



EUROPEAN COMMISSION - PRESS RELEASE

Digital Agenda: Europe invests in photonics research to accelerate high-speed broadband

Brussels 28 June 2011 - Thirteen photonics research projects are being launched in the field of high-speed fibre broadband networks with the aim of developing technologies to deliver super fast internet speeds to the home in excess of 1 Gigabit per second. The projects were jointly selected in 2010 by the European Commission, Austria, Germany, Poland, the United Kingdom and Israel, who are together paying a total of €22.3 million towards them. The research projects will run for two to three years. Giving every European access to fast and ultra fast broadband by 2020 and boosting investment in European information and communications technology research are key objectives of the Digital Agenda for Europe (see [IP/10/581](#), [MEMO/10/199](#) and [MEMO/10/200](#)).

Neelie Kroes, Vice President of the European Commission for the Digital Agenda said: *"I'm very happy that research on technology relevant to delivering super fast Internet speeds to the homes and businesses of 500 million Europeans is taking off. Such technology could have a crucial role to play in meeting Europe's broadband needs far into the future."*

The research projects all focus on how components (e.g. transceivers, amplifiers and routers) and IT systems can deliver speeds of 1Gigabit/second and above to the subscriber at home while reducing the operational cost for ultra-fast broadband. The objective is therefore to develop technology to give customers a faster service at no extra cost.

The Commission contributes one third of the funding of the projects and national funding agencies cover the rest. The joint approach enables participating countries to develop high speed optical broadband networks much faster, as joint efforts can generate a critical mass for market-uptake more efficiently.

The thirteen individual research projects constitute the Piano+ initiative, which is an [ERANET+](#) project and part of the European Commission's 7th Research Framework Programme (FP7).

Examples of projects

The [ADDONAS](#) project aims to deliver better quality for mobile video and real-time applications such as cloud computing by optimising the switching technology for super fast broadband circuits. This would allow data traffic to be sent only where it is needed, therefore removing bottlenecks on a router's performance. At the same time, the technology in question would aim to reduce the total energy bill for operators and users by over 50%.

To enable ultra-high-speed transmission of data, the [ALOHA](#) project aims to upgrade the transmission capacity of broadband semiconductors (i.e. optic lasers). The aim is to improve performance to 10 Gigabit/second transmission rates and beyond and accelerate the transition of faster laser components to mass market uptake.

The [TUCAN](#) project targets the development of low cost tunable transceiver technology (i.e. lasers whose wavelength of operation can be altered) that will be capable of meeting access network cost targets whilst maintaining high performance and reducing power requirements. Current networks are designed for fixed wavelength lasers at cost levels of less than €10 per laser but these are not designed to deal with high data rates (1 to 10 Gigabits/second) per customer as would be required in super fast access networks.

The [SEPIANet](#) project aims to develop optical components, modules and subsystems for future access products based on embedded electro-optical printed circuit board technology that would significantly reduce power consumption and increase energy efficiency and bandwidth, which is currently not possible in today's copper-based access network systems.

Background

Photonics is a strategic technology driving innovation in many sectors, such as communications (including super fast internet access), lighting and medical applications.

Ultra-fast broadband access is becoming increasingly important in Europe as demand for bandwidth-hungry services multiplies. New entertainment and business services like high-definition (HD) or "3D" TV, downloading music or videos on smart phones and video conferencing facilities require much faster internet than is generally available today in Europe.

More information about the research projects can be found here:

<http://www.pianoplus.eu/projects.html>

Digital Agenda website: <http://ec.europa.eu/digital-agenda>

Neelie Kroes' website: http://ec.europa.eu/commission_2010-2014/kroes/

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