separately. All PSTS licensees must interconnect and provide facilities by agreement, upon request by any other licensee, unless the regulator finds that the request is unreasonable, based on the following test:

Whether the interconnection is technically feasible, will promote the efficient use of the PSTN and can be implemented on a reciprocal basis.

In terms of the Electronic Communications Bill, any licensee must interconnect or provide facilities by agreement, upon request by any other licensee or exempt services provider, unless the regulatory finds that the request is unreasonable. ICASA may exempt certain licensees of their obligation to interconnect or provide facilities if ICASA finds that such licensees do not have significant market power.

The test under the Electronic Communications Bill will be:

Whether the interconnection is technically *and financially* feasible and will promote the efficient use of communications networks and services.

#### **4.4.3 Pricing regulation / Competition**

The Electronic Communications Bill now includes in it a Chapter on competition matters. In addition to being able to deal with competition matters ex post facto, ICASA may also regulate concerning pro competitive matters. These matters include pricing issues: price controls, accounting methods and separate accounting requirements, and information provision. The key to implementing these provisions will be the appointment of sufficient human and financial resources to ICASA in implementing these very important provisions.

01 December 2005

### **References**

- Ayogu, M & Hodge, J. 2001. 'An Assessment of the New Direction in Telecommunications Policy in South Africa', *Trade and Industry Monitor*, vol. 18, June
- Ayogu, M & Hodge, J. 2002. 'Understanding the nature of reforms in the telecom sector in South Africa: A political economy perspective', *Journal of Contemporary African Studies*, 20,2



- Benjamin, P. 2001. 'Does 'Telecentre' mean the centre is far away? Telecentre development in South Africa', *The Southern African Journal of Information and Communication*, vol 1, no. 1, pp.
- Business Day, 7 June 2002, "Telkom and ICASA settle tariff fight out of court"
- Cawley, R. 2001. 'Universal Service: specific services on generic networks - some logic begins to emerge in the policy area', *29<sup>th</sup> Telecommunications Policy Research Conference*, Alexandria VA, USA, October 27-29
- Coopers & Lybrand, 1992. *Telecommunications Sector Strategy Study for the Department of Posts and Telecommunications*, Pretoria, Government Printer
- COSATU. 1996. 'Submission on Bill', *presented to the Communications Portfolio Committee on 23 October 1996*
- COSATU. 2001. 'Submission on Telecommunications Amendment Bill [B65-2001]', *presented to the Communications Portfolio Committee on 28 September 2001*
- Dept. of Communications. 1997. "License issued to Telkom SA Limited to provide Telecommunication services under section 36 of the telecommunications act, 1996", Government Gazette no. 17984, notice no. 768, 7 May 1997
- Department of Communications. 2004. Press statement. Policy announcement by the Minister of Communications, Dr Ivy Matsepe-Casaburri, 2 September, 2004.
- DRA-Development, 1998. 'A Telecommunications Universal Service Policy Framework for Defining Categories of Needy People in South Africa', *Engineering News*. 2004. Telecommunications
- Gassner, K. 1998. 'An estimation of UK telephone access demand using Pseudo-Panel data', *Utilities Policy*, vol 7, pp. 143-154
- Gillwald, A. 2003. 'Under-serviced Area Licences in South Africa: Steps to achieving viable operators', LINK Centre Policy Research Paper No. 3, February. Graduate School of Public and Development Management, University of the Witwatersrand, Johannesburg, South Africa.
- Gillwald, A & Esselar, S. 2004. *South African 2004 ICT Sector Performance Review*. Link Centre Public Policy Research Paper No 7. December. Graduate School of Public and Development Management, University of the Witwatersrand, Johannesburg, South Africa.
- Gillwald, A & Kane, S. 2003. *South African telecommunications sector performance review*. LINK Centre, University of the Witwatersrand.
- Hamilton, J. 2003. 'Are main lines and mobile phones substitutes or complements? Evidence from Africa', *Telecommunications Policy*, vol. 27, pp. 109-133
- Hlapolosa, P. 2003. General Manager, Telecommunications, ICASA. Personal interview. 12 May
- Hodge J. 2000. 'Liberalising Communications Services in South Africa', *Development Southern Africa*, vol. 17 (3), Sept.
- Hodge, J. 2001. 'Promoting Competitive Outcomes in the Fixed Line Telecommunications Sector in South Africa', *TIPS Annual Forum*, September 10-12 2001, Johannesburg
- Hodge, J. 2003. 'Extending Ownership in Telecommunications in South Africa: Policy, Performance and Future Options', *TIPS Working Paper*, 2003
- Hope, M. 2003. Senior Manager: Frequency Spectrum, ICASA. Personal correspondence. 23 May
- Horwitz, R. 2001. *Communication and Democratic Reform in South Africa*, Cambridge University Press, NY, USA
- ICASA. 2001a. "Findings & Conclusions on the Review of Rate Regime in the PSTS Sector", Government Gazette no. 22240, notice no. 886, 23 April
- ICASA. 2001b. "Notice of intention to make regulations on fees and in the PSTS sector", Government Gazette no. 22241, notice no. 887, 23 April

- ICASA. 2001c. "Mobile cellular telecommunications service license issued to Cell C (proprietary) Limited", Government Gazette 22429, notice no. 1601, 22 June 2001
- ICASA. 2002a. "Regulations on annual contributions to the universal service fund by telecommunication service licensees", Government Gazette no. 23237, 15 March
- ICASA, 2002b. "Draft PSTS licence for second national operator", Government Gazette 23475, notice no. 894, 31 May
- ICASA 2002c. "Amendment of Interconnection Guidelines", Government Gazette 23771, notice no. 1494, 20 August
- ICASA 2003a. "Draft licence for underserved area licences to be issued pursuant to section 40A", Government Gazette 24320, notice no. 300, 27 January
- ICASA 2003b. "Limitation of Ownership and Control of Underserved Area Licence", Government Gazette 24970, notice no. 559, 25 February
- Jain, R & Das, P. 2001. 'A Framework for Assessing Universal Service Obligations: A Developing Country Perspective', *29<sup>th</sup> Telecommunications Policy Research Conference*, Alexandria VA, USA, October 27-29, 2001
- Laffont, J-J and Tirole, J. 2000. *Competition in Telecommunications*. MIT Press
- Lawson, C & Meyenn, N. 2000. 'Bringing Cellular Phone Service to Rural Areas: Grameen Telecom and village pay phones in Bangladesh', *Private Sector*, Note no. 205, World Bank
- Madyibi, S. 2003. SNO Project Director, ICASA. Personal Interview, 13 May
- Matabane, M. 2003. ICASA. Personal interview. 12 May
- Mathyssen, A. 2003. Head of Licensing, ICASA, Personal Interview, 13 May
- McGarty, T. 1997. 'The economic viability of wireless local loop and its impact on universal service', *Telecommunications Policy*, vol. 21, pp. 387-410
- Milne, C. 2000. 'Affordability of basic telephone service: an income distribution approach', *Telecommunications Policy*, vol. 24, pp. 907-927
- Minges, M, Mannisto, L & Kelly, T. 1999. 'the future is bright, the future is mobile', *Inform*, vol. 1, no. 6, pp. 485-496
- Minister for Posts, Telecommunications & Broadcasting. 1997. "Ministerial Policy Direction on Contributions to Universal Service Fund", Government Gazette no. 17984, notice no. 775, 7 May 1997
- Ministry of Communications. 2001. *Telecommunications Policy Directions*. March
- Msimang, M. 2003. ICASA. Personal interview. 12 May
- Mochiko, T. Users happy but services underused. *Business Report*. 10 June 2005.
- MTN. 2002. "Presentation to Parliamentary Portfolio Committee on Communications", *Public hearing: Consumer issues relating to cellular*, 5 November
- Ó Siochrú, S. 1996. *Telecommunications and Universal Service: International Experience in the Context of South African Policy Reform*, IDRC, Canada
- Peha, J. 1999. 'A Market-Based Mechanism for Universal Service Obligations', *27<sup>th</sup> Telecommunications Policy Research Conference*, Alexandria VA, USA, September 25-27
- Qualcomm, 2002. Rural Telephony Deployments using CDMA2000. 12 November
- Rodini, M, Ward, M & Worocho, G. 2003. 'Going Mobile: substituitability between fixed and mobile access', *Telecommunications Policy*, vol ?, No. ?, pp.?
- Rodriguez-Andres, A and Perez-Amaral, T. 1998. 'Demand for telephone lines and universal service in Spain', *Information Economics and Policy*, vol. 10, pp. 501-514
- RSA. 1995. *A Green Paper for Public Discussion: Telecommunications Policy*, Ministry of Posts, Telecommunications and Broadcasting, Pretoria, Government Printer
- RSA. 1996. *White Paper on Telecommunications Policy*, Ministry of Posts, Telecommunications and Broadcasting, Pretoria, Government Printer, March 13
- RSA. 1996. Telecommunications Act, No. 103 of 1996
- RSA. 1997. Telecommunications Amendment Act, No. 12 of 1997

- RSA. 2000. Independent Communications Authority of South Africa Act, no. 13 of 2000
- RSA. 2001. *Policy Directions issued by the Minister of Communications*. Department of Communications. Government Gazette
- RSA. 2001. Telecommunications Amendment Act, No. 64 of 2001
- South African Advertising Research Forum, *All Media Products Survey 1998-2001*
- Statistics South Africa, *Income and Expenditure Survey 1995*
- Statistics South Africa, *Labour Force Survey 2000-2001*
- Statistics South Africa, *October Household Survey 1995-1999*
- Sung, N, Kim, C & Lee, Y. 2000. 'Is a POTS Dispensable? Substitution Effects Between Mobile and Fixed Telephones in Korea', *Thirteenth Biennial Conference of the International Telecommunications Society*, Buenos Aires, 2-5 July
- Telkom, *Annual Reports 1994-2001*
- Telkom. 1997-2002. Telkom SA Ltd Tariff and Fee Filing, volume 1, Basket services.
- Telkom website. [www.telkom.co.za](http://www.telkom.co.za)
- Thornton, L. May 2005. South Africa's Legislative Response to Convergence.
- Trinkwon, D. 1997. 'Technology of fixed wireless access', *Telecommunications Policy*, vol. 21, pp. 437-450
- Universal Service Agency. 1998. 'Discussion paper on definition of Universal Service and Universal Access in Telecommunications in South Africa', *Government Gazette*, No. 19397, notice 2601, 22 October
- Universal Service Agency. 1999. 'Universal Access and Universal Service Discussion Paper', *Government Gazette*, No. 20129, notice 1114, 28 May
- Wellenius, B. 2000. 'Extending Telecommunications beyond the Market: Toward universal service in competitive environments', *Private Sector*, Note no. 206, World Bank
- Wenders, J. 1987. *The Economics of Telecommunications: Theory and Policy*. Harper and Row, London
- World Wide Worx. 2005. South Africa corporates to leap into VoIP. <http://www.theworx.biz/voip05a.htm> accessed 24 November 2005.

## ANNEXURE A

### General trends with respect to end user prices in the various telecommunications markets

#### *Fixed line market*

Traditionally long distance and international calls have been priced at very high levels. Revenues so gotten would then be used to subsidise local calls and telephone line rentals, which were priced below cost. In anticipation of competition Telkom embarked on a tariff rebalancing drive aimed at ensuring that prices were cost based. As such, long distance call prices have been declining. For instance, in 2002, the actual price per minute of a local call increased by 23.9% whereas that of a long distance call decreased by 12%<sup>283</sup>.

*Installation Charge:* Telephone line installation charges for both residential and business customers have been the same over the years. They increased from R150 in 1997 to R240 in 2004. It has been argued that residential customers should not be paying the same rate as the business customers.

*Rental Charge:* Rental charges have been the same for residential and business customers as well, but only between 1997 and 2002. Since then, business customers have been paying relatively more than the residential customers. The rates have increased from R39.20 in 1997 for both classes of customers to R95.44 for business and R71.84 for residential in 2004. There is however, a general feeling that the rental rates in South African fixed line market are relatively lower than their international counterparts.

*Usage charges:* They are broken down into standard and call more charges, and manual, auto and pre-paid packages. These usage charges have increased from 9cents/minute in 1997 to 39cents/minute in 2004 for residential and 39.3 cents/minute in 2002 to 43 cents/minute in 2004 for business.

*Public Payphones:* Payphone calls have been fluctuating for the period between 1997 and 2004. The average increase over a period of 8 years is 5.26%. The price has increased from 35 cents per three minutes in 1997 to 50 cents per minute. Effectively the price was 11.6 cents per minute in 1997 and it has increased by 38.3 cents over a period of eight years.

*International calls:* The rates for international calls are depended on which country you are calling, and they have been decreasing over the past seven years. For example calls to UK were R5.55 in 1997 and have decreased to R4.59 in 2004. Uruguay was R12.87 in 1997 and has decreased to R7.65 in 2004. The reason for decreases in international calls is the rebalancing of tariffs within the overall basket, as already mentioned above. Be that as it may, there is a general concern, however, that calling international destinations from South Africa is two times more expensive than calling South Africa from international countries.

#### *Mobile market*

Comparing tariffs across networks is a complex exercise due to the myriad tariff plans offered within and across networks. Nevertheless, call charges are likely to follow a similar pattern over a period of time. As such, analyzing tariff trends in one network can serve as a

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<sup>283</sup> Telkom annual report, 2002.

proxy for the general trends in the mobile market as a whole. The analysis below follows this approach.

Even before Cell C's cheap introductory offers and cut-rate tariff plans, competition has been reasonably intense in this market. Furthermore, Cell C's initial offers have not been of limited duration and have in many cases been matched by both Vodacom and MTN.

In May 2004, Cell C launched an airtime voucher that allows subscribers to pay in advance for an entire period's airtime, while still rationing the airtime on a monthly basis. The Steadychat vouchers are available in 6 or 18 months options. The 6 months option allows the subscriber to get 30% more airtime value for R300, i.e., it gives them R390 worth of airtime rationed over a 6 months period (R65/month). The 18 months card gives the subscriber 33% more airtime, i.e. for R1350 the subscriber gets R1800 worth of airtime rationed over 18 months i.e. rationed at R100 per month.

The tables below show some few examples to highlight tariff trends in South Africa.

**Table 2. MTN-trends in MOU, ARPU and tariff/min**

	MOU <sup>284</sup>	ARPU <sup>285</sup>	Tariff/min
1997	279	422	1.51
1998	278	426	1.53
1999	265	378	1.43
2000	221	302	1.37
2001	172	229	1.33
2002	168	208	1.24
2003	164	206	1.26

Source: MTN

Table 2 above shows MTN's average revenue per user (ARPU) and minutes of use (MOU) over a six-year period. Over this period ARPU declined by 51%. As MOU only fell by 41% over this period, the implication is that average tariffs have fallen. The data shows that tariffs have declined by 17% over the six year period (or 46% in real terms).

**Table 3. Comparing cost/tariffs of Vodacom Talk100/120 contract over 6 years**

	June 1998	April 2004	% Change
<b>Fixed costs (Rand)</b>			
Connection fee	91.2	97	6%
Monthly charge	267.9	315	18%
Free minutes	100	120	20%
<b>Call Costs (local) R/min</b>			
Peak standard	1.37	2.01	47%
Off-peak standard	0.68	0.98	44%
SMS peak	0.68	0.8	18%
<b>Call costs (International) R/min</b>			
Peak	1.37	1.72	26%
Off-peak	0.68	0.9	32%

<sup>284</sup> Minutes of use per month

<sup>285</sup> Average revenue per user/ per month

<b>Overall package cost</b>			
220 MOU +12 SMS	415.62	494.7	19%

Source: Vodacom

Table 3 compares the cost of Vodacom's Talk 100 contract and tariffs as they were in June 1998 with the current closest equivalent contract (Talk 120)<sup>286</sup>. The last row in the table shows how the ARPU of a subscriber who uses 220 minutes of talk time and send 12 SMS per month has changed over the past 5 year period. As shown, the overall nominal cost has increased by 19%- a real price decline of 19%.

Although the traditional contract market was never a key focus area for Cell C, contract subscribers have also benefited from increased competition. To coincide with Cell C's launch, MTN and Vodacom introduced the option of per second billing, and announced lower costs for on-net calls as well as selective reductions on other tariffs. These actions increased barrier to entry to the contract market for Cell C.

In early 2003, Cell C and MTN introduced a hybrid product, which allowed subscribers the benefit of contract with the control of the prepaid. Like the traditional contract, subscribers receive a free handset, but instead of paying for usage on a post-paid basis, they purchase a fixed amount of airtime upfront on a monthly basis. A further benefit for subscribers is that the tariffs are lower than the standard prepaid rates. Although the overall cost to operators is higher, the benefit is improved retention of high-end prepaid customers.

Despite the decline, in real terms, of tariffs over time, there is a general feeling that mobile prices are still relatively high in South Africa. Recently, the Communications Users Association of South Africa (CUASA) launched a complaint with Icasa alleging that mobile call tariffs are excessively high in South Africa. The Regulator is obliged in terms of the Telecommunications Act to investigate the complaint. In the process Icasa has issued a discussion document<sup>287</sup> soliciting comments from interested stakeholders, as a means of ascertaining the allegations and to assist in determining what action, if any, needs to be taken in this regard. The discussion document notes that access charges have fluctuated over the last 5 years. Subscription charges have increased 35% over the same period. An international comparison exercise (using a number of packages) further revealed that mobile prices in South Africa are relatively higher than comparator countries, with the exception of Switzerland with respect to pre-paid packages. The Regulator will conduct public hearings into pricing in the sector in the near future, before deciding on what action to take.

### ***Data services***

Data services in South Africa are still priced at high levels in comparison to developed countries. A recent study found that even with the latest price reductions ADSL services in South Africa are still more expensive than in comparator countries<sup>288</sup>.

<sup>286</sup> Talk 100 and 120 are types of tariff plans offered by Vodacom

<sup>287</sup> Icasa. 2005. Discussion Document – Mobile Prices. [www.icasa.org.za](http://www.icasa.org.za)

<sup>288</sup> South Africa Foundation. 2005. Telecommunications prices in South Africa: An international peer group comparison. *Occasional Paper* No 1.

## ANNEXURE B

### Some concurrent cases

Due to the concurrency in jurisdiction between the Competition Commission and Icasa, the sector regulator, both complaints discussed below were handled in terms of the Memorandum of Agreement between ICASA and the Competition Commission. In both cases, however, the Commission was allowed to undertake the investigations.

#### 1. *SAVA v. Telkom*

- 1.1. In May 2002 the South African Vans Association (SAVA) and a number of other Vans providers filed a complaint with the Competition Commission regarding alleged anti-competitive practices on the part of Telkom. The anti-competitive complaints involved price discrimination and abuse of dominance. Another complainant Omnilink also filed a complaint with the Commission against Telkom during August 2003, alleging that Telkom had engaged in anti-competitive price discrimination in respect of the provision of Vans to Nampak, a manufacturer of packaging material. In particular, Omnilink alleged that Telkom provided a type of Vans called a Wide Area Network – Virtual Private Network (“WAN-VPN”) service to Nampak (Pty) Ltd (“Nampak”) at a price below the price that Telkom would charge Omnilink for the infrastructure/facilities required to offer the service, and which infrastructure/facilities Telkom would also require to offer the equivalent service.
- 1.2. The Commission’s investigations found that Telkom had engaged in price discrimination, refusal to deal and exclusionary conduct. The matter was referred by the Commission to the Tribunal for adjudication but has yet to be heard because Telkom has challenged the Commission’s decision in the High Court where the matter is pending.

#### 2. *Orion v Telkom*

- 2.1. An abuse of dominance complaint was filed by Orion, alleging that Telkom. Orion alleged that Telkom is abusing its monopoly position by inducing customers not to deal with the Complainant; engaging in predatory conduct, by charging prices below average variable costs for fixed-to-mobile telephone services; and engaging in anti-competitive price discrimination between different customers, all in contravention of the Competition Act.
- 2.2. The Commission could not find evidence to sustain any of the allegations made by Orion against Telkom, and therefore recommended that the complaint not be referred to the Competition Tribunal for determination.

**Additional Questions on the State of Competition in the Telecommunications Sector in South Africa**

**1. Technology**

- (a) The ICN is quite interested in the extent to which new telecommunications technologies are being adopted in member countries. Please describe the extent to which fixed wireless such as Wi-Fi and WiMax are in use currently in your country or being contemplated.**

With a very high demand for broadband services and low fixed network infrastructure coverage, the South African market is sure to be dominated by mobile and wireless technologies such as WiMax and 3G. In 2004 Telkom partnered with Intel to pilot WiMax, a wireless alternative for 'last mile' broadband connectivity, to complement its fixed line network. By 2006/2007 Intel sees WiMAX technology being integrated into the mobile devices such as laptops, PDA's and Personal Communicators, changing the way people work and communicate. The agreement between Telkom and Intel outlines the companies' plans to deploy the necessary infrastructure to take advantage of next-generation WiMAX broadband wireless technology (also known as 802.16). Early work has already begun to identify sites for the network infrastructure and obtain the necessary equipment. Trials have also begun in identified sites in Pretoria.

Besides WiMax, there are other broadband services in South Africa. Sentech, the South African state owned enterprise that provides broadcast signal distribution, international telephony and broadband services, launched a broadband wireless service in May 2004 called "MyWireless," offering speeds as fast as fixed-wire options like DSL, and providing an instantaneous, "plug-and-play" Internet connection. The service targets both residential and business users with fixed and portable data services.

In April 2005, Wireless Business Solutions (WBS), a mobile data network service provider launched its 'iBurst' mobile broadband service in South Africa, after six months of pre-commercial operation. This is seen as offering much needed competition to Telkom and Sentech. The Second Network Operator (SNO) is also expected to introduce wireless technologies when it starts operations.

Mobile operators are also in the broadband race. The two biggest mobile operators in South Africa, Vodacom and MTN, launched 3G services in 2005. again, this is expected to provide some measure of competition to the incumbent fixed line operator and ISPs in the provision of broadband services. In fact, Vodacom launched a video SMS service where users can send or receive up to 30 seconds (300 kilobytes) of high quality video for less than 1 Rand.

With regard to Wi-Fi, the South African market is said to be also showing signs of growth although it attracts a very small number of business users and international travelers per month who make use of hotspots at airports, shopping malls and hotels to stay in touch. The disadvantage of Wi-Fi however include its limited range and lack of standardization between hotspots.

- (b) To what extent do new technologies (e.g. VoIP, broadband, mobile and fixed wireless) bring competition to the access, distribution network and service markets?**



Until the 1<sup>st</sup> of February 2005 firms in South Africa could only use Voice over Internet Protocol (VoIP) for their internal communications only. However, since then, VANS can now offer a voice service in addition to data transmission. According to Forrester's Research, an ICT think tank, about 40% of South African businesses planned to invest in VoIP<sup>289</sup> in 2005. On the same note, of the total number of firms interviewed by World Wide Worx at the beginning of 2005, 31% were already using the technology whilst more than 50% were planning to use it before the end of the year<sup>290</sup>. The technology promises great cost savings especially for high call volume businesses like call centers, due to the need for a critical mass of calls that have to be made before VoIP can be profitable.

Whereas VoIP was still a relatively new technology in 2004, least cost routing, was already extensively deployed. The upgrade to VoIP should therefore be relatively easy for South African firms.

Demand for broadband is also being driven not only by business users but also by subscribers wanting to access VoIP calling which allows them cheap international calling, enabling them to talk to friends and family in the Diaspora.

Although VoIP promises to introduce competition into the South African telecommunications market and thereby drive down the cost of telephony, the lack of broadband adoption due to the high cost of bandwidth is still a major factor in using the technology. This is blamed squarely on Telkom's hold on DSL and its control of bandwidth. According to Gilwald and Esselar (2004), lack of competition and the incumbent's fear of cannibalizing its ISDN service offerings have led to a slow introduction of vital new technologies. Furthermore, although ADSL was deployable by Telkom prior to 2002 it wasn't until then that it was introduced, primarily in anticipation of competition. Between 2002 and 2004, there were only 36 000 Telkom ADSL users. This figure increased to 58 000 in 2005. A possible solution to stimulating the broadband market is the unbundling of the local loop, which will require lot of political lobbying. The introduction of wireless technologies, however, might be a solution in the short to medium term.

Whilst Telkom sees wireless technologies such as WiMax as complementary to its fixed line service, ISPs and mobile operators view them as a way of circumventing the incumbent's stranglehold on the local loop.

The advent of wireless and mobile technology means that Telkom is no longer the only provider of broadband Internet and data access. Consumers now have the option of Sentech's 'MyWireless', WBS's iBurst and 3G services provided by mobile operators. All of these services offer some form of competition to Telkom's ADSL service. As a result, Telkom decreased its ADSL prices twice during the course of 2005.

**(c) To what extent are new technologies regulated in your country? Please describe the extent of such regulation.**

WiMax is still at a pilot stage in South Africa. As such there are no regulations developed for this technology. Regulations exist for WiFi and draft regulations for ADSL. These are discussed below.

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<sup>289</sup> <http://www.savant.co.za/home.asp?pid=1328>

<sup>290</sup> World Wide Worx. 2005. South Africa corporates to leap into VoIP. <http://www.theworx.biz/voip05a.htm> accessed 24 November 2005.

With regard to fixed wireless services, specifically WiFi, ICASA published its findings following a section 27 enquiry into the provisioning of wireless Internet access using ISM frequencies in June 2003<sup>291</sup>. Although the enquiry related to the use of Wireless Local Area Networks (WLAN), ICASA's attention was brought to the fact that WLAN is not only wireless Internet access but can enable connectivity to the Internet, intranet, corporate data bases as well as other value added services. In other words it incorporates data services as well.

One of the issues that ICASA sought to determine related to whether a person providing public access to a wireless LAN, is indeed providing a telecommunications service and if so whether such service must be licensed. ICASA concluded that a LAN service is not a public switched telecommunication service and that the Radio Act Declaration of 1995, places an unnecessary restriction on the use of WLAN by requiring that a LAN service shall be confined to the owner's premises and between computer systems of the same user. ICASA thus removed the need for a LAN to be limited to computer systems of the same user.

ICASA further determined that a LAN service provided within an owner's premises is not part of the local access service and as such need not be licensed. ICASA noted the need to create an environment for innovation that will benefit the sector. In this regard, all commercial services provided on customer premises will be exempt from licensing in terms of section 33(2) of the Act.

ADSL is the other technology for which regulations have been developed, although still in draft form. In July 2005, ICASA, the sector regulator released the findings of an investigation, in terms of section 27 of the Telecommunications Act, into the manner in which ADSL service is offered in South Africa. The investigation was prompted by a series of complaints, numbering more than 40, mostly relating to the pricing of ADSL by Telkom. Of particular concern is the fact that in South Africa telecommunications users pay double rental in that there are separate fees for line rental, ADSL access, ISP charges and call charges whereas the trend internationally is to charge a single fee for both access and Internet portions.

ICASA has gone further and released for public comment draft regulations for the provision of the ADSL service. In terms of the draft regulations, an ADSL tariff shall comprise of a connectivity charge, a monthly telephone line rental for basic telephony and a bandwidth charge. The connectivity charge shall be levied once off at the inception of the service. Service providers shall purchase bandwidth from network operators at a wholesale rate agreed between the parties. ICASA will only intervene in instances where there is disagreement regarding the wholesale rates. The draft regulations also deal with issues of consumer protection, and throughput speeds as well as service level agreements.

**(d) To what extent has the competition authority been involved in the introduction of new technologies such as providing advice to the regulator or enforcing competition legislation? Please describe this involvement.**

The involvement of the competition authorities in South Africa in the introduction of new technologies has been limited to an evaluation of complaints received regarding anticompetitive practices by market players. There are pending cases before the Commission

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<sup>291</sup> ICASA. 2003. Findings and conclusions in terms of section 27 (8)(a) of the Telecommunications Act on the section 27 enquiry on the provisioning of wireless Internet access using ISM frequencies. Government Gazette No 25594, 16 October 2003.

relating to issues of pricing and access to bandwidth. The authorities also get involved in terms of commenting on discussion documents as well as policy and legislative proposals by government and the regulator.

## 2. Market Structure

### (a) For each telecommunications service please identify the dominant firm (if applicable), competitors, and their respective market shares.

*Fixed line market* – Telkom is currently the only player in this market although the Second Network Operator (SNO) was granted a licence in December 2005. Operations are not expected until the second half of this year. In its business planning, Telkom has factored a loss of between 10% and 15% market share to the SNO. The bulk of the SNO's market share is expected to come from business users.

*Mobile market* – The first two mobile network operators began business in 1994. Currently there are three players in this segment, Vodacom, MTN and Cell-C. As of the end of May 2005, Vodacom, MTN and Cell C each had 56%, 35% and 9% market share respectively<sup>292</sup>.

*Value added network services* – This sector has managed to attract a large number of players, estimated at around 200 in 2005<sup>293</sup>.

*Private telecommunications networks* – There are two players in this market: Transtel and Eskom, both of which are government owned entities. Since February 2005, entities that have private telecommunications facilities are now entitled to resell spare capacity and facilities or to cede or assign rights to use such facilities or to sublet or otherwise part with the control thereof.

*Provision of public pay phones* – Again, from February 2005, persons may apply for a licence to provide a public pay phone services in any area of South Africa.

*Customer premises equipment* – This segment of the market has been deregulated since 1996. Customers are allowed to purchase customer premises equipment of their choice from any seller.

### (b) If applicable, for each service please identify remaining entry barriers (both economic and regulatory) which must be overcome before markets can become fully competitive.

The fixed and mobile telephone markets are subject to regulatory barriers to entry. Entry into the market is subject to licensing by the Regulator, after an analysis of the market and award of a licence by the Minister of Communications. As such, there will be a determined number of competitors at any given point in time. Entry into the VANS markets is restricted by high input costs such as the cost of access to the fixed line network and international bandwidth. High facilities leasing costs deter investment in the sector. In the mobile market, high interconnection rates may pose a challenge to new entrants, assuming that the licensing hurdle is overcome. The other challenge relates to the local loop. Telkom's hold on the local

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<sup>292</sup> Vodacom Group Annual Results (2005)  
MTN Annual Results (2005)  
Cell C website information at [www.cellc.co.za](http://www.cellc.co.za)

<sup>293</sup> Telkom annual report (2005)

loop means that VANS and other operators do not have direct access to end-users. They have to via Telkom.

### 3. Regulation

**(a) Please provide details on all foreign ownership restrictions with regard to telecommunications.**

The telecommunications sector is not subject to any foreign ownership requirements. The Minister of Communications, however, reserves the right to stipulate shareholding requirements when issuing a licence. For historical reasons, the only ownership and control requirements that are somewhat regulated relate to concentration levels and ownership by historically disadvantaged individuals<sup>294</sup>. In terms of the regulations in respect of the limitation of ownership and control of telecommunications services in terms of section 52, no person who holds an ownership interest or control interest<sup>295</sup> in a licensee in any telecommunication service category in a concentrated market<sup>296</sup> shall hold an ownership or control interest in another licensee in the same telecommunication service category.

Further, a licensee shall obtain prior written approval from the Authority in any case where the transfer results in (a) the transfer of a control interest (b) a decrease in the ownership interest held by historically disadvantaged persons in a licensee within the first two years of the initial grant of the licence, where the licensee proposed in its application such ownership interest to be held by historically disadvantaged persons.

**(b) Please describe the principles used (including pricing rules) for interconnection and network access.**

Subsection 43(3) of the Telecoms Act requires ICASA to prescribe guidelines pertaining to the form and content of interconnection agreements including among other things:

- the timeframe within which interconnection shall be carried out pursuant to the agreement.
- The quality or level of service to be provided
- The fees and charges payable for such interconnection.

ICASA published such interconnection guidelines on 15 March 2000, in Government Gazette No 20993. The guidelines provide that an interconnection agreement must be entered into as soon as practicable but no later than three months after an interconnection provider<sup>297</sup> received a request. The guidelines also provide for the non-discrimination of interconnection

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<sup>294</sup> Defined as encompassing natural persons, associations or juristic persons whose members are natural persons who before the 1993 Constitution came into operation were disadvantaged by unfair discrimination on the basis of race, gender, disability, sexual orientation or religion.

<sup>295</sup> Ownership interest means any direct or indirect ownership of issued share capital of more than 5% in a licensee.

Control interest means, among others, that a person (a) beneficially owns more than 25% of the issued share capital of the licensee; (b) is entitled to vote a majority of the votes that may be cast in a general meeting; (c) is able to appoint or veto the appointment of a majority of the directors of the licensee....

<sup>296</sup> A concentrated market means any telecommunications service category in which (a) there are fewer than five licensees (b) the Authority makes such a determination based on set criteria.

<sup>297</sup> An interconnection provider is a provider of a telecommunications service who is required to provide interconnection under section 43 of the Telecommunications Act.

seekers<sup>298</sup> by an interconnection provider. In instances of inability to negotiate or where agreement on the reasonableness of the request cannot be reached either party can approach the Regulator for mediation before referring the matter to the Regulator for a formal determination.

In terms of the existing telecommunications regulatory regime, interconnection and facilities leasing are regulated similarly but separately. All PSTS licensees must interconnect and provide facilities by agreement, upon request by any other licensee, unless the regulator finds that the request is unreasonable, based on the following test:

Whether the interconnection is technically feasible, will promote the efficient use of the PSTN and can be implemented on a reciprocal basis.

Similarly, in terms of the draft Electronic Communications Bill, any licensee must interconnect or provide facilities by agreement, upon request by any other licensee or exempt services provider, unless the regulatory authority finds that the request is unreasonable. ICASA may exempt certain licensees of their obligation to interconnect or provide facilities if ICASA finds that such licensees do not have significant market power.

The test under the Electronic Communications Bill will be:

Whether the interconnection is technically *and financially* feasible and will promote the efficient use of communications networks and services.

In terms of the facilities leasing guidelines, promulgated in 2000, a facilities leasing agreement must be entered into as soon as practicable after the Facilities Provider<sup>299</sup> has received a request for facilities leasing, but in any event not later than three months. This period could however be extended by the Regulator where necessary. All requests for new Facilities Leasing Agreements must be filed with the Authority, and a Facilities Provider of an Essential Facility may not terminate a Facilities Leasing Agreement without the Authority's consent. Parties to the agreement are encouraged to negotiate in good faith and to resolve disputes relating to the agreement. Furthermore, facilities must be provided in a non-discriminatory manner and in no less favourable terms than a Facilities Provider would provide to its subsidiary, associate or any other similar entity.

**(c) What parts of the network do competitors have mandated access to? Has the list of essential network elements changed over time?**

#### **4. Role of Competition Authority and Regulator in the Promotion and Maintenance of Competition**

**(a) We understand your country has negotiated an agreement to coordinate and harmonize joint jurisdiction over competition matters in telecommunications. What matters are ordinarily handled by the competition authority and what matters are handled by the regulator? Please provide examples, including matters referred to the competition authority by the regulator.**

In terms of the Telecommunications Act, ICASA is responsible for, among other things, sector-specific technical and economic regulation of certain key aspects of the

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<sup>298</sup> Defined as a provider of a telecommunication service who has interconnected or has requested that it be able to interconnect its telecommunication system to the telecommunication system of an interconnection provider.

<sup>299</sup> Defined as a provider of a telecommunication service who is required to lease facilities under section 44 of the Telecommunications Act

telecommunications sector that are crucial for competition including interconnection, facilities leasing, number portability, carrier pre-selection, network access and tariff regulation. The regulator's mandate also includes oversight on issues such as quality of service as well as the establishment and enforcement of licence conditions, particularly for major operators. ICASA also implements government policy on social objectives such as universal service and access.

Section 53 of the Telecommunications Act, however, also mandates the regulator to investigate 'uncompetitive' behaviour by operators in the sector. This creates an overlap with the Competition Act, thus necessitating some form of cooperation between the two agencies when it comes to dealing with competition matters. The Competition Act requires the Commission to negotiate cooperation agreements with such regulators. A Memorandum of Agreement (MOA) was entered into between ICASA and the Commission in 2002.

In terms of the MOA, the Commission deals with complaints relating to the following:

- (a) restrictive horizontal practices prohibited in terms of section 4 of the Competition Act.
- (b) Restrictive vertical practices prohibited in terms of section 5 of the Competition Act.
- (c) Abuse of dominant position prohibited in terms of section 8 and 9 of the Competition Act.

ICASA, deals with complaints relating to the following:

- (a) contravention of telecommunication and broadcasting licence conditions
- (b) contravention of telecommunication and broadcasting legislation

In practice, however, the decision as to which authority shall handle a particular complaint is arrived at through discussion and interaction between officials of the two institutions to see which one is better placed to deal with the matter. In the past, all abuse of dominance cases such as refusals to grant access to an essential facility, excessive pricing claims, price discrimination and the like have been handled by the competition authorities. In the SAVA vs Telkom<sup>300</sup>, there were discussions between the two agencies before a decision was taken to have the matter investigated by the Commission. Even then, ICASA provided advice on certain aspects of the case during the investigation process in accordance with the MOA, which allows information sharing between the agencies.

With regard to mergers and acquisitions, the Competition Act requires that all such transactions that meet the set thresholds must be filed with the Commission. In its assessment of such transactions, where necessary, the Commission may seek advice from the regulator. Mergers that require a transfer of licence are subject to the concurrent jurisdiction of both the Commission and ICASA. While the Commission concerns itself with competition matters, ICASA would look at the licensing and ownership aspects of these transactions. Where a transaction requires the approval of both the Commission and ICASA, the MOA requires that parties shall submit separate and concurrent applications to both agencies, who will then make independent determinations on the basis of the criteria and mandates of their respective legislation. The MOA has provisions for dealing with instances where the two regulators arrive at different decisions. Where one agency does not grant approval the transaction will not be approved.

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<sup>300</sup> See addendum

The MOA establishes a joint working committee charged with managing and facilitating cooperation and consultation in respect of matters dealt with by each regulator. The joint working committee also advises management of both agencies on issues affecting competition in the telecommunications and broadcasting sectors.

**(b) Does the regulator have a mandate to forbear from regulation of the telecommunications sector? Does the legislation have forbearance (deregulation) powers? If not, are forbearance powers being contemplated? How are decisions made to forbear from regulation in your country?**

There is no provision in either the Telecommunications Act or the MOA requiring the regulator to forebear from regulating under certain circumstances. ICASA and the Commission proposed such a provision in their deliberations during the drafting of the Electronic Communications Bill. Needless to say, it is doubtful whether the final Act will contain such a clause. Forbearance is dealt with through ministerial determinations in accordance with the Telecommunications Act.

**(c) What competitive safeguards have been adopted in your country to reduce customer-switching costs and to protect telecommunications consumers?**

The ability of consumers to react to changes in price or product offerings by producers is crucial for competition. Where consumers are able to switch suppliers, at minimum cost and effort, competition is likely to be robust. It is for this reason that the ICASA drafted regulations for number portability. The Telecommunications Act, 103 of 1996, mandates that number portability enabling customers to retain their fixed-line and mobile telephone numbers if they switch between fixed-line operators and between mobile cellular operators will be introduced starting in 2005. ICASA published the regulations for the implementation of fixed-to-fixed and mobile-to-mobile number portability on the 30<sup>th</sup> of September 2005 in the Government Gazette. It is expected that implementation thereof will only begin in the second half of 2006. The implementation of number portability requires the publication of functional specification regulations for fixed and for mobile number portability. Consultation on the mobile number portability functional specification is in progress. The consultation process on the fixed number portability functional specification has not commenced yet. The set-up and per-operator costs are typically the largest cost components of implementing number portability.

Similarly, carrier pre-selection enables subscribers to choose one operator for local calls and another operator for long distance and international calls without the inconvenience of having to first pre-dial a network code<sup>301</sup>.

The carrier pre-selection regulations published in 2005 require providing operators<sup>302</sup> to implement call-by-call carrier pre-selection two months after having received a request from another operator and to implement automatic carrier pre-selection ten months after having received such request.

Slamming, which is the transfer of a user from one operator to another without such user's knowledge or authorization, is to be prohibited. Carrier pre-selection is not applicable to mobile cellular operators.

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<sup>301</sup> South Africa Foundation. 2005. Reforming telecommunications in South Africa. Twelve proposals for lowering costs and improving access. Occasional Paper No 2/2005.

<sup>302</sup> Defined as operators obliged to provide CPS phase 1 or 2 to one or more operators.

The regulator is also considering protecting mobile phone users from being locked into long-term contracts. Contract mobile phone subscribers in South Africa are subject to long-term contracts of twenty-four months. ICASA sees this as a high switching cost that restricts competition. In 2005 ICASA published a discussion document on mobile phone handset subsidies<sup>303</sup>, as a way of garnering ideas on how if at all necessary, to regulate handset subsidies, that necessitate subscribers being locked into long-term contracts. The Commission submitted written comments and participated in the oral hearings that took place, recommending that contracts of different lengths and the option of a subscription contract without a 'free' handset should be offered by mobile operators. This would ensure that customers are able to switch subscribers at short notice than waiting for twenty-four months before switching.

## 5. Universal Service

### (a) We understand your country has a universal service policy for telecommunications. Please describe how it works in practice.

The delivery of universal service in South Africa has three components: rollout obligations; community service obligations and the universal service fund (USF) to be administered by the universal service agency (USA). It was accepted at the onset that universal service was not a viable goal, and that an interim policy of universal access was acceptable. However, because the PSTN had failed to service black areas adequately under apartheid, there was considerable pent-up demand amongst profitable customers in these areas. It therefore seemed appropriate to have some universal service component to the policy - the rollout targets. The community service obligations and the USF on the other hand were classic universal access policies.

*Rollout requirements* – To ensure that the exclusivity period for the PSTN fulfilled the goals of infrastructure rollout, strict licence conditions were placed on the network provider. In particular, the licence conditions included rolling out 2.81 million new lines over the exclusivity period, of which 2/3rds would be in under-serviced areas and for priority customers. Financial penalties would be imposed for failure to reach these targets<sup>304</sup>. The targets were set on the basis of what level of teledensity South Africa should have, given its per capita income level. The expectation was that South Africa could aim for a teledensity of 20 phones per 100 people, double its teledensity at the time. This teledensity target was translated into a specific target in terms of number of lines. The mobile operators were not given specific rollout targets because a) they were licenced prior to the consultative policy process, and b) this was considered a luxury service that did not have mass appeal.

*Community Service obligations* –The aim of community service obligations is the extension of payphone access to ensure that each household in the country is within a short walk from a payphone. Given that universal access was an intermediate goal, Telkom was given a large obligation to put in place and keep operational and additional 120,000 payphones during the exclusivity period. The mobile operators were not given very demanding targets for what were called community service telephones.

<sup>303</sup> ICASA. 2005. Discussion Document into terminal equipment subsidies also known as handset subsidies. Government Gazette No. 27613, 24 May 2005

<sup>304</sup> Telkom would pay penalties for missing targets of R450 per line for the first 100,000 lines and R900 per line for each extra line missed. If it misses Priority Customer targets the penalty per unit is R4,500, for schools R900, public payphones R2,250 and villages R1,125.



*Universal Service Fund and Universal service Agency* – Sections 58-64 of the Telecommunications Act established the Universal Service Agency to manage the Universal Service Fund (sections 65-68). The agency is mandated with publicly promoting the goal of universal access and service, determining what shall constitute the universal access and service goals of the country, and conducting research and monitoring implementation. It also manages the USF, which is to be used exclusively for the payment of subsidies to assist needy persons towards the cost or access to telecoms and/or to Telkom other operators to assist them in rollout. The Minister of Communications determined the initial contribution to the USF for the duration of the exclusivity period (until May 2002), setting a cap of R20m per annum, of which half was paid by Telkom and the other half split between the mobile operators. Since 2002, the sector regulator now determines the contribution to the fund.

In terms of the ‘Regulations in respect of the annual contributions to the Universal Service Fund by holders of telecommunication service licences’, every holder of a licence issued in terms of chapter V of the Act, shall pay an annual contribution of 0.2% of the annual turnover derived from the provision of the telecommunication service that it is licensed to provide, to the Fund.

Expansion of availability and affordability of telecommunications services is also championed through the under-served area licences (USALs), the continuance of the USF and any licence obligations for the SNO, Sentech and Cell C. While the licence conditions now place far more emphasis on universal access (i.e. community pay phones and school Internet labs), the USALs focus on universal service (i.e. household ownership).

## **6. Country Specific Issues**

- (a) **In addition to these questions, the ICN Telecommunications Working Group would like to know if there are specific issues your country would like the ICN to address so as to assist your country in promoting competition in the telecommunications industry. This might include providing advice on matters unique to your situation.**

# Taiwan Telecom Review

*Directorate General of Telecommunications (DGT)  
Chinese Taipei  
October 6 , 2005 , Taipei*



Directorate General of  
Telecommunications

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  - ❖ *Universal Service Regulation*
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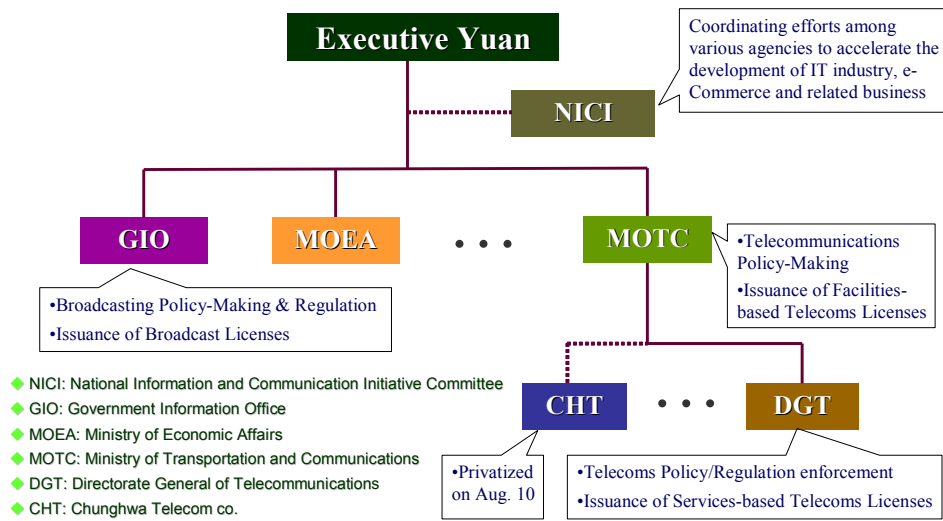
<sup>305</sup> Taiwan did not participate in a subsequent questionnaire.



## Introduction



### Authorities of ICT-related Industries



## Functions of DGT & GIO

### ◆ DGT's functions

- ❖ *devise telecom development policies and draft laws and regulations;*
- ❖ *exercise licensing and regulatory functions, including regulating tariff & interconnection charges, and administer universal service fund;*
- ❖ *settle disputes among operators, and allocate radio spectrum (for telecom & broadcasting) & numbering resources; and*
- ❖ *assign organizations to evaluate conformity of terminals .*

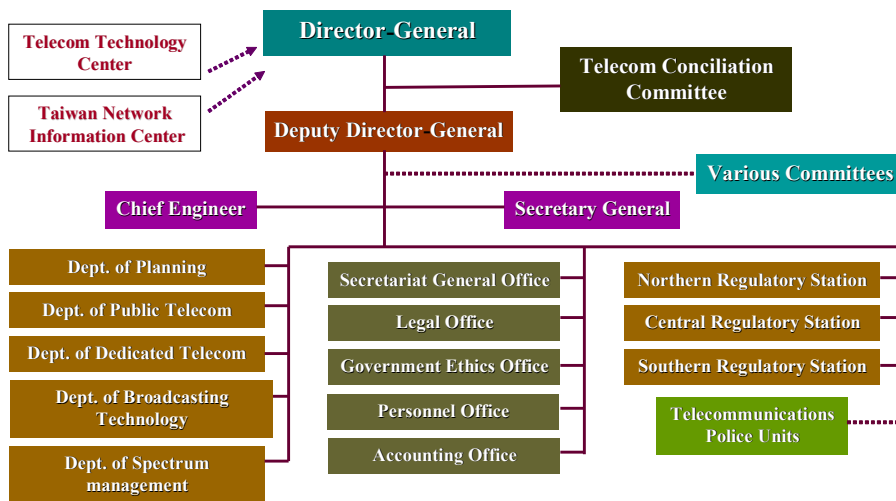
### ◆ GIO'S functions

- ❖ *enforce legislation pertaining to the radio, television, and cable TV industry;*
- ❖ *tabulate the activities of the radio, television, videotape and cable TV industries; and*
- ❖ *regulate radio & television broadcasting stations, cable television system operators, and radio & television program supply enterprises.*



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## DGT's Organizational Chart



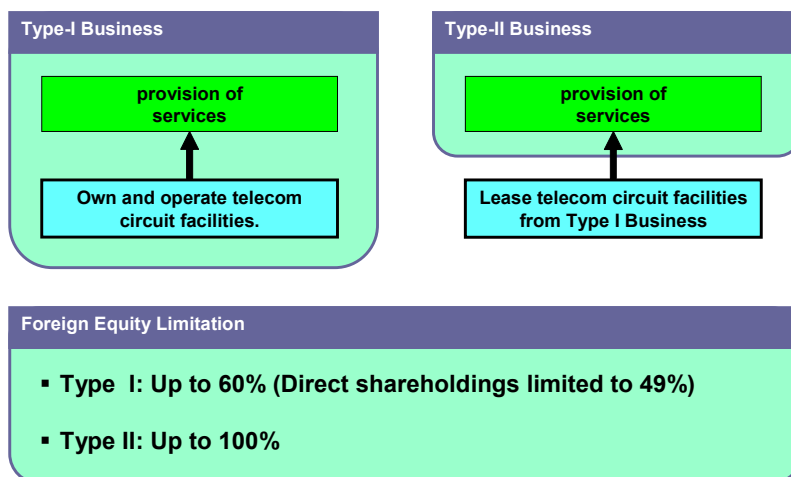
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## Telecom Liberalization



Directorate General of  
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### Classification of Telecommunication Business



## Approach & Stage of Liberalization

### Approach

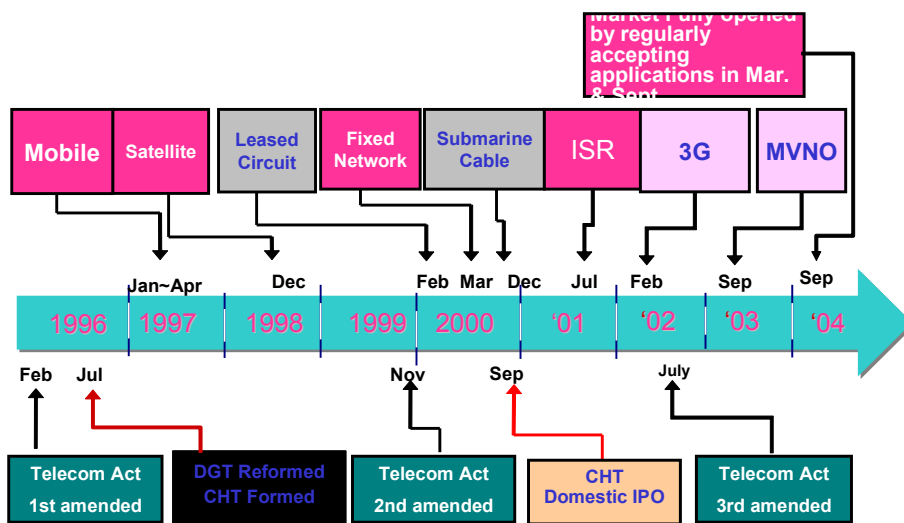
**Deliberate and Phased Approach**  
**Facility-based before Service-based competition**

### Stage of Liberalization

- **Stage-I : Mobile Communications n/w & services**
- **Stage-II : Satellite Communications n/w & services**
- **Stage-III : Fixed-Line Communications n/w & services**
- **Stage-IV : Voice simple resale services**



## Liberalization Milestones



## Process on De-regulation & Re-regulation (1)

1996, Feb. : **Amendment to Telecom Act of 1958.**

Jul. : **Re-organization of DGT.**

Oct. : **Publication of rules and guidelines for interconnection and tariff rate**

1997, Jan. : **Mobile Phone Services Opened.**

Feb. : **Paging Services Opened.**

Mar. : **Mobile Data Services Opened.**

Apr. : **Trunked Radio Services Opened.**

Oct. : **Stipulation of Regulation of Interconnection for Mobile Communications.**

1998, May. : **Satellite Up-Link / Down-Link Services Opened.**

Aug. : **VPN Services Opened.**

Sep. : **Mobile Satellite Communications Services Opened.**

Dec. : **Fixed Satellite Communications Services Opened.**



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## Process on De-regulation & Re-regulation (2)

1999, Nov.: **Amendment to Telecom Act.**

1. *Relax the shareholding by foreigners from 20% to 60%.*

2. *Set up accounting separation principles.*

3. *Adopt "Price Cap" regulation.*

4. *Set out the rights and obligations of Type-I operators with regard to interconnection.*

5. *Specify the rules for calculation of interconnection cost (TELRIC base from 2001)*

1999, Nov.: **Revision of "Interconnection Regulation for Mobile communications", and renamed as "Interconnection Regulation for Type I Telecom Business".**



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## Process on De-regulation & Re-regulation (3)

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2000 Feb. : Domestic Leased-Circuit Services Opened.  
Mar. : Fixed-line Communications Services Opened.  
Aug. : Stipulation of Accounting Standards and Regulation for Type I Telecom Operators.  
Sep. : Stipulation of Regulation Governing End-User's Tariffs for Type I Telecom Operators.  
Dec. : Int'l Submarine Cable Leased-Circuit Services Opened.

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2001 Jun. : Stipulation of Regulations on Universal Services .  
Jul. : Voice Simple Resale Opened.  
<< Chinese Taipei's Telecom market had thus been fully opened. >>

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2002, Jan. : Chinese Taipei became a member of the WTO.



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## Market Status



Directorate General of  
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### Number of Telecom Operators

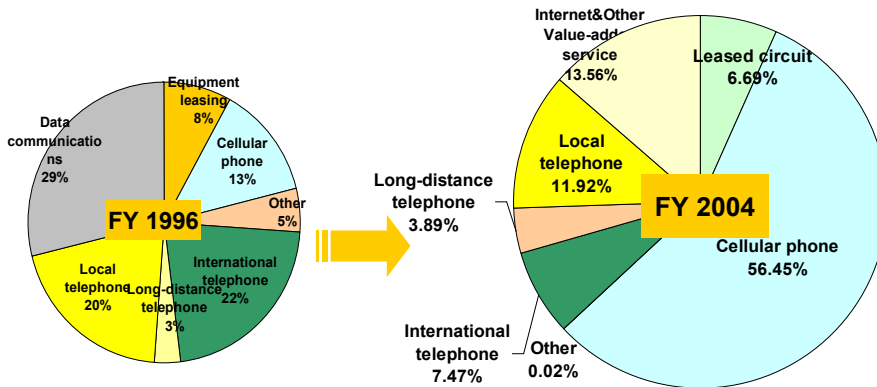
Type of Business	Service Categories		No. of Opr.	Subtotal	Total (as of 08/ 2005)	
Type I	Mobile	Mobile Phone	2G	6	32	119
			3G	5*		
		Radio Paging	5			
		Mobile Data	4			
		Trunked Radio	9			
		1900 MHz Low-powered Cordless Phone	1			
	CT-2	2				
	Satellite	MSS	0	16		
		FSS	10			
		Satellite TV Program Relay Services	6			
	Fixed	Fixed Network	4	71		
Domestic Leased Circuit		63				
Submarine Cable		4				
Type II	Internet Access		175	579		
	Voice Simple Resale		79			
	I-phone		82			
	Other Value-Added services		243			

\*The first 3G operator, APBW, launched its services on 29 July, 2004.

Source: DGT



### Transition of Telecom Scale



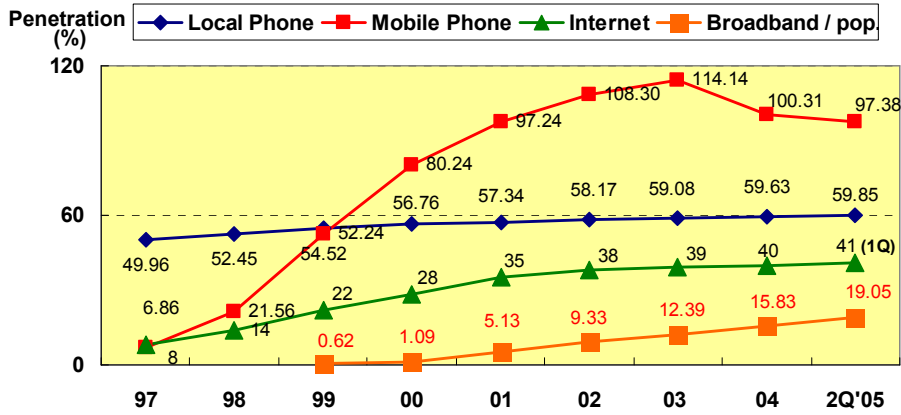
Revenue: NTD 157.3 Billion

Revenue : NTD 369 Billion

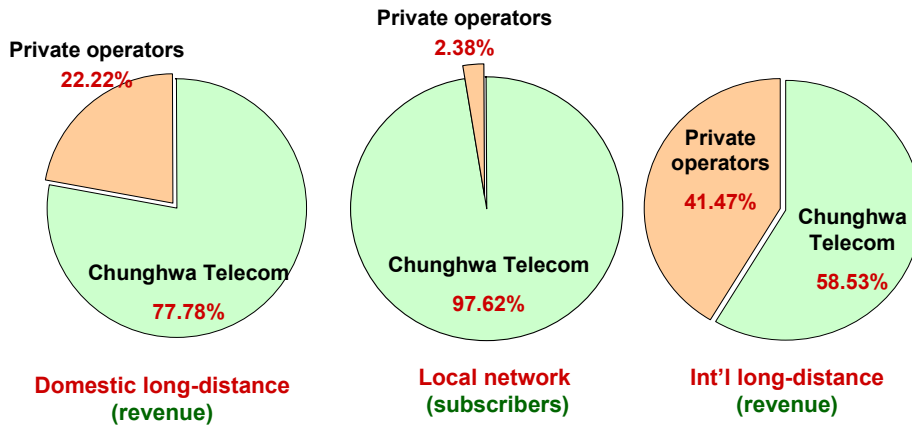


Source: DGT

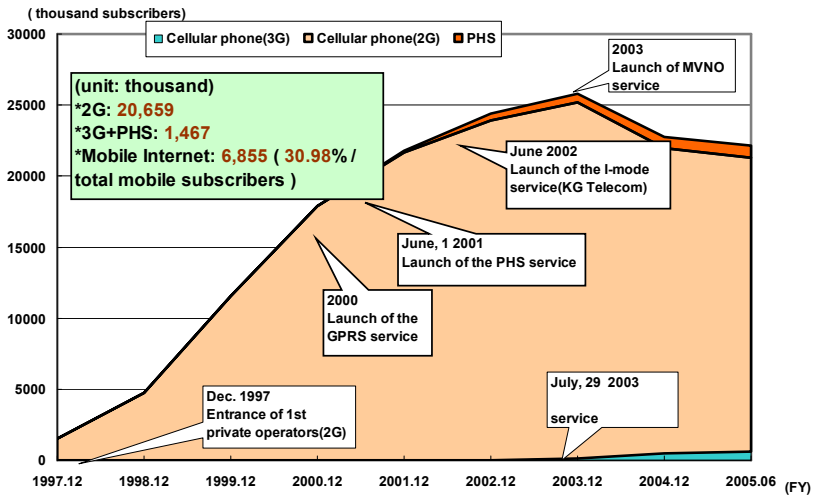
## Penetration Rates of major services



## Fixed Network Market - Market Share of CHT and Private Operators



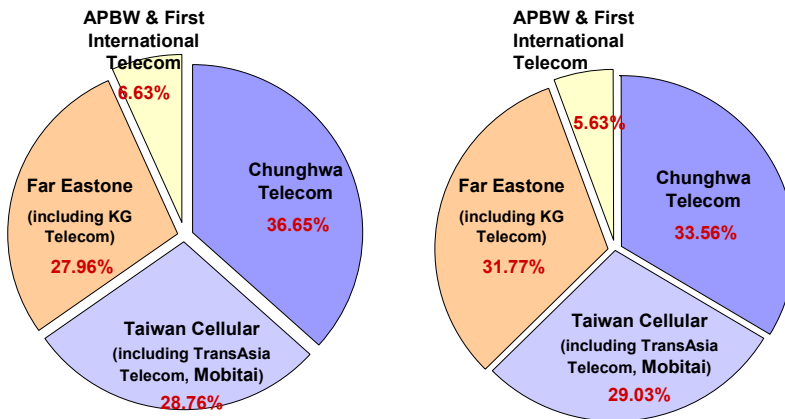
## Evolution of Mobile Market



Source: DGT

18

## Mobile Phone - Market Share



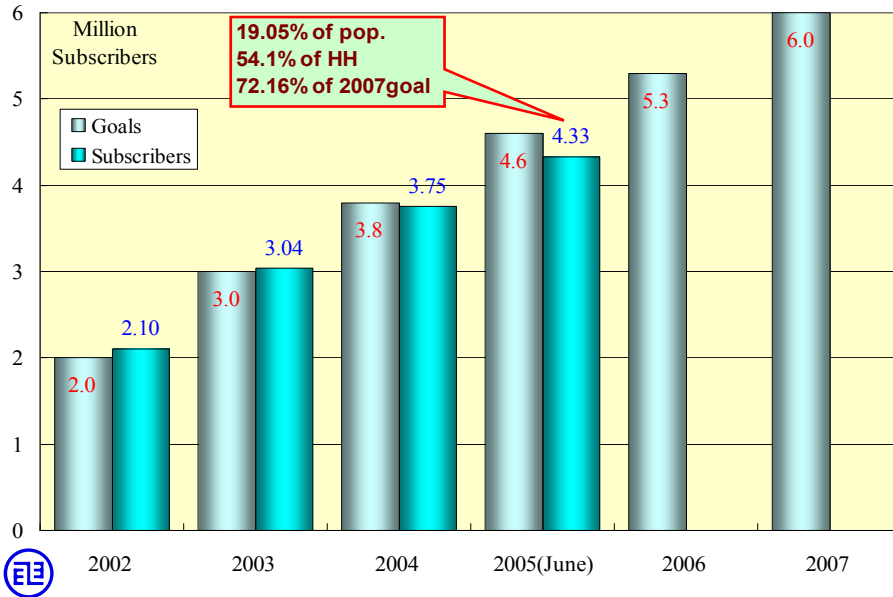
Σ Subscribers: 22,127 k

Σ Revenue of 06 '05: NTD18.429 b

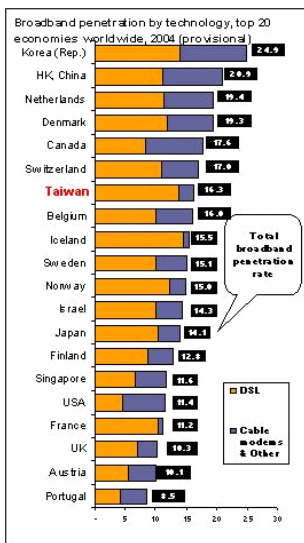
Source: DGT, June 2005

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### Broadband Subscribers Growth



### Broadband Penetration Rate, 2004



•Taiwan ranks the 7th globally, the 4th among Asia-Pacific countries.

Source: ITU, April 26, 2005

## Internet Utilization

### ◆ Survey Results released by TWNIC -July 2005

#### ❖ Users

- **No. of Internet users:** 14.66m (64.78% POP)
- **Gender Difference in Internet Users (above 12 years old)**
  - Male: 67.66% POP
  - Female: 60.78% POP
- **No. of Broadband Internet Users:** 10.53m (54.70% POP)

#### ❖ Households

- **No. of Household with Internet Access:** 4.91m (68.34% HH)
- **No. of Household with BB Internet Access:** 4.08m (56.84% HH)



## Regulatory Framework



## Regulatory Principles

- ◆ *Technology neutral approach*
- ◆ *Asymmetrical regulation*
- ◆ *No pre-set number of market participants except limitation of scarce resource*
- ◆ *Promoting investment in broadband infrastructure*



## Pro-Competition Framework (1)

- ◆ **Independent Regulatory Body:**
  - ❖ *DGT was reorganized and transformed into a regulatory authority, hived off its commercial operations to ChungHwa Telecom Co. in July 1996*
- ◆ **Interconnection:**
  - ❖ *Regulations for Network Interconnection -Oct.1997*
- ◆ **Accounting Separation:**
  - ❖ *Regulations on Accounting Separation - Aug. 2000*
- ◆ **Price Regulation:**
  - ❖ *Regulations Governing Tariffs - Sep.2000*
- ◆ **Universal Service:**
  - ❖ *Regulations on Telecom Universal Services- Jun.2001*



## Pro-Competition Framework (2)

### ◆ **Equal Access**

- ❖ *Regulations Governing the Equal Access Service - Jun.2003*

### ◆ **Number Portability**

- ❖ *Regulations Governing Number Portability - Nov.2003*

### ◆ **Transparency discipline**

- ❖ *Policy-making Process: provide prior consultation and public comment*
- ❖ *Interconnection agreement: interconnection agreement with the dominant operator should be published on DGT web site.*

### ◆ **Competition Safeguard**

- ❖ *Specify prohibitive behaviors and stipulate in the Telecommunications Act*



## Future Policy Direction



## Establishment of the NCC

- ◆ ***A more effective and re-structured independent regulator is necessary to ensure impartiality and accommodate to the trend of convergence between telecommunications and broadcasting.***
- ◆ ***Our government has decided to establish a new converged regulator, named **Nat'l Communications Commission (NCC)**.***
- ◆ ***The Organizational Statute of the NCC is under the deliberation process in the Legislative Yuan.***



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## The Amendment to the Telecommunication Act (1)

- ◆ ***In response to technology convergence and market development, DGT has formed a task force to review the Telecommunications Act.***
- ◆ ***The key elements of amendment will cover :***
  - ❖ ***Easing entry regulations***
    - Abolition of distinction between Type I and Type II telecom business
    - Abolition of Franchise and permit system for market entry →  
**REGISTRATION**
  - ❖ ***Enhancing effective & fair competition***
    - publish major carriers' reference interconnection offer (RIO)
    - reinforce asymmetric regulations over dominant carriers
    - Abolish tariff regulations for non-dominant, price-cap system applied to dominant carriers.



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## The Amendment to the Telecommunication Act (2)

### ◆ *The key elements of amendment ( continued) :*

#### ❖ *Strengthening consumer protection*

- Prior publication on market exit
- provision of sufficient information on service content when making a contract



## Conclusion



## Conclusions

- ◆ *Appropriate institutional and regulatory environments are required during the process of services liberalization.*
- ◆ *Introduction of efficient and effective competitive with a balance between deregulation and re-regulation will benefit both consumers and the national economy.*
- ◆ *A more effective and re-structured independent regulator is necessary to ensure impartiality and accommodate to the trend of convergence between telecommunications and broadcasting.*



## Conclusions

- ◆ *The regulator should take full consideration of public opinions and international benchmarks to develop a best policy that can balance different interests in the sector.*
- ◆ *The mechanism for competition safeguard is essential to the success of service liberalization and should be constantly reviewed to adapt to the development of market and innovation of technologies.*



<http://www.dgt.gov.tw>

***Thank you for your attention.***



**Reference (1) :Universal Service**



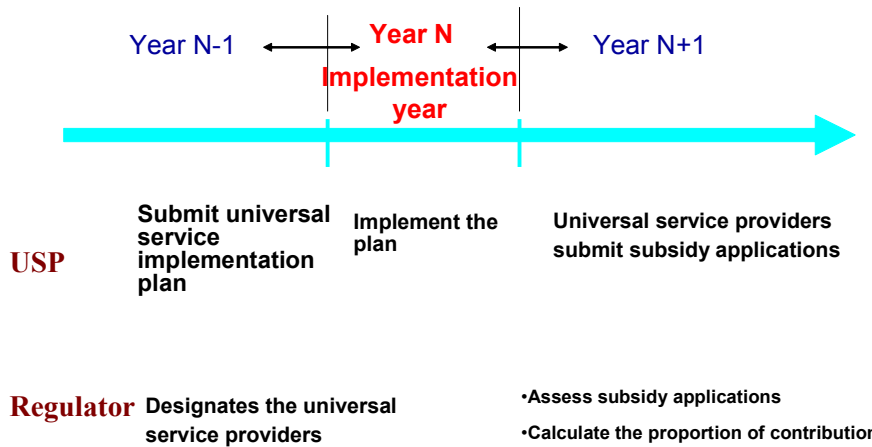
## Scope of University Services

- ◆ **Universal service(US) for voice communication**
  - ❖ *Uneconomic public payphone service, telephone service in uneconomic areas and free coastal radio maritime emergency and safety communication service.*
- ◆ **Universal service (US) for data communication**
  - ❖ *The discount offers for local data communications services necessary for Internet access as offered to **schools and public libraries** by operators.*
  - ❖ *Schools and public libraries desiring Internet access may select legal operators for the provision of US for data communications.*



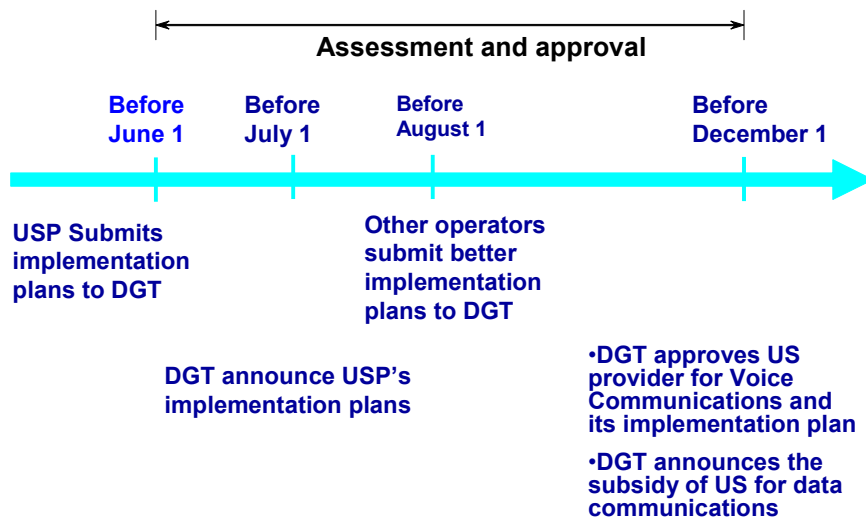
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## Operations and management



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## Submitting and approval for implementation plans



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## Universal Service Fund Administrative Committee

### ◆ Members

- ❖ Selected by the DGT from representatives of **agencies, academics and experts.**

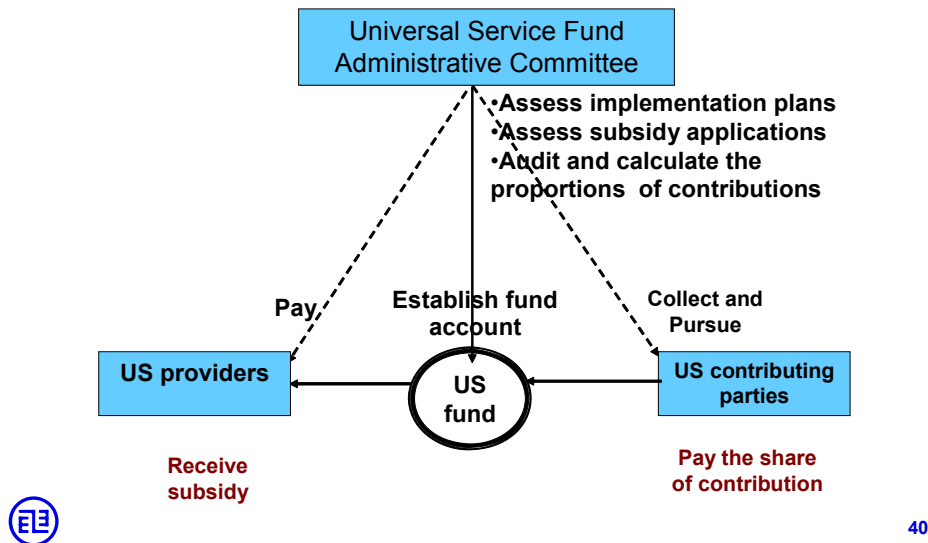
### ◆ Functions

- ❖ Assessment of annual implementation plans and subsidy applications.
- ❖ Auditing and calculation of the proportions and amount of contributions.
- ❖ Audit and assessment of the incoming and outgoing situation of **Telecoms Universal Service Fund.**



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## Management of Telecoms Universal Service Fund



## Universal service contributing parties

### ◆ Universal service contributing parties

- ❖ Type I operators
- ❖ Type II operators designated by MOTC
  - ISR
  - I-Phone
- ✂ If a contributing party's revenue figure is less than the amount specified by the DGT, it need not contribute universal service charges that year.

### ◆ Proportion

- ❖ Calculated from the **proportion of revenue** generated by the individual contributing party against the total revenue generated by all contributing parties, multiplied by the total universal service charges.

## Implementation status

- ◆ **June 15, 2001: MOTC announced *Regulations on Telecommunications Universal Service***
- ◆ **Jan. 1, 2002: Enforced the regulations, and *designated CHT as the US provider for voice communications***
- ◆ **The total US costs in 2002, 2003 and 2004 :**

(Million NT\$)	2002		2003		2004	
	CHT's plan	MOTC's approval	CHT's plan	MOTC's approval	CHT's plan	MOTC's approval
Total cost	4,012	2,367	4,956	1,834	3,302	1,505

- ◆ **The subsidies cannot exceed *105%* of the predicted subsidy amounts in the approved implementation plans**



## Reference (2)-Interconnection



## Interconnection (1)

- ❖ *Network Interconnection is mandatory for all Type I operators.*
- ❖ *A Dominant Carrier shall unbundle its network elements.*
- ❖ *If an agreement fails to be concluded within three months, any involved party can request for arbitration by DGT.*
- ❖ *DGT may disclose the interconnection agreement between or among Type I operators which are Dominant Carrier and other telecommunications operators*
- ❖ **The Dominant Carrier's interconnection fee will be reviewed annually and negotiated by operators. From 2001, interconnection fees should be calculated on the basis of TELRIC.**



## Interconnection (2)

- ◆ ***Any technically feasible point may be requested for providing network interconnection services***
- ◆ ***Points of interconnection:***
  - ❖ *local switches;*
  - ❖ *local tandem switches;*
  - ❖ *toll switches;*
  - ❖ *international switches;*
  - ❖ *designated tandem switches;*
  - ❖ *signal transfer points;*
  - ❖ *cross-connect points; and*
  - ❖ *other precedents of points of interconnection.*

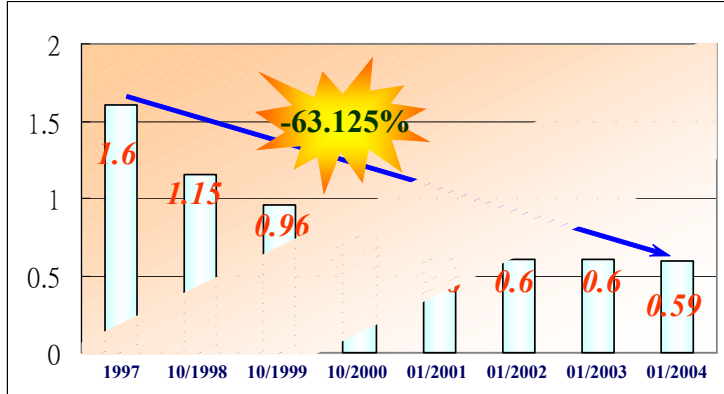




### Interconnection (3)

◆ **Trend of Interconnection Fee between Fixed and Mobile**

Unit :NT\$/minute

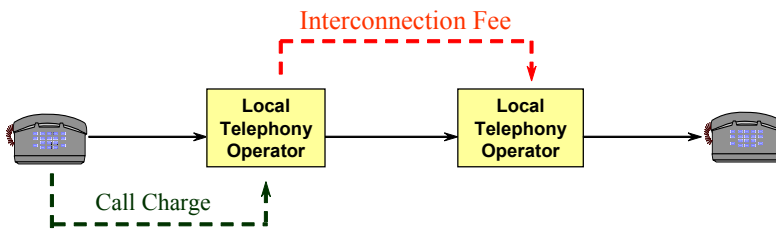


Off-peak interconnection fee was NT\$0.39 per minute from January 2004.



### Interconnection (4)

◆ **Fixed → Fixed**



Tariff is set by the operator of the calling party and paid by the calling party.

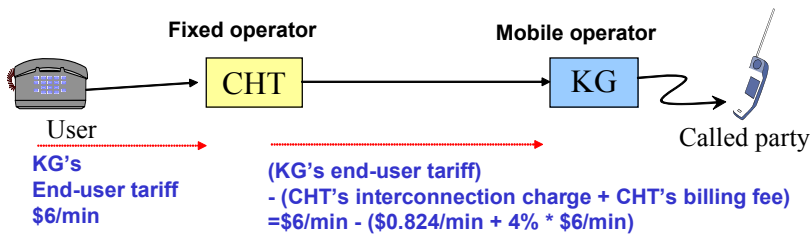
The revenue is attributed to the operator of the calling party.

The bad debt will be on the account of the calling party.



## Interconnection (5)

### ◆ Fixed → Mobile



CHT charges its user the mobile call charge set by KG at NT\$6 per minute, and pays the mobile call charge to KG.

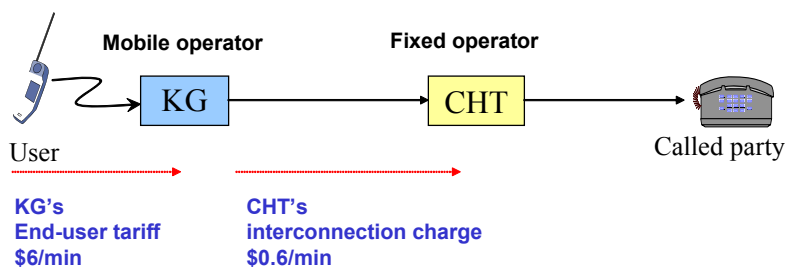
In return, KG pays interconnection charges NT\$0.824 per minute to CHT for collecting the call from the caller and delivering it to the POI plus 4% of the mobile call charge for billing and administration.



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## Interconnection (6)

### ◆ Mobile → Fixed



KG receives its end-user charges and pays an interconnection charge to CHT for delivery to CHT customer.

Currently, KG sets end-user tariff at NT\$6 per minute, and pays NT\$0.6 per minute to CHT for interconnection charges.



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## **The State of Competition in the Telecommunications Sector in Turkey**

### **1. The State of Competition In the Telecommunications Sector**

#### **(a) Telecommunications deregulation**

##### **(i) Which segments of the market are deregulated and to what extent?**

The market for telecommunications equipment in Turkey was liberalised in 1980s. Mobile services were provided by two competing firms, Turkcell and Telsim, which had revenue sharing agreements with Turk Telecom, the incumbent state-owned telecom operator, until 1998, and at this time, these two operators were issued license to operate GSM 900 network. Value-added services were liberalised in 1994. Rest of the market (PSTN services, CATV, fixed telecom infrastructure) was opened to competition by 2004, when the legal monopoly of Turk Telecom over PSTN services ended at this time.

While there is a limited number of providers authorised in some segments (e.g., mobile telephony services), there are many providers that are subject to general authorisation in some segments (e.g., ISPs, data services). In addition to regulatory obligations imposed on all providers, some providers in different segments of the market are subject to specific obligations (e.g., access obligations).

##### **For how long have these segments been deregulated?**

Not applicable.

##### **What deregulation processes and strategies have been utilized?**

Equipment market, mobile market and value-added services were liberalised earlier than fixed telephony and cable TV services. Main strategy of deregulation is to ensure competition and entry into different markets, most of which have been dominated by Turk Telecom, after the end of legal monopoly. Privatisation process of Turk Telecom, which has been completed in 2005, is also an important step in the deregulation of the sector. It should be also noted that establishment of an autonomous sector specific authority (Telecoms Regulator/TR) before the liberalisation of main markets was of critical importance.

##### **Who makes the deregulation decision?**

The government and the parliament decide the liberalisation of the market, as former monopoly over different segments of the market was granted by an act. After the liberalisation of the market, TR decides as to what extent the markets will be subject to ex ante regulation.

##### **What was the role of the competition authority (“CA”) or competition principles in the deregulation process?**

The CA had no specific role in the liberalisation decision. For now, competition law principles are not utilized by the TR in the regulation. However, the TR is planning to use competition law principles when analysing and identifying markets that will be subject to ex ante regulation. The CA also has no role in this market analysis process, since there is not any formal procedure of coordination regarding the market analysis process in the legislation.

**(ii) What segments have not yet been deregulated?**

All segments of the market have been liberalised. However, many segments (for example, local access services, markets in fixed telephony, mobile call termination and wholesale data services) are still subject to ex ante regulation.

**(b) Please describe any other competitive reforms that have taken place?**

Not applicable.

**How has the CA or the use of competition principles facilitated such reforms?**

Not applicable.

**(c) Who is the incumbent telecommunications services provider and who are its main competitors?**

Turk Telecom is the incumbent fixed line operator. As its monopoly over PSTN and fixed voice services has ended recently, it is still de facto monopoly over fixed line infrastructure and voice services over it. So, Turk Telecom has also de facto monopoly over network access services that are essential for service providers in different segments of the market. Many operators have recently entered into the long distance telephony market and started to compete against Turk Telecom in this market.

Turk Telecom has strong presence in the dial-up Internet access services market and almost 99% of the broadband internet access services market. There are 79 ISPs licensed in the Internet access services market and main competitors to Turk Telekom in the Internet access services are Superonline, KoçNet, Doğan Online.

Turk Telecom had also de facto monopoly over Cable TV network until recently. In the privatisation process, in accordance with the Opinion of the CA, the Cable TV network was separated from Turk Telecom. Authorisation process is still pending for Cable TV operators.

In mobile telephony services, there are two incumbent operators, Turkcell and Telsim. Avea, in which Turk Telecom has 40% stake, entered to this market later than these two incumbent operators.

In data services, Turk Telecom is the incumbent and sole provider of wholesale services (national and international leased lines). At the retail level,

although there are many providers competing against Turk Telecom, Turk Telecom is still the market leader.

**(d) What are the current market shares (incumbent and competitors) in each of the various telecommunications markets?**

Turk Telecom has almost 100% market share in wholesale network access services over PSTN. Turk Telecom also has almost 100% market share in voice services over PSTN.

Turk Telecom and Superonline are the strong players in dial-up Internet access services market, however, exact market shares figures are not available since there is a migration from dial up to broadband Internet access (ADSL).

In the broadband Internet access services, Turk Telecom has around a 99% market share.

In mobile market, Turkcell is the dominant firm with a market share of 65-70%. Its rivals, Telsim and Avea, have 15-20% and 10-15% market shares respectively.

**In which markets are the competitors most prominent?**

In mobile markets, Turk Telecom is a small operator, as it lately entered to this market. Although Turk Telecom is dominating the Internet access services, its competitors are also prominent in this market.

**Where do barriers to entry still exist?**

There are barriers to entry in the provision of infrastructure services especially in the fixed infrastructure (both in PSTN and Cable), since it is very costly to roll out a new network for newcomers. Network effects are also considered as a barrier to entry in many segments of the market.

**How is the mitigation of such barriers to entry being resolved?**

Specific rules for access and interconnection ensure competitors to have access to essential network elements. Structural remedies (separation of ownership in competing infrastructures and accounting or legal separation) by using both ex ante or ex post interventions are also utilised to this aim. And the competition law exists to fine dominant operators that are abusing their position by refusing to supply access.

**What is the role of the CA and the Telecommunications regulator (“TR”) in removing these barriers to entry?**

While TR is imposing specific obligations on operators to mitigate or remove barriers to entry (especially access and interconnection obligations), CA is aiming to protect competition by controlling mergers and prohibiting abusive and collusive behaviours. The CA also gives opinion about new legislation and regulations to the TR.

**How are abuses of market power mitigated or avoided?**

As mentioned above, the TR imposes specific (asymmetric) obligations on operators having market power. The CA also prohibits abuses of market power in the context of the competition law.

**What is the role of the CA and competition principles in mitigating abuses of market power?**

The CA, by considering regulations of the TR, prohibits the abuse of dominant position. The CA generally intervenes in cases that are not addressed by TR's regulations or cases where regulations leave discretion to the operators. If there is an abuse that can be resolved by TR, the CA does not tend to intervene in the case. The TR, pursuing the EU model, will begin to use competition law principles (market definition, market power test parallel to the dominant position including the concept of collective dominance) in the designation of markets and operators that will be subject to sector specific obligations.

**(e) Has there been any merger activity in the telecommunications sector?**

There have been consolidations in Internet access services and mobile services markets. In the Internet access services market, some providers exited market by transferring their customer bases and relevant infrastructures to their competitors. In mobile markets, two GSM 1800 operators, Aycell and Aria, which had difficulties in entering into market and gaining market share, merged under the name of Avea. And recently the control of Turk Telecom has changed via a privatisation transaction.

**What is the role of both the CA and TR in evaluating mergers?**

Both authorities are evaluating mergers regarding their respective legislations. The CA is evaluating mergers as to whether merger will create or strengthen a dominant position. In the privatisation transactions, which are also subject to merger control by CA, the CA provides its views on the proper method of structuring sale of the privatisation assets before the tender process. After the tender process, transactions are notified to the CA and the CA approves or disapproves the transaction. In privatization transaction of Turk Telecom, the CA sent its opinion to Privatisation Authority, which is requiring, *inter alia*, structural divestiture of Cable TV by Turk Telecom after completion of the privatization. In the privatization process, the CA tried and ensured to create infrastructure-based competition with the separation of PSTN and Cable TV.

**(f) What are the general trends with respect to end user prices in the various telecommunications markets?**

End user prices tend to be decreasing or stable in many markets. It is notable that prices fell down in long distance telephony market after Turk Telecom's monopoly has ended. Prices of broadband Internet access services are also decreasing gradually. Prices in mobile telephony services especially on net call prices are decreasing.

**(g) What are the general cost trends in the various markets?**

There are not available data to give guidance about general cost trends. However, by considering that the TR is trying to ensure cost oriented access and interconnection tariffs, it can be stated that costs related to providing infrastructure input are likely to be decreased.

**(h) Has the quality of service changed in telecommunications markets? If so, in what way?**

As most of the markets have been newly liberalised and entry into these markets is still weak, change in the quality of services is not notable yet.

**(i) Have new technologies been introduced in these markets? If so, what are the general competitive trends with respect to the introduction of new technologies?**

New technologies are generally introduced by mobile service operators in particular in the supply of value-added services (VAS). By introducing new technology, incumbent operator aims to maintain its market share, while other competitors are aiming to gain market share from incumbent as well as new customers. VOIP is a new technology in fixed voice services market, however, it has not become a common technology yet.

In the Internet access services market, Turk Telecom introduced the ADSL technology in 2003 and dominated the broadband Internet access market.

However, we have not yet witnessed technology induced competition from competitors especially in the newly liberalised markets.

**How has such technology induced competition manifested itself?**

Not applicable.

**How have the CA and competition principles played a role in responding to such technology induced competition?**

Not applicable.

**2. Governance In The Telecommunications Sector**

**(a) Describe the specific roles of the CA and TR in the telecommunications sector?**

The CA is responsible for the enforcement of the Act on the Protection of Competition (Competition Act) enacted in 1994. The Act is mainly based on EC competition rules (Art.81, 82 and Merger Regulation). It prohibits anti-competitive agreements and concerted practices between undertakings and decisions of associations of undertakings (Art.4), abuse of dominant position (Art.6) and concentrations (mergers, acquisitions and joint ventures) creating or strengthening a dominant position (Art.7). The Act has been enforced by CA, which was established as an autonomous public organisation, since 1997.

As is the case in many jurisdictions, Competition Act applies to all sectors of the economy. In this context, no specific exception was granted for any sector of the economy in the Competition Act. However, the only exception was granted for mergers not exceeding specified thresholds in banking sector within a different Act. Therefore, Competition Act is applied in the telecommunications sector by CA like it is in other sectors of the economy. In other words, competition law is a part of the regulatory framework for the telecommunications sector.

It must be underlined that there is a specific provision in telecommunications legislation that requires the CA to get the opinion of TR when enforcing Competition Act to the telecommunications sector. On the other hand, the CA sends its opinion to the TR about new legislation in the consultation process.

The TR is responsible for making and enforcing legal, economic and technical regulations in accordance with the principles and provisions set out in the legislation. The TR's main tasks are issuance of secondary legislation and licenses, setting tariffs where needed, and monitoring compliance in areas such as tariffs, interconnection and licensing.

**Does the CA only maintain competition, or does it also promote it?**

The CA's main task is to maintain competition. As competition advocacy is one of the CA's priorities in its agenda, it advocates the promotion of competition in its Opinions adopted in the consultation processes of new legislation.

**(b) Are competition law principles utilized or imputed into the TR's analyses and procedures? If so, how?**

Not yet. However, as mentioned above, the TR is planning to utilize competition law principles in its market analysis as it is in the EU model. Recently, the TR has published a document relating to the concepts of market definition and significant market power. It means that the TR in Turkey is going to analyse markets in accordance with the principles of competition law.

**(c) Is the TR mandated to forbear from the regulation of specific services or markets?**

Not applicable.

**(d) What is the role of the judiciary (i.e. the courts) in the telecommunications sector?**

The CA and the TR are administrative bodies and their decisions are subject to the judicial review.

On the other hand, as Competition Act sets out that undertakings affected by the infringement of the Act may request that all of their damages are compensated by the undertaking or undertakings which infringed the Act, undertakings in question can apply to the courts to compensate their damages.



- (e) **Are there any other institutions that play a role in this sector? If so, what role do they play?**

Ministry of Transport is setting policies and strategic plans in the sector.

- (f) **What role, if any, does self-regulation of market participants (*i.e.* firms) play in this sector?**

Not applicable.

- (h) **Is there any overlap in jurisdiction between the CA and the TR?**

According to the CA, there is not any overlap in the jurisdiction between the CA and the TR. Competition law can be applied only by the CA in this sector. Sector-specific regulations are issued and enforced by the TR. However, as it is common in many jurisdictions, competition law and sector specific rules can be applied to the same matter. Therefore, jurisdictional conflicts arise in some cases, and in most of these cases, the TR is claiming that the matter is within the ambit of its jurisdiction.

**How is potential conflict from such overlap resolved?**

There is a provision in the legislation that requires the CA to consider the opinion and the regulations of the TR. In accordance with this provision, the CA requests the opinion of TR before adopting a decision in the sector. This is partly a solution to the potential conflict.

In order to create a set of rules to manage coordination and cooperation between the CA and the TR, a protocol of cooperation, which is described below, was signed in 2002.

**Describe any case law or other arrangements that address the overlapping jurisdiction issue (e.g. such as cooperation or coordination agreements).**

The Protocol mentioned above stipulates that the two agencies shall exchange information when carrying out their tasks. It establishes a co-ordination committee that will convene four times a year. If there are applications to both agencies on competition matters, then the agencies will co-ordinate through the Co-ordination Committee. However, in practice, co-ordination and co-operation in the context of the Protocol have not been satisfactory and worked well.

If cooperation or coordination agreements are in place, has the use of such agreements changed as competition has evolved? If so, please explain.

Competition has not yet evolved enough to consider change in coordination and cooperation.

- (h) **What are the advantages and disadvantages with respect to the current governance model for the telecommunications sector?**

In the current model, TR has discretion in many issues and it is not required to conduct market analyses as a prerequisite in any market. So, it has flexibility to impose ex ante obligations upon the providers in any market. This is the main advantage of the current model to respond to the challenges in markets, most of which are newly liberalised. However, pursuing the EU model, TR is planning to utilize competition law principles gradually.

Main disadvantage of the current model is the absence of clear provisions in the legislation defining the roles of the TR and the CA, and interaction between the two agencies. So, the regulatory framework cannot ensure coherent application of competition law and sector specific rules. Another disadvantage is that flexibility of TR mentioned above does not ensure sufficient legal certainty.

**Is consideration being given to amending or replacing the current model as competition intensifies?**

Work on a Draft Act on Electronic Communications continues, however, the main reason behind the Draft is not amendment of the current model as competition evolves in the market.

**Additional Questions for the State of Competition in the Telecommunications Sector in Turkey**

**1. Technology**

- a) The ICN is quite interested in the extent to which new telecommunications technologies are being adopted in member countries. Please describe the extent to which fixed wireless such as Wi-Fi and WiMax are in use currently in your country or being contemplated.**

Wi-Fi systems have been widely deployed by the incumbent and the internet service providers especially in 2005. WiMax is not available yet, but being contemplated.

- b) To what extent do new technologies (e.g. VoIP, broadband, mobile and fixed wireless) bring competition to the access, distribution network and service markets?**

The broadband business is largely carried out by the incumbent. Although wholesale broadband services are available in regulatory terms, the implementation is far behind the desired level. Having completed just two years of full liberalisation, considerable progress is expected for the forthcoming years. Other new technologies also have not brought enough competition to the different level of supply chain yet.

- c) To what extent are new technologies regulated in your country? Please describe the extent of such regulation.**

There is no specific regulation for the new technologies (e.g., VoIP and Wi-Fi). As Turkey is aiming at following the EU model, it is possible that new technologies will be treated in a technology-neutral way.

- d) To what extent has the competition authority been involved in the introduction of new technologies such as providing advice to the regulator or enforcing competition legislation? Please describe this involvement.**

Generally, the Competition Authority advocates the elimination of barriers preventing the emergence of new technologies especially in its Opinions sent for draft secondary legislation of the Regulator. On the other hand, one case can be referred as to enforcement of competition law in that context. In ISPs case, the Competition Board took interim measures against Turk Telecom. In this Decision, the Board ordered Turk Telecom to provide access for ISPs to the alternative technologies (e.g. ISDN/PRI, DSL) in the provision of internet access services. Although the Board did not consider the subject as an antitrust violation at the final stage, it ensured that the issue would be dealt with by the Regulator.

**2. Regulation**

- a) Does your country have foreign ownership restrictions with regard to telecommunications? If so, please describe them.**

No. There is not any restriction for foreign ownership in telecommunications.

**b) What is the status of the privatization process relating to Turk Telecom?**

Privatisation process of Turk Telecom was completed in November 2005. Oger Telecom (a branch of Saudi Oger Group), which was the highest bidder in the auction, acquired the 55 % shares of Turk Telecom.

**c) Please describe the principles used (including pricing rules) for interconnection and network access.**

The negotiations among the operators have the priority and the dispute resolution procedure is carried out by the Regulator if the negotiations fail. In addition, the principle of non-discrimination is especially followed on the agreements of operators having SMP.

Regarding the pricing issue, various pricing methods have been used taking into account the specific conditions of different services. For instance, the leased line tariffs have been approved on a cost basis and the bit-stream access tariffs have been determined with retail-minus approach.

**d) What parts of the network do competitors have mandated access to? Has the list of essential network elements changed over time?**

The first item of mandated access is interconnection. After that, bit-stream access for DSL services has been mandated on BRAS (corresponding to IP-level access) and finally local loop unbundling has been mandated by July 2005.

**3. Role of Competition Authority and Regulator in the Promotion and Maintenance of Competition**

**a) We understand your country has established a protocol of cooperation to determine which agency (competition authority or telecommunications regulator) can best handle matters of joint jurisdiction. What matters are ordinarily handled by the competition authority and what matters are handled by the regulator? Please provide examples, including matters referred to the competition authority by the regulator.**

There is a protocol signed between Competition Authority and Telecommunications Authority (Regulator) in 2002. However, this protocol has not worked well in practice because of the conflicting views of both agencies about the allocation of responsibilities. Generally, while Competition Authority has argued that it has exclusive jurisdiction over antitrust violations (i.e. control of vertical and horizontal agreements restricting competition, abuse of dominance, and merger control) in all markets including telecommunications, the Regulator argues that the Competition Authority has no jurisdiction at all in the regulated telecommunications markets, due to the fact that they are being regulated by a sector specific regulator. Therefore, the protocol has not ensured a workable coordination mechanism between two agencies.

At the moment, the only way of communication between two agencies is written opinions. Competition Authority has to take opinion of the Telecoms regulator in accordance with a provision in the Telecoms legislation. Moreover, the Regulator also asks Competition Authority's opinion about preparations of new secondary legislation. Generally, mergers, cartels and vertical agreements are handled by

Competition Authority. Conflict mostly arises in the abuse of dominance issues. In those cases, Competition Authority does not intervene in the issues where there is a specific regulation or decision of the Regulator about the subject (e.g. interconnection prices and conflicts, access issues, technical problems). In most of the complaints that were brought before Competition Authority, the Regulator argues its exclusive jurisdiction. In some cases where there is not any regulation by the Regulator, the Regulator sends Opinion referring the case to Competition Authority (e.g. incumbent's refusal to supply of leased line capacity which is not addressed by relevant tariff regulation).

- b) We understand that the regulator has no mandate to forbear from regulation of the telecommunications sector. Does the legislation have forbearance (deregulation) powers? If not, are forbearance powers being contemplated? How are decisions made to forbear from regulation in your country?**

There is not any explicit mandate given to the Regulator in the legislation. Moreover, the legislation does not set out any provision forbearing any field or market from regulation. However, in practice, the Regulator has discretion to decide as to which markets or services will be regulated. For example, the Regulator has not intervened in retail internet access services.

For now, the Regulator, following the EU model, is carrying out market analysis in telecommunications markets and defining and identifying markets which will be subject to ex ante regulation. It means that the Regulator will have the forbearance powers especially after the Draft Act, which is now in the parliament, is enacted.

#### **4. Universal Service**

- a) Does your country have a universal service policy for telecommunications? If so, please describe how it works in practice.**

Universal services have been carried out by Turk Telecom as a public undertaking so far. However, with liberalisation and privatisation of Turk Telecom, universal service policy has changed. An Act setting out the scope, principles and provision of universal services was enacted in June 2005. The Act also creates a fund to finance the cost of universal services. As secondary legislation for the application of the Act has not been issued yet, for now, it is difficult to talk about how the universal service scheme works in practice.

#### **5. Country Specific Issues**

- a) Is there a time table for adopting the EU competition policy model for telecommunications regulation? If so, please describe the changes that must be made to achieve this and the role to be given to the competition authority.**

On 3 October 2005, the EU has opened membership negotiations with Turkey. Nowadays, screening process is pending in order to identify the position of Turkey to adopt *acquis communautaire*. So there is not any exact timetable. However, as Turkey has a long history of relationship with the EU (e.g., partnership since 1963 and customs union since 1996), Turkey has harmonised its legislation in many fields. For the telecommunications regulation, competition law modelled on EU's rules was adopted in Turkey in 1994. Telecommunications legislation is generally based on the

EU's 1998 regulatory framework, however, the Regulator is amending its secondary legislation by considering the EU's new regulatory framework. And the legislation is also going to be amended by a new act (Draft Act) which is in the Parliament now.

In that context, in a near future, Turkish telecoms legislation will be harmonised with the principles set out in the EU's new regulatory framework. This means that regulator will use competition law principles in ex ante regulation and access issues will be dealt with in accordance with EU's access principles. When analysing markets by using competition law principles, the Regulator, where appropriate, has to work in coordination with the competition authority. However, the role given to the competition authority with the Draft Act is unclear as will be explained in the following answer.

- b) In addition to these questions the ICN Telecommunications Working Group would like to know if there are specific issues your country would like the ICN to address so as to assist your country in promoting competition in the telecommunications industry. This might include providing advice on matters unique to your situation.**

As mentioned before in our answers, one of the main problems in the regulation of telecommunications industry in Turkey is about allocation of responsibilities between Competition Authority and the Regulator. Because of the vague wordings in legislation, the Regulator has argued its jurisdiction for competition infringements. Moreover, with the Draft Act, markets regulated by the Regulator are being exempted from the application of competition law (except merger control). Therefore, there remains very limited role for competition law and competition authority especially in the telecommunications sector. We, as Competition Authority, believe that the role of the competition law and the competition authority is very important in promoting the competition in the telecoms sector.