



**VIA E-MAIL**

[advcn@traf.gov.in](mailto:advcn@traf.gov.in)

[cn@traf.gov.in](mailto:cn@traf.gov.in)

7 July 2010

Dr. J.S. Sarma  
Chairman  
Telecom Regulatory Authority of India  
Mahanagar Doorsanchar Bhawan  
Jawahar Lal Nehru Marg  
New Delhi – 110002

**Re: Consultation Paper 09/2010  
Consultation Paper on National Broadband Plan**

Dear Dr. Sarma:

The Global VSAT Forum (“GVF”) would like to thank the Telecom Regulatory Authority of India (“TRAI”) for the opportunity to have input into its National Broadband Plan. In this response, the GVF provides an overview into the important role satellite communications will play in any national broadband network.

The GVF is a non-profit association representing the global satellite industry. Our membership comprises more than 200 companies from 100 countries in every region of the world. Our membership includes companies from all sectors of the industry, including satellite operators, satellite manufacturers, ground segment and network operators and manufacturers, as well as consultants, law firms and other organizations involved in the satellite industry.<sup>1</sup>

As the TRAI highlights in its Consultation Paper, “[t]he Indian demographic pattern indicates that almost 70% of its population lives in rural areas.”<sup>2</sup> This demographic pattern drives home an even greater dependence on satellite to drive broadband uptake in India. The simple fact is that large amounts of this 70% will never be connected to any fiber network, while insufficient lower-frequency spectrum exists to cover all consumers through terrestrial mobile networks.

---

<sup>1</sup> For more information regarding the GVF, please visit the association’s web site ([www.gvf.org](http://www.gvf.org)).

<sup>2</sup> Consultation Paper, page 4.

## **I. BRIDGING THE DIGITAL DIVIDE**

Satellite networks are often the only way to provide a robust broadband service to users in rural and remote areas on a cost effective basis. India's vast landmass and substantial rural population make satellite networks vital to ensure that the National Broadband Plan achieves what it aspires to: universal connectivity and the lowering of the Digital Divide.

Satellite is an instant solution to meet India's future bandwidth requirements. Satellite capacity already exists over India to serve the broadband market, and can be added to over time. A satellite platform's ability to instantly provide service to virtually all parts of the country once deployed is thus key to fulfilling the goal of universal and affordable access. As stated by the European Satellite Operators Association, "[f]or solutions to the 'digital divide', satellite-based services are the most efficient and in many areas the only financially viable way to serve."<sup>3</sup>

Satellite networks can cover remote territories and provide connectivity at substantially less cost than their terrestrial counterparts. Unlike terrestrial technologies, the economics of satellite broadband are independent of population density, and costs do not significantly increase with the remoteness of the user. Cost of the satellite portion per user in any one area remains, in the main, consistent whether one user is accessing service in that area or 1,000.

## **II. SATELLITE BACKHAUL**

In its Consultation Paper, the TRAI goes into considerable detail with regard to the backhaul network, and here satellite connectivity also has an important role to play. Satellite backhaul will continue to act as a vital link between fiber rings in nearly every national broadband network. Satellite will continue to provide vital rural backhaul connectivity to support existing and future telecoms infrastructure. What is more, fiber bottlenecks -- which the TRAI correctly identifies as problematic in its Consultation Paper -- can be eased through satellite backhaul.

The importance of this backhaul role is increased by the robustness that is the essence of satellite networks. Satellite is a reliable, non-terrestrial service that, by this nature, is not susceptible to terrestrial incidents that will cut out terrestrial networks such as extremes of nature and man-made incidents. Modern, IP-based satellite networks are highly scalable and will be able to give priority to the emergency services and government in times of natural or man-made disasters. Recognition of the robust back-up provided by satellite services, and their role in giving access to communications when terrestrial services fail is vital to any national broadband network. Public safety, disaster recovery and emergency service connectivity are all vital services offered seamlessly by satellite.

---

<sup>3</sup> See [http://www.esoa.net/v2/docs/public\\_spacePolicy/20070917\\_ESOA\\_ResponseToICTStrategy.pdf](http://www.esoa.net/v2/docs/public_spacePolicy/20070917_ESOA_ResponseToICTStrategy.pdf)

### **III. SATELLITE BROADBAND**

Satellite broadband connectivity will also enhance competition in the Indian market. While in many cases, satellite is the only option to provide broadband connectivity, there is a substantial area where satellite will be able to provide extra competition at affordable prices to terrestrial networks. What is more, a single satellite platform can support multiple service providers and thus increase competition in the provision of satellite services as well.

Satellite platforms today are capable of delivering broadband speeds to end-users. Consumer and business packages are available with speeds of up to 5 MBps, and vibrant new technologies will offer still greater speeds to satellite broadband users at affordable prices. Despite this, the GVF does not believe the arbitrary figure of 2 MBps is relevant to describe broadband service in India.

Finally, satellite broadband connectivity is available in the whole of the Indian territory today. While India's fiber networks will be slowly rolled out over a decade, satellite broadband connectivity can already be enjoyed by consumers throughout India's vast landscape. Capacity exists and user equipment is already affordable.

### **CONCLUSION**

The GVF thus urges the TRAI to treat satellite as an existing, modern and future component of its National Broadband Network. Whether providing core services, backhaul connectivity or back-up services in times of outage, satellite has an existing and growing role in providing Indian people with broadband services which will always be a vital part of the nation's communications backbone.

The GVF wishes to thank the TRAI for being able to comment on this Consultation Paper and is available for further consultation with the TRAI.

Sincerely,



David Hartshorn  
Secretary General  
Global VSAT Forum