

Opening Access: Infrastructure and supply-side issues

The below represents a summary of Section 1 of Chapter 9 of the [National Integrated ICT Policy White Paper](#).

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Introduction

The White Paper requires the implementation of an open access regime across the entire broadband infrastructure and services value chain. The policy mandates that:

- Core networks will support, at a minimum, traditional open access principles of fairness, transparency and non-discrimination;
- Last mile infrastructure will be built on open access core networks and will be made available in a manner that will enable many users to coexist on the same infrastructure or in the same spectrum; and
- Digital services and applications will be provided over open access networks and will be governed by an Open Internet and net neutrality regime to protect and maintain open, uninhibited access to legal online content.

Goals

The goals of the proposed open access policy are to:

- Allow for effective service based competition and ensure accessible, affordable, high quality and reliable services for consumers
- Increase network coverage, and enable the rapid deployment of broadband infrastructure and services across all areas of the country
- Promote shared and equal access to broadband infrastructure

- Remove barriers to competition and innovation in the provision of broadband services
- Foster innovation and development of applications and services

What is open access?

Open Access in a network context refers to a scenario where wholesale access is provided to electronic communications network infrastructure or services on terms that are reasonable, effective, transparent and non-discriminatory. This is underpinned by principles of

- Openness;
- Transparency;
- Equal access and non-discrimination;
- Sharing and non-duplication;
- Efficiency, standardisation and reasonableness.

Scope

The general open access regime set out in this policy addresses access at Layer 0 (conduits, ducts, collocation) and Layer 1 (local loop, dark fibre, traditional copper passive infrastructure). Layers 2 and 3 include active equipment and provide for a variety of possibilities for implementation, ranging from bit stream services at different levels of the network (e.g. national, regional, local interconnection at layer 2 or layer 3) or different technologies (e.g. IP-based, Ethernet-based, ATM) allowing for different technical implementations, to different investment needs for alternative operators, and a different degree of freedom to offer differentiated services.

Challenges

Ineffective regulatory regime

- The current process governing pro-competitive interventions by the regulator is too rigid and complex.

Concentrated broadband infrastructure market

- The broadband market is characterised by a few very strong and vertically integrated players. Infrastructure (built using scarce or public resources) - whether mobile or fixed - is seen as a competitive advantage rather than as a facility that can be shared in order to stimulate competition at retail level.
- This results in less infrastructure in less affluent areas; infrastructure-sharing bottlenecks; high costs to communicate; the duplication of infrastructure; the inefficient use of scarce resources; and barriers to entry for new entrants and SMMEs.
- Policy intervention is required to address insufficient sharing of Telkom's network between cities, towns and villages.
- Policy intervention is required to facilitate access to municipal infrastructure and coordinate deployments of broadband networks in metropolitan areas.
- Policy intervention is required to address bottlenecks in the access portion of broadband networks, depending on the form of access technology used:
 - Fibre: deployment has been commercially driven resulting in multiple, uncoordinated networks concentrated in affluent areas.

- Wireless: the concentration of mobile broadband spectrum in six vertically integrated incumbents which provide network service to themselves as well as third parties on commercial terms favourable to them. It further results in wasteful competition on access infrastructure.

Objectives

- Create efficient, uniform, competitive and responsive open access networks that will enable all players to compete on equal terms, thereby enabling multiple downstream competitors to share infrastructure;
- Promote transparency (equal treatment of similar services), non-discrimination (same treatment of own and competitor services) and accountability across the broadband value chain;
- Open high demand spectrum for use by all licensed operators;
- Encourage service-based competition which will increase consumer choice (of services providers and of services), reduce costs and increase innovation;
- Encourage consumers to fully experience the internet as long as the content, applications and services that they are accessing is legal;
- Reduce market entry barriers and enable sharing of infrastructure and scarce resources, thereby reducing duplication of infrastructure; and
- to enable innovation in the development of digital applications and services.

Interventions

Open Access principles relevant to all networks

- **Effective access to infrastructure:** Effective access refers to access by competitors that is easily obtained in reasonable locations using standardised interfaces. The service should be of a high quality and unbundled to a sufficient degree so that the access seeker does not have to purchase services it does not need. To be enforced through mandatory unbundling, submission of service level agreements and publication of reference / standard offers.
- **Transparency:** Access providers must be transparent in the design of their offerings, their pricing and the terms and conditions associated with them. To be enforced through, inter alia, mandating reference/standard offers.
- **Non-discrimination:** All access seekers must be granted access to networks in a non-discriminatory manner. To be enforced through, inter alia, mandating reference/standard offers.

Open Access Principles relevant to vertically integrated entities

- Accounting separation required, i.e. the preparation of separate accounts for each of the different businesses operated by the same entity by identifying and allocating the costs and revenues associated with each business as well as the dealings between them.
- This “functional separation” is adopted as having the least cost impact on operators, but the Minister may consider structural separation in future.

Open access principles relevant to deemed entities

- Deemed entities are operators that display any of the following characteristics:
 - significant market power in the relevant infrastructure market, or
 - controls an essential facility; or
 - has a network that constitutes more than 25% of the total infrastructure in that market; or

- has a scarce resource, such as frequency spectrum, assigned to it for its exclusive use.
- Regulator to publish a list of deemed open access networks as soon as possible after the finalisation of the White Paper.
- A deemed open access network operator should provide:
 - Cost based pricing: in principle the wholesale price of a service should not exceed the minimum costs that an efficient firm would incur in the long run in providing the service, allowing for a commercial return on efficient investment.
 - Active infrastructure sharing: including national roaming, Radio Access Network (RAN) sharing and enabling Mobile Virtual Network Operators (MVNOs). Voice and data roaming must be available for the latest generation of technologies and deemed entities are required to provide regulated national roaming to MVNOs in a fair, transparent and non-discriminatory manner.
- Deemed open access networks should provide equipment and facilities or such elements as are required by other licensees available at Layer 3 or below.
- Deemed open access networks should satisfy all of the general open access principles as well as the vertically integrated entity principles if applicable.
- The regulator is directed to prioritise and develop wholesale open access regulations following adoption of this White Paper. In the short term, until the EC Act is amended, the regulator is also directed to review of the definition of 'essential facilities' to align it with the intentions set out in this policy.

Wireless Open Access Network

One of the applications of the open access approach is the establishment of a Wireless Open Access Network (OAN), with further detail set out in the new radio frequency spectrum policy. In essence:

- All high demand spectrum will be assigned on an open access basis, and that all currently unassigned high demand spectrum will be treated in line with this policy.
- The Wireless OAN will be a public-private sector-owned and managed consortium, and will consist of entities that are interested in participating. Participants may include, but not be limited to, current holders of electronic communications service (ECS) and electronic communications network service (ECNS) licenses, infrastructure companies, private equity investors, SMME's, ISPs, OTT players and MVNO's. The participation of existing ECNS licensees will speed up the ability of the Wireless OAN to meet its coverage objective. Parties with retail businesses which participate in the network are likely to provide a natural incentive for the reduction of wholesale prices.
- The regulator is responsible for the licensing of the Wireless OAN (including both ECNS and spectrum licences). The speedy licensing of the Wireless OAN is key to meeting the 2020 targets set out in South Africa Connect and the overall Vision 2030.
- No amendments to existing legislation are envisaged to support the wireless open access framework and the Wireless OAN should be licensed as soon as possible after the coming into force of this policy. The time frames for this will be determined by the Minister in consultation with the regulator and other stakeholders.
- The licensing process will ensure and reinforce the principles of legality, fairness and transparency. In issuing a licence to the Wireless OAN, the regulator will ensure that the consortium adheres to the following principles:

- Voluntary participation by interested stakeholders.
- Diversity of ownership and control: The ownership structure should be diverse and enable the meaningful participation of all entities involved.
- Competitive neutrality: It should not result in anti-competitive outcomes; and potential dominance and control by any single entity should not be allowed.
- Compliance with the prevailing legislation, regulations and codes in relation to Black Economic Empowerment.
- Effective participation by targeted groups including women, youth and persons with disabilities.
- The Wireless OAN will provide wholesale services only. Entities that are members of the Wireless OAN can provide retail services if they have the requisite licenses.
- Incentives will be provided to support wireless open access. These include:
 - Reduced or waived spectrum fees.
 - Access to public buildings and other type of public infrastructure, e.g. poles, towers, ducts, rights of way at reduced costs through government facilitation.
 - Allocation of some funds from the fund responsible for rural and under-serviced areas.

Policy Direction for licensing of Wireless OAN

The regulator is hereby directed to:

- Follow a public, transparent process in licensing Wireless OAN.
- Evaluate and be satisfied with the proposed consortium's technical plan, financial viability, ability to commence rollout of licensing, operational capacity and its strategy to make commercial agreements with existing operators to piggy back on existing infrastructure prior to issuing it a license.
- Have due regard to the network's universal access strategy – both technical and financial - to ensure full population coverage with the required capacity in a reasonable space of time.