BGAN Extension

Applications: Mobility

"Mobile Satellite Telecommunication Systems have undergone an enormous evolution in the last decades. The interest in telecommunication services, available anywhere and at any time with ever-higher capabilities to offer advanced multimedia services, is leading to incredible advances in this sector. This unique innovation positions the Broadband Global Area Network (BGAN) alongside the world's most advanced digital mobile services"

Juan Rivera Castro, Satellite Communications Systems Engineer/BGAN Extension Technical Officer, ESA

PRIME CONTRACTOR:

Inmarsat Limited
9 City Road
London
EC1Y 1AX
United Kingdom
http://www.inmarsat.com

CONTACT INMARSAT:

Paul Febvre
Project Manager
E-mail: paul_febvre@inmarsat.com
Phone: +44 (0) 20 7728 1687
Fax: +44 (0) 20 7728 1174

PROJECT PARTNERS:

EMS SatCom UK Ltd. (UK)
Nera ASA (N)
LogicaCMG [UK]
University of Surrey [UK]

PROFILE:

The Inmarsat Broadband Global Area Network (BGAN) system has been specified to support point-to-point telecommunication services on portable and semi-fixed land mobile platforms with low to medium-gain, non-tracking antennas providing bit rates in the 216 to 432 kbps range in downlink, and 72 to 432 kbps in uplink, depending on the type of terminal. The BGAN air interface is optimised for a land-portable environment with directional antennas.

BGAN Air Interface and Platform Extension

The BGAN Extension Project aims at extending the BGAN air interface and platform portfolio to truly mobile maritime, aeronautical, and land-vehicular environments not covered in the baseline system definition, in order to benefit these mobile communities.

BGAN Service Extension to Multicast

The BGAN baseline system has been specified for point-to-point S-UMTS services to individual terminals. Satellites offer a resource-efficient means of multi-casting over wide areas. It is believed that there is a potentially considerable marketing opportunity in the MSS domain. This work aims to develop a solution for supporting efficient multicasting via BGAN technology.

The BGAN Extension Project has adopted the "Open Standards" approach and will aim to open the new specifications to the exploitation of the wider community through the standardisation process, thereby facilitating further gains for the Mobile Satellite community (manufacturers and operators, as well as the users) from the economies of scale. The standardisation activities will focus on the BGAN System and BGAN air interface as a satellite component of UMTS. The range of design and specification contributions is expected to produce significant input for the European Telecommunications Standards Institute(ETSI), validate new system architectures based on an analysis of present and future satellite-technology limitations.