



The European Space Agency is taking a practical step forward in the ultimate television viewer experience: satellite-delivered 3D TV at home.

Since the first broadcasts of Scottish engineer John Logie Baird - the first person to produce a live, moving, television image from reflected light - the desire to improve and enhance television broadcasting and viewing has been there. Throughout the decades improvements have been made. In 2008 there were more than 100 million European homes receiving television programmes transmitted by satellites, either by direct reception or through cable distribution systems.

Viewers have seen the incorporation of high definition (HD), surround sound, widescreen and flat screen televisions, all in the effort to enhance user experience. Many of these developments were the result of technological advances first pioneered in the cinema. This trend continues with a recent crop of high quality 3D productions being released in cinemas which whet the appetite of the viewing public.

Why is it needed now?

There are many companies engaged in the production of 3D TV screens for domestic use and in parallel many companies engaged in the study of new techniques for encoding 3D content and its transportation over satellite networks. However, to date these elements have yet to be integrated to yield a complete service offering for consumer oriented 3D TV broadcasting.

How will it be done?

The project objectives include:

- Set up a complete end to end chain for satellite 3D TV broadcasting,
- Target viable solutions for consumer 3DTV products,
- Produce 3D content and deliver 3D events for an on-air pilot trial,
- Set up reception sites which will be used to gather end user feedback.

Two types of reception sites are being created. One will mimic a home environment using longer duration content and the other will be a public venue with short duration content. One of the home sites has been deployed at ESTEC, ESA's research and technology centre located in Noordwijk, The Netherlands.



Who will implement it?

ESA, in recognizing the importance of assisting in the development of technologies that remain ahead of the curve, support companies OpenSky and Skylogic in the delivery of 3D TV into viewer's homes. Through the Advanced Research in Telecommunications Systems (ARTES) programme and the project "Stereoscopic Broadcasting", ESA is providing its support to OpenSky and SkyLogic in the provision of a complete service offering for consumer-oriented 3D TV broadcasting.

The 3D TV's and standard reception equipment are currently being deployed across Europe. Transmissions of a 24 hour, seven days a week 3D channel began on the 12th of March 2009 via the EURO-BIRD 9A satellite. The content catalogue for the channel includes a range of program lengths and material including sport, a short film and trailers. However, the 3D TV channel will include, not only pre-recorded 3D content, but also events filmed in live 3D.

For those with capabilities to view the 3D channel, the EURO-BIRD™ 9A satellite is located at 9 East (Transponder frequency 11747MHz, SR 27500, Horizontal). Videos are transmitted in a modified side by side arrangement. To view them properly, a 3D capable TV and glasses are required.

What are the benefits?

With the launch of a 3DTV broadcasting service a major innovation is possible and furthermore this innovation will be highly visible to the market. 3DTV is a step forward from HD by offering an exciting new dimension to home viewing and which benefits from the ability of a satellite HD channel to carry the necessary 3DTV information. 3DTV will enable the satellite broadcasting industry to maintain its ongoing leadership for the delivery of HD content to the home audience. It will be another evolution brought about by satellite and leveraged by satellite.