



Regulatory Policies and Guidelines for Satellite Services

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Presentation Outline

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- Regulatory Principles
- National Licensing (for Satellite Systems)
- Concluding Questions to Ponder : What are the Best Practices in regulation ?

Objective

This presentation identifies regulatory bottlenecks and restrictive licensing rules that could discriminate against satellite service providers by denying them the competitive advantage, and slow or prevent effective provision of satellite based services. Corresponding regulatory solutions are then highlighted.

Overview of the changing telecommunication landscape ^{1/3}

Technology/ Market Developments

- Internet technology to supply data, voice, and video,
- growing convergence in the telecommunications sector
- The Broadband Agenda

Overview of the changing satellite telecommunication landscape ^{2/3}

- Competition in what were previously considered to be monopolistic markets.
- Inadequacy of existing regulatory frameworks under the technology environment: new and/or converging technologies are not easily classified under existing frameworks.

Overview of the changing satellite telecommunication landscape ^{3/3}

Global satellite infrastructure developments :

- The eminent convergence of services from non- geostationary satellites and terrestrial cellular services in the GSM band into a seamless network -the need for a new regulatory framework for services from satellites in non-geostationary orbits

Levels of satellite regulations

1. Global: The **Radio Regulations** of the ITU done by the WRCs + (**Rules of Procedure** done by the RRB)
2. Regional: Regional (continental) agreements, guidelines and/or regulations, e.g. EU **Decision No 626/2008/EC** on the selection and authorisation of systems providing mobile satellite services (MSS).
3. Sub-regional: **Sub-regional agreements, guidelines and/or regulations e.g. the 2015 SADC decision** on Sharing of the Ka band (26.5 – 40GHz). Fixed service and Satellite service.
4. National: **National regulations**
5. (State/County: Limited scope regulations e.g. earth station licensing)

Regulatory Issues affecting Broadband Satellite Deployment ^{1/2}

- Deployment of broadband satellite services at national, regional or global levels brings with it, a horde of regulatory issues. These issues may stem mostly at the national level but have far reaching consequences
- Restrictive regulatory practices and licensing rules can block the benefits of technological advancements, reflected in material losses and socio-economic progress.

Regulatory Issues affecting Broadband Satellite Deployment ^{2/2}

Some of the factors not conducive to the growth of satellite broadband delivery:

- Non-adherence and abuse of the international orbit frequency coordination procedures
- Monopolistic practices
- burdensome authorization conditions and unequal fiscal treatment,
- requirements of national presence

Licensing and access practices for satellite systems and earth stations (VSAT) ^{1/3}

International framework

The ITU Radio Regulations set the International framework for licensing of satellites: Article 18.1 states that “..no transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject.”

Licensing and access practices in place for satellite systems and earth stations (VSAT) ^{2/3}

Primary Requirement

- To manage spectrum resources so that harmful interference is prevented
- To protect public safety. (i.e., use of fencing, secure areas and warning signage)

Purpose of for licensing

- To grant permission to operators/users to use frequencies under certain conditions. Among these conditions are standard of service, efficient use of the spectrum, avoidance of interference and avoidance of overloading when the same channel is assigned to more than one user, etc.

Licensing and access practices in place for satellite systems and earth stations (VSAT) ^{3/3}

A license should typically cover:

- technical aspects (e.g. quality of service, sharing/collocation of facilities, interconnection, type approvals, spectrum management, etc.)
- commercial aspects (e.g. competition, pricing, universal access/service obligations, etc.)
- administrative aspects (e.g. licensing conditions and procedures, coordination, etc.).

- Questions so far?

Regulatory Principles ^{1/4}

- The wide variety of licensing approaches applied throughout the world has served as an impediment to the provision of satellite services. Development and implementation of harmonized licensing regimes, both across service types and within regions and sub-regions, is essential
- When the introduction of new and advanced technologies is coupled with liberalization, competition and a harmonized licensing process, it creates increased access and facilitates innovation.

Regulatory Principles ^{2/4}

Objectives of licensing are to:

1. Simplify access to satellite market for a potential new entrant.
2. Define conditions of operation, rights and obligation of licensees
3. Contribute to the creation of a level playing field and promote competition.
4. Create conditions for consumer protection

Regulatory Principles ^{3/4}

Objectives of licensing are to (Cont'd):

4. Ensure transparent and predictable regulatory regime and safeguard industry development in the region
5. Manage scarce resources
6. Define targets and obligations to be attained by all licensees.

Regulatory Principles 4/4

Conditions for an Open and Competitive Market to thrive:

- Any discrimination in favour of existing service providers or limiting the number of independent service providers for the provision of satellite services to consumers, does not lead to an open and competitive market.
- For the satellite component to be a part of the overall infrastructure, a vibrant market for satellite services (like in the banking system) is needed and this can be created through regulatory certainty, liberalization, equity and transparency and by promoting competition.

National Licensing for Satellite Systems ^{1/7}

The Space Segment

The majority of nations do not have the capability and resources to launch their own satellites. And in many instances it may not make economic sense to do so. There are however tens of international **Satellite Service Operators /Providers** that cover practically every part of the globe where there is potential demand. These are licensed in the “home” countries.

The Ground Segment

The types of licences issued by National Administrations fit all into two groups :

1. authorization requirements for satellite service providers; and
2. individual licensing for earth station facilities.

National Licensing for Satellite Systems 2/7

Blanket Licensing

A new approach to regulating VSATs - blanket licensing - began to be implemented some time ago and it has been successful. VSATs are configured based upon technical criteria - involving power level, frequency, etc. - that mitigate the risk of interference. Thus, a single blanket license can be issued covering a very large number of VSAT terminals.

This approach has worked well in the United States which is home to the largest installed base of VSAT networks.

National Licensing for Satellite Systems 3/7

Technology Neutrality

Various satellite technologies deliver modern services to consumers. In order to facilitate fair competition between these technologies, regulators strive to make their regulations, licensing requirements, and regulatory fees **technically neutral**.

If discriminatory regulatory requirements make one or more of available technologies relatively unattractive, an Internet Service Provider (ISP) for example will likely be forced to choose the technology that is least encumbered from a regulatory perspective, rather than the technology that can provide the best service at the lowest price.

National Licensing for Satellite Systems 4/7

“Open Skies” and International Gateway Liberalisation

While placing licensing requirements on the space segment portion of a satellite network, administrations have focused on two areas: requiring authorizations for domestic landing rights, and requiring authorizations for the use of specific frequency segments. Tremendous demand for Internet, data, voice, video and other essential services is best addressed by policies that permit open and direct access to all satellite resources i.e. an “**open skies**” policy.

National Licensing for Satellite Systems 5/7

“Open Skies” and International Gateway Liberalisation (Cont’d 1)

The original model for owning earth stations was vertical integration. Within the global consortiums such as Intelsat and Inmarsat, each member country’s designated satellite operator would own and operate the earth stations to link to the consortium’s satellites. Insufficient access to international network capacity, in many cases due to vertical integration, often results in high prices for broadband access. For many developing countries, the connection to the global information grid is limited and therefore high costs for access to international networks are passed on to businesses and consumers. These high prices reduce the demand and the incentive/motivation for the service provider to invest in additional network capacity.

National Licensing for Satellite Systems 6/7

“Open Skies” and International Gateway Liberalisation (Cont’d 2)

Liberalizing the access to the satellite gateway facilities can lower infrastructure costs and promote infrastructure sharing, while multiplying the amount of international capacity available to operators. This boosts the international traffic, promotes competition for access to international networks and therefore results in lowering of prices. Experiences in several countries, such as India and Singapore that have implemented international gateway liberalization, have demonstrated these benefits

National Licensing for Satellite Systems 7/7

Regional harmonization of regulatory network

- Regulatory challenges are being addressed at the regional and sub-regional levels by administrations that share similar objectives. The underlying force is the realization that satellite-based systems are one of the most effective forms of wide-area and, often, cross-border solutions for ICTs and telecommunications provision worldwide.
- Type approval and equipment registration in the regional context and satellite licensing are some of the key areas where administrations have focused their efforts to coordinate and harmonize satellite regulatory approaches.

Concluding Questions to Ponder : What are the Best Practices in regulation ??

1. “Competition = more investment?and less end-user prices?
2. Should an Administration requiring a satellite operator to have a local presence ? What are the merits and demerits?
3. What kind of license should be given to Satellite Operator on country-by-country basis??

How can an Admin avoid unnecessary duplication of international regulation through ITU

4. Should foreign ownership be restricted? Should non-domestic satellite operators be required to align with national/domestic incumbents?
5. Should we abandon the old monopoly or dominant carrier (where they still exist)? What is impact of these policies on domestic economic development and growth?



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Questions?