SOURCE:	Congolese Postal and Telecommunications Regulatory Agency (Republic of the Congo)
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The Congolese Postal and Telecommunications Regulatory Agency (ARPCE) attaches great importance to the development of the Internet and of open access networks conducive to the emergence of innovative and competitive offers that serve to develop usages. It is pleased to take part in this consultation and endorses the initiative, which enables all regulators to understand the ins and outs of broadband by exchanging experiences.

- Defining open access: making sense of the various concepts

The various concepts of open access networks have to do with their design, construction, use and accessibility. Other aspects to consider relate to neutrality, non-discrimination and resource sharing. To make sense of the concepts, it is necessary to:

  o **Understand the structure of open networks**

    Network structure in terms of use: transport, collection and distribution.

  o **Characterize the various open network structures**

    Technical characteristics of infrastructure networks, technologies and specifications.

  o **Define usages**

    Define new usages and new interfaces with a view to understanding information processing and user expectations.

  o **Define the networks market**

    Define the markets for optical networks and wholesaling, listing and identifying the regulatory texts in force.

- Open access to networks: what policy and regulatory tools to enable opening up access to network facilities (i.e. international fibre networks, "essential" or "bottleneck" facilities, other networks) without harming investment and innovation?

The context in several African countries is characterized by the existence of a privatized or partially privatized incumbent operator systematically benefiting from the management, maintenance, operation and marketing of infrastructure that is generally financed out of the public purse.

Given the sizeable investment required to roll out optical infrastructure, whether for international networks or for national backbones, local private companies are for their part often unable to acquire such infrastructure.

The management of public optical infrastructure by the incumbent operator can make it the dominant operator on the market. That dominance could constitute a "bottleneck" for private entities if the regulators do not guarantee equitable access to resources through a clearly-defined regulatory framework.

The first thing to do, therefore, is to call for open projects to understand the best way to manage infrastructure in the light of each stakeholder's needs, and to establish a policy aimed at stimulating and optimizing investment in, and use and marketing of, infrastructure by mixed (private and public) establishments, while guaranteeing the deployment of infrastructure in areas that are less economically attractive. This requires strong incentives for the establishment of policies for ***public-private partnerships conducive to investment***. Policies involving the private sector in the operation and management of basic resources would aim to guarantee legal security, technical stability and the requisite equity for all stakeholders, with due respect for user demands.

From the operational standpoint, the regulations must structure the optical network market using a horizontal approach that allows for the separation of transport networks (the backbone) from access networks (the local loop) and services. The regulator should thus regulate every segment of this market.

This segmentation raises the question of the number of operators on the optical infrastructure market, which has to reflect changing needs.

This brings us to the establishment (or not) of a licensing system on the access segment and of an authorization regime for the backbone (transport) segment. The market has to be regulated according to the national economic data; regulators have to regularly analyse whether or not it is a good idea to have several operators in the interests of avoiding market destabilization, but above all to enable several service providers to offer a wide range of services to the end customer.

- Open networks: how to ensure that every citizen has access to the benefits of ubiquitous broadband networks (i.e. through policies for universal access to broadband, transition to New Generation Networks (NGN), leveraging on the digital dividend)?

Accessibility to broadband networks is an acute problem. ARPCE, pursuant to Article 86 of the Telecommunication Code, is implementing the government's policy on universal service.

General measures have to be taken, encompassing:

  o regulatory texts (legislation, decrees, rulings, decisions, etc.);

  o analyses of rational connectivity needs in uneconomic areas;

  o innovative long-term financing mechanisms that generate constant revenues;

  o the creation of a fund to support digital development involving all stakeholders. The fund would also finance training and microprojects capable of backing up the universal service policies that would finance the extension of the backbone to areas that are less economically attractive.

These measures have to be adapted to the concept of high-availability, more sophisticated networks, with ongoing consolidation of the networks in response to basic needs.

The regulator will have to draw up transparent and equitable rules to ensure that price levels facilitate access for all.

Independent management bodies will therefore have to be set up to formulate universal access programmes to update infrastructure, support the development of quality of service and capacity building for local operators, implement technological, organizational and economic innovations and cover the compensation system.

- Open Internet: how to handle traffic management over increasingly congested networks while applying fair rules?

Network operators know that, no matter how much bandwidth is added, the networks will always suffer from congestion.

What the operators have to do is limit the flow of data to other countries by ***creating local content and establishing local Internet exchange points***, of which there are very few in the countries of the South.

Given that the underdeveloped countries are yet to be seriously confronted with this situation, attention will have to focus on the development of national and subregional exchange points.

This is why we feel it is important for regulators to launch public consultations, in order to shape oversight and appeal structures. The following will have to be defined:

  o the type of structure that can provide suitable oversight and management;

  o the structure's terms of reference and mission: its authority vis-à-vis Internet service providers;

  o the rules and instruments used for in-depth inspection of packets and their potential impact on protection of privacy;

  o the laws in force, focusing on the users' right to protection of privacy.

- Open access to content: what role for regulators in bringing public services online (i.e. e-government, e-education, e-health) and creating demand for such services?

- Challenges to open networks (i.e. cyberthreats, unforeseen aspects of the Information Society, disputes, regulatory efficiency and consistency across services and networks): what strategies?

The current context in many countries does not allow the entire population to benefit from these online services, which is a problem in terms of accessibility for all. This brings us straight back to the problems of network access for all citizens.

One solution to the many difficulties is to install single-service interfaces like the one-stop shop. The public administration would have one single gateway hosting all public services.

That gateway would be run by an interministerial committee answering to the regulator, which would be responsible for its administrative management.

In the case of single interfaces, the regulators would have to provide users with:

- conditions allowing for access to all services;

- an environment fostering user trust and guaranteeing confidentiality for personal data;

- specific rules relating to electronic contracting, to replace the traditional lengthy, complex and resource-intensive public contracting processes.

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