

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)  
Fixed and Broadcast Communications (2)

Author: Mr. Venugopal Desaraju  
Devas Multimedia Pvt. Ltd., India, dvenugopal53@yahoo.com

Dr. M.G. Chandrasekhar  
Devas Multimedia Pvt. Ltd., United States, drchandramg@yahoo.co.in

Mr. Ramachandran Viswanathan  
Devas Multimedia Pvt. Ltd., United States, rv@devasmedia.com

Mr. Anil Bokil  
Devas Multimedia Pvt. Ltd., India, aabokil@devasmedia.com

Mr. Anil Kumar Mudumbe  
Devas Multimedia Pvt. Ltd., India, amudumbe@devasmedia.com

SATELLITE BASED IP SERVICES IN MOBILE ENVIRONMENT

**Abstract**

With the introduction of IP based transmission schemes, true convergence at services level is getting achieved with different types of services like audio, video and data being merged into multimedia services and provided on the same signal. IP protocol enables the transportability of packetized signals across all types of media. It is now well recognized that most cost effective solutions for providing such services are through an optimal combination of satellite and terrestrial systems – with satellites providing wide area coverage encompassing rural and remote areas and the complementary ground component providing services in shadow areas and in heavy built up areas. Satellite systems are well suited to provide IP based services with asymmetric data in the forward and return links especially in the mobile environment. Multipath mitigation mechanisms have now matured over years and most of the radio access standards adopt them. The limitations of the bandwidth in satellite systems can also be over come through adoption suitable architecture and technologies including use of short messages for communications as well as for 'fetch' services. This paper describes the different architectures and technologies for satellite based IP services in mobile environment and the tradeoffs involved based on the satellite systems being built in India.