

Project Information



Broadband Access Network Integrated Telecommunication System 2

BANITS 2 aims to continue extending the knowledge in the area of the access and metropolitan networks started with the BANITS 1 project in order to deliver the new service packages to residential and business customers. The new services comprise high-quality multimedia services, with special focus on maximum utilisation of existing network infrastructure, including access and metropolitan areas and specifically covering technologies like xDSL, RPR and VPLS. Such new services are facilitated by the high growth rate of the xDSL/DSLAM infrastructure widely deployed in Europe, getting very attractive to the network and service operators so they will enable them to improve the profits with low investments.

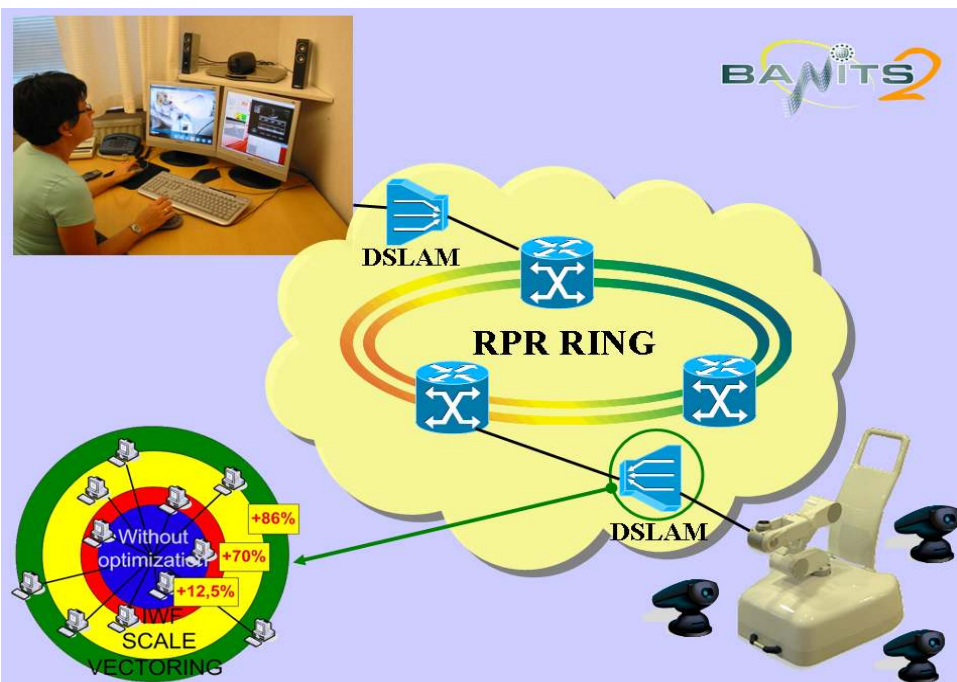
Main focus

The overall objective of BANITS 2 is to continue exploring ways to extend usability and increase revenue in existing networks through new technological solutions in access and metropolitan areas. Further-

more, the research and development of a full service testbed is proposed, covering all these areas, which enables multi-service offering to business and residential users, including multimedia services. BANITS 2 will use Panlab, the Pan-European Laboratory, setting up a fully interconnected BANITS 2 test bed.

BANITS 2 will investigate access and metropolitan networks to meet three main features:

- ◆ Low investment cost and operational expenses, so the solution should leverage existing infrastructures of Network operators such as DSLAMs and optical equipment, combining them with the well-known technology like Ethernet to minimize CAPEX and OPEX.
- ◆ Multi-service capabilities, allowing the optimal provision of the new services with the required attributes of performance, quality of service and security, which will coexist with the traditional services.



BANITS2

Project ID: CP3-003

Start Date: 1 January 2006

Closure date: 31 December 2008

Partners:

Corrigent Systems, Israel

Ericsson AB, Sweden

Ftw. Telecommunications Research Center Vienna, Austria

Inelcom, Spain

LMI Ericsson, Ireland

Lund University, Sweden

Mobile Robotics Sweden AB, Sweden

Robotiker, Spain

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www.celtic-initiative.org/projects/banits2

- ◆ Well integrated in an end-to-end way: optimal inter-working between different networks infrastructures (DSLAM, RPR, SDH, GbE metro, IP/MPLS) and between various network types (access and metro/core networks).

Approach

It is of paramount importance to find ways to leverage the already deployed SDH and xDSL/DSLAM infrastructure while, at the same time, it is necessary to study evolution scenarios toward a fully multimedia enhanced set of services for residential and business customers. BANITS 2 will, at the same time, emphasize the European scientific, technological and business competencies in Ethernet technologies while leveraging existing infrastructure both at the optical and SDH level to deliver the new Ethernet-based services. BANITS 2 will focus on the optimal architecture for the packet-switched networks (GbE metro, IP/MPLS) using new advanced technologies like RPR.

Main results

The major expected result is an open platform to provide a solution for the cost-effective extension of life for the already available telecommunication infrastructures, with special focus on access and metropolitan networks. Thus, the main results of BANITS 2 will be:

- ◆ A distributed test bed where near real network scenarios could be practically implemented to exercise BANITS 2 proposed network and applications/services solutions.
- ◆ An optimal solution in metropolitan area networks, with high

QoS, performance, dynamic bandwidth provision, scalability and efficient transport.

- ◆ Tools for collaborative working environments, for remote robot control for patient examination and also for innovative live streaming video.



resiliency and simplified protocols architecture. For that, BANITS 2 will investigate trying to find a solution based on Resilient Packet Ring (RPR) technology for the metropolitan area.

- ◆ A solution for the Access Network, around an architecture based on advanced xDSL approach and TDMoEthernet.
- ◆ Multimedia Services that will exercise the solutions for the different network elements regarding the service attributes as

Impact

BANITS 2 will, thanks to the presence of some key players in the European telecom industry, provide an innovative standard solution well suited for the European market. The impact can be summarized in the following aspects:

- ◆ SDH/RPR and/or link aggregation will definitely help increasing reliability up to the traditional SDH level for native Ethernet traffic.
- ◆ High bandwidth all around the network together with native multicast support as provided by IP, RPR and advanced xDSL technologies, will allow for easy and highly scalable solutions without impairing total cost.
- ◆ Use of a Resilient Packet Ring approach in the Metro portion of the network. Use of an RPR type MAC will improve the performance of the network in aspects such as efficiency of use of the fibre bandwidth, quality of service, native multicast support, etc.
- ◆ BANITS will implement TDMoEthernet technologies to provide a solution for maintaining leased line services.

About Celtic

Celtic is a European research and development programme, designed to strengthen Europe's competitiveness in telecommunications through short and medium term collaborative R&D projects. Celtic is currently the only European R&D programme fully dedicated to end-to-end telecommunication solutions.

Timeframe: 8 years, from 2004 to 2011

Clusterbudget: in the range of 1 billion euro, shared between governments and private participants

Participants: small, medium and large companies from telecommunications industry, universities, research institutes, and local authorities from all 35 Eureka countries.

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