Template for Summary of Project

Project acronym :	Euro-NGI
Project name :	Design and Engineering of the Next Generation Internet
Logo	(temporary logo)
Project URL :	http://www.eurongi.org
Project reference :	IST-50 7613
Contract type :	NoE
Start date :	1/12/2003
End date :	30/11/2006
Project duration	36 months
Total budget :	5.000.000 €
Action lines :	Broadband for all
Clusters :	Broadband for all
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Number of partners :	58

Main objectives :	

General Context

The Next Generation Internet (NGI) will view multiservice-multimedia, mobility, services convergence, fixed-mobile convergence, Quality-of-Service (QoS), variable connectivity and other capabilities as the norm. Technology diversity is exploding and mastering such a heterogeneous environment becomes essential for network designers. The target of the new architectures is "any service, any time, everywhere".

This new environment makes obsolete the design and engineering methods and tools currently available and forces the scientific community to develop new design, control, planning, dimensioning, operation and management principles and tools that require to investigate new multi-technology architectures for providing a seamless end-to-end connectivity by hiding the technology and environment diversity from service developers and users.

In addition, future high-speed wire-line and wireless access technologies will provide instant high bandwidth connectivity, which makes it difficult to forecast traffic and thus to apply existing traffic engineering methods.

For addressing this new scientific and technological environment, Euro-NGI will integrate the scientific community activities to fulfil two main goals:

- Mastering technology diversity (vertical and horizontal integration) for the design of efficient and flexible NGI architectures.
- Providing required innovative traffic engineering architectures adapted to the new requirements and developing the corresponding appropriate quantitative methods for analysis, simulation and measurement.

Objective

The main objective of the Euro-NGI network is to create and maintain the most prominent European centre of excellence in Next Generation Internet **design and engineering**, leading towards a European leadership in this domain.

The recent technological advances will lead to exploitable innovative services once the integration of these technologies through innovative architectures is achieved. Due to the wealth of technologies and tools, the best approach for achieving this objective is to ensure that the integration of European research capacities reaches a critical mass. The outcome of this integration is the creation of a Virtual Centre of Excellence (VCE) acting as a "Collective Intelligence Think Tank".

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Technical approach :	
Key issues :	

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Expected impact :	

The European Union has a long history of supporting network related research projects through e.g. the RACE, COST and IST programs. These programs have generated strong research cooperation and collaboration within Europe on the topics addressed by Euro-NGI. This NoE arrives at the right time for consolidating and integrating this large array of activities.

The first major impact of Euro-NGI is therefore to have, with the same volume of efforts, results and achievements with a high leveraging effect. Research will be better coordinated, all required domains will be thoroughly studied, and scientific knowledge will be better exposed to the research community.

The second major impact Euro-NGI will be to counterbalance the effect of European research not having a similar level of research activities than the United States, thus avoiding the technology being provided only by North American and Asian industries and the European service and network operators suffering from a non-European dominance of service and networking technologies.

The third major impact of Euro-NGI will be the unification of the traditional view of Telecom services and infrastructure on national level into a European one. This will help to identify the structural and technical bottlenecks in interconnection between the different competitive service and network providers. Moreover, it will give opportunities for small and medium enterprises to find niches in the cost and value chain generated by the next generation telecom services and corresponding networks.