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Asia's Great Step Forward

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"... universal access is now not so much an engineering or supply-side problem but rather a regulatory and policy challenge." -ITU World Telecommunication Development Report (March 1998)

Forget about a great leap forward. All that's needed to facilitate communications in Asia are a few small steps. Indeed, today all nations of the world have an immediate opportunity to advance essential telecommunication policy objectives through harmonisation of regulations governing the use of telecommunications solutions.

Take, for example, fixed satellite-based network services. During the past 15 years, the satellite communications industry has been developing and refining network solutions such that today, there are more than one million so-called Very Small Aperture Terminal (VSAT) systems installed and operating in more than 120 countries - many of which are located in the Asia-Pacific region.

Practically speaking, this level of deployment means that economies of scale are now being realised that enable the cost effective use of such systems and services for a broader range of applications - IP-based narrow- and broadband solutions that apply directly to universal access and sustainable development in even the most inhospitable locations.

This trend is not theoretical. International telecom services are already facilitating the creation of a global economy, where VSAT-based systems are used extensively in the developed nations to reduce costs, increase efficiency, and improve productivity.

Likewise, least developed countries (LDCs) are also turning to VSAT-based solutions which - being distance independent - make it possible to link the providers of raw materials to agents, to shippers, to importers, to retailers and, finally, to consumers in widely-separated geographic areas.

Further, the benefits of VSAT-based communications are being realized in every sector of activity, both private and public. From banks and stock exchanges to schools, hospitals, and rural telecenters, VSATs are also being seized upon to elevate economic, educational, and health standards. In turn, higher economic and social standards are attracting foreign investment, which is creating employment

opportunities, which leads to increased exports, which yields stronger hard-currency earnings.

VSAT services can now support a broader range of domestic and international communications objectives than ever before. A snap-shot of typical services includes:

- Internet Via Satellite
- Distance Learning
- Rural Telecommunications
- Telemedicine
- Disaster Relief
- Government Closed User Groups
- National and Multi-national Networks
- Broadband Data Communications
- Multicast VSAT Services
- Intergovernmental and Corporate Applications
- PSTN Infrastructure Extension
- News Distribution Services

The advantage to end users of such VSAT-based solutions is that vendors can provide an inexpensive, single communications platform serving an entire country, a region or the world. Global demand for this level of connectivity has enabled VSAT technology to rise from being a niche technology to a mainstream telecommunications service platform used by many corporations, governments, and personal users in the mass marketplace.

Regulatory Reform: The Missing Link

Traditionally, while some administrations have progressed quickly, other nations have not realised their full potential, partially because outmoded regulations inhibited or prevented the cost-effective provision of VSAT-based services.

More recently, though, this has been changing. The Global VSAT Forum's Regulatory Working Group - a non-partisan group of legal and regulatory experts - recently conducted a survey of the regulatory conditions applied to VSAT service provision throughout the world.

The survey reveals that, through close collaboration between government administrations and the VSAT industry, effective national deregulatory approaches are now being implemented in an increasingly harmonised regional context through organisations such as the Asia-Pacific Telecommunity (APT), the Inter-American Telecommunication Commission (CITEL), the European Conference of Postal and Telecommunications Administration (CEPT), the Telecommunications Regulators Association of Southern Africa (TRASA), and the European Commission (EC). Similarly, an immediate opportunity exists not only for regional groups, but also through national administrations, which are

taking the next essential step required to facilitate more effective provision of satellite communications services.

In general, the Global VSAT Forum sees an increasing recognition by regulatory agencies that "less is more." In other words, many regulators now recognise that imposing less regulatory requirements results in more access to essential communications which, in turn, generates new business, creates jobs, yields higher export earnings, and attracts foreign investment.

In this regard, the following are a few regulatory solutions that are being implemented in regions like the Asia Pacific:

1) Streamlined Licensing:

Traditionally, most governments have required each individual VSAT terminal to be licensed; this was in addition to requiring a network operator's license. But years ago, the U.S. government implemented a new approach to regulating VSATs - "blanket licensing" - and it has been very successful.

With this regulation, VSATs are configured based upon technical criteria - involving power level, frequency, etc. - that eliminate the risk of unreasonable interference. Thus, a single blanket license can be issued covering a very large number of VSAT terminals.

This approach has worked well both for the U.S. regulator, for the industry, and for end users. The U.S. - which has one of the most highly developed fiber-optic infrastructures in the world - is also home to the largest installed base of VSAT networks in the world. This shows not only that VSATs are an essential complement to terrestrial systems, but that the blanket-licensing regime has been instrumental in facilitating cost-effective satellite service provision. More recently, Brasil's regulator - Anatel - issued the nation's first-ever VSAT blanket license, and the local licensee has reported that they are now able to provide much more cost effective satellite-based solutions.

The U.S. and Brasil aren't the only countries to streamline their VSAT-licensing approaches. Indeed, 43 European nations have now adopted a set of policy principles that eliminates the need for individual licensing of receive-only and interactive VSAT terminals.

The policy principles were adopted through the regional CEPT and, more recently, have begun to be implemented by individual national administrations.

Europe's policy principle exempts interactive Ku- and Ka-band VSAT terminals from individual licensing requirements, provided the systems meet selected criteria. For example, in the European framework, to qualify interactive Ku-band VSATs must have 2W or less power, emit 50 dBw EIRP or less, have an antenna

aperture of 3.8M or less, and be installed 500 meters or more outside airport perimeter fences. (VSATs may still be installed within 500 meters of the airport perimeter, but they would require individual terminal licensing.)

Countries that have implemented the policy include the Czech Republic, Denmark, Finland, the Netherlands, Luxembourg and Norway. And numerous other administrations reportedly are soon to announce an implementation date.

It is important to note that Europe's implementation of blanket licensing is not required by the CEPT; rather, each individual country decides whether they want to implement on a local level - and the individual regulators are deciding to proceed based on their national interests.

The same opportunity is available to the Asia Pacific region. In each implementation, the key technical criteria has been basically the same: Earth stations that operate in a frequency range allocated to VSAT-based services on an exclusive or primary basis will not pose a risk of unreasonable interference within that band. Thus, individual licensing of satellite terminals operating in that band is unnecessary.

Ku-band is just such a frequency range. And there is more Ku-band satellite capacity available in the Asia Pacific than at any other time in history. All that remains is for Asian administrations to implement these proven, streamlined approaches to licensing VSAT-based services.

2) Transparency:

Huge amounts of time, money and effort are spent each year by the communications industries of every country in an attempt to determine what regulations apply to VSAT-based systems and services.

This difficulty - often referred to as a lack of "transparency" - is so severe that in many cases the service provider gives up or, worse, commits to provide service only to learn later about an obscure regulation which leaves them and the end user in a compromised position.

Again, recognizing the importance of facilitating VSAT service provision, governments around the world have begun prominently posting all such data on a website.

For example, the countries of South, Central and North America have developed a VSAT licensing database that includes the licensing requirements for many administrations in the region. The database, which is administered by the member states of the Inter-American Telecommunications Commission (CITEL), can be seen at http://www.citel.oas.org/vsat/vsat_information_of_licensing.asp. There

are several countries that have posted their VSAT licensing requirements in this central location.

Meanwhile, the European governments have gone even further. A database has now been developed by the CEPT that includes the satellite-licensing data for many of its 43 member administrations at <http://www.eto.dk/>

In the second phase of the European program - which is to be completed this year - when applicants visit the site, they are to be able to apply for licenses in any combination of European countries using a single electronic application form. Each government retains total control of the licensing process, but the database and software facilitate simple access to information and easy processing of license applications by the individual administrations.

As with streamlined VSAT licensing, all of the countries that are participating in transparency programs are doing so on a voluntary basis. The advantages of making data readily accessible are clear: posting regulatory requirements is quick, inexpensive, reduces the burden on administrations, and enables industry to effectively provide services.

In Asia, meanwhile, the APT has recently launched a website replete with, among other features, a reference section on telecommunications licensing. Asian administrations should take the next step: Post their licensing conditions online and hotlink them to the APT's regional facility (<http://www.aptsec.org/>).

3) Type Approvals:

Type approval of telecom terminals has long been recognized by national administrations as a problem. Testing requirements from country to country are often redundant, resulting in major delays, higher costs and less efficient provision of communications.

That's why the Asian members of the Asia Pacific Economic Co-operation group (APEC) signed a Mutual Recognition Agreement to facilitate the elimination of redundant type approval testing. And that's why CITELE is currently moving toward adoption of a similar regime for South, Central and North America.

Further, recently, European Community (EC) legislation began to be implemented that eliminates government type approvals of VSAT and other telecom terminals. This change is being brought about with the Radio and Telecommunications Terminal Equipment Directive 1999/5/EC (the "R&TTE Directive"), which introduces a system based on manufacturers' declaration of conformity and relaxation of the regulatory constraints on the free movement and putting into use of terminal equipment.

And finally, as an interim solution the Global VSAT Forum's MRA Working Group has developed a technical framework called the "Mutual Recognition Arrangement," which defines a set of standardised measurements that, after satellite-operator type approval testing is completed, produces a data package that can be used by administrations as a means of satisfying their domestic type approval requirements.

These new approaches should be implemented by every nation, enabling both the public and private sectors to benefit tremendously, with faster more cost-effective access to communications and elimination - or at least reduction - of unnecessary regulation.

4) Open Skies:

In the past, governments have developed policies to protect their country's satellite systems. These "Closed Skies" policies require service providers to use only locally-owned satellite capacity when providing VSAT services.

This problem is particularly acute in Asia, where some administrations continue to "protect" local satellite operators behind a veil of regulatory market-access barriers. The main result of such practises is that the provision of regional satellite-based network solutions is prevented - to every operator's detriment.

Recognition of this fact was never more apparent than in June 2001, when a meeting of Asia satellite operators was held in Singapore. The meeting agenda was premised on the fact that many or most satellite operators serving the region have the same problem: their regional beams are under-utilized - and not due to lack of demand for service. Likewise, satellite network operators continue to have extreme difficulty providing multi-national telecom solutions, which limits the satellite industry's ability to provide services.

During the meeting, the satellite operators agreed to jointly support the implementation of VSAT-based Open Skies policies to enable them to meet demand for IP-based services in Asia.

Their timing was good. Governments are realising that tremendous demand for Internet, data, voice, video and other essential services is best addressed by policies that permit open access to all satellite resources, assuming that they have been properly co-ordinated through the International Telecommunication Union (ITU).

This approach is gradually being adopted by administrations in every major region of the world including, for example, Singapore, Japan, Hong Kong, Australia, the Philippines and India in Asia, Nigeria in Africa, Brasil in South America, most of Western Europe and North America, and others.

While the policies being implemented around the world today are not completely open, they all involve permitting increased access to orbital resources, regardless of the satellite operators' country of origin.

Concluding Remarks

As is apparent, the trend globally - from Asia to Europe to the Americas to Africa - is for national administrations to improve access to communications by implementing state-of-the-art regulations governing the use of satellite communications... step by step.

Global VSAT Forum: The GVF is the UK-based independent, non-partisan and non-profit organisation representing every major world region and every sector of the VSAT industry. It has more than 130 members and serves as the unified voice of the industry in regulatory, policy and trade matters. The Forum co-ordinates regulatory and policy solutions at the national, regional and global level, and supports educational and promotional programmes in every nation of the world.