NTP-2018: VSAI SUBMISSION TO DOT & TRAI

Anchor Principle: Enhance the role of satellite communications for accelerating " Broadband to All "

Preamble

It costs ten to twenty times more to connect the last 10-20% population of any country. Satellite communication helps connect this last 10-20% population in a very cost-effective way. The satellite service providers licensed by the Department of Telecom have an installed base of more than 250,000 terminals. They serve as the communication backbone to the banking industry, large distributed enterprises, small and medium businesses who are dependent on the internet for conducting their business (including filing of GST returns), other telecom service providers who use satellite as a backhaul medium to expand their coverage to the rural and difficult terrain areas and lastly the Government itself for the rollout of various social initiatives. Another 500,000 small and medium businesses are waiting to get on to the internet and are wanting cost-effective and reliable communication. This number would grow ten-fold if satellite broadband can be a cost-effective medium for the consumers (similar to countries like US, Australia, Brazil). The Government can do its bit to un-lock this potential by tweaking its policy and provide the much-needed impetus to the service providers. VSAT Services Association of India (VSAI) has been working for the cause of proliferation of broadband and sees immense potential in the use of satellite as a medium for broadband. After an elaborate consultation with its esteemed members who range from satellite providers to licensed service providers and equipment manufacturers, VSAI has come up with some key recommendations that can help its cause and also help the industry grow.

Key Recommendations
1. Open the supply of satellite capacity to private players aimed to ease the way of doing business and making the latest and innovative technology available to all at an affordable cost. Like in all other sectors, the Government playing the role of either the sole supplier or a middleman for satellite capacity artificially restricts the industry from growing. Licensed service providers should have a choice of

various satellite operators and should be able to get into direct commercial deals for procurement of capacity similar to the broadcast sector.
2. Remove licensing and other artificial barriers that are impeding the growth of the industry. Today the license restricts the speed of broadband to 2 Mbps per VSAT terminal. Similarly, many licensing barriers exist on the use of different bands, newer technology like the LEO/MEO. Similarly, satellite can address a variety of applications such as multicast file transfers, connected cars, maritime, in-flight connectivity & broadband on trains very effectively. Technology should be the only limiting factor for the provision of a satellite broadband service.
3. Make the VSAT service both a carrier and an access service. VSAT service providers can extend voice connectivity to the remote areas and at the same time act as a gap filler for telecom networks of other service providers. This will be possible only if the VSAT service providers are treated both as an access and a carrier service provider.
4. De-license the VSAT terminals so that the import/local manufacture and sale of terminals can be freely done. Simplify the SACFA/WPC compliance by making it a self certification. For the gateways, provide a time bound and single window clearance not exceeding 60 days from the date of application. This will result in a much faster roll out of the service and reduction of costs which will help bring down the cost of the service.
5. Smoothen the WPC approvals for gateways and remote terminals and make it timebound. Any delay in the approvals adds up to the costs of operations for the service providers, which directly impacts the cost of the service to the subscribers. The Government is determined to ease the way of doing business. Simplifying the process in the areas of WPC will go a long way towards this objective.
6. Bring policy and regulation of all telecommunications services via satellite under exclusive purview of DoT and TRAI respectively on lines of terrestrial services. DOS/ISRO could play a consultative role to identify a list of coordinated satellites and frequencies in line with ITU procedures, to be used for telecom networks.

7. Expand the scope for existing Service Providers so that they can grow the market and proliferate satellite Broadband access across the SAARC countries without needing a International Long Distance license.
8. Establish a Telecom Ombudsman, which has an independent finance wing, to which telecom operators can take various disputes/ issues including a mechanism under which telecom operators can challenge incorrectly calculated demand notices sent by the DOT which need to be addressed in a time bound and independent manner. Transparency and independence must be maintained in the constitution of the Ombudsman and it's scope, powers, timelines for response and binding nature of decisions/ interventions must be clearly set out.
9. Review of License Fee and issues around calculation of AGR which has caused considerable confusion/ dispute in calculation of LF and SUC. The definition of AGR needs to be reviewed and should only include revenues arising from licensed telecom activity which is not disputed/sub-judice/ paid under protest. Further, a specified period (eg one year notice) before a increase in the percentage of LF/SUC is notified, so that telecom operators may adjust our pricing accordingly in various customer contracts. All pending litigation on AGR must be settled in a time bound manner, such that the industry remains competitive and viable.
10. Clear Guidelines on calculation of Interest and Penalty must be set out by the DOT. There should be a clear policy that demands that have been challenged in court/ paid under protest must not attract interest/penalty and interest on penalty. Further, clear guidelines on the calculation and quantum of interest/penalty should be laid down and a maximum cap must be laid down unless there is a willful default and the matter is not contested bona fide in court or paid under protest.
11. Terms which allow for retrospective price revision in satellite capacity contracts with Antrix and cause significant uncertainty, disruption and loss should be done away with as a policy decision of the government in line with it's mission and objectives under the proposed policy.

EXPLANATORY NOTES

1. **Open the Supply of Satellite Capacity**
    a. **In many forums that the VSAT industry is represented, it is often said that the VSAT industry should come up with much more affordable broadband to gain traction of the regulators. So does the chicken come first or the egg comes first. Yes, indeed it is a "chicken and egg" situation. Satellite is a potent medium for delivering broadband to the rural areas. While Satellite in many geographies is still not an effective delivery mechanism to the ultimate consumer, it has certainly become a viable backhaul alternative to provide community wi-fi and cellular backhauls that takes both broadband and telephony to the rural masses. For India to leverage this great technology to reach telecom services to the rural masses, it is imperative that both the availability of satellite capacity and the cost of satellite capacity needs to be improved. In this direction, the association would like to make the following points:**
        i. The NTP 99 was a big milestone for the VSAT service provider industry opening up the Ku Band and allowing foreign satellites to augment the domestic capacity. The NTP 99 recognized the consultative role of DoS in the satellite space. However, this consultative role has become a canalizing role for DoS/Antrix in providing capacity. This has lead to a number of issues that are impeding the growth of the satellite broadband industry.
        ii. The Government's (DoS) role of being a sole supplier of capacity has led to many hurdles in doing business (much against the Government's intent to bring about ease of doing business across all sectors including telecom). Added to this, DoS is a licensor, regulator and service provider, which leads to many conflicts of interest.
        iii. Any sale of capacity by DoS effectively becomes an allocation of a national resource, thus leading to many complications in contracting.
        iv. Even if Government owned developer of capacity (ISRO) is able to succeed in keeping pace with the private industry, the very fact that the funding for the development is done by the ex-chequer, the contractual terms and the sale of capacity always have a lot of issues that have to be dealt with. This will also not let the Government owned developer to be competitive. A monopolistic

approach will only deprive the industry from the much needed agility and flexibility to address the market needs. Some of the industry unfriendly policies of ISRO in allocating capacity are

1. Taking a security deposit against every application of capacity - Nobody in the private industry adopts such an approach
2. Retrospective rate increase of 20-45%. The service provider is in no position to recover this from their customers and this further makes it unviable for the service provider to provide affordable broadband service in the terrestrial underserved and unserved areas.
3. Not approving private satellite investment and build proposals on flimsy reasons
4. Space segment applications that can be met by ISRO satellites are put in cold storage and customers are even discouraged from making such applications

b. The Information & Broadcast ministry has effectively dealt with this by allowing procurement of capacity directly by the broadcasters from any satellite operator thus bringing down the Government's role.
c. Despite having a share of a sixth of the global population, our share in the communication satellite market stands at less than 2% of the global communication satellite population. Thus India, the target focus of the " Next Billion in BroadBand " has less than 3% of the total global satellite population (41 as against 1381) . This clearly establishes that India is far below global norms on satellite communications.
d. Globally Low Earth Orbit (LEO) and Medium Earth Orbit (MEO) networks are being developed, which are expected to bring about an exponential increase in capacity and at the same time bringing the cost of capacity by factor of 100. India's ambition to be a global power in the satellite launch space and reaching out to the moon and mars should not cloud the benefits that affordable satellite communications can bring about for the masses.
e. The National Telecom Policy 2018 can overcome some of these issues by:
    i. By allowing direct contracting of capacity by telecom service providers from private operators. At the same time, the Government should focus on developing a domestic private industry in the satellite sector that can effectively complement the efforts of ISRO

and provide affordable satellite communications to the rural areas of the country that are deprived of connectivity.

ii. A list of coordinated satellites can be drawn up and service providers may be allowed to contract capacity only from such coordinated satellites. The contractual period can be limited from 3 to 5 years so that at the time when the domestic private industry is ready with enough capacity, any foreign capacity can be transitioned to the domestic private industry.

iii. Unified license specifies that VSAT operator can take bandwidth only from DoS. So it is entirely within the purview of the licensor (DoT in this case) to change this and allow service providers to take capacity from private operators.

iv. Encourage domestic private satellite operators. There are several proposals that are pending for launch and operation of domestic satellites under the Indian Satellite System. These satellites have a potential to bring about 4-5 billion US dollars of FDI to the telecom sector and improving the connectivity greatly in the remote areas.

2. Remove licensing and other artificial barriers that are impeding the growth of the industry

a. The TEC IR Document (TEC/IR/SCB-08/03.Oct 2013) restricts the speed of broadband via satellite to 2 Mbps. While, satellites can deliver upwards of 25 Mbps to a subscriber and is already delivering such speeds in other countries, these licensing barriers are artificial in nature. The same document allows a much higher limit for a broadcast network or a transmission network. This clearly goes to show that this limit is not driven by a technology limit. Similarly, a transportable VSAT is allowed for the broadcast sector in the form of SNG/DSNG terminals, but not allowed for satellite broadband or mobile ATMs for banks.

b. Similarly, the licensing conditions need to be agnostic to bands and satellite orbital locations. All bands that are permitted by the NFAP should be automatically allowed for satellite broadband. Many constellations are being developed in the LEO/MEO orbits for high throughput and cost-effective delivery of capacity. It would be impossible for us to be self-sufficient in this area. These developments have a big bearing on the growth of the industry and in the provision of affordable broadband to the masses in the underserved and un-served areas. The telecom policy should take cognizance of these developments and make the rules and regulations technology neutral.

c. When it comes to applications, satellite communications can provide the much needed convergence. More and more media networks are also going IP. A VSAT provider should be able to carry any IP traffic regardless of the application. The applications that satellite can effectively address are:
    i. File transfers for the purpose of education , local information, weather bulletins, agricultural mandis & low cost entertainment to rural areas;
    ii. Connected cars for traffic management, insurance and security purposes; convergence broadband and media services;
    iii. Inflight Communications(IFC) and Maritime Communications
    iv. Data Multicasting & Caching for ultra-low cost based transfer of files
    v. Hybrid solutions consisting of data multicast with return channel over terrestrial solutions
    vi. Broadband for planes/trains/ships
    vii. Broadband for Commuters
    viii. Mobile Backhauling for 4G/5G
    ix. Smart Cities for M2M
    x. Emergency services to reduce car accident casualties
    xi. Low cost entertainment distribution
    xii. Auto Car Software upgrades/updates

Please refer to the attached document titled **"Changes required in TEC IR for removal of artificial licensing barriers"** for further elaboration and suggestions from the association.

3. Make VSAT service a carrier and access service

a. Satellite broadband effectively complements other forms of broadband and backhaul technology. In the Indian context, satellite communications is used by large enterprises, small and medium businesses, telecom service providers as a part of a larger network. Most of these networks are delivered by access providers and the VSAT service is one part of the larger service being offered. In this context, it is imperative that the VSAT service be treated as a carrier service for the access provider to carry in their portfolio. Being a specialized and a niche service, the VSAT service providers are better equipped to delivering the service. At the same time, for the customer, it makes prudent business sense to buy this as a

bundled offering. The access providers should be able to buy this service and re-sell the same to their customers.

b. **In many geographies satellite is effectively used as a backhaul to deliver either a cellular service or a wi-fi broadband service. In such cases, it makes so much sense, if the satellite service is a carrier service. Today, the carrier service is addressed by the NLD authorisation of the UL. However, the spectrum charges under the NLD license follows a formula based charging mechanism and this mechanism has a big anomaly that increases the SUC by a factor of 100. TRAI in its recommendation on "Captive VSAT CUG Policy issues" dated 18th July 2017 has already recommended for a correct implementation of this formula. This needs to be reiterated.**

4. **De-license the VSAT terminals so that the import/local manufacturing and sale of terminals can be freely done.**
    a. The biggest inflection point for the growth of mobiles came in when the Government decided to de-license the mobile handset. Imagine, we having to obtain a license for a mobile handset. It would severely restricted the mobile industry. Today, satellite is yet another wireless alternative. In many countries, satellite terminals are in homes very similar to a DSL/Cable/FTTH modem/equipment. This sort of a revolution is only possible when the Government de-licenses the terminal itself. This means, the terminal can be freely imported and deployed.
    b. This does not mean that the service provider has any less accountability to the regulations. Like in most countries, the terminals are installed on a self-certification and information basis. Audits are conducted and if the audit finds out that the terminal does not comply to the regulations, severe penalties are imposed.
    c. Similarly, on the gateway side, it takes more than nine months to get the regulatory approvals. In some cases, it has taken more than two years to obtain all the regulatory permissions. The satellite operators including ISRO charge the VSAT service provider during this period and this works in nobody's favour. The Government also loses revenue (in the form of license fee and spectrum usage charges) when the network is not put-to-use. In order to avoid this, the Government should adopt a single-window approach and a time bound approval should be provided within a sixty day window.
5. **Smoothen the WPC approvals for gateways and remote terminals and make it timebound**

a. For the Gateways:
    i. VSAT service providers need to establish newer hubs/gateways to serve their customers when adequate capacity is not available on a single satellite
    ii. VSAT service providers as a process first get the space segment allocation to be able to apply for WPC.
    iii. Today the charging of space segment begins right at the time of allocation, whereas the WPC approvals (Decision Letter, SACFA & Operating License) takes anywhere between six months to two years. During this period the VSAT service provider continues to pay for the space segment, thus incurring a huge unproductive cost, which is passed on to the end customer making the VSAT service very expensive.
    iv. The delays in WPC are on account of the following:
        1. Lack of policy for administrative allocation of spectrum
        2. Obtaining a “no-dues” certificate from the finance section against each spectrum allocation
    v. With respect to the process, the association recommends the following
    vi. WPC merely endorses the allocation of frequencies by DoS. So technically there is no spectrum allocation taking place from WPC. As a result, this is not an administrative allocation of spectrum. So this needs no policy intervention or ad hoc approvals.
    vii. No-Dues have to be done away with a negative list of defaulters drawn up by finance on a periodic basis (quarterly) and that excludes all cases where the matters are sub-judice.
b. WPC & SACFA for remote sites
    i. For the remote sites the association recommends the following:
        1. Do away with the SACFA + WPC license for all exempted sites
        2. Let the VSAT Service provider do a self-certification based on-line submission with all the requisite information pertaining to the installation of sites.
        3. WPC should do periodic audits to identify and penalise any violations that are essentially deviations from the self-certifications and the actual installations.

6. **Bring policy and regulation of all telecommunications services via satellite under exclusive purview of DoT and TRAI respectively on lines of terrestrial services**
    a. The telecom industry has reached a great deal of maturity when it comes to policy formulation. The Department of Telecom (DoT) plays the role of a licensor and policy formulator. The Telecom Regulatory Authority of India, using a consultative approach comes up with recommendations to help DoT in formulating policy. TRAI also acts as a market regulator. Any dispute resolution is done by the TDSAT.
    b. Department of Space (DoS) on the other hand formulates space policy that includes the satellite communications element. The Satcom Policy should be only restricted to the allocation of its own assets. In addition, this also can address private participation in the Indian space program including the Indian Satellite System.
    c. All policy with respect to satellite broadband service (VSAT service) should be holistically addressed by DoT and TRAI. TRAI may from time to time take consultation from DoS for its expertise in the satellite domain.
    d. For effective administration of the INSAT/GSAT capacity, it would be desirable to have a commercial arm like ANTRIX to sell capacity with well laid out contracting principles that are distanced from a Government allocation of a national resource. This is the only way, the Indian capacity can become competitive and at par with foreign capacity in terms of the ease of doing business.

7. **Expand the scope for existing Service Providers so that they can grow the market and proliferate satellite Broadband access across the SAARC countries**
    a. The honourable Prime Minister has a great vision to donate a satellite developed by India to the SAARC countries. This gives a tremendous opportunity for the VSAT service providers to reach out to the various customers in the SARRC countries to provide a VSAT service.
    b. With a gateway in India, VSAT service providers can expand their scope by providing services to customers in the SAARC countries without the need for an International Long Distance license.
    c. The SAARC countries have similar problems that of ours and a satellite broadband service will effectively complement their terrestrial infrastructure. This service help reach broadband to the unserved and underserved areas of the respective countries.

CONCLUSION/SUMMARY

· Commercial Communications through satellite needs to be maximized for Digital India for bridging the Rural/Urban Digital Divide. Opening the skies would bring the much-needed ease in doing business in this sector in addition to bringing the latest technology that is available today and in the future.

· The licensing and regulation needs to be an enabler and not a dampener. No artificial restrictions should be applied in the name of licensing. Technology should be the only limiting factor. This will pave wave for lower cost and satellite broadband that will be affordable for all.

· A VSAT service is a gap filler and a great backhaul option. So it needs to be a carrier service. At the same time, it is an ideal medium for a consumer in the remotest part of the country and thus a great access service. So both needs to be given its due merit.

· The success of the mobile revolution can be repeated with satellite and this can be achieved by de-licensing of the terminal equipment and timely provision of approvals for gateways.

· The telecom industry has come a long way and is at a very high level of maturity. This has been made possible due to the effective structure that has been put in place. DoT as the licensor and policy maker, TRAI in a consulting role and a market regulator has helped the industry achieve a great amount of growth. This model needs to be successfully adopted for the satellite broadband industry as well. Department of Space should be consulted on a need only basis by TRAI for taking their expert inputs.

· In-line with the vision of the honourable Prime Minister, VSAT service providers can help realize this vision by setting up networks that expand across the borders and reach out to consumers in the neighboring SAARC countries.

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