



IPv6 in the IST @Hom project

Paolo PASTORINO
Telecom Italia Lab



IST-2000-28186

Project participants

- France Telecom R&D
- Opensugar, Grenoble
- Telecom Italia Lab
- Motorola Technology Centre Italy
- Motorola Res. Centre France
- Sony, Advanced Technology Center, Stuttgart



www.at-hom.org



Objectives

- To define and demonstrate an end to end open network architecture based on OSGi framework.
- To manage the Home networks (technical and commercial management)
- To enable a Home network for high data rate services
- To evaluate the impact of IPV6 on the Home Network and related distributed services and terminals
- To demonstrate services : Two trials across Europe



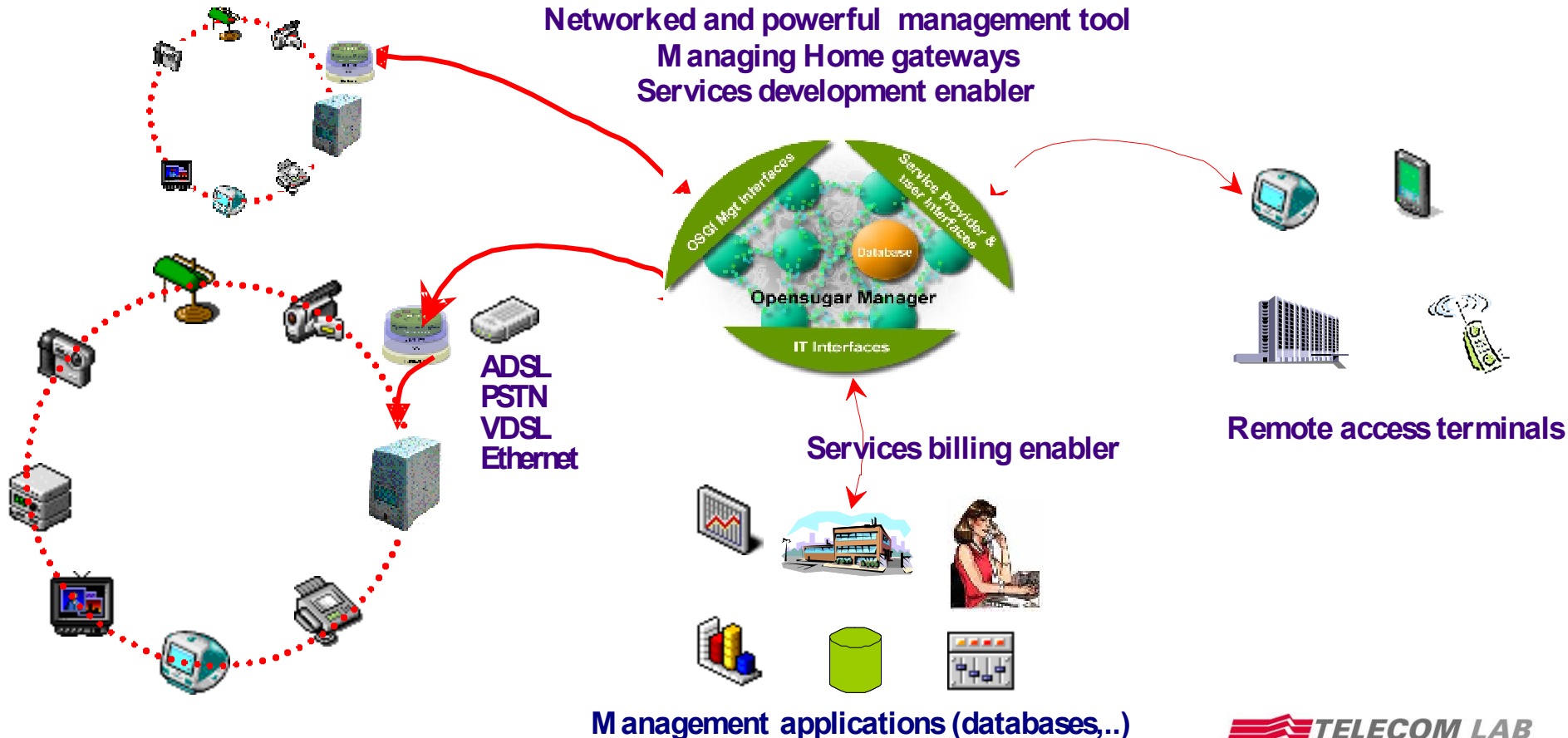
General concept

A Home Network
for multi-services

The Home Network
services operator

Provides remote access to
the Home Network

Networked and powerful management tool
Managing Home gateways
Services development enabler

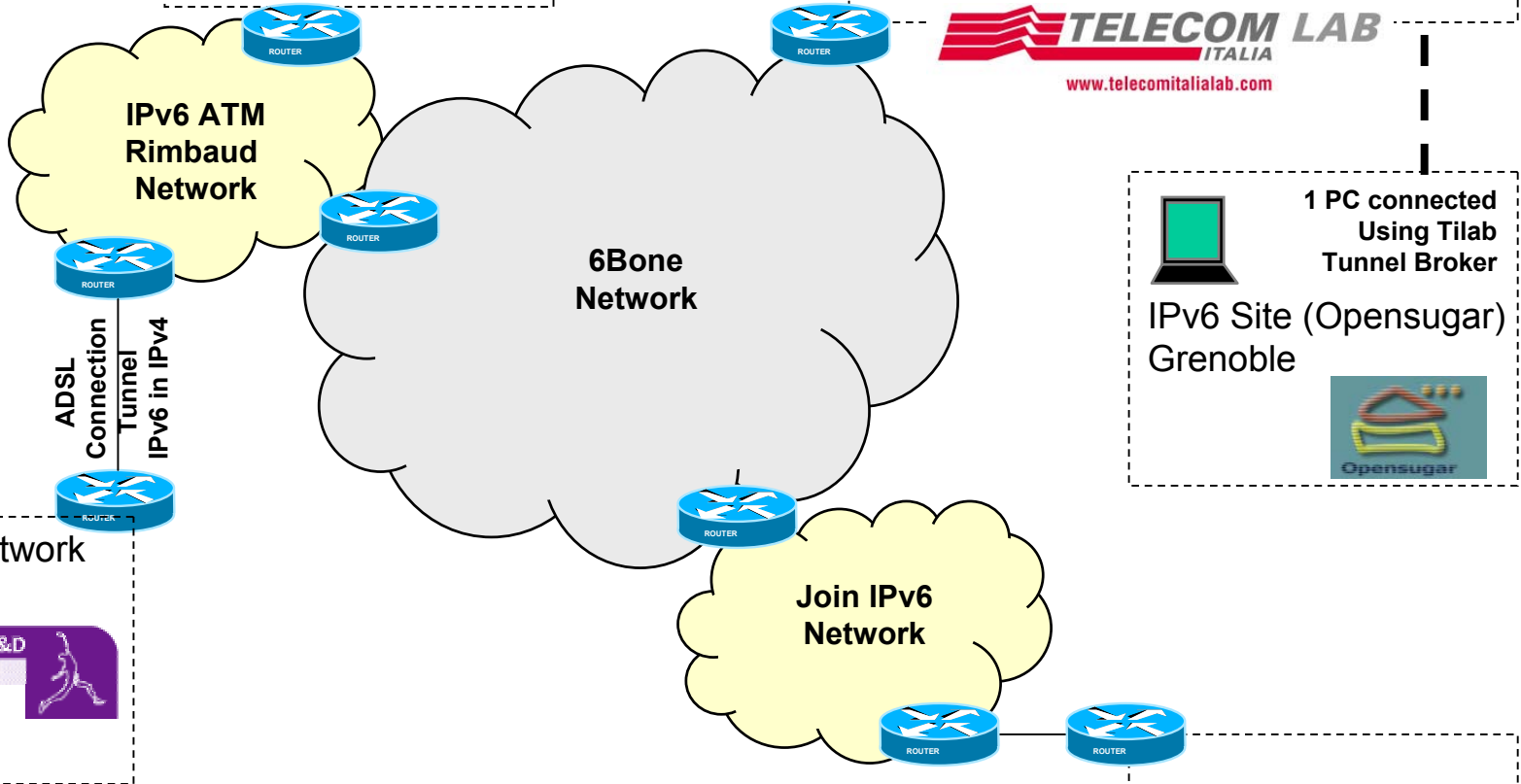
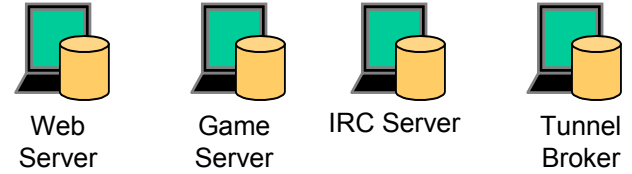




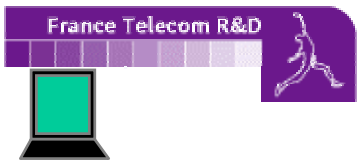
IPv6 Home Network Caen



Telecom Italia Lab IPv6 Site



IPv6 Home Network Lannion



1 PC connected
Using Tilab
Tunnel Broker
IPv6 Site (Opensugar)
Grenoble



SONY ATCS
IPv6 Home Network
Stuttgart



IPv6 technical details (1/2)

- Evaluate home network services (auto-configuration of the network, neighbours discovery, end to end QoS,...) using IPv6 functionalities
- For example IPv6 can bring a significant advantage for home network because it directly integrates the following services:
 - Large addressing space allowing each device in the house to have a unique and public IP address
 - Plug & Play, or Auto-configuration as it is called in IPv6, allows devices to be added to a network with little or no configuration effort
 - End to end QoS
 - Mobility: This function will allow mobile users to either access resources within the home network from outside the network or allow them to be a part of the network from a remote location (office, etc.)



IPv6 technical details (2/2)

- We will be able to test IPv6 services in an home environment such as:
 - Native IPv6 services on the HN (auto-configuration shows the simplicity enhancement for the client)
 - Access from the HN to a corporate site in a secure way (for example very useful in the SOHO case)
 - Remote access from the WAN to the HN (online photo album, house control, ...) in a mobile or nomadic situation
 - Advanced multimedia services (personal video streaming, download and play, advanced videoconferencing, cooperative telework)
 - End to end IP connection (e.g. terminal to terminal without address translation, etc ...) from site to site
 - Security (to make secure a communication between a host in site 1 and a host in site 2)
 - Mobile IPv6 (mobility between sites)
 - Communication between an IPv4 host and an IPv6 host



Thanks

