DO YOU WORK IN ONE OF THESE TECHNOLOGICAL SECTORS?

- telecommunications
- new media
- future internet
- applications & services

ARE YOU ...

READY TO BE PART OF LAUNCHING AN INNOVATION ON THE MARKET?

Do you want to work with partners beyond national borders, developing new products or working on pre-competitive research? If you fit the profile then Celtic-Plus may be the ideal tool for you.

READY TO GO INTERNATIONAL?

Do you want to access new markets, technologies and skills? Do you want to gain recognition through your involvement in a large research project?

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The HIPERMED Project

Working across multiple technologies

HIPERMED stands for High PERformance low cost teleMEDicine platform. It is the first cross-domain project in the fast growing e-health sector to be initiated within the Celtic Cluster including partners from both the ICT and the health sector. The final result was the design of a common, open and high-performance telemedicine platform. The system is low-cost and provides services over the Internet, including low cost HD-video. HIPERMED has a huge commercial potential which translated rapidly into commercial deployments.

A key factor to make telemedicine systems work is reducing the costs related connecting patients at home, regional hospitals and specialised ones at a national level. Throughout the project's stages, from definition to validation, the focus remained on minimising deployment costs by using in-house infrastructures.

The HIPERMED platform was implemented in different European countries following a common methodology, including low cost HD-video. HIPERMED has a huge commercial potential which translated rapidly into commercial deployments.

The results of the HIPERMED project have allowed the evolution of the telemedicine system in smaller steps, leading to the development of a new kind of system with fibre-optics almost all the way, keeping only the very last piece of copper. Hence the fibre gets closer to the home, but it is still not necessary to replace the last and most expensive part of the access network.

The 4GBB Project

Where politics and industry meet

The 4GBB project is a perfect example of how great engineering ideas are born at the crossroads of economic realities and political ambition. While politicians often advocate optical fibre to every home, operators realised that, in most cases, fibre deployment will lead to very high costs. The problem with an FtTH network does not lie in the technology, but rather in the investment and deployment cost, which is a bite too large to chew at once.

The results of the 4GBB project allow the evolution of the network in smaller steps, developing and standardising a system with fibre-optics almost all the way, keeping only the very last piece of copper. See it as a kind of “Super-ADSL”, which allows transmitting Gbit/s bandwidth over the last hundred meters of existing copper pairs. Hence the fibre gets closer to the home, but it is still not necessary to replace the last and most expensive part of the access network.

4GBB has been a platform for initiating the ITU-T G.fast standard. A standard is necessary both as a basis for regulation, system compatibility and in order to achieve the required mass-market benefits.

The CIER Project

Microwave plug&play installation of broadband in rural areas

Many rural areas in Europe and sparsely populated regions in developing countries are still not connected to the Internet. The CIER project has developed a technology that could play an important role in bringing broadband coverage to rural regions, and has the potential to make continuing blind spots in broadband coverage in Europe disappear. Commercial deployments have already started in parts of Europe, but also in Tanzania, where the new network has already connected three schools and one hospital.

In isolated regions, the lack of energy supply, suitable infrastructure, trained personnel and high operation costs impose tough requirements on the deployment of Internet connections. The solution was the creation of self-configuring ‘Internet building-blocks’. The ‘building-blocks’ allow Internet connections to be set up in remote areas and challenging environments such as difficult topographies, or in harsh weather conditions.

The technology's successful development has generated wide interest and the impact of the CIER project is set to go beyond initial expectations: this network architecture of a new kind may provide a valuable contribution to the discussion on 5G, the next major phase of mobile telecommunications systems.