Project Information

GENESIS

Deployment of Next Generation Services

The GENESIS project aims to build a pre-production platform as a real prototype for development, validation, deployment and execution of advanced VoIP and value added business services. The platform will be deployed on an NGN with an IPv6/IPv4 core network and customers will access all provided services from wired and wireless access networks.

Main focus

The main objective of the GENESIS project is to perform a pre-production platform that is capable of serving and deploying advanced and integrated VoIP and value added business services for Small, Medium and Large Enterprises (SMLEs) over a Telco's VPN service. The platform will be deployed on an NGN with an IPv6/IPv4 core network and customers will access all provided services from wired and wireless access networks (WiMAX network). Customers' CPEs will be integrated with the NGN providing NGN-ready CPEs with advanced features.

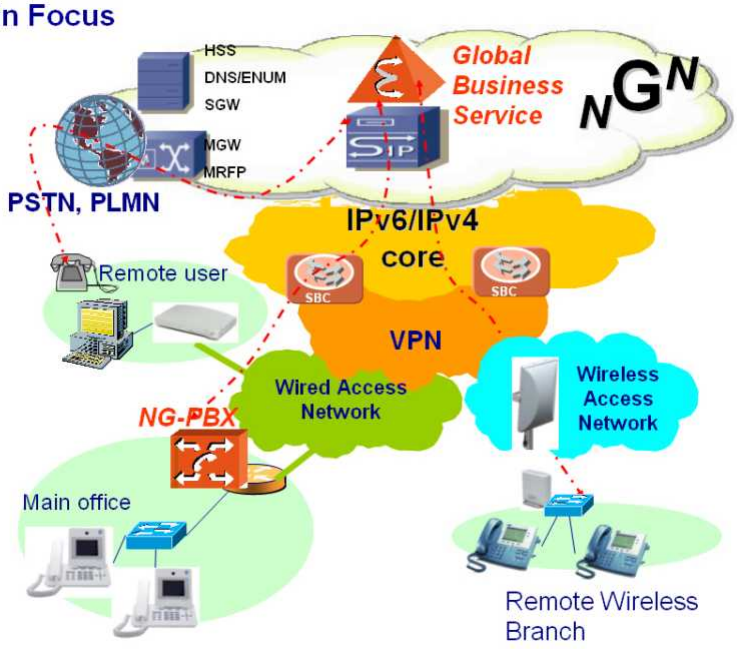
The GENESIS platform will provide a set of VoIP and value added business services that will enhance the Telco's VPN services currently offered in the market of business communications. The solution will consist of a VoIP Service Execution Framework that will include the necessary tools or bundles to develop services for: Corporations with advanced NGN-ready CPEs, SMEs following the paradigm of Centrex-like hosted services and mobile office, providing an office-like environment to commuters or roaming users

At least one photo or easily understandable drawing/ chart should be provided. A photo is generally preferred. Make sure that the rights for publication are available.

Approach

The GENESIS project will develop an Integrated Telecommunication System capable of offering Next Generation Services over a cutting-edge broadband access network, including fixed and mobile high-speed access networks (WiMAX). It will

Main Focus



GENESIS

Project ID: CP4-011

Start Date: 1 March 2007

Closure date: 28 February 2009

Partners:

Alvarion, Spain

Embou, Spain

Gintel, Norway

Instituto Tecnológico de Aragón, Spain

Lake Communications, Ireland

MailVision, Israel

Telefónica I+D, Spain

Co-ordinator:

Mark Roddy

Lake Communications, Ireland

E-mail: mark.roddy@lakecommunications.com

Project Website

www.celtic-initiative.org/projects/genesis

show how VoIP services may be offered to SMLEs over an advanced NGN infrastructure and will cover key aspects of future telecommunication systems, including the design of scalable VoIP services and their deployment, the research on advanced CPEs and the integration with wireless and wired access networks such as WiMAX and high speed DSL lines.

GENESIS platform will also contribute to the improvement of the quality, enjoyment, and value of the user experience, in particular for Small, Medium and Large Enterprises (SMLEs) and in the market of advanced VoIP business services. The GENESIS project results may be applicable to the NEM initiative (Networked and Electronic Media) by providing value added VoIP services in a complex environment. In particular, GENESIS results should be applicable to the following NEM research program priorities: Services and applications, Network Infrastructure, Delivery Networks and Terminals, User Devices.

Moreover, GENESIS will serve as a real prototype for development, validation, deployment and execution of advanced VoIP and value added business services, which can be accessed from any kind of device or terminal and from many different mobile or fixed access networks, including WiMAX access networks. As a validation proof, GENESIS will build up a Corporate-CentrexIP VoIP service on top of an NGN network to create a Global Business Service.

Main results

GENESIS project will develop a service solution to be located as an application service over a standard NGN. It will consist of a VoIP Service Execution Framework that will include the necessary tools or bundles to develop services for corporations with advanced NGN-ready CPEs; SMEs following the paradigm of centrex like hosted services and Mobile office, providing an office environment to commuters or roaming users

GENESIS will deploy advanced services also on new access networks as WiMAX, which will provide an advanced wireless channel for IP services. The wireless network will be enhanced with an upgraded model of advanced VoIP services with admission control and resource allocation processes based on NGN connection. GENISIS will advance the state of the art in creating, managing, delivering and consuming converged IP communications services. New protocols such as SIP and the IMS architecture will enable the gradual convergence of fixed and wireless networks based on IP, resulting in an enormous opportunity for innovation in services.

Impact

GENESIS will impact on the European industry by providing a new vision on which services are executed and deployed based on user preferences and following a cooperative framework between the NGN elements, hosted by Telcos and Service Providers, and the CPEs provided by hardware manufacturers. This vision is relevant in today's market where again operators have invested significantly to add next generation capability to their networks with the possibility of innovative new services that will generate revenue. GENESIS will address all aspects in the area of advanced services leveraging this additional capability in VoIP and multi-media communications to bring real value to the European Telecommunications industry.

Low cost networking technology for wireless infrastructure (WiMAX) will become increasingly more important in the emerging markets. Cost efficient delivery of voice and data services will be an important contribution to bridge the "digital divide". GENESIS will focus on technologies that will enable development and deployment of VoIP and value added services also in such environments.

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.

Celtic Office

c/o Eurescom, Wieblinger Weg 19/4,
69123 Heidelberg, Germany
Phone: +49 6221 989 405, e-mail: office@celtic-initiative.org
www.celtic-initiative.org

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