

## Press release

### SES AND FRAUNHOFER HHI DEMONSTRATE VIRTUAL REALITY VIA SATELLITE

*R&D showcase at IBC will offer viewers a fully immersive virtual reality experience*



LUXEMBOURG, 05 September 2016 -- SES S.A. (Euronext Paris and Luxembourg Stock Exchange: SESE), together with Fraunhofer Heinrich Hertz Institute HHI in Berlin, will demonstrate a groundbreaking R&D project at IBC this year showcasing the transmission of a 10K x 2K panoramic video signal via satellite to multiple devices.

The panoramic signal will be received at the SES stand and transmitted to an Ultra HD display, as well as a set of virtual reality (VR) head-mounted devices. The viewer can choose a viewing angle, zoom in and out, turn the picture on the TV display using a simple remote control - or choose to wear a VR headset, where the video signal is delivered simultaneously.

Filmed with Fraunhofer HHI's remarkable OmniCam-360 camera and transmitted via SES's ASTRA 19.2 degrees East orbital position, this demonstration will provide a first glimpse of what a future VR 360° video would look like. For the first time, it allows the viewer a truly immersive experience of being part of a virtual event, whether its sports, concerts or other live shows.

"We use a combination of technologies here exactly to showcase what is possible when using hybrid approaches," said Dr. Ralf Schäfer, Fraunhofer HHI's Head of Division Video. "There is no stadium in the world providing enough seats for all enthusiastic fans. So imagine a live event somewhere in the world – filmed with professional cameras like our OmniCam-360 and then delivered to a huge global audience via satellite. And every single viewer at home has the best seat in the middle of the show."

Thomas Wrede, Vice President Reception Systems at SES, added, "Satellites are the perfect distribution path for these new kinds of video experiences, as they can manage huge volumes of data being offloaded from terrestrial networks. Furthermore, technology standards like SAT>IP not only allow the viewers at home to pick and choose a device - the TV screen, tablet or virtual reality equipment - but also they can now choose their favourite viewing position."

For further information please contact:

**SES**

Markus Payer  
Corporate Communications  
Tel. +352 710 725 500  
[Markus.Payer@ses.com](mailto:Markus.Payer@ses.com)

**Fraunhofer Heinrich Hertz Institute**

Anne Rommel  
Corporate Communications  
Tel. +49 30 31002 353  
[anne.rommel@hhi.fraunhofer.de](mailto:anne.rommel@hhi.fraunhofer.de)

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**About SES**

SES (Euronext Paris and Luxembourg Stock Exchange: SESG) is the world-leading satellite operator with a fleet of more than 50 geostationary satellites. Focusing on value-added, end-to-end solutions in four key market verticals (video, enterprise, mobility and government), SES provides satellite communications services to broadcasters, content and internet service providers, and mobile and fixed network operators, as well as business and governmental organisations worldwide. SES stands for long-lasting business relationships, high-quality service and excellence in the satellite industry. The culturally diverse regional teams of SES are located around the globe and work closely with customers to meet their specific satellite bandwidth and service requirements.

SES's subsidiary, MX1, is one of the leading media service providers and offers a full suite of innovative digital video and media services.

Through its ownership of O3b Networks, a next generation satellite network combining the reach of satellite with the speed of fibre, SES significantly enhanced existing video and data capabilities. SES is the first satellite provider in the world to deliver a differentiated and entirely scalable GEO-MEO offer with powerful technical capabilities across numerous market segments and geographies.

At SES we are shaping new ecosystems and laying the groundwork for new foundations.  
Further information available at: [www.ses.com](http://www.ses.com)

**About Fraunhofer HHI:**

The Fraunhofer Heinrich Hertz Institute is a world leader in the development of mobile and fixed broadband communication networks and multimedia systems. From photonic components and systems through fiber optic sensor systems to video coding and transmission, the Fraunhofer HHI works together with its international partners from research and industry.  
[www.hhi.fraunhofer.de](http://www.hhi.fraunhofer.de)