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Rapid Deployment Guidelines:
Response to Ministry of Communications
Notice 248 of 2008

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1 Introduction

The operators represented in this response would like to thank the Department of Communications (DoC) for the opportunity to respond to the Notice of Proposed Guidelines for Rapid Deployment of Electronic Communications (EC) Facilities In Terms of the Electronic Communities Act of 2005 (hereafter referred to as "*The Act*"), in Government Gazette 30820 as issued on 27th February 2008 (hereafter referred to as "*Rapid Deployment Guidelines*").

Whereas the various operators represented have elected to also send individual responses to the DoC on this matter, there has been common consensus among the operators that this matter is grave importance. In this regards the operator's points of common concerns are reflected in this joint response.

The layout of this document is as follows:

Section 2: Executive Summary

Section 3: Legal standing of the Guidelines

Section 4: A consideration of various focus areas in the guidelines

Section 5: A look at how rapid deployment should work from a local and international perspective

Section 6: Clarification of various definitions in the Guidelines, cross referencing equivalent definitions in draft regulations on essential facilities

Section 7: An insight into the economics of submarine cables, showing the relationship between equity and bandwidth sold

Section 8: Conclusion

2 Executive summary

The various operators support government's objective of ensuring fair access to submarine cable infrastructure, while concomitantly reducing the prices of international bandwidth. The question is thus as to which is the best tactical plan for achieving these objectives? The various operators agree that the liberalization of the South Africa market via the Act is the best strategy towards achieving these aims, and already we have seen much progress on the international bandwidth front. Given the significant progress that has already been made by the various operators in establishing various infrastructures and investing in submarine cables; it would appear as if these guidelines do not address a tangible problem and are in this respect superfluous.

Although there is indeed a need for the facilitation of the rapid deployment of EC facilities and networks in order to foster infrastructure based competition in South Africa, we feel that these guidelines will not lead to the rapid deployment of either. Specifically the guidelines do not fulfill the intentions of Section 21 of the Act in that the Honorable Minister of Communications (hereafter referred to as "*the Minister*") has not met with the other ministers in order to actually detail processes and procedures that would entail the rapid deployment of EC facilities.

It would appear as if these guidelines are in fact "Submarine Cable Authorizations". In introducing such authorizations to the ICT industry, the Honorable Minister of Communications is de facto introducing a separate license class for submarine networks. If this is indeed that case, then the Minister is firstly subverting the powers of ICASA and secondly undermining the Act which lays out the licensing framework upon which the entire industry is based. We thus come to the conclusion that the minister is acting *ultra vires* in propagating these guidelines, and as such we regard these guidelines as having no legal standing.

The various operators acknowledge the intentions of the minister with respect to regulating the ownership of submarine cables landing in South Africa. Some of these intentions, namely that submarine cables must be 51% South African or African owned, are indeed noble. However we submit that in certain instances such limitations are not practical. Furthermore provisions relating to ownership requirements, limitations on the transfer of ownership and the contents of applications should be considered in terms of Chapter 3 of the Act's licensing process, rather than these Rapid Deployment Guidelines.

The operators submit that the Act is the cornerstone around which all ICT legislation in South Africa is based. In particular objective 2(y) of the Act exhorts all parties to "*refrain from under interference in the commercial activities of licenses while taking into account the EC needs of the public*". It is submitted that these guidelines do little to promote the development of infrastructure in South Africa however instead serve to hinder the deployment of EC facilities by adding further bureaucracy to an already adequately functioning state of affairs.

3 Legal standing of Rapid Deployment Guidelines

3.1 Ministerial powers as per Electronic Communications Act

The operators note that these guidelines have been drafted “*in terms of section 3(1) and (2) of the Electronic Communications Act*”, where the Act (as amended) states:

s3(1) The Minister may make policies on matters of national policy applicable to the ICT sector, consistent with the objects of this Act and of related legislation in relation to –
(c) the Republic’s obligations and undertakings under the bilateral, multilateral or international treaties and conventions
(g) any other policy which maybe necessary for the application of this Act and related legislation

s3(1A) The Minister may, after having obtained Cabinet approval, issue a policy direction in order to –
(a) initiate and facilitate intervention by Government to ensure strategic ICT infrastructure investment; and
(b) provide for a framework for the licensing of a public entity by the Authority in terms of Chapter 3

s3(2) The Minister may, subject to subsections (3) and (5), issue to the Authority policy directions consistent with the objects of this Act and of the related legislation in relation to –
(a) the determination of priorities for the development of electronic communication networks and electronic communication services or any other service contemplated in Chapter 3
(b) the consideration of any matter within the Authority’s jurisdiction reasonably placed before it by the Minister for urgent consideration

From the above it is clear that the Minister is entitled to “*make policies*” and “*issue policy directions*”. The operators do not consider the Rapid Deployment Guidelines to be either of the above, and as such the minister is regarded as acting beyond the scope of her powers. Furthermore there is no direct linkage between s3(1) or s3(2) of the Act, and Section 21 of the Act, to be discussed.

3.2 Submarine cables as per the EC Act

The various operators would like to point out that PSTS and MCTS licenses issued under the now repealed Telecommunications Act of 1996 gave the various operators the rights to own and operator EC facilities used for international communications, including the under sea cables an landing station. Under the EC Act, Section 93(1) states that the Authority must convert existing licenses on no less favorable terms.

Furthermore according to Section 93(10) of the Act, during the current transitional period, existing licenses are considered to be individual licenses, for the provision of EC network services (ECNS). This interpretation unequivocally and categorically supports the view the ECNS licensees are entitled by the Act to deploy undersea cables as part of their EC networks, without requiring ministerial approval.

Furthermore Chapter 8 of the Act speaks to submarine cables¹ and cable landing stations². In particular the indicative list of essential facilities includes:

s43(8) “The Authority must prescribe a list of essential facilities including but not limited to –
(b) EC facilities connected to international EC facilities such as submarine cables and satellite earth stations; ... “

¹ Item (d) on list under definition of electronic communications’ network

² Item (g) on list under definition of electronic communications facility

Submarine cables are hence additionally covered by facilities leasing regulations, essential facilities regulations and interconnection regulations.

Given the contention of the operators that the right to land and operator submarine cables is a right already bestowed upon ECNS licenses, then it would appear that through these Guidelines the Minister is attempting to introduce a new license category. The operators contend that the Minister is acting *ultra vires* in this regards, is undermining the supremacy of the Act, and is in effect attempting to dilute the rights of ECNS licensees.

3.3 The scope of guidelines

Guidelines are by definition, as the name implied, intended to give guidance. They are meant to provide assistance on the processes and procedures that must be followed. They are not mandatory and cannot be enforced. Guidelines are not to be regarded as subordinate legislation, especially considering they have not been drafted by parliament.

This having been said, the operators are of the view that the guidelines cannot be used to impose conditions on licensees, owners and operators of submarine cables.

4 Focus areas of the Guidelines

4.1 Rapid Deployment as per Section 21 of the EC Act

On page 3 of the notice, it is stated that the Minister has in consultation with the Ministers of Provincial & Local Government, Environmental Affairs & Tourism, the Authority and other relevant institutions, made guidelines. The applicable Section 21 of the Act reads:

s21(1) *The Minister must, in consultation with the Minister of Provincial and Local Government, the Minister of Land Affairs, the Minister of Environmental Affairs, the Authority, and other relevant institutions, develop guidelines for the rapid deployment and provisioning of electronic communication facilities.*

s21(2) *The guidelines must provide procedures and processes for –*

- (a) obtaining any necessary permit, authorisation, approval or other governmental authority including the criteria necessary to qualify for such permit, authorisation, approval or other governmental authority; and*
- (b) resolving disputes that may arise between an electronic communication network service licensee and any land owner, in order to satisfy the public interest in the rapid roll out of electronic communications network and electronic communication facilities.*

On a point, the Act requires the Minister to also meet with her counterpart in Land Affairs, in addition to the other parties as listed in the notice. It would appear *prima facie* that the consultations between the various ministers and institutions, as envisaged above, has indeed not occurred since there is no evidence to suggest that the various process for authorizations have been coordinated or expedited in any way. In fact the Guidelines admit to as much in paragraph 8(2) which states: “*Applications should be filed expeditiously in order to ensure sufficient time for the Minister to assess the qualification criteria set forth guideline 3 and to engage in the consultation process pursuant to guideline 6*”

The Act clearly envisages an *a priori* consultation process, as opposed to the process envisaged above. Furthermore in paragraph 8(2) the Guidelines contradict their own stated intention by stating:

“to avoid unnecessary delays in obtaining environmental authorization any permits or approvals ... ECNS licensees planning to participate in the construction or operation of an international submarine cable system on the date of coming into force of the these Guidelines should file their application for Authorization as soon as practical.”

Section 21 of the Act clearly envisages that Rapid Deployment Guidelines to solve this problem themselves. Furthermore a Rapid Deployment Guideline, in order to be effective, should in outlining the process, identify all relevant local or national authorities. Instead this burden has not been fulfilled by the Guidelines which instead in paragraph 6(1), *inter alia*, clearly place the emphasis on the persons seeking authorization to identify all permits and applications that are required.

It is thus grossly erroneous to assert that the Rapid Deployment Guidelines are in fulfillment of Section 21 of the Act whereas in fact the opposite is in fact true. The Guidelines as they stand palpably add more bureaucracy to a process that by all accounts is currently functioning adequately.

Lastly any Rapid Deployment Guidelines in fulfillment of S21 of the Act, should primarily focus on terrestrial EC networks and facilities – which these Guidelines do not take into account. It is thus suggested that the title of the Guidelines be amended in order to accurately reflect the true nature of the Guideline, which is the “Rapid Deployment of International Submarine Facilities”.

4.2 Ownership & Control

Notwithstanding previous objections, we shall briefly respond to selected topics in the guidelines in order to consider their practicality.

4.2.1 Interpretation of chapter 3

Firstly it would appear as if these Guidelines do not differentiate between the “submarine cable” and cable landing stations insofar as the ownership and control is concerned. This differentiation is important as in most cases a single entity manages and implements the necessary facilities within the cable landing stations.

The operators would like to note that, with respect to paragraphs 3 of the Guidelines, there is some ambiguity. The operators understand this section to read as follows:

- In order to land a cable in South Africa, an application must be made by a South African ECNS licensee. This licensee will naturally be terminating traffic from the international submarine cable. It would be expected that this applicant is also a member of the cable consortium; however this is not necessarily a requirement.
- Only the South African entities (ECNS licensees) terminating traffic from the cable are obliged to file the application, or joint application as per paragraphs 3(1) and 4(2); however it is a requirement that the combined equity ownership interest of the cable be at least 51% African or South Africa owned.
- African operators and other consortium members will not have to file an application since they are not individual ECNS licenses registered in terms of the Act.

Given this requirement it would appear as if the Seacom, Eassy, Infraco and UHURUNet cables would be *prima facie* authorized to land in South Africa.

4.2.2 African/ South African ownership

Internationally cables are classified by the cable route they follow. Cable routes incorporating Africa are:

- Africa – Africa (Eassy, UHURUNet)
- Europe-Africa-Asia (SAT-3/WASC/SAFE; SEA ME WE3&4, Seacom)

Within these cable routes there is a mixture of traffic, as determined by the geographic origination and destination points. Traffic either:

- i) Transits through a country/ continent
- ii) Terminates in a country/ continent

In the case of an intra-Africa cable, the ownership criteria of majority African owned makes perfect sense, assuming the various African countries have sufficient capital to fund the cable. However in the case of Europe-Africa-Asia cables, it is possible in certain cases that Africa is merely used as a transit point for the cable. In that case majority African ownership rules may not be sensible, and in fact may deter investment to the extent that Africa is bypassed.

As indicated, the various operators note that the majority of cables under construction that will terminate in South Africa are indeed majority African owned; however this has not historically been the case, and may not be the case going forwards.

In Chapter 7 we shall further explain how the equity on a cable should, in an optimal environment, mirror the capacity utilized by the various operators on the cable. It would hence be prudent to remove ownership criteria altogether since imposing such criteria may in cases undermine the economics upon which the cable is based, and thus scuttle any potential cable before it even materializes.

Lastly the operators would like to point out that if a 51% local (e.g. South Africa) ownership criteria was reciprocally demanded by all countries that are landing points on the cable, it would be mathematically impossible for such a criteria to be satisfied by more than one landing country of that cable.



Figure 1. SAT-3 & Eassy cables



Figure 2. Seacom cable

4.3 Applicability of Guidelines to cables under construction

Paragraph 8(1) states: *“These Guidelines apply to all ECNS licenses intending to construct, own, operator or provide EC network services using an international submarine cable.”*

The paragraph as above implies that a cable would still be in the conceptual or feasibility phase. The operators submit, assuming these guidelines were to be validated in law, that a regulation or law cannot be retroactive. In this regards cables which are the stage where the C&MA agreement has been signed, and funding agreements secured, would not fall under the above provision since to all intents and purposes they are already under construction.

4.4 Security considerations

The preamble of the guidelines that that *“RECOGNIZING that international gateways and international submarine cables are critical infrastructure with national security implications that required special government attention”*

The operators respectfully disagree with the above assertion on a number of counts. Firstly, security considerations are not mentioned as being pertinent or even related to rapid deployment in Section 21 of the Act. On legal principle, national security issues should consequently be addressed within the ambit of legislation pertaining to national security, and not within these Guidelines.

Secondly, it appears that whereas security is a consideration of submarine cable landing in the United States, it is not a consideration in the EU. Thus one must surmise that the security threat as perceived by the States is more imagined than real. There are to date no accounts or even hypothetical scenarios of terrorists utilizing submarine cables against another state.

Thirdly, if electronic security were to be effectively implemented then every mode of bandwidth into South Africa would have to be equally policed. The current guidelines as stand, leave a number of backdoors in the form of SAT-3, terrestrial cross border leased lines and satellite services.

The operators would like to submit that of the various considerations, environmental protection should rather take precedence of place.

5 How should rapid deployment look

In this section we discuss our interpretation of how Chapter 21 of the Act may be practically implemented. This will serve as a useful benchmark against which this notice can be measured. We assert that although it is not explicitly stated in Chapter 21, rapid deployment guidelines can be applied to both i) terrestrial networks, and ii) cable landing stations & submarine cables

5.1 Terrestrial networks

One of the issues that is currently stifling the deployment of terrestrial electronic communications networks is the various number of approvals that need to be obtained, and the time taken to obtain such approvals. Such approvals may include:

- a) In the case of environmentally sensitive zones i.e. green zones - environmental approvals are required as per the Environmental Protection Act. This affects the time it takes to build facilities, in particular radio masts. The long delays on the finalization of the Environmental Impact Assessments (EIA's) are particularly problematic
- b) In the case of the digging of trenches and building of facilities such as manholes, street distribution cabinets etc. – various municipal approvals are required e.g. plans on the trench run. The particular problem is that all operators are allocated only 1.2m of space in which to lay cables, which leads to cables being stacked.
- c) In the case of establishing a facility in the form of a building, building approvals are required from the municipalities e.g. height, perimeter fence etc. In certain cases such approvals can take years process.

It would be expected that any rapid deployment guidelines would, as per s21(2) provide the “processes and procedures” which would expedite the aforementioned, however this has not occurred. There is thus an urgent need for a coordination role to be established in order to facilitate and expedite the obtaining of the necessary permits. Perhaps a government office could be established to this effect?

5.2 Deployment of cables in South Africa

The present process and procedures that operators have to follow in order to obtain various authorizations and permits can be broadly categorised under the following headings:

- Authorisation ‘in principle’ for cable laying and landing;
- Environmental Impact Assessment (EIA) study
- Public Domain use (seabed in territorial waters, beach)
- Right of ways for land route
- Civil works (land route and station)
- Cable route and burial;
- Fishermen’s Agreements

Over and above these authorisations and permits being required there are also contractual responsibilities by the contractors, which include responsibility for obtaining permits for customs clearance and other formalities.

The major action on each Landing Point Party (LPP) is to get an Environmental Impact Assessments (EIA) performed and submitted to the relevant Environmental Authority. The review, approval and announcement period for this EIA by the Environmental Authority can take anything from 6 months to a year to complete. This can cause major hold up, which will be felt even more severely where a new cable station is to be built, as there will be uncertainty on the location of the station causing major delays due to the final engineering of the cable system for the landing point.

From a legal perspective the following laws apply to the various domains of a domestic/international cable:

- a) *the cable landing station* – NEMA³, National Building Regulations & Building Standards Act
- b) *the sea shore* – NEMA, Sea Shore Act
- c) *the sea & sea bed* – UNCLOS⁴, Sea Shore Act, Maritime Zones Act

There is thus an urgent need for an overarching process that:

- Identifies the various authorities and contact details
- Shows the order and dependences of the various authorizations and permits in terms of a work-flow diagram

and further any interventions that could:

- Expedite/ streamline stages in the process e.g. shorten the EIA
- Commit the various departments to timeframes such that the entire process had a finite response time

would not only be welcome, but would indeed fulfil the requirements of Section 21 of the Act. From the above summary, it is evident that there is scope for rapid deployment to indeed be applied to submarine cable landing guidelines. We have looked to European and American regulatory frameworks in order to assess international best practice.

5.3 European perspective

In Europe submarine cables, with the notable exception of the UK, are dealt with in a laissez-faire manner. Few countries have adopted specific telecommunications regulations on submarine cable landing licenses or rights. They are usually dealt with in regulations concerning domestic fixed infrastructure, with perhaps some greater emphasis on environmental and zoning issues. The international character of submarine cable is rarely taken into account and EU Member States generally have not felt that this area requires the adoption of a particular regulatory regime. The EU Interconnection Directive 97/33/EC is applied to submarine cable head ends on a piecemeal basis.

In its Fourth Implementation Report, the EU Commission noted that “*practical problems appear to exist with regard to the use of public ways and sea cables...*” This area involves a sometimes very complex range of building and environmental permits. Landing submarine cables often requires the permission of local authorities to construct infrastructure at the head-end. The only country that appears to have provided some sort of simplicity in the application of permits is Germany. There, upon request, an operator will receive from the regulatory authority a detailed list of the agencies involved, including contract persons with respect to submarine cables laying procedures.

5.4 American perspective

In the early 2000's, the Federal Communications Commission (FCC) in the United States introduced: “*streamlined procedures for the Department of State's review of applications submitted to the FCC for submarine cable landing licenses.*” This is however somewhat of a misnomer on a number of counts:

- 1) The streamlined procedures do not actually expedite the authorization processes in any way. In the main part they present the criteria by which an authorization will be streamlined. The basis for such a streamlining is that a cable must be seen be pro-competitive. There are also certain exemptions for smaller licensees in a consortium – however this does not expedite the authorization per se. However, the procedures do

³ NEMA: National Environmental Management Act, also associated regulations as per notice 385 in Government Gazette 28753 dated 21 April 2006

⁴ UNCLOS: United National Convention on the Law of the Sea, as domesticated in South Africa through the Maritime Zones Act.

commit the executive to provide an expedited authorization within 45 (electronic) or 60 (manual) days, whereas a regulation authorization can take up to 90 days, with an option for a further 90 days.

- 2) It was also noted in the States that the streamlined procedures do little by way of streamlining, and much by way of adding further red tape. Commissioner Furchtgott-Roth stated that what was being proposed was “*a vast and unnecessary regulatory structure all in the name of ‘streamlining’*”. He went on to say that “*what gets lost in today’s item is that applicant for cable landing licenses are, by definition, expanding overall capacity*” and that expanded capacity is inherently good for consumers in that it expands consumer choice and drives down prices.

One of the options proposed by the FCC, and subsequently adopted, was that applications should be able to be submitted electronically.

The key principle however to consider in the case of the US streamlined procedures is that criteria for streamlining effectively amounted to a competition assessment (i.e. a type of market review), and thus the emphasis was on promoting pro-competitive facilities based competition.

6 Definitions clarification

In this section we shall consider various definitions in the Guidelines that require further examination.

"Cable landing station" means the electronic communications facility including where applicable, collocation space, monitoring equipment, space on or within ducts, cable trays, conduits and beach joints that houses the electronics and is used to connect an international submarine cables to land-based electronics communications facilities and includes all associated support systems, sub-systems and services, ancillary to such international submarine cables and electronic communications facility;

The operators would like to point out that such a term is already defined in the draft essential facilities leasing regulations (General Notice 1800, published in Gazette No. 30612 of 24 December 2007). The operators believe it beneficial to only have one such definition, and believe that the essential facilities regulations are the appropriate domain.

Notwithstanding the above we shall comment on the proposed definition. The operators note that the underlined section in definition repeats sub clauses (i) to (iv) of the definition of "EC facility" in the Act and in doing so adds little additional value. In the interests of clarity and conciseness may we suggest the simplified definition as per below.

"Cable landing station" means the electronic communications facility which, inter alia, connects to submarine cables and land-based electronic communications networks

"International submarine cable" means any marine-based fiber optics cable operated outside of the Republic;

"International submarine cables" means the domestic wet segment of a fiber-optic cable, including the fibres and circuits therein that extends from the point of interconnection to an international submarine cable, through the territorial water of the Republic and terminates or otherwise interconnects to the land-based point of interconnection in a cable landing station; and

It would appear at first glance that there is a duplication of definitions; however upon closer inspection perhaps the second definition is better understood to define "**domestic submarine cable**"?

The manner in which two definitions are used, is such that it would imply there are two interconnected cables. This is indeed not the case as instead there is one single cable, with a hypothetical boundary point at the edge of the territorial waters. There is neither a physical nor technical point of interconnection or junction at the edge of the territorial waters. It must be further emphasised that this cable is not partially owned or controlled at different points by the various landing countries. Rather the cable is complete owned and administered end-to-end by the cable consortium, which is an autonomous legal entity formulated under international law.

It would hence remove much confusion if the two terms were collapsed into a single definition. In this regards, we are of the view that the draft essential facilities regulations already define a suitable term, below, whose title could perhaps be rephrased as simply "**submarine cable**".

"Undersea-based fibre optic cables" means optic fibre cables designed to be placed under the sea to facilitate the transmission of electronic communications network services between and amongst sovereign countries,

“International submarine cable system” means the international submarine cables and all associated cable landing stations including any land-based electronic communications facilities used to interconnect a land-based electronic communications network to the cable landing stations regardless whether such electronic communications facilities are collocated or otherwise housed in the cable landing station but excludes international submarine cables and land-based electronic communications networks.

This definition is in contradiction with itself, as evidenced by the underlined parts of the text. Considering that both the submarine cable and cable landing station elements are already defined, surely this definition serves to only confuse matters further? It is hence our recommendation that this definition be deleted.



7 The economics of the undersea cable business

7.1 The incentive to invest in a cable

A cable consortium may be formed through one of three methods:

- i) A closed club
- ii) A special purpose vehicle
- iii) A hybrid of (i) and (ii)

The consortium makes profits/losses by selling bandwidth to the various national operators (which can then be reinvested to upgrade the cable, or used to fund the construction of additional cables). Bi-directional bandwidth is bought from the consortium between two points, and the operators are charged per Megabit-Kilometer (Mb-Km). An operator may purchase a ½ circuit i.e. bandwidth up to some physical or theoretical points, or a fully assigned circuit between two operators in two countries (when permitted by the consortium members). Consequently equity interests in a consortium, although they can be expressed as percentages, are more commonly expressed at total Megabit-Kilometres.

It does not make sense for an operator to simply pay money to a consortium. Instead it is beneficial if the operator selling service in a country was also a member of that consortium. In that case the operator in question would effectively be paying himself as a consortium member. In order to avoid transactional costs (e.g. additional tax), what happens is that when an operator purchases from a consortium, in which he is a member, the consortium sells to that operator at cost, as per Figure 3.

This practice is the fundamental basis upon which up front investment in the cable is encouraged. If the local operators carry an investment risk, they will in addition ensure that demand in local market is stimulated in order to recoup their investment.

If a consortium, by virtue of an 'open access principle' was forced to sell bandwidth to investors and non investors at the same price – there would simply be no incentive to invest. In that case the cable consortium would carry all the risk, and the local operators would be the prime beneficiaries. The consortium would respond to this risk asymmetry in one or both of two ways:

- 1) Reduce investment in the cable. This would at a minimum severely delay the contraction of a cable since the necessary guarantees would take longer to be put in place; at a worst case the entire project would fold.
- 2) Charge a risk premium in order to account for likely possibility that the bandwidth will be undersubscribed, i.e. prices on the cable will necessarily be higher across the board than they ought.

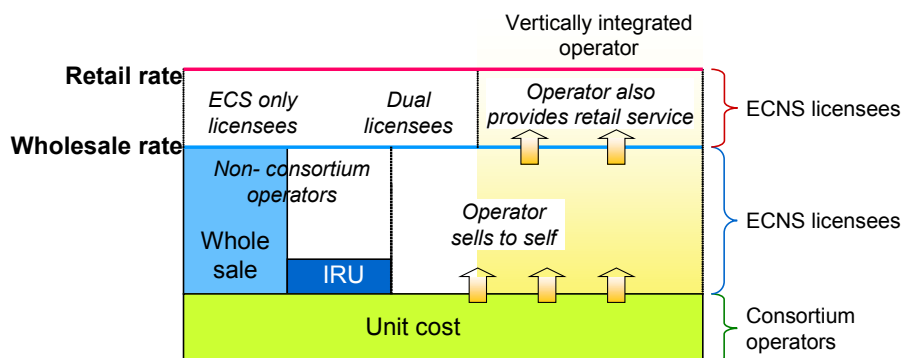


Figure 3. Pricing of cable bandwidth

The most universally optimal situation is when the total Mb-Km's which an operator purchases from the consortium is equal to the same operator's equity in the cable, expressed in Mb-Km's. We assert this to be the golden rule of equity, as highlighted in Figure 4.

Equity \propto Bandwidth

Figure 4. Optimal rule of equity allocation

7.2 Selling bandwidth to non-consortium members

It is possible for any consortium member to sell bandwidth into a country; however this is generally not in the respective national interests of each country. Instead only local operators should be permitted to land bandwidth in a country. If foreign consortium members sell into a country then:

- i) there is a net out flow of foreign exchange from that country.
- ii) the foreign operator will likely sell at marginal (i.e. unit) cost which would undermine the investment incentive discussed above.

Monopolistic pricing of local however can be prevented if there are several local operators able to terminate bandwidth in a country (either through multiple cables, or being members of the same consortium). Fortunately for South Africa this situation already exists by virtue of the Act granting all ECNS licensees the right to terminate bandwidth in South Africa. Thus the Act provides the basis for open access (i.e. liberalization).

Local consortium members can sell wholesale bandwidth to the local market in one of two ways:

- 1) **Wholesale bandwidth rates** – here an ECSN licensee can procure bandwidth according to his needs on a commercial basis. It is conceivable that there is a band of rates as terms and volume discount incentives may be offered – as per accepted competition norms.
- 2) **Indefeasible right of use (IRU)** - the purchase of an IRU gives the purchaser the right to use some capacity on a telecommunications cable system, including the right to lease that capacity to someone else. However, with that right comes an obligation to pay a proportion of the operating cost and a similar proportion of the costs of maintaining the cable including any costs incurred repairing the cable after mishaps.

IRU's are usually considered long term leases, in the order of the expected lifetime of a cable i.e. 25 years. The IRU usually consists of a substantial upfront capital payment, and thereafter smaller monthly payments. Overall an IRU provides a substantial discount to the commercial wholesale rates, in exchange for the IRU holder to share in the risk of operating the cable.

An IRU does not entitle one to equity in a cable, however the consortium members will offer IRU bandwidth at a price only slightly greater than the unit cost in order to make it an attractive offer. In particular the upfront payment that accompanies the IRU helps fund the initial capital required to build the cable.

7.3 Vertical integration

Let us consider the question of whether vertical integration i.e. an operator is both a consortium member, wholesale local bandwidth provider and retail seller of bandwidth, is detrimental to the market in any way.

We have already justified how a consortium selling bandwidth to at different rates in different circumstances is good economic practice. Now assume that the lowest wholesale bandwidth seller to the market is the price setter. Only two scenarios are possible

- i) the consortium member cum ECNS wholesaler is the wholesale price setter.
- ii) Other ECNS wholesalers are the wholesale price setters

In scenario (i) there is little incentive for the consortium member cum ECNS wholesaler to be the price setter. Any price reductions would only serve to cannibalize his own revenue streams. Moreover if the operator in (i) attempted to set the price to low, then ECNS may come under margin squeeze and consequently leave the market. This would amount to market foreclosure, which is an anti-competitive practice. Such a situation may either be remedied ex-post under competition laws, or ex-ante through regulatory remedies imposed at the conclusion of a market review. The appropriate remedy in this case would be a price separation between wholesale and unit cost, with additional transparency and separation of accounting provisions.

The more likely scenario is actually (ii). In this instance the ECNS provider, assuming a newly liberalized market, would attempt to grow market share. In order to do this he would naturally attempt to undercut the price of the established entrants. A price war may temporarily occur, however a pricing equilibrium would soon be reached whereby the ECNS licensees would seek to maximize profit by balancing market share with bandwidth price. There is thus no harm in vertical integration between consortium members and wholesale bandwidth providers.

Secondly consider if wholesale bandwidth providers would also be permitted to sell retail bandwidth. This is a moot consideration in the South Africa context, since the EC Act clearly permits operators to be the dual holders of ECNS and ECS licenses; never-the-less, we shall still consider the point. Again there are two scenarios:

- iii) the consortium member cum ECNS wholesaler is the retail price setter.
- iv) Other ECNS wholesalers are the retail price setters

Again, the vertically integrated operator in (iii) is unlikely to engage in such practices since it would firstly cannibalize his own revenue streams, and secondly if taken to the extreme would amount to anti-competitive practices. Again such a situation may either be remedied ex-post under competition laws, or ex-ante through regulatory remedies imposed at the conclusion of a market review. The appropriate remedy in this case would be a 'Retail – X' price separation, with additional transparency and separation of accounting provisions.

Again we see the more likely scenario to be that of (iv), where again an equilibrium point will soon be reached in the market as the various operators seek to profit maximize. Contrary to its name, the "profit maximizing" behaviour will not lead to "monopolist pricing", however will conversely reflect a healthy market where efficient prices prevail. There is thus no harm in vertical integration between wholesale and retail bandwidth providers.

There are two provisos to the above conclusions, both of which are easily met within the South Africa legislative environment:

- 1) Anti-competitive practices must be monitored and prevented, and if found remedies imposed. In South Africa there is dual jurisdiction between the Competition Commission and ICASA on such matters. In particular Section 67(4)(e) of the Act mandates ICASA to undertake periodic review of the relevant markets; while Section 67(4)(f) mandates that ICASA "*provide for monitoring and investigation of anti-competitive behaviour in the relevant market and market segments*".
- 2) Access to bandwidth (or associated facilities) must not be impeded in any way to the detriment of legitimate competitors. Again the Act already enforces an open access regime in South Africa through the licence conversion process. In addition impending regulations on interconnection, facilities leasing and essential facilities will prevent against undue discrimination between licensees

8 Conclusion

There is an urgent need in South Africa for government assistance in the rapid deployment of EC networks; as recognized and in fact mandated by Section 21 of Act. Regrettably the Rapid Deployment Guidelines of Notice 24 6 from the Department of Communications do not assist in this regards. In fact they appear to be quite the opposite in adding further “red tape” to the process of obtaining the necessary approvals and permits for landing submarine cables in South Africa. It would be more accurate to thus label the Guidelines as “Cable Landing Authorizations”.

It is the considered view of the various operators that these Guidelines have no legal standing. Furthermore the Minister would be acting *ultra vires* in any attempts to enforce such guidelines as if they were law. The Department of Communications appears to have disregarded provisions in the United National Law of the Sea, to which South Africa is a signatory, which states that coastal states are entitled to lay submarine cables on the continental shelf unimpeded. Assertions that Minister is empowered by virtue of Sections 3(1) and 3(2) of the Act to introduce such Guidelines are erroneous. Stating that these Guidelines are in fact Guidelines is further erroneous, and there is no evidence that the Minister has consulted with the other ministries and institutions as required by Section 21 of the Act. There is certainly no evidence of processes that will in any way expedite the laying of submarine cables.

It is the assertion of the operators, that the Act already adequately legislates the submarine cable business in South Africa. It would appear as if a submarine cable Authorization is a separate license category, and this would not only undermine the rights of ECNS licensees as per the Act, however also disregards the powers of ICASA and undermines the entire licensing process.

One the issue of cable ownership, it is also felt that the Minister is acting *ultra vires* in this regards. In awarding ECNS licenses, ICASA already is obliged to take many factors, including BEE equity, into consideration. The operators went further to discuss the concept of majority African or South African ownership on cables. It was noted that whereas for intra-Africa cables such a criteria is likely to be met in any event, imposing such a condition on predominantly transit cables will be the unintended consequence forcing cable consortia to consider a different route, thus bypassing Africa from an investment perspective.

In order to assist the Minister in fulfilling Section 21 of the Act, the operators have detailed various problem areas of their businesses in need of rapid deployment assistance. Since the problems are usually at a provincial or municipal level, there appears to be little detailed international advice in this regards. The American “streamlined procedures” have similarly been criticized as being bureaucratic, whereas in Europe there is generally minimalist intervention (i.e. no separate licenses) for undersea cables. The consensus is that all the permits & authorizations need to be identified in a holistic framework, and then mechanism found to expedite the interlinked processes.

In Chapter 6 we reviewed certain definitions in the Guidelines. It was noted that landing stations and undersea cables are considered to be facilities (possibly essential) and network services respectively. In this regards ICASA’s draft regulations on facilities and the Act not only define these terms, but adequately lay out the rights and procedures of access to these items. This lays the framework for open access to submarine cables within the South African regulatory environment.

Finally in Chapter 7 we discussed cable landing guidelines from an economic perspective. It was noted that the historical monopolistic pricing of international bandwidth results no so much from the consortia per se, however rather from the lack of liberalization in the local markets where bandwidth terminates. It was noted that the Act has effectively liberalized the South African market, with price declines already evident. Furthermore the operators noted that although they support the principle of open access there still needs to be incentives for operators to invest in cables; and thus the operators support the concept of justifiable price discrimination between investors and non investors.