



# 6DEPLOY: IPv6 Deployment Support Project Overview

**Jordi Palet, Consulintel**  
[jordi.palet@consulintel.es](mailto:jordi.palet@consulintel.es)



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**Looking for a contact ?**

- Mail to: [martin.potts@martel-consulting.ch](mailto:martin.potts@martel-consulting.ch)
- Or: [bernard.tuy@renater.fr](mailto:bernard.tuy@renater.fr)

# Contribs & updates

Martin Potts, MARTEL

Bernard Tuy, RENATER

Martin Potts, MARTEL

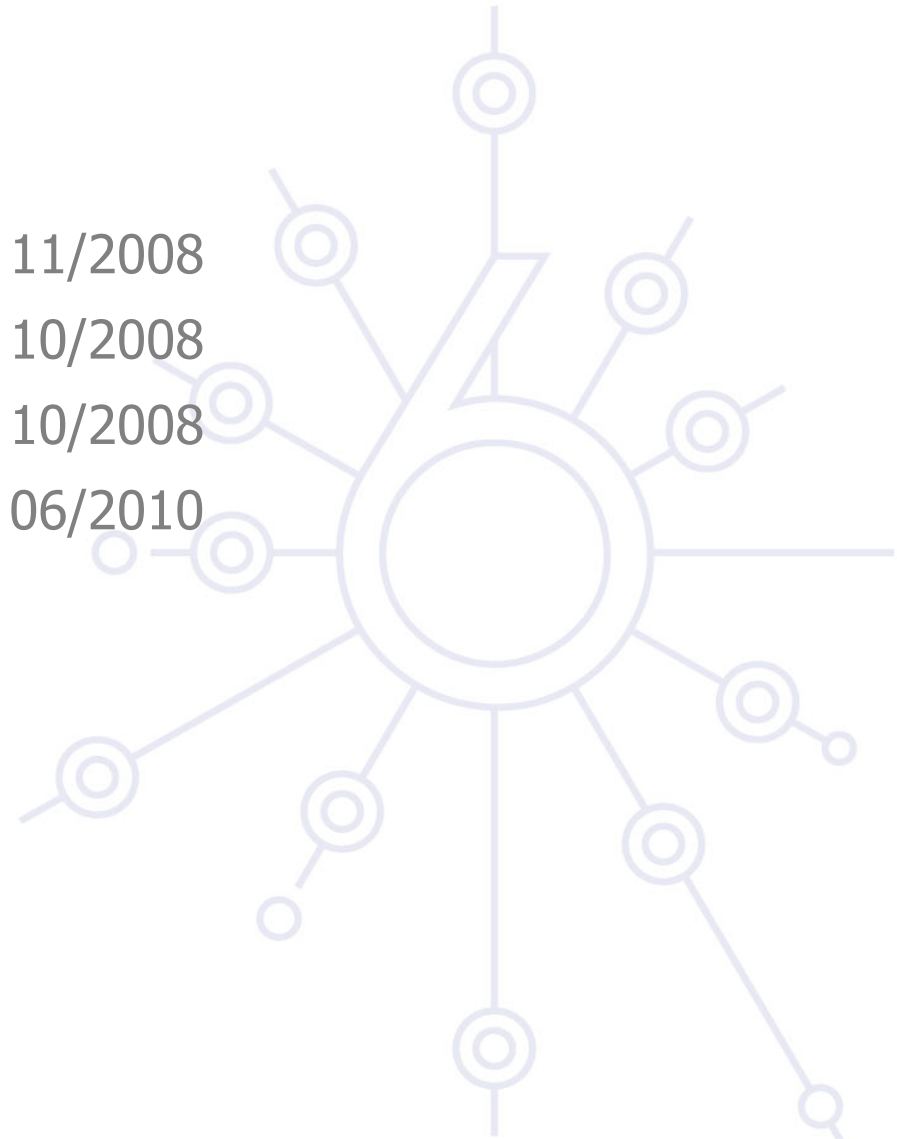
Jordi Palet, Consulintel

11/2008

10/2008

10/2008

06/2010



# Introduction

**Many EC IPv6 funded projects (>180 MEuros)**

**6DISS is over ...**

**A lot of experience was gained during that 30-month project**

**..... and much documentation was produced**

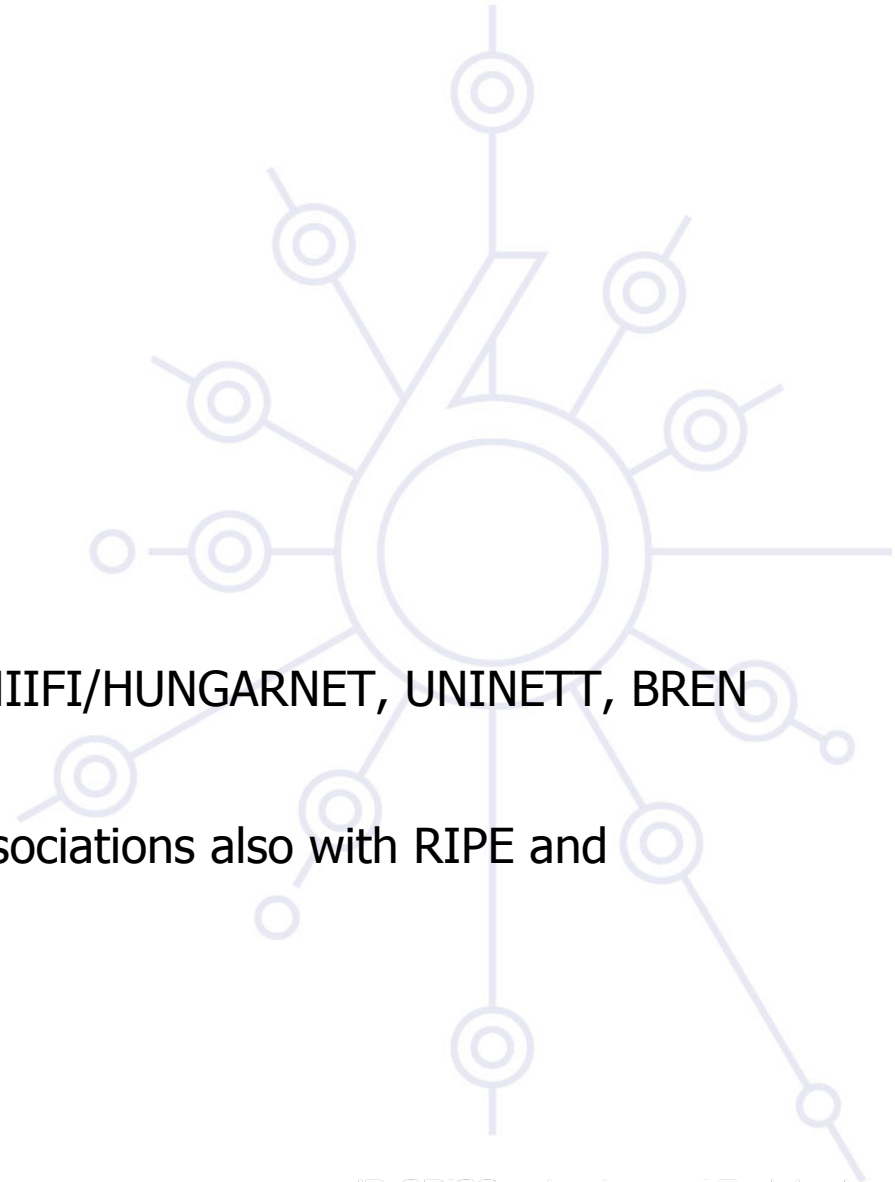
- Should you have any technical question related to IPv6 ... look first at <http://www.6diss.org> – you will probably find the answer

**This new project “6DEPLOY” has been set up to share the experience in a practical way**

# Key Data

## 13 Partners:

- Martel (Co-ordinator)
- Industry/Commercial:
  - Cisco, Consulintel
- NRENs:
  - RENATER, GRNET, FCCN, NIIFI/HUNGARNET, UNINETT, BREN
- RIRs:
  - AfriNIC, LACNIC (strong associations also with RIPE and APNIC)
- Universities:
  - UCL, Soton-ECS



## Key Data

**Duration: 1st May 2008, for 30 months**

**EC Funding: €1M**



## Objectives (1)

**6DEPLOY exploits the experiences from 6NET, EURO6IX, 6DISS and GÉANT regarding the building of pan-European platforms for IPv6 in core, access and enterprise networks.**

**Network services such as Mobility, Multicast, DNS, routing, monitoring and management, and an increasing number of applications are now available. Transition strategies have been developed and validated. This experience will now be transferred.**



## Objectives (2)

### **Specifically, 6DEPLOY will:**

- organize workshops for the e-Infrastructure community and give practical advice and hands-on support for deploying it in their environments
- work on deployments in Europe and in developing countries; exchanging experiences and best practices
- improve the competitiveness of European industry by informing about experiences from IPv6 deployments in other regions
- gain expertise with which to support *more-commercial* deployments in European industries (e.g. Emergency Services, Health, Broadcast, Transport, Schools, Environment, Gaming, ...)

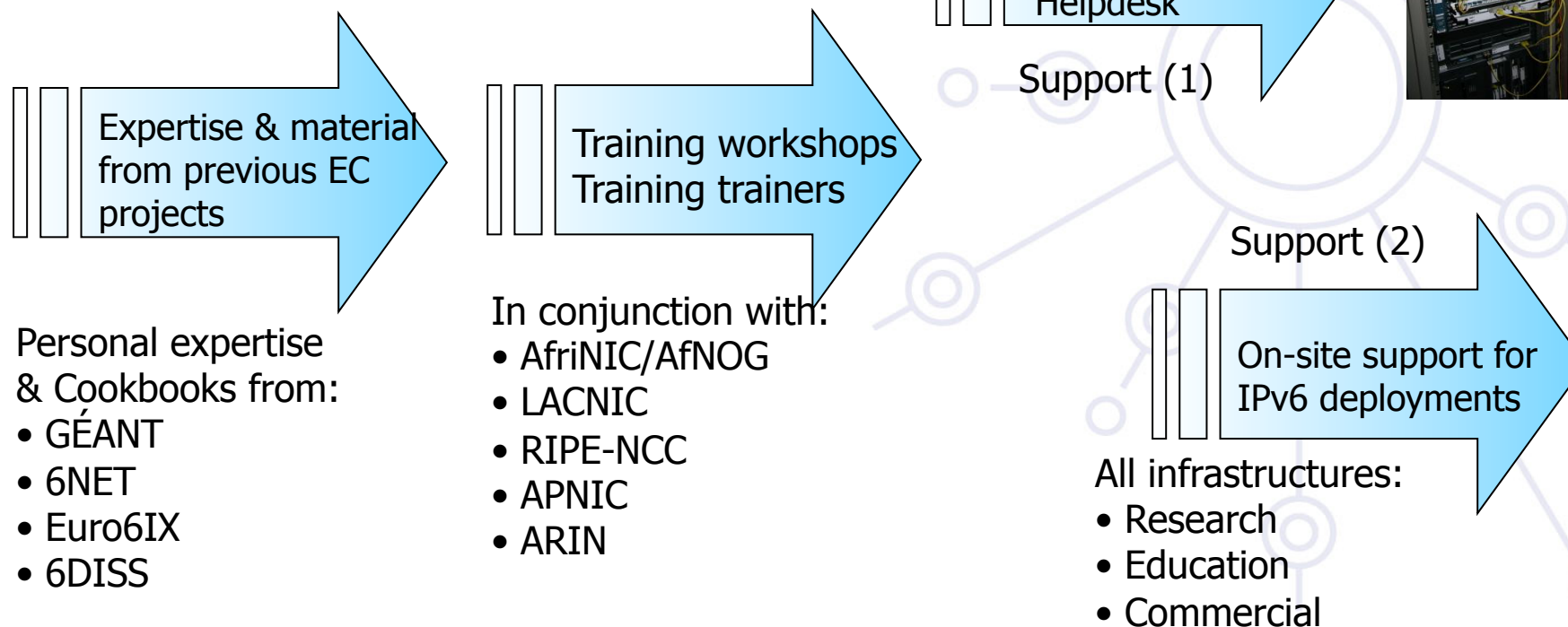
## Objectives (3)

- help to build consensus between European researchers, by enabling and exploiting synergy among related projects (e.g. GÉANT-2, SEEREN-2, SEE-GRID, EUMEDCONNECT, CLARA, ALICE)
- encourage - and enhance the effectiveness of - the coordination between National and pan-European e-Infrastructure initiatives, by being a focal point for IPv6 activities, giving IPv6 training and supporting IPv6 deployments
- open up the EC FP7 ICT programme to the participation of International Cooperation Partner Countries in Africa, Asia and Latin America, by involving organisations which influence e-Infrastructures on their continents

## Objectives (4)

- improve scientific cooperation between Europe and the target regions (Africa, Asia and Latin America,) by exchanging knowledge and experiences through direct practical support for deployment, training events, etc.
- support interoperability and standards, by informing of the latest IPv6 standards, equipment hardware and software releases, and IPv6 policies (RIRs)

# Technical Approach 1: Workshops



## Technical Approach 1: Workshops

**Training will be given in each of the targeted RIR regions (AfrINIC, LACNIC and APNIC) once or twice per year.**

**Training will also be given to European industries and to FP7 projects.**

**Workshops will be aligned as far as possible with parallel events. e.g. AfrINIC, LACNIC, APNIC, AfNOG, APRICOT, ISOC meetings and similar operator and Internet Registries events, national/regional IPv6 Task Force meetings, other conferences, etc.**

# Technical Approach 1: Workshops

**In order to ensure the impact of the 6DEPLOY training is effective, the participants should be deployers of the technology in e-Infrastructures (e.g. research establishments, Universities and NRENs) and industry. i.e. people who will collectively determine the rate of deployment of IPv6.**

# Technical Approach 2: Material

Module Topics		
IPv6 Introduction	IPv6 Mobility	IPv6 Routing protocols
IPv6 Protocol	IPv6 Multicast	IPv6 - IPv4 Co-existence
IPv6 Addressing	IPv6 DNS	IPv6 DHCP
IPv6 Addressing case studies	IPv6 Associated protocols	Equipment configuration
IPv6 Network Management	IPv6 and cellular networks	IPv6 and DSL
IPv6 Autoconfiguration	IPv6 Security	Deployment scenarios
IPv6 and sensor networks	IPv6 QoS	"How to" guide for developers

# Technical Approach 2: Material

## Documentation of IPv6 Deployment Use Cases in (for example):

- School Networks
- Campus Networks
- Large-scale commercial ISPs
- Telecentres
- Public safety







# “World Tour Programme”

## **6DEPLOY Workshops done so far:**

- Salvador de Bahia, Brazil (May 2008) in conjunction with the LACNIC XI meeting
- Nairobi (June 2008) - used 3 remote test-beds (in Paris and Sofia (from 6DEPLOY) and Brisbane (from APNIC))
- Maputo (August 2008) - specifically requested to be in Portuguese
- Haiti (August 2008)
- ... just a few dozens more, all around the world !.
- Singapore (June 2010)
- Bali (June 2010)

## 6DEPLOY LABS

- Sofia, France
- Sofia, Bulgaria
- Paris, France
- Mauritius
- Nairobi, Kenya
- Kyrgyzstan
- Georgia
- India
- Madrid, Spain
- Slovenia
- Next ones, possibly: Bogota (Colombia), Buenos Aires (Argentina), Caribbean location ?



## Conclusion

**Deploying IPv6 is about training people**

**6DEPLOY will achieve part of the work**

**There is room for lots of other initiatives**

**Cooperation, sharing info, etc. is a must**

**If you're planning an event with a bit of IPv6  
info, training, ...**

- Don't hesitate to get in touch with us

**Contact : [helpdesk@6deploy.org](mailto:helpdesk@6deploy.org)**

**6DEPLOY2 about to start ...**



DEPLOY

# IPv6 Workshop

**Name of Workshop**

**Location, Date**

# Outline

**Workshop objectives**

**What *you* can expect**

**What *we* expect**

**6DEPLOY project and resources**

**How the session will be run and organized**





# Workshop Objectives

**To introduce IPv6 concepts and differences from IPv4**

**The contents include:**

- Basic IPv6 protocol operation
- Core IPv6 services and IPv4/IPv6 co-existence mechanisms
- IPv6 routing
- IPv6 deployment – getting up and running

**To give you hands-on (Cisco, XP, Linux, ...) experience**

**To enable you to go home and get IPv6-connected!**

# What *you* can expect – Day #1

**IPv6 basics**

**“Transition” mechanism basics**

**Enabling IPv6 on hosts and local routers**

**Applications**

- DNS
- Web

**=> Lab work**





# What *you* can expect – Day #2

## Routing

### General discussion. Be prepared to present:

- your network topology
- your plans to deploy IPv6
- your questions / issues

## Security

=> Lab work



# What *you* can expect – Day #3

**Managing IPv6 networks**

**=> Lab work**

**Case studies**

**Feedback questionnaire**



## What we can expect

**Provide us with your experience and your needs to go ahead in IPv6 deployment**

**Ask (“good”) questions at any time**

**Take the chance to gain a solid experience in the lab sessions (hands-on)**

**Remain in contact afterwards ... and be informed of all the initiatives related to IPv6 in your region**

**Fill in the feedback questionnaire ...**



deploy

Questions ...