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SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
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KEY KA BAND SATELLITE COMMUNICATION SYSTEMS – APPLICATIONS AND
CONFIGURATIONS

Abstract

The last decade saw the emergence of Ka band satellite communication systems in different parts of the world. Ka-band satellites offer several advantages like large bandwidth availability, higher bit rates, ease of generation of multiple beam satellites, small size user terminals, etc. With increasing mobility of the people, availability of communication and information services in fixed, nomadic and mobile environments is an important requirement. The frequency allocations in Ka-band include those for Fixed Satellite Service and Mobile Satellite Service. With the flexibility provided by Ka band technologies, we are entering into a new paradigm in planning, designing and implementing commercial satellite system ventures. The approach to be adopted has to dig up the known and hidden demands in various layers of sectors like enterprises, consumers, mass communications requirements in transits (mobility), etc. and develop insights into market in terms of product and solutions. Ka band satellites are conceived as Integrated Satellite System unifying the satellite platform, payload, ground network hardware and software technologies and services towards commercially successful satellite systems. In this paper some of the key applications of Ka band satellite systems are addressed. Different Ka band satellite systems configurations to meet the applications and demands in an optimal and phased manner are studied.