**ESA Ministerial Telecommunications and Integrated Applications**

**A roll – FINAL**

Ministers from the 22 ESA member states and Canada will gather in Lucerne, Switzerland on 1-2 December to discuss future spending priorities for the ESA space programme.

ESA members fund a core programme of space activities but can also subscribe to optional programmes. Before the ESA Ministerial Council meeting, each ESA directorate has drawn-up a list of priorities to be considered by ministers. In this report, we hear from ESA’s Telecommunications and Integrated Applications Directorate.

It also contains new EDRS animation.

A-ROLL

10:00:00

[STILL IMAGES OF LA REUNION ISLAND IN COLOUR AND BLACK & WHITE]

ESA recently achieved a remarkable first – these images were transmitted from a satellite in low-Earth orbit to a communications satellite in geostationary orbit using a laser.

[ANIMATION OF EDRS SYSTEM, RECEIVERS AND SCANNING; GVS OF SHIP, EARTHQUAKE RESCUE AND IPAD]

This European Data Relay system, EDRS, gives users on the ground much faster updates from satellites – and has a wide range of applications including improved maritime safety and emergency response.

EDRS was developed as a public-private partnership between ESA and Airbus Defence and Space. It is part of the ARTES programme of Advanced Research in Telecommunications Systems. This ESA strategy is designed to stimulate competitiveness of European industry.

10:01:02

[INSET CLIP: Magali Vaissiere

Director, Telecommunications and Integrated Applications, ESA]

*“ARTES is all about innovation. ARTES pushes industry to innovate to develop its competitive edges, to think about new solutions. They wouldn’t do it on their own because they are innovative and very risky. They need the public sector to support them and mitigate the risks, so they will be able to develop the solutions and offer them to their customers.”*

10:01:31

[EDRS and satellite technology animation]

Now that EDRS has been proven in space, ESA plans to develop Globenet – a high-speed data network in space using three geostationary satellites to provide global coverage. The Directorate also wants to support the development of mega constellations – large networks of mass-produced satellites, operating in low-Earth orbit…and invest in ‘Pioneer’ an initiative aimed at facilitating in-orbit test flights to develop innovative services, applications, systems and technologies.

10:02:06

[INSET CLIP: Magali Vaissiere

Director, Telecommunications and Integrated Applications, ESA]

*“It is very important that member states remember that the telecoms sector is the main revenue earner of the space sector. Therefore if the European industry does not remain as competitive as it is today, this would have a strong impact on the rest of the sector.”*

10:02:29

[GVS SHOWING SATELLITE ENABLED TECHNOLOGY – GPS AND AIR TRAFFIC CONTROL SYSTEM EGNOS]

Many of technologies we rely on have come about thanks to government investment through ESA programmes...and there are wider economic benefits too.

10:02:39

[INSET CLIP: Magali Vaissiere

Director, Telecommunications and Integrated Applications, ESA]

*“If they invest one Euro in Artes they will get a return up to 21 Euros – this is not a figure that ESA is just stating this is the result you can find in the London Economics study.”*

10:02:56

[GVS CLEAN ROOM, TOULOUSE, OF ALPHASAT]

Evidence suggests that investments made now in ambitious new communications technologies will open up many new applications and commercial opportunities for space technology in the future.

[ESA STING]

10:03:10

END ARoll

**ESA Ministerial Telecommunications and Integrated Applications**

**B roll – FINAL**

10:03:10

[TITLE] EDRS ANIMATIONS

New animation of the planned European Data Relay System (EDRS) showing its laser communication system sending data from satellites in low earth orbit to satellites in higher, fixed geostationary orbit, which can then transmit the data to the Earth. This means the satellites can be in continuous contact with the ground via receivers. The first EDRS satellite was launched in January 2016.

10:05:01

[TITLE] FIRST EDRS IMAGES

Still images of La Reunion Island, the first sent via EDRS, the European Data Relay System’s laser technology in high orbit, and taken by the Copernicus Sentinel-1A satellite. Sentinel-1A transmitted the images to the EDRS-A node in geostationary orbit via a laser beam. The images were released in June 2016.

10:05:32

[TITLE] Magali Vaissiere

Director, Telecommunications and Integrated Applications, ESA - French]

10:10:31

END