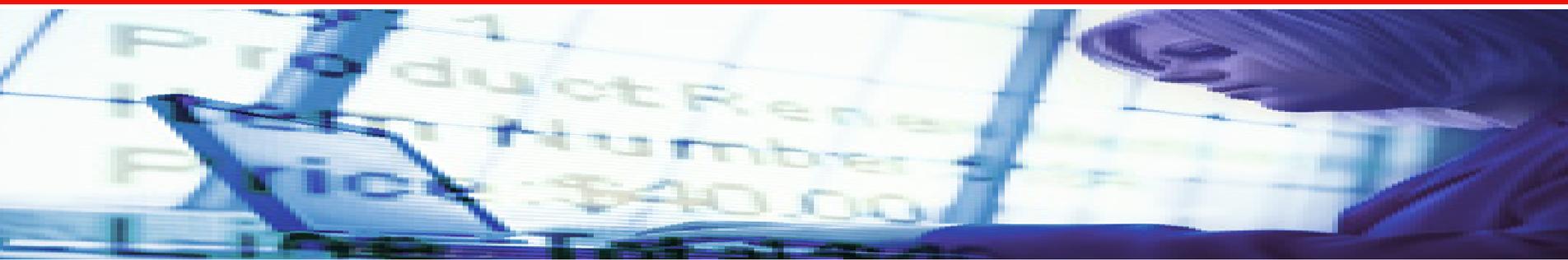


IPv6@TILAB



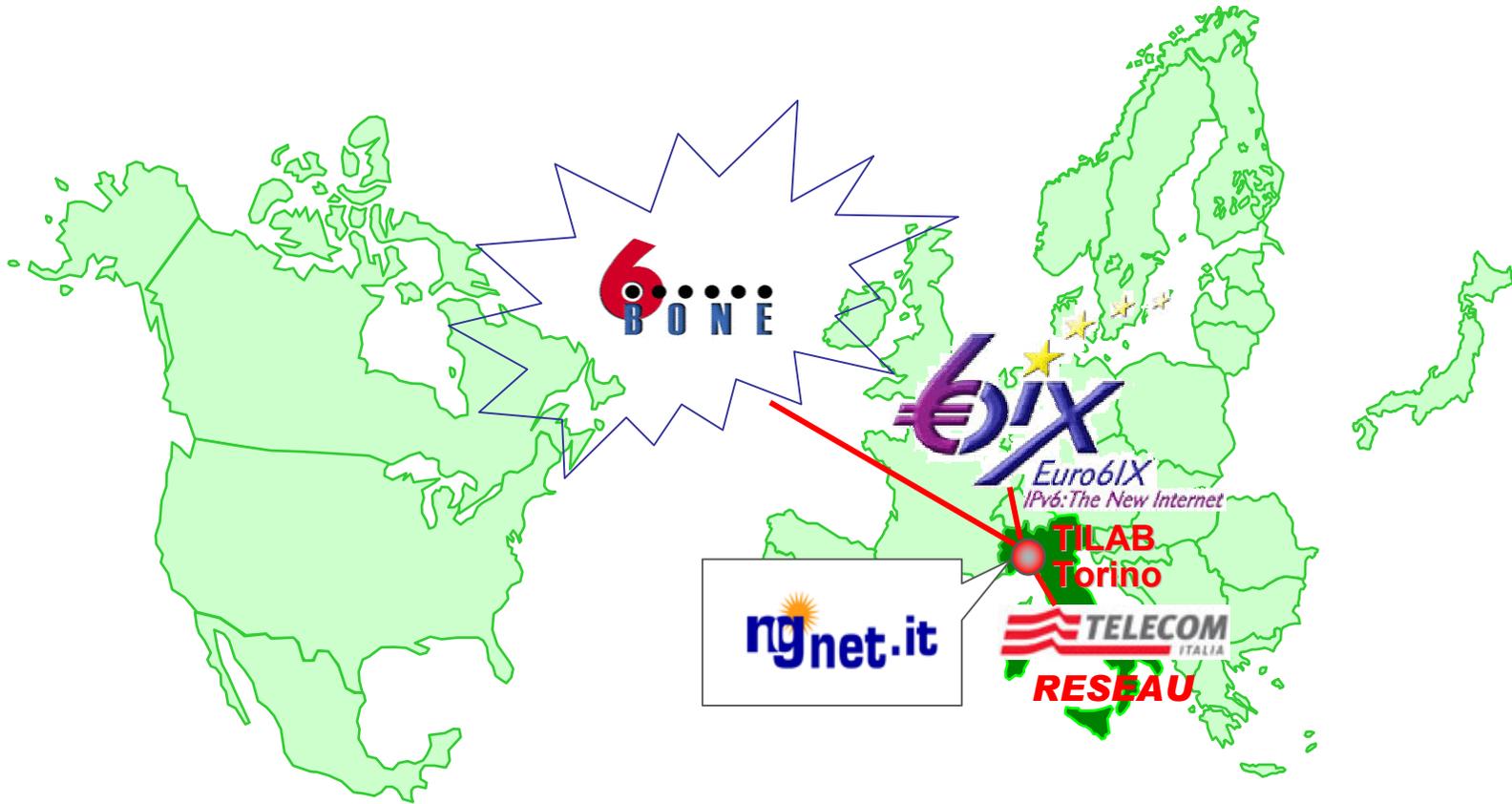
IPv6@TILAB

- TILAB IPv6 network
- ngnet.it initiative
- Euro6IX project
- TILAB IPv6 routing monitor: ASPath-tree

TILAB IPv6 network

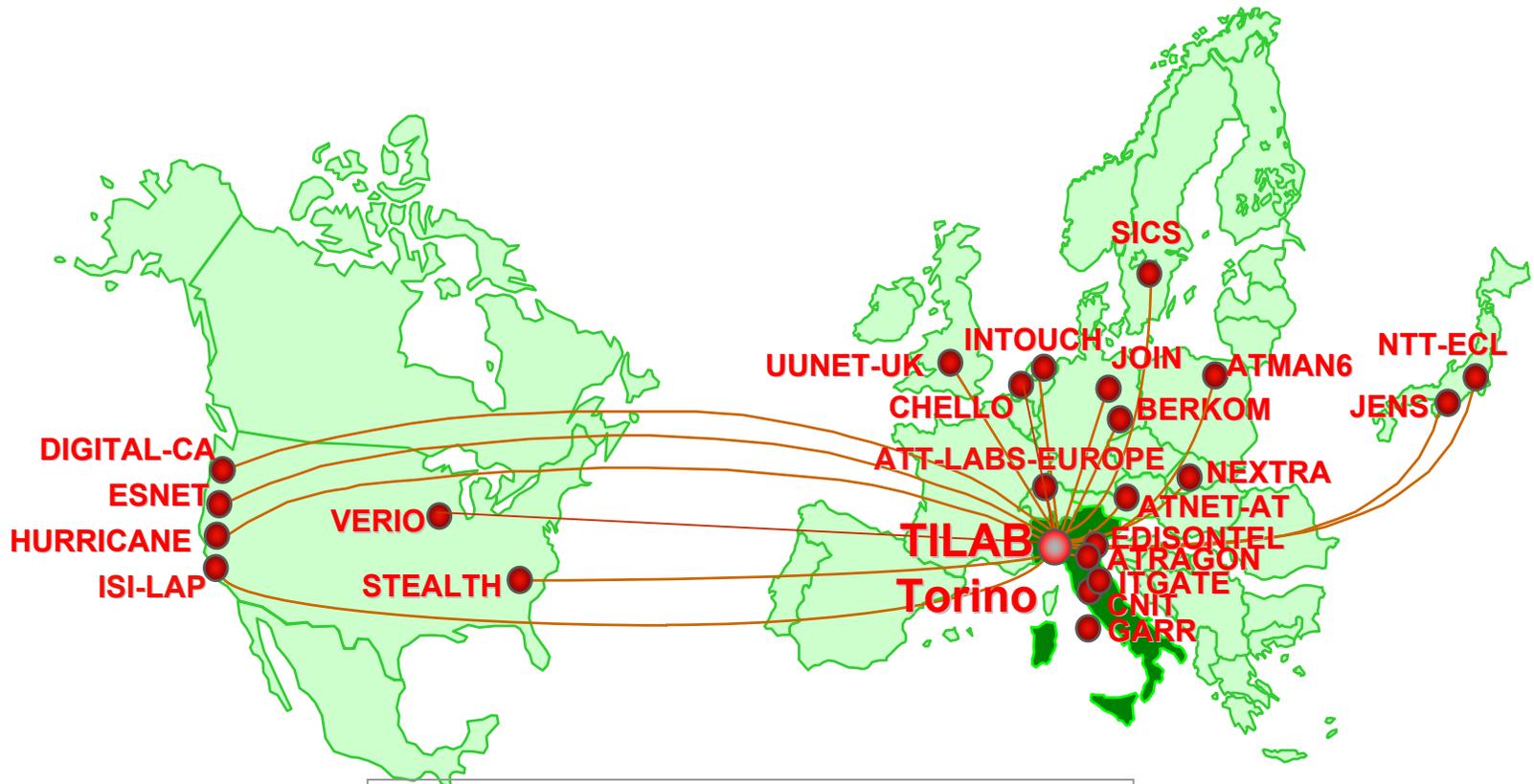
- TILAB is connected to several IPv6 (both Tunneled and native) networks
 - 6Bone
 - Euro6IX network
 - Telecom Italia Reseau
 - m6Bone

TILAB IPv6 network



TILAB within 6Bone

- Started as Backbone site (CSELT) in 1997



<http://carmen.ipv6.tilab.com/ipv6>

IPv6@TILAB

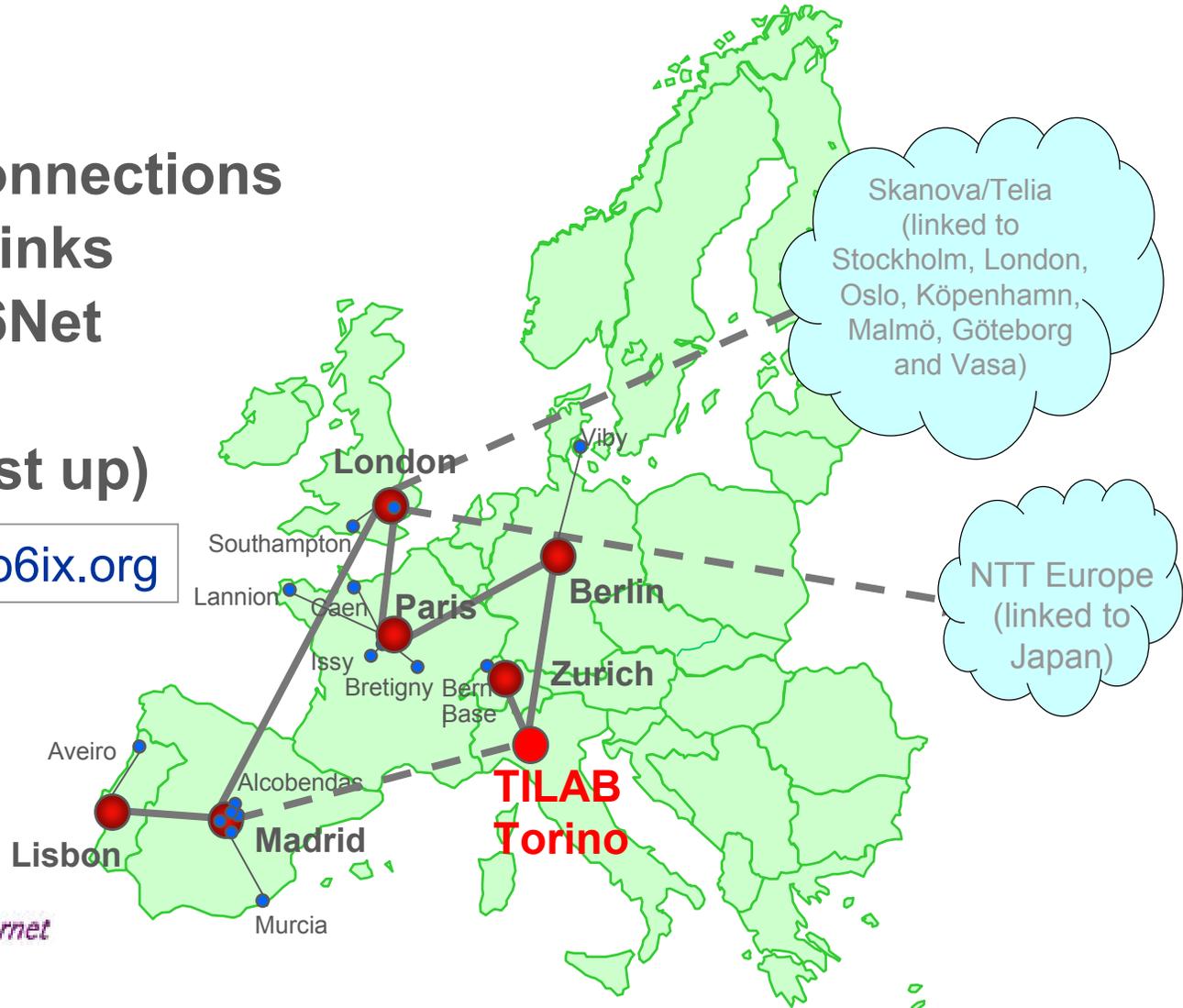
Raffaele D'Albenzio

Milan, 1st Oct 2003

Euro6IX Network

- Native IPv6 connections
 - 34Mb/sec links
- Peering with 6Net
 - UK
 - Italy (almost up)

<http://www.euro6ix.org>



IPv6@TILAB

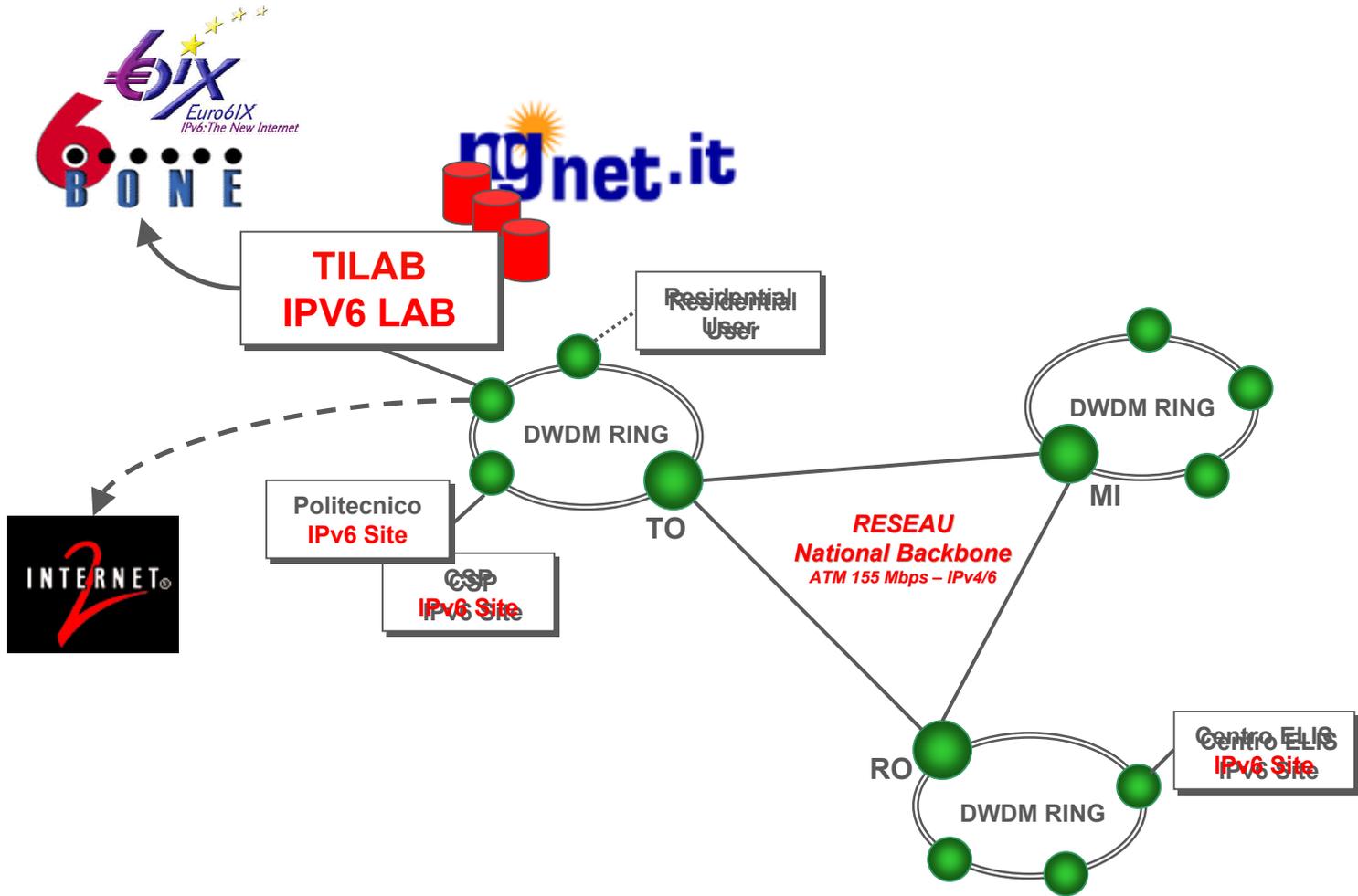
Raffaele D'Albenzio

Milan, 1st Oct 2003

IPv6 and RESEAU

- What is Reseau
 - it is an experimental network built and managed by Telecom Italia to test next generation broadband services
 - High bandwidth infrastructure
 - experimental access services based on Gigabit Ethernet for campus/corporate customers and xDSL (mainly VDSL) for residential users
- RESEAU network is IPv6 enabled
 - Some customers are using IPv6 native service. Some examples:
 - CSP
 - Politecnico di Torino
 - Centro Elis

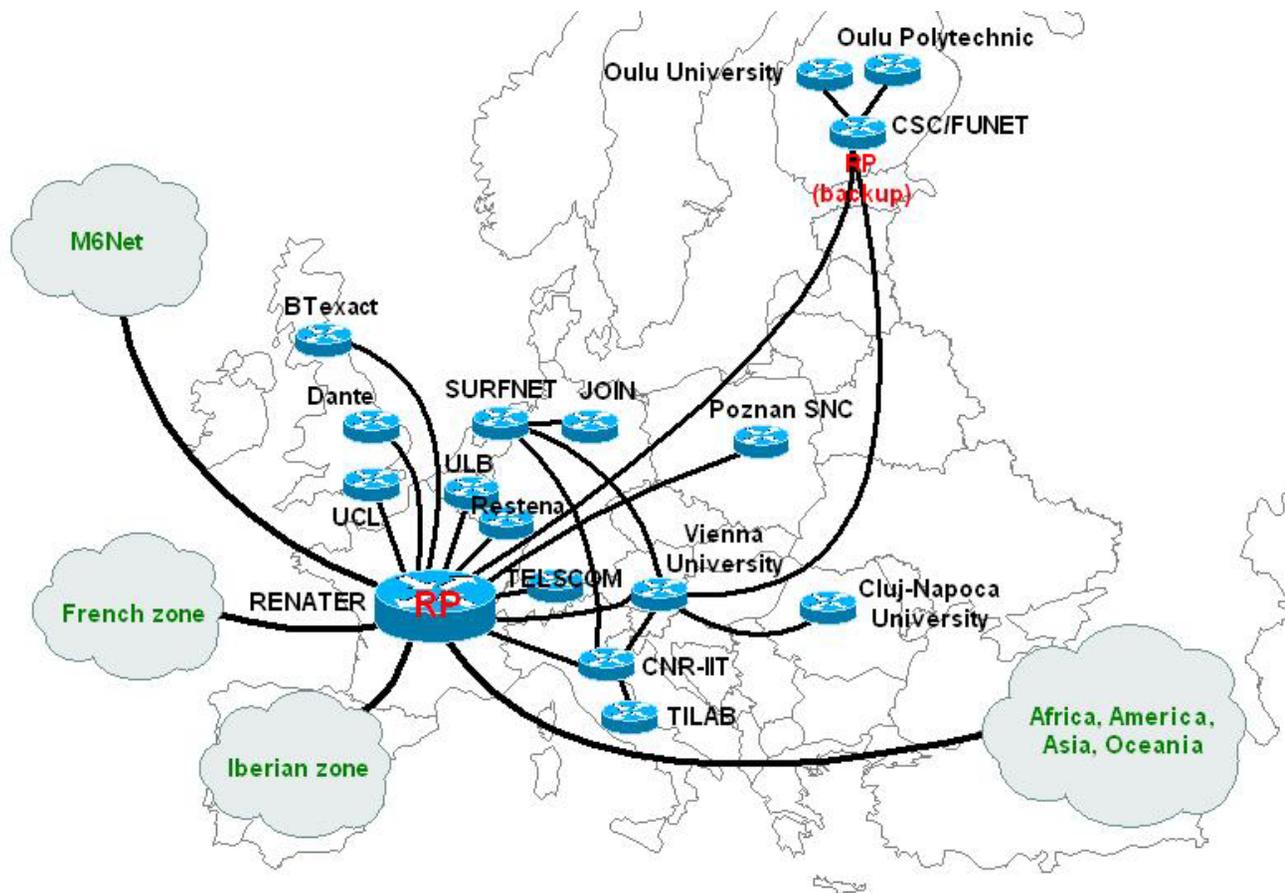
RESEAU IPv6 network topology



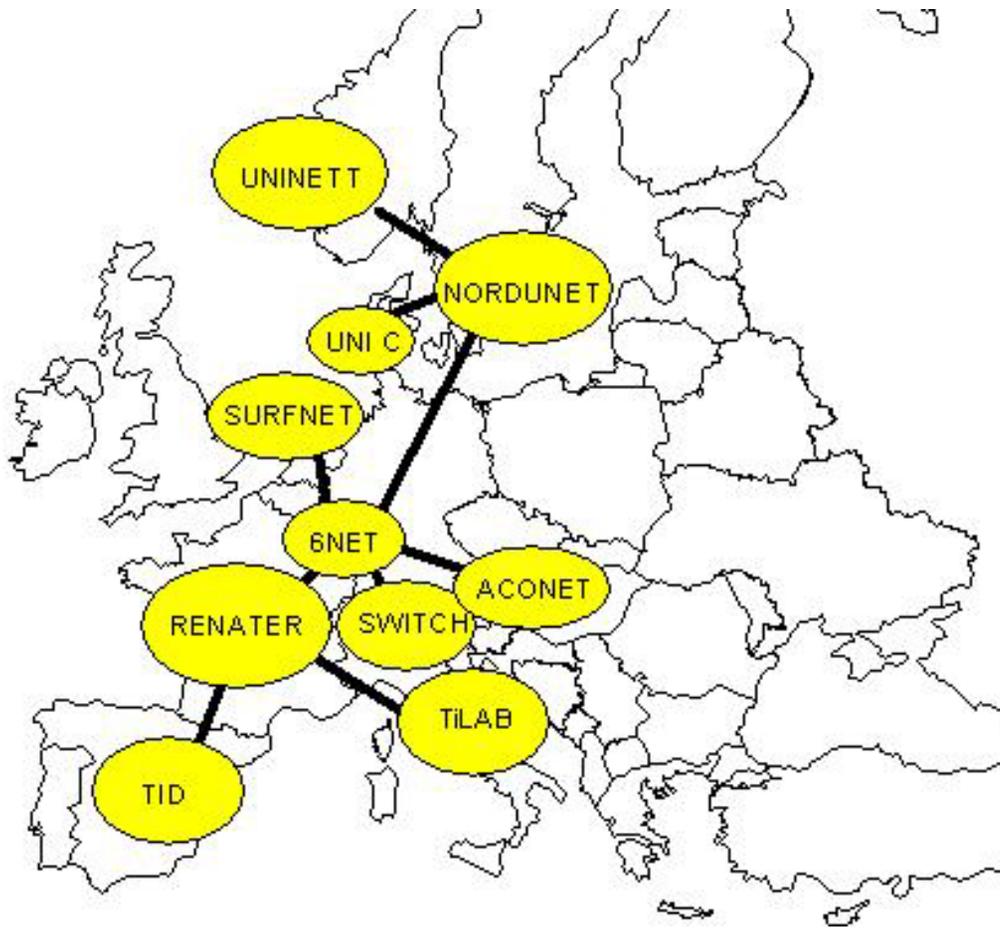
m6Bone

- experimental worldwide IPv6 network used to test IPv6 multicast protocols
- Born under an initiative promoted by RENATER (FR)
- Several events are forwarded on m6Bone
 - e.g. some IETF wg sessions
- TILAB m6bone connection
 - 1st phase: connection through CNR in Pisa
 - 2nd phase: multicast BGP peering with Renater (FR)

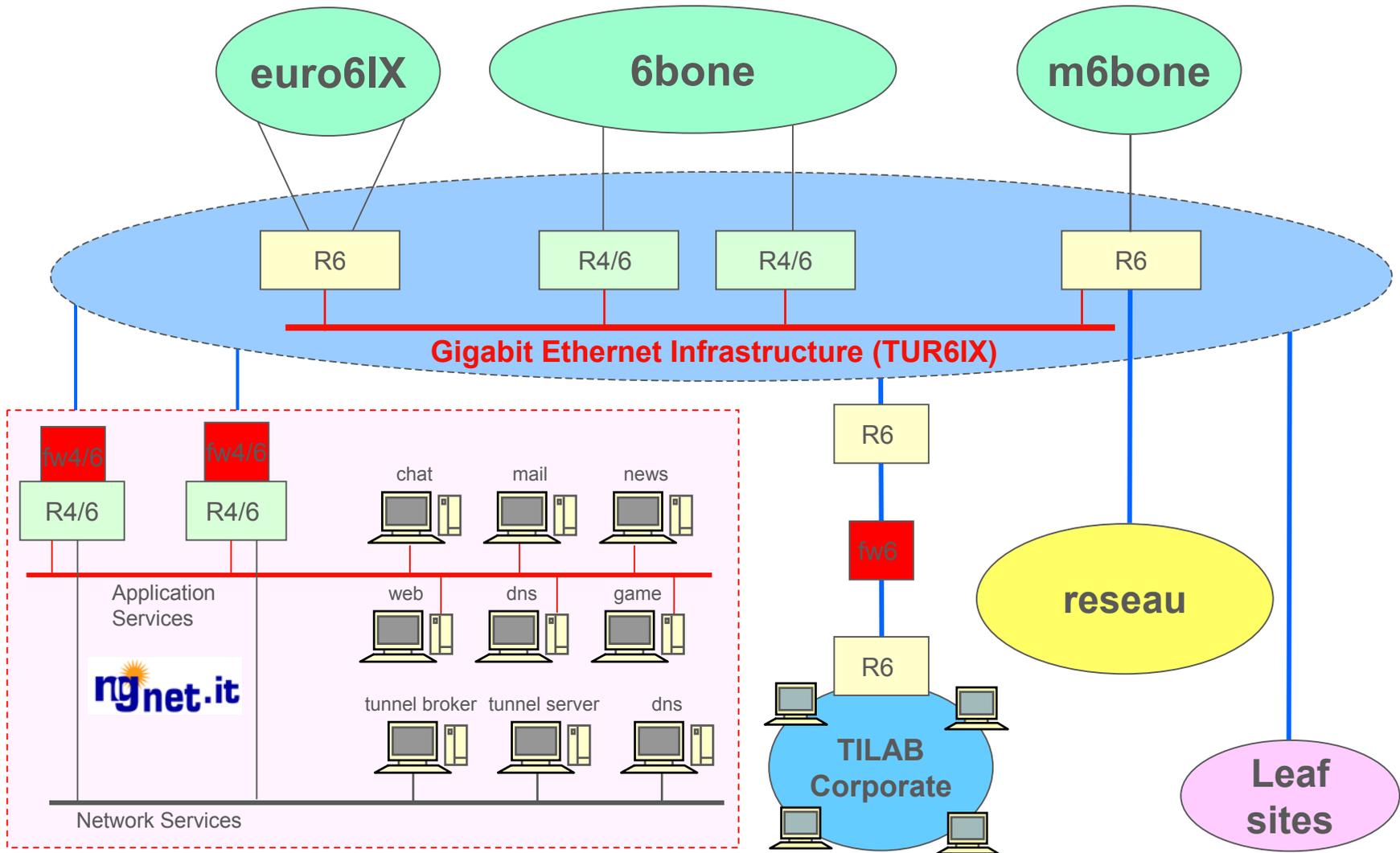
m6bone (Multicast 6Bone) topology



m6bone (Multicast 6Bone) multicast BGP topology



TILAB IPv6 network



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The “ngnet.it” initiative

<http://www.ngnet.it>

- Development of an “R&D” service offering from the TI Group:
 - IPv6 access using Tunnel Broker
 - Application Services: WWW, ftp, Chat, instant messaging, network games, news, forum, e-mail
 - Experimental connectivity (static Tunnel or native)
 - Traffic and network Monitoring
 - Traffic statistics
 - Routing stability analysis

“ngnet.it” services

<http://www.ngnet.it>

- “ngnet.it” IPv6 Tunnel Broker
 - number of registered users on 9/2003: ~ **37000**
- “ngnet.it” application services
 - chat, instant messaging, newsgroups, games on line, mailboxes available to IPv6 users only
- Chat with IPv6
 - chat servers linked to IPv4 IRCnet (through TIN.IT) and Azzurranet
 - peak of contemporary IRCnet users: **1521**
 - average contemporary users : ~**600**

“ngnet.it” services

<http://www.ngnet.it>

- **Newsgroups with IPv6**
 - feed from/to TIN.IT (IPv4) and University of Oregon (IPv6)
 - it.*, tin.* and comp.* newsgroups available
- **Games with IPv6**
 - Quake I/II server (porting by VIAGENIE)
- **E-mail with IPv6**
 - mailboxes offered to all the “ngnet.it” IPv6 Tunnel Broker registered users
 - web , pop3 and imap IPv6 only access
- **instant messaging with IPv6**
 - IPv6 only Jabber server

IST Euro6IX project

GOAL: development, testing and trial of innovative IPv6 services on a wide area infrastructure built as the interconnection of experimental IPv6 Internet Exchanges distributed through Europe

TILAB main contributions:

Set up of an experimental IPv6 Internet Exchange in Turin

Connections to Germany and Switzerland

Design of the IPv6 Internet Exchange internal structure

Interconnection network design

Monitoring tools

Trial site

<http://www.euro6ix.org>

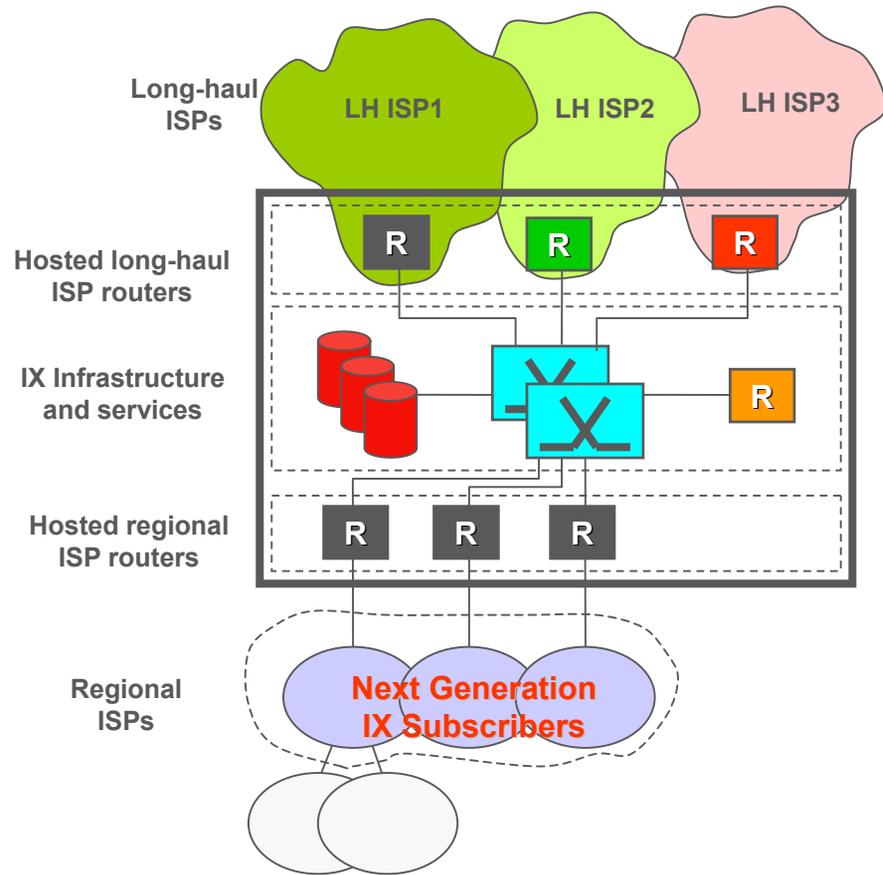


Partners

- BT Exact
- TILAB
- T-NOVA (DT)
- France Telecom
- TID
- PT
- Telscom
- Airtel
- 6Wind
- Consulintel
- Ericsson Telebit
- Eurocontrol
- novaGnet systems
- UPM
- UM
- UoS

IST Euro6IX project (2)

- Investigation of new roles for Internet Exchanges.
- Mediation function between ISPs and customers.
- Easier renumbering and multihoming
 - To be investigated



TILAB tools: ASpath-tree

<http://net-stats.ipv6.tilab.com/bgp/index.html>

Routing entry detail: Tue SEP 11 2001, h.16:45 - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: <http://carmen.ipv6.csel.it/ipv6/bgp/details/complete/file0012.html> What's Related

Instant Message WebMail Calendar Radio People Yellow Pages Download Channels

AS Path:
SICS (1654) - UNINETT (224)

Routing entry(es):

BGP status	Destination prefix	Origin AS	Assigned to	pTLA owner
valid	2001:700::/35	UNINETT	UNINETT	-
valid	3FFE:2A00::/24	UNINETT	UNINETT	UNINETT

This page has been created with [ASPath-tree v.3.2](#), developed at [Telecom](#).

Document: Done

Last 24h UNINETT history: Tue SEP 11 2001, h.16:45 - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: </carmen.ipv6.csel.it/ipv6/bgp/history/35-UNINETT.html> What's Related

Instant Message WebMail Calendar Radio People Yellow Pages Download Channels

2001:0700::/35 (UNINETT)

Current status: route present
Current AS Path: SICS (1654) - UNINETT (224)

Last 24 hour report

Unavailability (n_path_unavailable_detections/n_samples): **0.0%** (0/289)
Unstability (n_path_changes/n_samples): **0.7%** (2/289)

Route distribution:

Frequency	AS path
92.4% (267 / 289)	SICS - UNINETT
7.6% (22 / 289)	UUNET-UK - SICS - UNINETT

Document: Done

Move forward to next document in history list