

# SONATEL's IPv6 Project

## AfriNic-5 Mauritius Meeting

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# AGENDA

- **IPv6 International Context and Positioning of Africa**
- **IPv6 Migration Plan**
- **Sonatel's IPv6 Project : Inventory of Fixtures**
- **Sonatel's IPv6 Project : Applications Portfolio to be developed**
- **IPv6 Experimentation : Videoconferencingv6, ADSLv6, VPNv6**

## IPv6 International Context and Positioning of Africa

- ☞ After 10 years of intense activities of normalization on IPv6
- ☞ Europe, Asia, US: have deployed big networks and large-scale experimental projects for past 6 years.
- ☞ The IPv6 protocol is stable and most of the commercial products are IPv6 ready (équipements and operational systems)
- ☞ IPv6 begins the cycle of déploiement
- ☞ And the rest of the world: The creation of the 2 last regional internet registers (RIR): AFRINIC (for Africa) and LACNIC (for Latin America and the Caribs). A decisive step and an essential tool to reduce the numerical divide
- ☞ IPv6 must henceforth be seen and treated on the scale of the planet
- ☞ **SONATEL** have to position both at the **local** and **regional** level
- ☞ **SONATEL** have to seize the opportunities of business through IPv6.

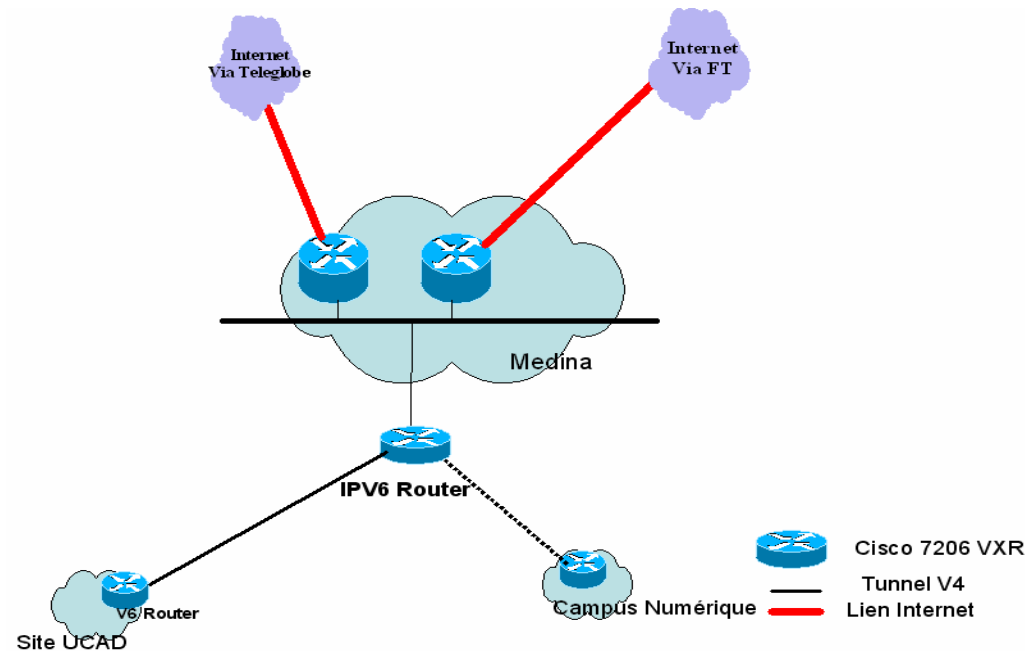
## IPv6 Migration Plan

- ☞ Development of IPv6 competencies and expertise: a large program launched
- ☞ Hands-on training
- ☞ Set IPv6 testbeds
- ☞ Participation and involvement in the national (Senegal's IPv6 forum) and regional (AfrINic) IPv6 initiatives
- ☞ Plan of IPv6 Integration in the operational networks (Core and Access)
- ☞ Specification, prototyping, test and deployment of IPv6 applications
- ☞ Pre-commercial deployment
- ☞ Commercial deployment

**This project must be conducted with support of partners: France Télécom, IPv6 Forum Senegal, AFRINIC, Vendors, Software providers....**

## Sonatel's IPv6 Project : Inventory of fixtures

- Acquisition of an IPv6 Prefix from AfriNIC **2001:4278::/32**
- Implementation of an IPv6 Point of Presence interconnected to V6 Backbone via VSNL International and France Telecom



## Sonatel's IPv6 Project : Inventory of fixtures

- Technical support and Participation in the Training of IPv6 Trainers
- Technical support and Participation in the IPv6 Workshop with 6DISS
- Support and Participation in the IPv6 Forum Dakar Summit
- Ongoing adaptation of the DNS to support the translation of the domain names in addresses IPv6
- Implementation of an IPv6 Tunnel towards Renater for the transport of roads and flow multicast
- Cheikh Anta Diop University, Campus Numérique of Dakar and St Louis, ADIE and ESMT are already connected to the Sonatel's IPv6 Node
- Migration of a Sonatel site in IPv6 for experimentation of the videoconference
- Definition of a plan of IPv6 addressing

## Sonatel's IPv6 Project : Applications Portfolio to be developed

➤ ADSLv6 connectivity service

➤ Videoconferencing IPv6

➤ VPNv6

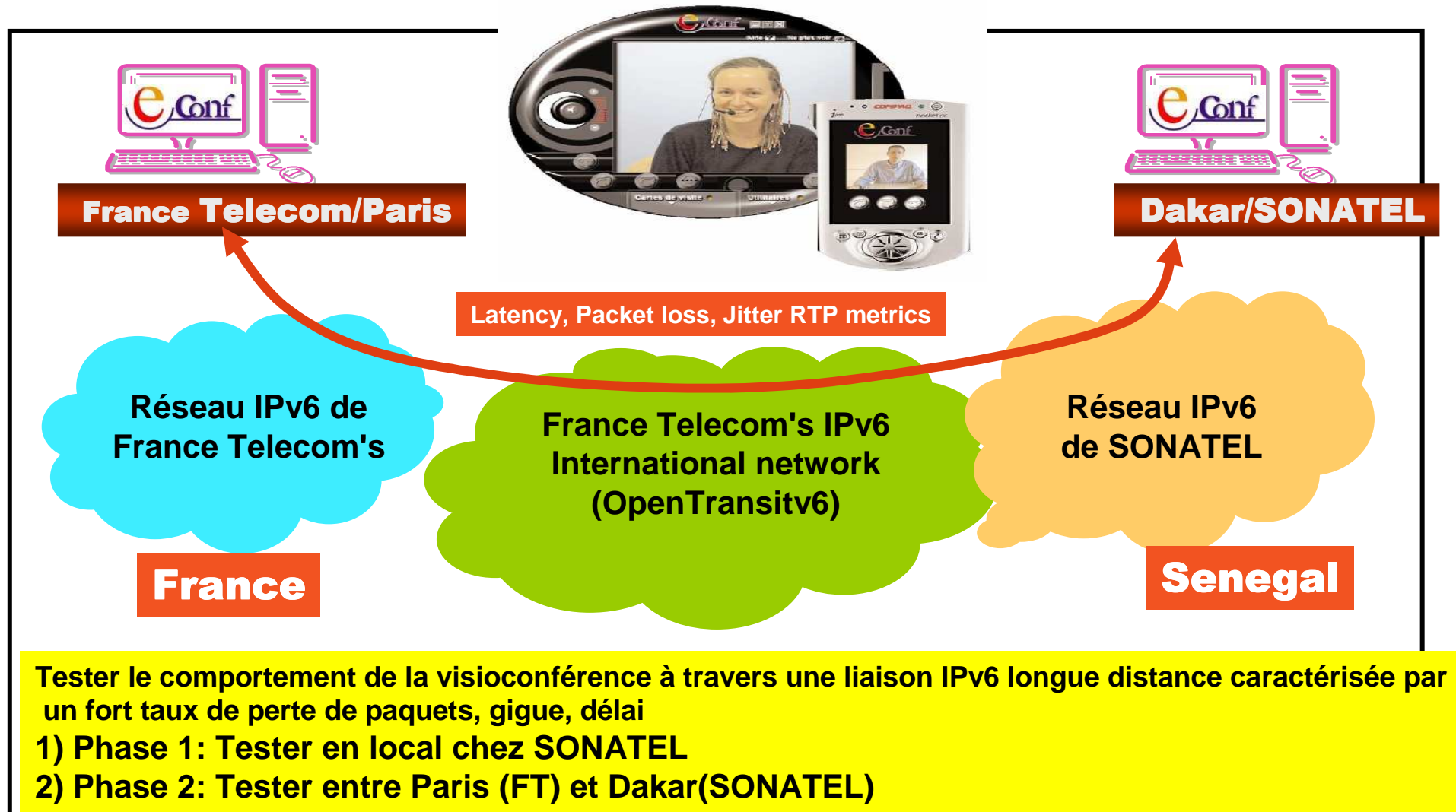
➤ E-learningv6 (Multicast)

➤ P2P Applications

➤ IPv6 applications in the context of mobility: VoIPv6 & Multimedia over WiFi/WiMAX/3G

➤ VoIPv6

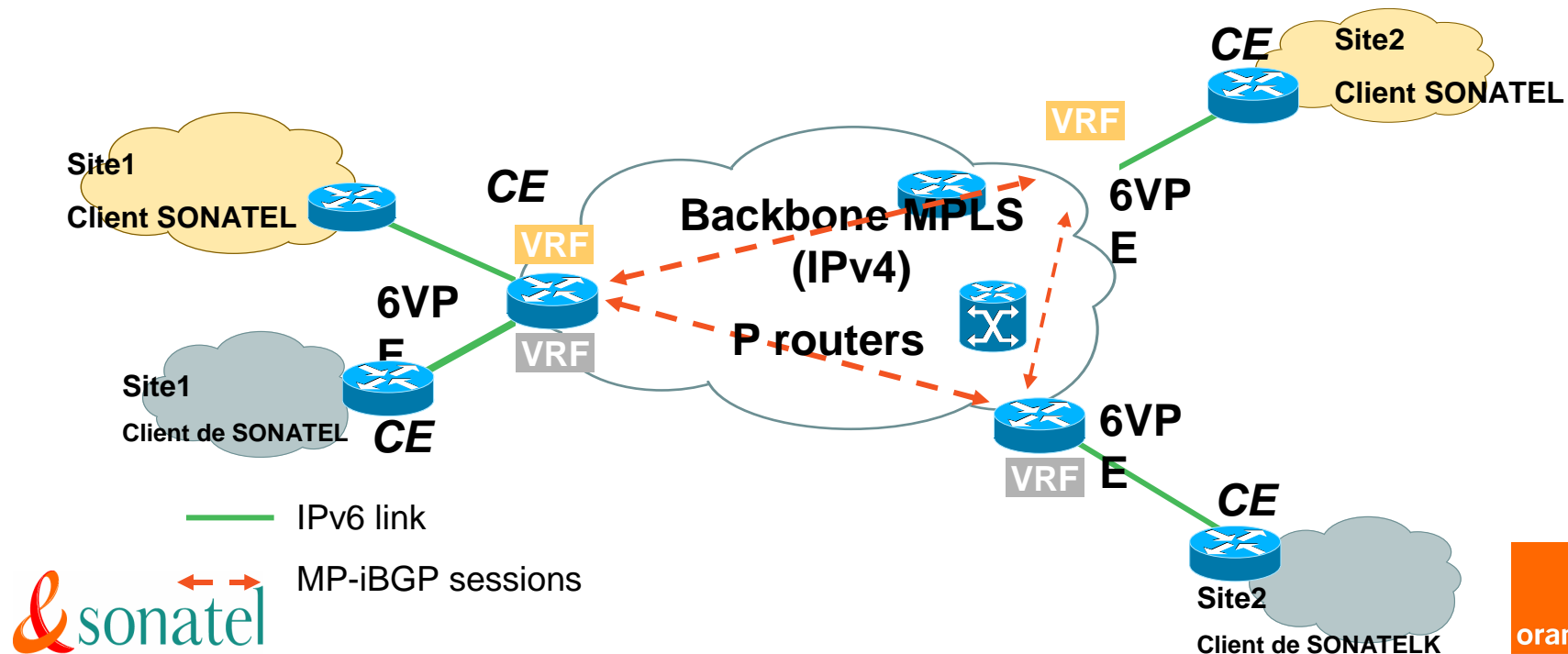
# IPv6 Experimentation : Videoconferencing Tests with FT



# IPv6 Experimentation : VPNv6

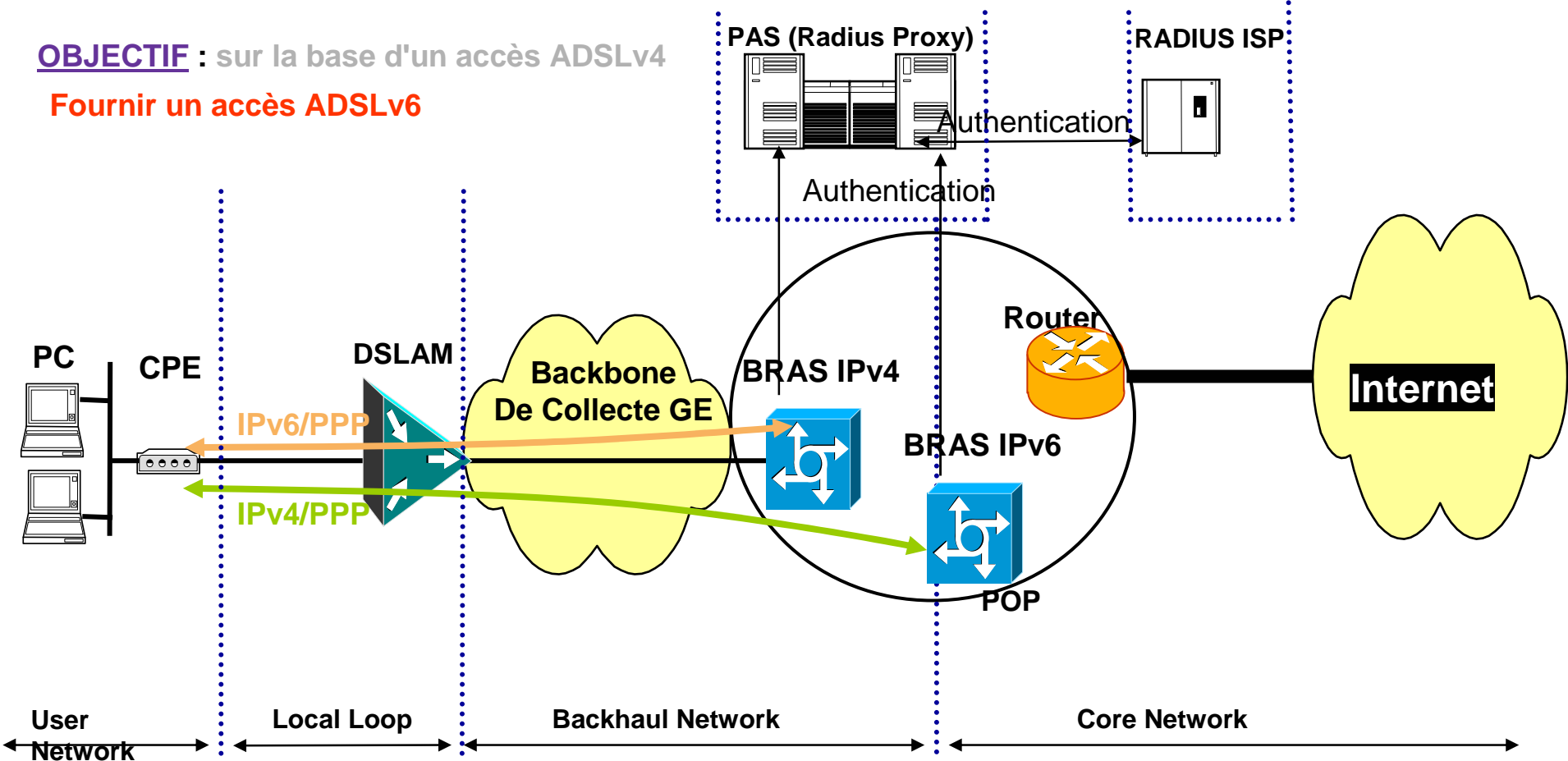
## Description de l'expérimentation

- Mettre les VPNv6 au même niveau que les VPNv4
- Convergence entre IPv6 et IPv4 sur MPLS VPN (RFC 2547bis)
- Résout les limitations techniques des solutions basées sur IP-Sec
- Solutions sur la technologie MPLS largement éprouvée.
- Equipements industriels disponibles
- Ne remet pas en cause le coeur de réseau IPv4 (donc économique)
- Seuls les routeurs de périphérie(PE) sont impactés



# IPv6 Experimentation : ADSLv6

**OBJECTIF** : sur la base d'un accès ADSLv4  
Fournir un accès ADSLv6



# Thank You

