

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)  
Advanced Systems (1)

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ALPHABUS, A SUCCESSFUL EUROPEAN PUBLIC PRIVATE PARTNERSHIP

**Abstract**

The European Space Agency and French National Space Agency CNES have set up a cooperation for the development of a new high-capacity satellite platform. This initiative is a coordinated European response to the increased worldwide market demand for large telecommunication satellites. The aim is to complement the existing European telecommunications platform product lines, such as Eurostar 3000 and Spacebus 4000, significantly beyond their capabilities in term of payload power, consumption, thermal dissipation and mass.

Alphabus is being jointly developed by EADS Astrium and Thales Alenia Space as co-prime contractors in a European industrial consortium taking full advantage of their extensive experience developed in this field. The phase C/D started mid 2005 and is coming to its end with an Alphabus qualification review planned in 4th Quarter 2010 and the delivery of a proto-flight platform model by end 2010.

Based on this successful development, a further increase of the Alphabus domain has started under the Alphabus Extension Programme in order to take full benefit of the heavy launcher capabilities and further decrease the cost per transponder.

In addition, a first operational program has been implemented by ESA under a Public-Private-Partnership (PPP) scheme with a commercial operator to allow an early flight demonstration and in-orbit validation of the Alphabus product. Following an extensive evaluation process, ESA selected Inmarsat Global Limited geomobile mission for this first flight opportunity. The Alphasat / Inmarsat XL mission is intended to be launched in 2012 with Ariane 5. This mission also includes the flight of four European Technology Demonstration Payloads.

Under a joined ESA/ CNES management scheme, an innovative overall program structure has been established for the common development of the new satellite platform, involving the two competing satellite prime contractors,. With the Alphabus product reaching qualification completion and the first platform model to be delivered to its first customer, this challenging programme organisation is on its way to unprecedented success..

The paper will describe (a) the objectives of this program, (b) the way it has been set up with a successful public-private partnership between ESA/CNES agencies, the European industry and a telecommunication satellite operator, (c) the program management with an integrated ESA/CNES team, (d) the main steps of the development with its schedule and (e) the actual results.