

6INIT  
(IPv6 INternet IniTiative)  
<http://www.6init.org>

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Sorry,  
no addresses  
today

IPv4 ISP

# Structure of Talk

- Who are we?

  - The facts and figures

- What are we doing

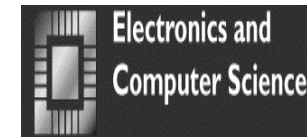
  - Applications, Networks, Trials

- What are the expected results?

- Questions

# 6INIT Statistics

- Costs: 4,238,248 euro (approx.)
- Duration: 16 Months
- Partners



estlander & rönnlund

## International Sponsoring Partners



# What we are Doing

## Applications:

Define and develop/port a number of multimedia applications to IPv6

## Network:

Define and develop/deploy/co-ordinate a Pan European IPv6 network - with links to the rest of the world

## Interworking:

Investigate and deploy an IPv6/IPv4 interworking mechanisms

## Trials:

Trial the applications on the network

**Using only IPv6**

# Applications

## ■ Major Applications:

- VoIPv6: SIP initially, may try H323

- Newspaper printing 

- Multimedia News on Demand (NoD) 

- Direct Online Trading (erDOT)



estlander & ronnlund

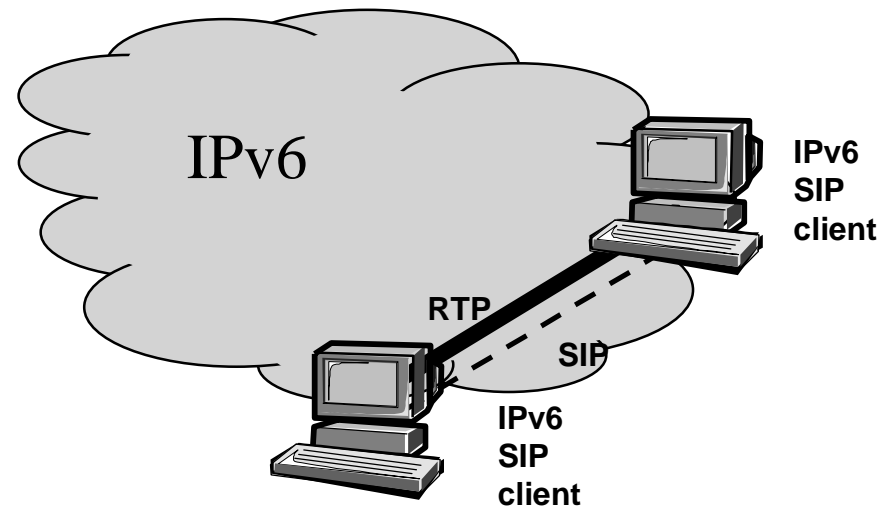
## ■ Universal Applications

- Mail, ftp, web server/browser ...

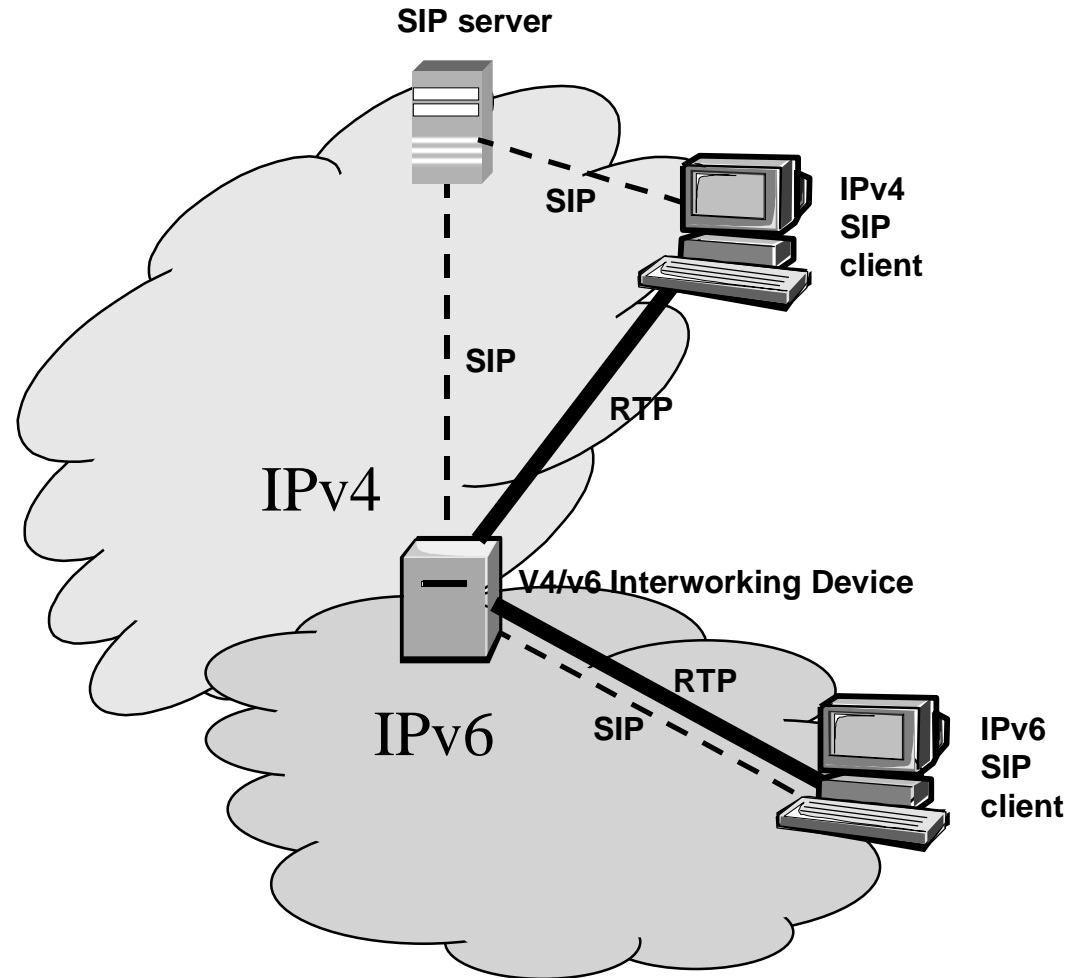
- Multimedia web, audio and video tools

- Games: Quake ...

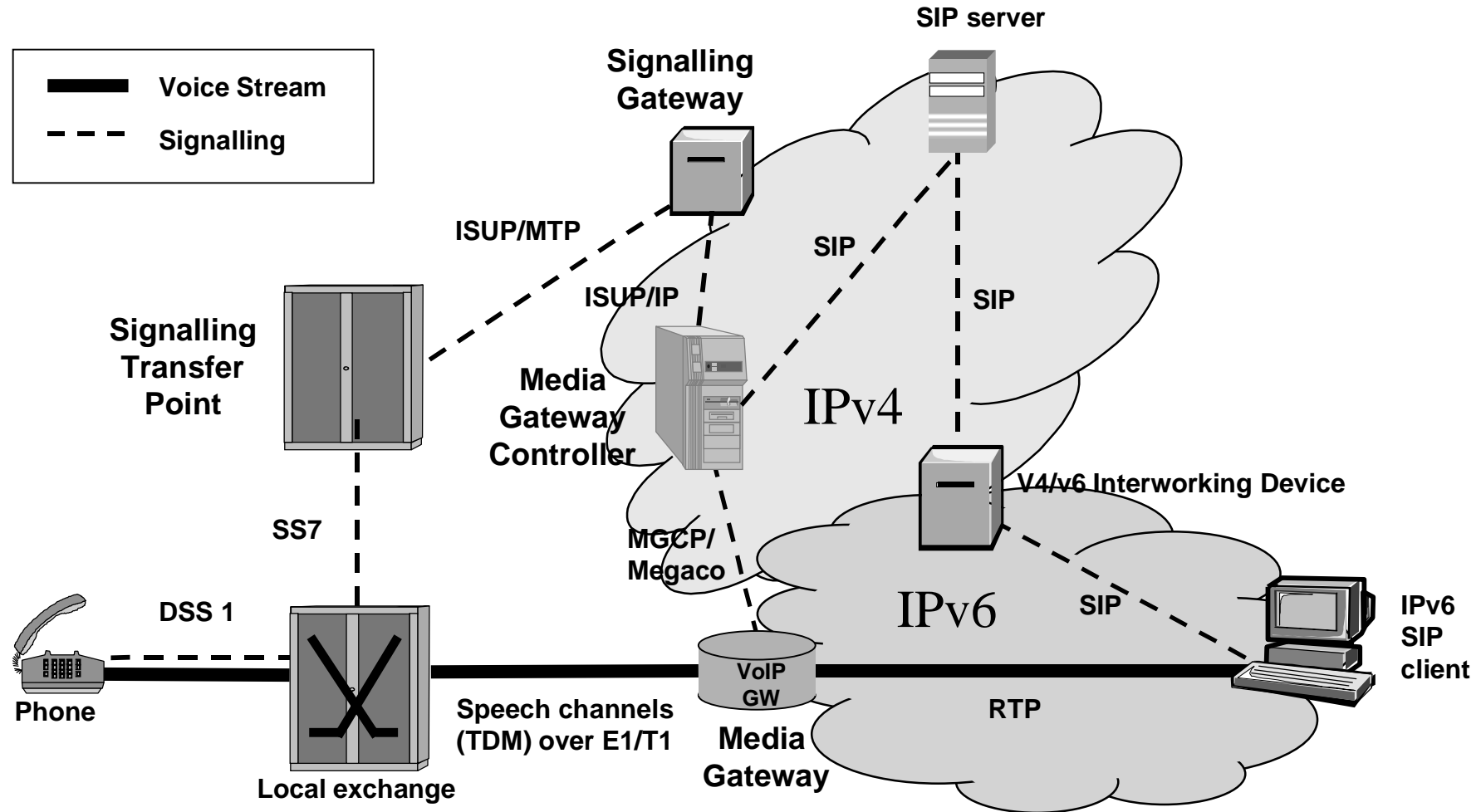
# VoIPv6 Architecture: IPv6 to IPv6



# VoIPv6 Architecture: IPv4 to IPv6



# VoIPv6 Architecture: PSTN to IPv6



# Newspaper Printing: Netmedia

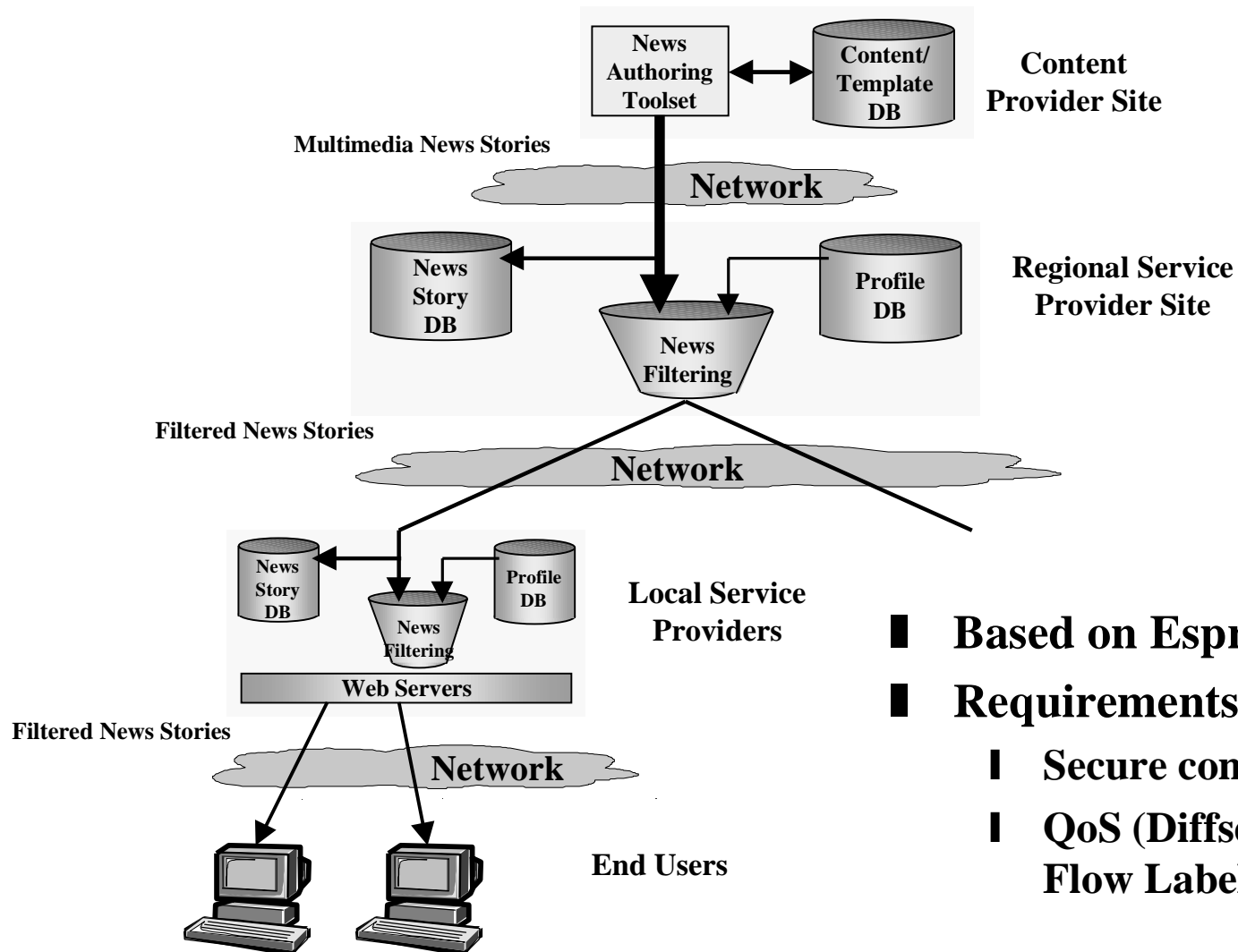
## ■ Aim:

- Build first multi-access newspaper printing system distributed over 20 different locations.
- Will enables customers to view and approve print run.

## ■ Requirements:

- Very time critical: QoS
- The security and authentication has to be rock-solid: IPsec

# Multimedia News on Demand (NoD): Intracom



- **Based on Esprit HyNoDe project**
- **Requirements:**
  - **Secure communications (IPsec)**
  - **QoS (Diffserv, may investigate Flow Label)**

# Estlander & Rönnlund Direct Online Trading (erDOT)

On-line trading system that gives large investors direct access to all the leading exchanges

## ■ Requirements:

- Secure communications between the customer and exchanges (IPsec)
- Quality of Service ie speed (Diffserve)

## ■ Goal:

- Deploy to a set of pilot customers during the project timeframe, then full deployment

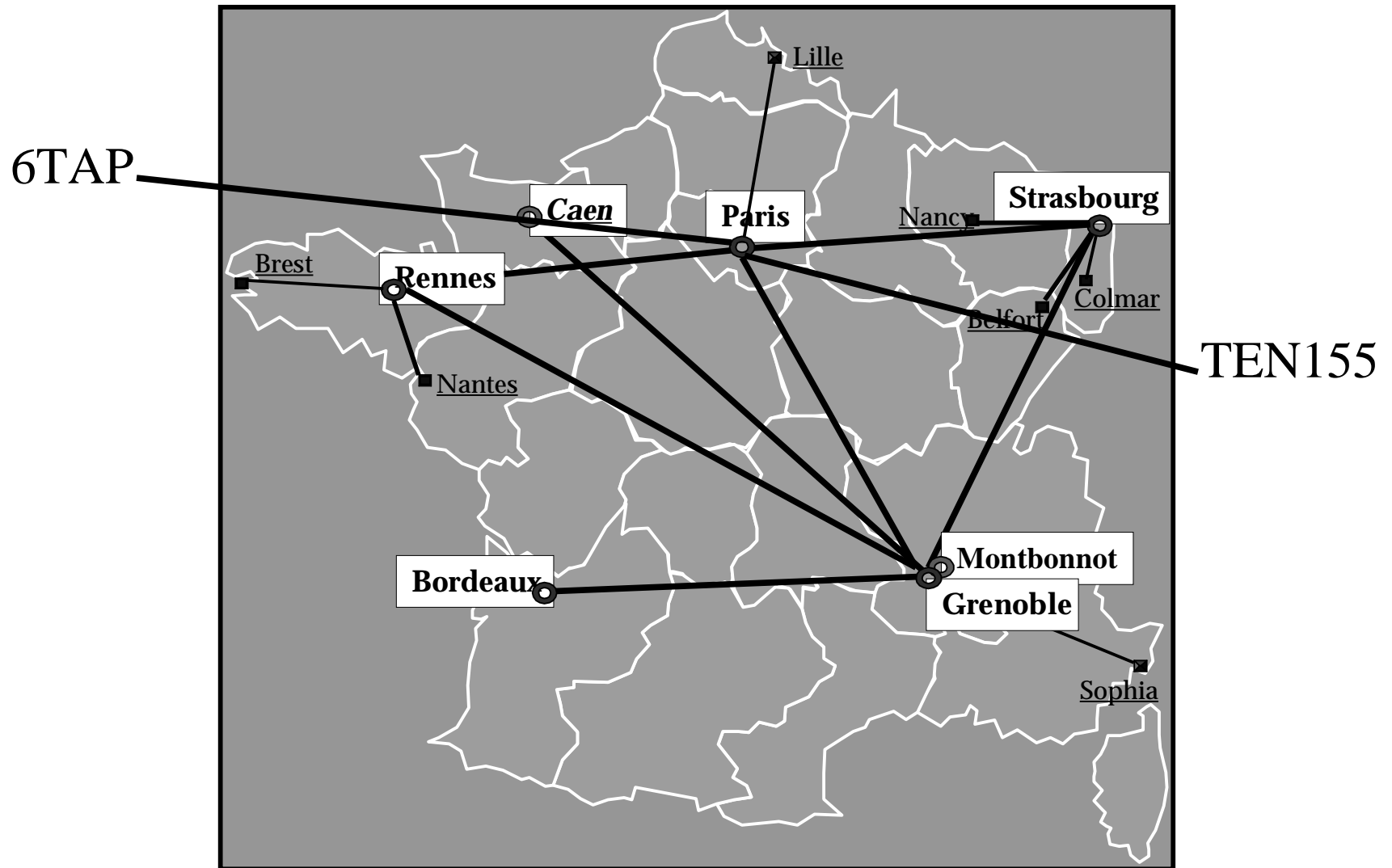
# Network Requirements

- Pan European IPv6 Network with:
  - DNS
  - QoS - Diffserve
  - IPsec: tunnel mode for VPN's etc
  - v4-v6 interworking via NAT-PT (ALG's for DNS, ftp, SIP, Quake ...), plus some use of tunnel broker and 6to4
  - Multiple sTLA's
  - BGP4+ peering
  - IPv6 Exchange

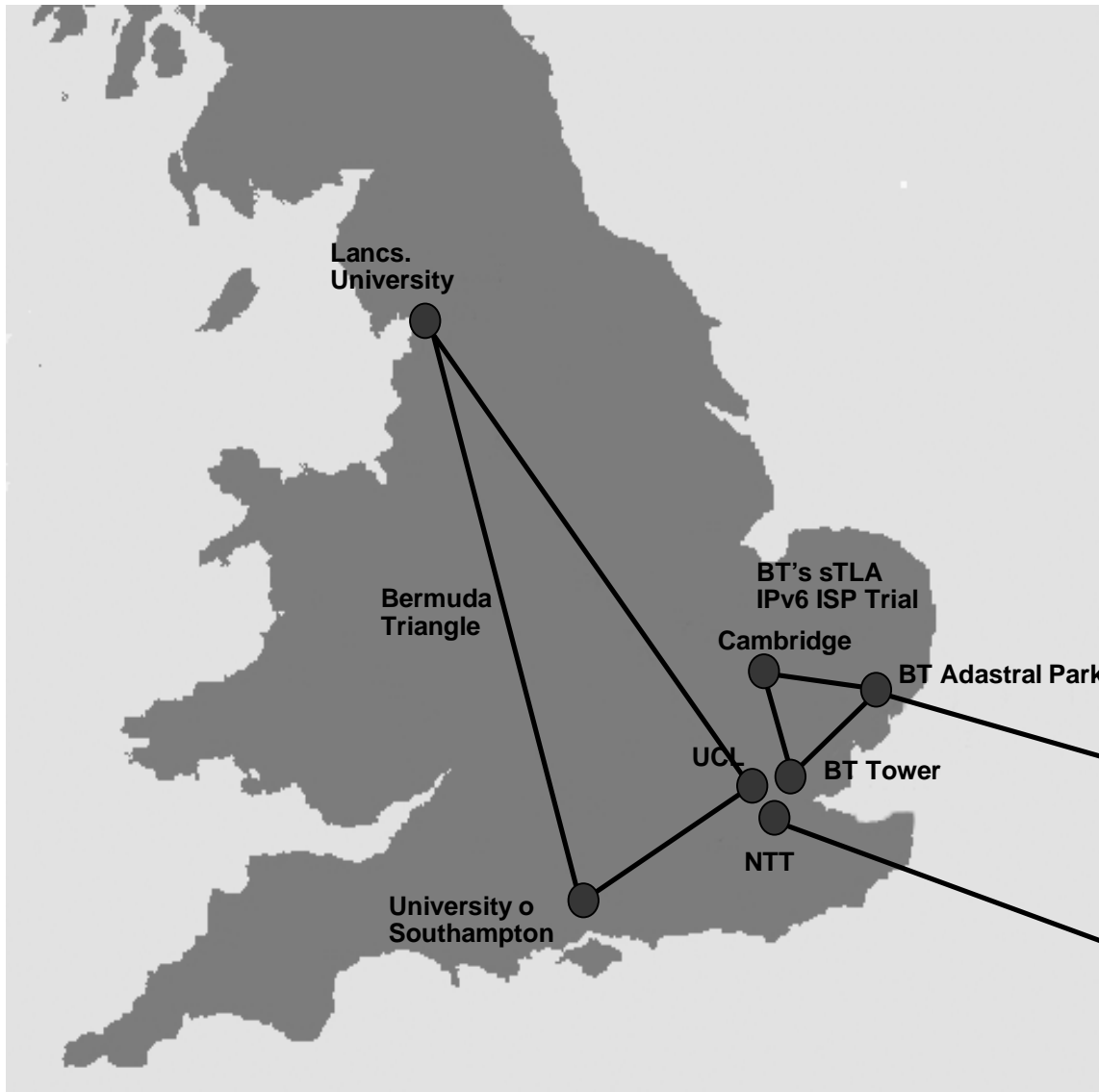
# Networks

- Start with five regional clusters:
  - UK, Germany, Greece, Scandinavia, France
- Each cluster will be stand alone ie
  - DNS, Interworking with v4,
- Then interconnect the clusters primarily via an IPv6 exchange to form the Pan European IPv6 Network

# French Cluster based on Renater II



# 6INIT UK Cluster



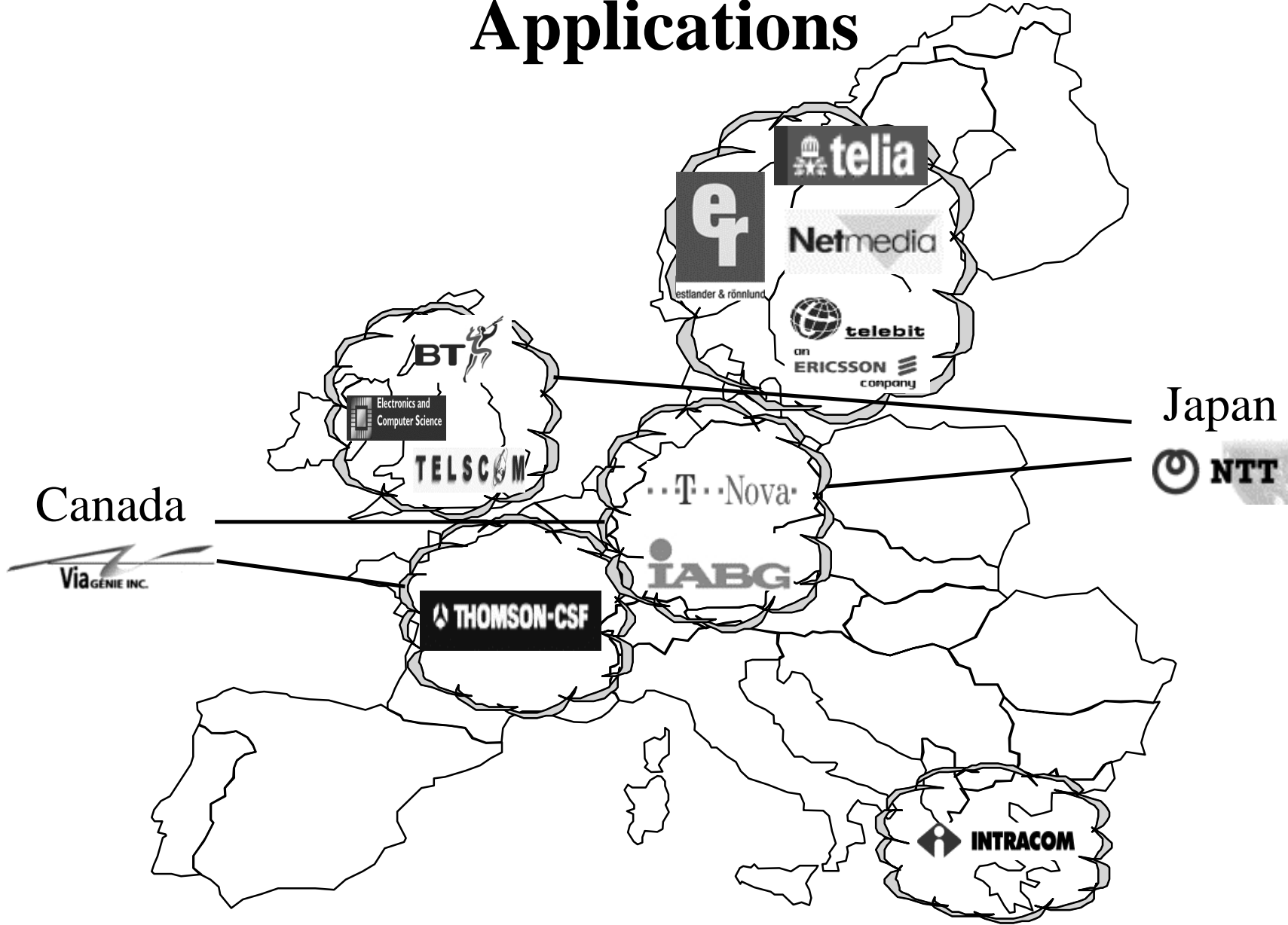
IPv4 tunnel to  
Telscom  
Switzerland



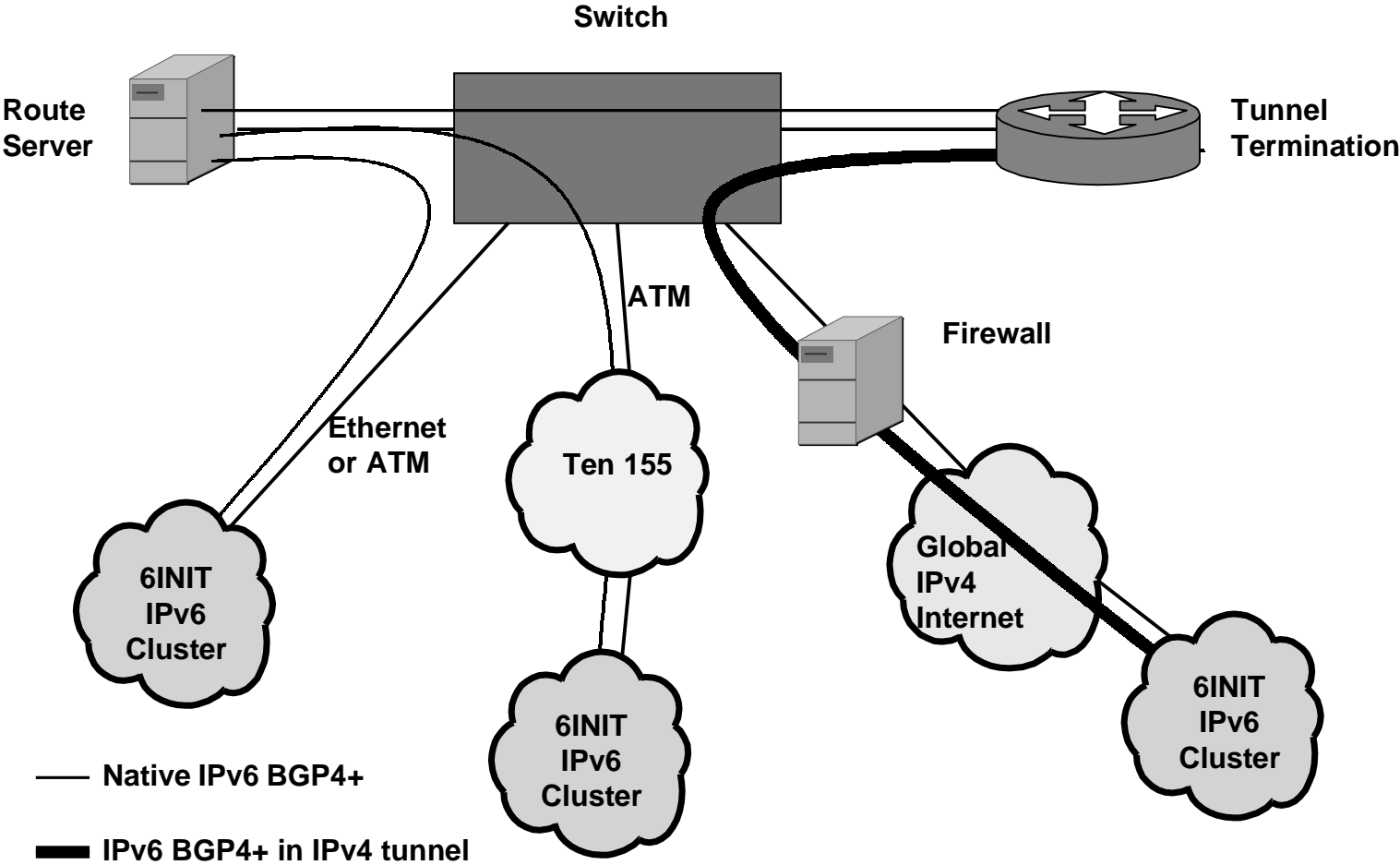
NTT's world  
IPv6 network



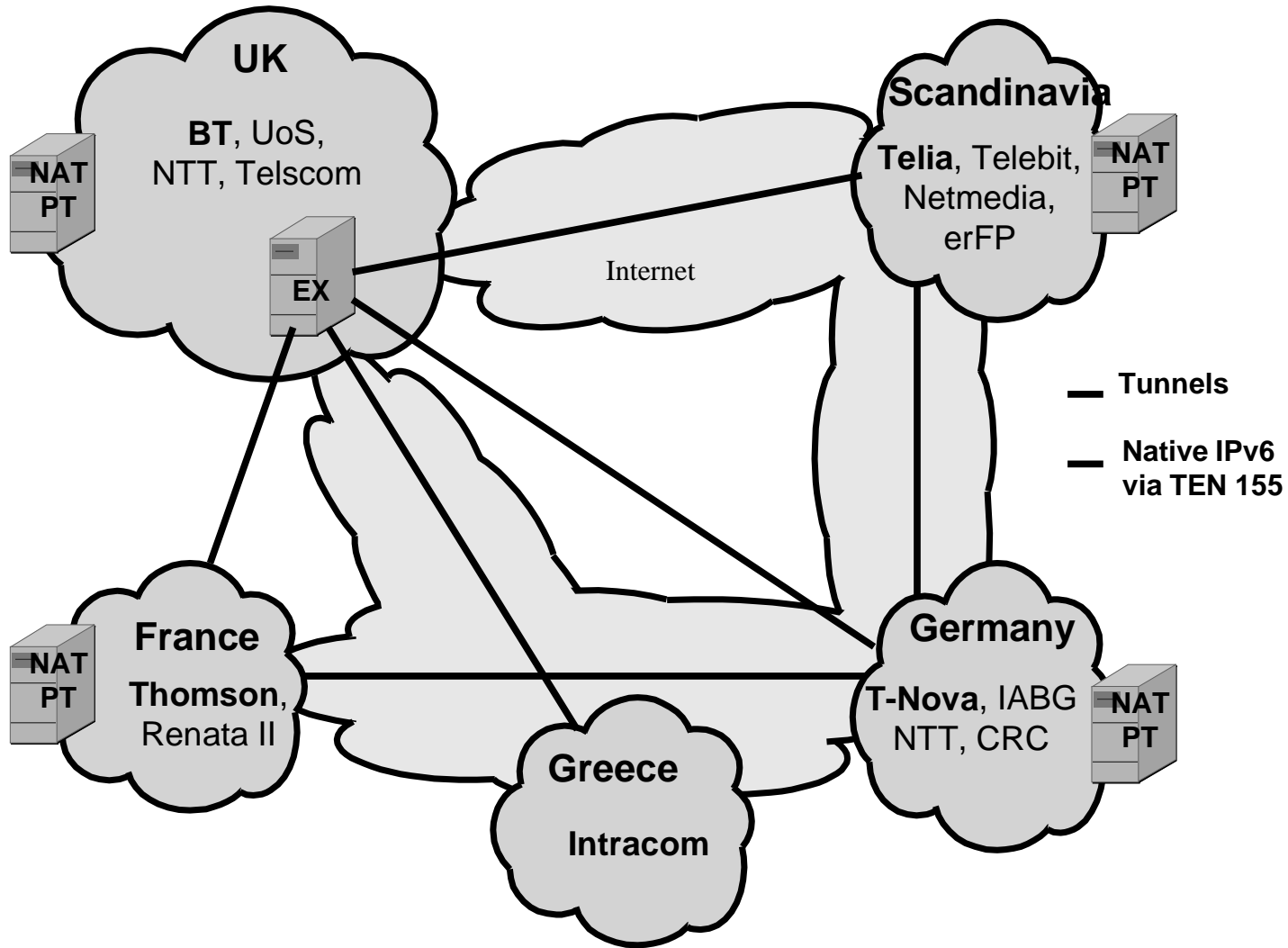
# Pan European IPv6 Network with Applications



# UK 6X for Cluster Interconnection



# 6INIT Pan European Network



# Expected Results

## Applications:

A number of IPv6 ready applications: VoIPv6, Newspaper printing, NoD and erDoT ...

## Pan European IPv6 network with:

IPsec, QoS, DNS, IPv4 Interworking ...

## Operational procedures

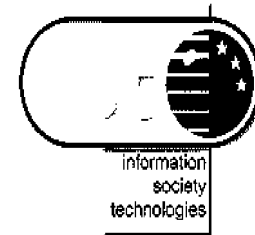
Which bits of the IETF's IPv6 "kit bag" work together and what's missing

## Promotions of IPv6



Welcome,  
how many  
addresses?

IPv6 ISP



Thankyou - Sorry it only scratched the  
surface

Any Questions?

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