

# Contract for the innovative flexible broadband satellite HYLAS

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HYLAS is a hybrid Ka Band/Ku Band satellite with European coverage. The satellite will be used mainly to provide broadband Internet access and to distribute and broadcast High Definition Television (HDTV). Credits: Avanti

The European Space Agency (ESA) and Avanti Screenmedia Group PLC (Avanti) have announced the signature at the Case for Space Conference, in London, UK this 15 May of a contract for the implementation of HYLAS (Highly Flexible Satellite).

HYLAS is a hybrid Ka Band/Ku Band satellite with European coverage. The satellite will be used mainly to provide broadband Internet access and to distribute and broadcast High Definition Television (HDTV).

The contract between ESA and Avanti covers support for the development of the most innovative elements of this new system. The supplier of the HYLAS Satellite is EADS Astrium Limited. ESA's contribution is €34m of a total estimated project cost of €120m.

For Giuseppe Viriglio, Director of European Union and Industry Programmes for the European Space Agency, "HYLAS will play an important role in demonstrating the advanced technological capabilities of European space companies which are truly competitive on a global scale. It also makes significant progress in solving the social problem of poor broadband coverage in many parts of Europe and serves as a template for future large scale projects".

With a launch mass of around 2100kg and beginning-of-life power of 3.5KW, HYLAS is a moderately sized satellite that allows the scalable introduction of new enhanced services with limited technical and financial risk.

The traffic handling capacity of the Broadband HYLAS payload ranges from 150,000 to 300,000 simultaneous users. By using high-gain Ka Band spot beams, it is possible to provide up to 8 simultaneously active spots, a capacity equivalent to more than 40 conventional 33 MHz transponders.

In addition, the implementation of a novel type of payload based on the combined use of EADS Astrium Limited General Flexible Payload technology and TSAT Flexible Travelling Wave Tubes will allow the optimisation of the assignment of satellite resources (power and spectrum) to each spot as a function of their respective traffic demand.

Furthermore, two flexible Ku Band transponders will allow the distribution and broadcast of a range of HDTV programmes for Avanti Screenmedia customers over the largest part of the European continent.

Avanti's intended ground segment will be based on ESA-supported standards known as the DVB family (DVB S-S2/DVB RCS). The launch of HYLAS is currently planned for late 2008 on an orbital position of 3.5° West. Its expected lifetime is 15 years.

Source: ESA

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