

# NGN-LAB

## Next Generation Networks Laboratories

### Abstract

The project establishes a platform for the development of advanced Internet technologies, by provisioning the required system infrastructure and interactive applications, to realise Next Generation Network related experiments.

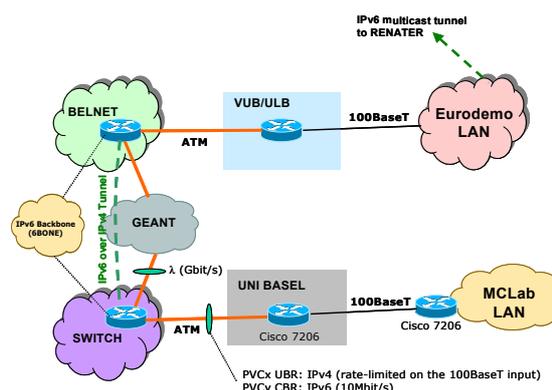
### Objectives

Provision of a test platform for Next Generation Networks

- main topics addressed are: IPv6 and QoS
  - additional topics: mobility, access networks, interworking & interoperability, multimedia
- Support of IST and national research projects for testing their systems:
- applications and test equipment provision
  - link to GEANT to test across 2 testbeds in Basel (CH) and Brussels (BE)

### Figure

NGN-LAB IPv6 connectivity between Brussels (EuroDemo) and Basel (MCLab)



### Technical Approach

NGN-LAB is making advanced networking infrastructure available in two interconnected testbeds, to support IST projects to test new technologies such as IP telephony, video streaming and multicast, IP over GSM/GPRS, etc.

During the last year the project team has focussed its main efforts to issues related to QoS, NSIS (Next Step in Signalling) and DiffServ, as well as to the promotion of the Flow Label definition as an Internet Draft. Overlaps with other EU funded projects in this area of work were avoided.

### Testbed

Two testbeds in NGN-LAB: Basel (MCLab) and Brussels (EuroDemo):

- multiple networking technologies, fixed and mobile
- PCs, laptops, palmtops and advanced mobile phones
- LANs and WLANs
- ADSL and GSM/GPRS
- Bluetooth, IrDA
- IPv6 implemented and tested
- DiffServ environment available

- connectivity to GEANT
- multiple IPv6 applications

In both testbeds, IPv6 applications are installed on:

- Windows (various versions)
- Linux (Suse, RedHat, Debian),
- FreeBSD 4.4

### **Applications**

Some of the applications relate to: ping, traceroute, vic, rat, quake, DNS, DiffServ, voice over IP, home automation, streaming video, etc.

### **Innovation**

NGN-LAB is liaising with other national and international testbeds and Forums, to promote the Next Generation Networks infrastructure for provisioning end-to-end services.

NGN-Lab has also worked on the IPv6 Flow Label specification and proposed a way to route packets depending on values stored in the flow label field. This work has led to an implementation, but no Internet Draft has been issued yet.

The project is active at the IETF especially in the NSIS working group. They have issued documents that were accepted by the working group as working group items, which is the first step to produce standards.

### **Dissemination**

NGN-Lab has achieved very positive results in the area of dissemination, such as the organization of the next ETSI Plugtest.

The project team has also concentrated their efforts in the promotion of IPv6 to a wider, non-technical audience.

Project name:  
NGN-LAB

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RTD

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01/01/2001

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€818,633

Total effort in person-months:  
132

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VUB B  
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Interoperability  
Interworking  
Ipv6  
Next generation networks  
QoS

Collaboration with other EC funded projects:  
6NET  
6WINIT  
AQUILA  
CADENUS  
GEANT

MOEBIUS  
SEQUIN  
TEQUILA  
TORRENT

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