

Atelier IPv6

Dakar, Sénégal
24 -26 Octobre 2006

Philippe.Bereski@alcatel.fr

Simon.Muyal@renater.fr

Bernard.Tuy@renater.fr



Copy ...Rights

- *This slide set is the ownership of the 6DISS project via its partners*
- *The Powerpoint version of this material may be reused and modified only with written authorization*
- *Using part of this material must mention 6DISS courtesy*
- *PDF files are available from www.6diss.org*
- *Looking for a contact ?*
 - *Mail to : martin.potts@martel-consulting.ch*
 - *Or bernard.tuy@renater.fr*



Droits d'auteur ...

- *L'ensemble des présentations utilisées dans le cadre de cet atelier est la propriété de 6DISS, représenté par ses différents partenaires.*
- *La version Powerpoint des présentations peut être réutilisée et modifiée après qu'une autorisation écrite ait été obtenue*
- *L'usage de tout ou partie de ce matériel doit mentionné que sa source est le projet 6DISS*
- *La version PDF des présentations est disponible sur www.6diss.org*
- *Pour tout contact :*
 - Mail à Martin.Potts@martel-consulting.ch
 - Ou Bernard.Tuy@renater.fr



Agenda

- Workshop objectives
- What you can expect
- What we expect
- 6DISS project and resources
- How the session will be run and organized



Planning

- Objectifs de l'atelier
- Ce que vous pouvez en attendre
- Ce que *nous* en attendons
- Planning des 3 journées
- (brève) Introduction au projet 6DISS



Workshop objectives

- Introduce IPv6 concepts and differences to IPv4
- Coverage includes:
 - Basic protocol operation
 - Core services and IPv4/IPv6 integration methods
 - IPv6 routing –Deployment – getting up and running
- Give you hands-on (Cisco, XP, Linux) experience
- Allow you to go home and get IPv6-

connected!



Dakar, SN -Octobre 2006

IPv6DISSEmination and Exploitation

Objectifs de l'Atelier

- Introduire les principaux concepts du protocole IPv6 en soulignant les différences avec IPv4
- Le programme comprend :
 - Les éléments nécessaires à la mise en oeuvre d'IPv6
 - La présentation des mécanismes d'intégration avec IPv4
 - Les stratégies de déploiement
- Configurer et mettre en oeuvre concrètement les équipements
- Reproduire la même chose dans votre environnement de travail et connecter votre campus/entreprise à l'Internet v6



Ce que vous pouvez attendre de l'Atelier ...

- Disponibilité à 150% des formateurs
- Réaliser vous même la configuration
 - Des machines terminales
 - Des routeurs
- Configurer les services réseaux usuels
- Vérifier que “ça marche” en se connectant à l'Internet v6 ...



Ce que *nous* attendons de l'Atelier ...

- Participation active de tous
 - En posant des questions
 - En réalisant les exercices proposés
 - Saisissez l'occasion de cet atelier pour acquérir une bonne expérience avec IPv6
- Et aussi ...
 - Faire part de votre expérience
 - Des problèmes que vous auriez rencontrés
 - **Remplir le questionnaire d'évaluation le dernier jour**
 - Rester en contact une fois chacun rentré "à la maison" pour être informés des initiatives de déploiement d'IPv6 dans votre région.



What we 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 ...





Planning des 3 jours



Mardi 24 Octobre 2006 /1

- Matin :
 - Introduction à l'Atelier
 - Introduction à IPv6
 - Adressage
 - Protocoles associés à IPv6
 - Mécanismes d'auto-configuration
 - TP1 : configurer les interfaces réseaux des PCs



Mardi 24 Octobre 2006 /2

- Après-midi
 - TP1 (Fin) : configuration des PCs
 - Analyse des datagrammes NDP ...
 - Présentation de la topologie (locale et distante)
 - Réseau local
 - Labs Paris & Bruxelles
 - TP2 : configuration des interfaces des routeurs (testbeds et routeurs locaux)
 - Mécanismes d'intégration avec IPv4

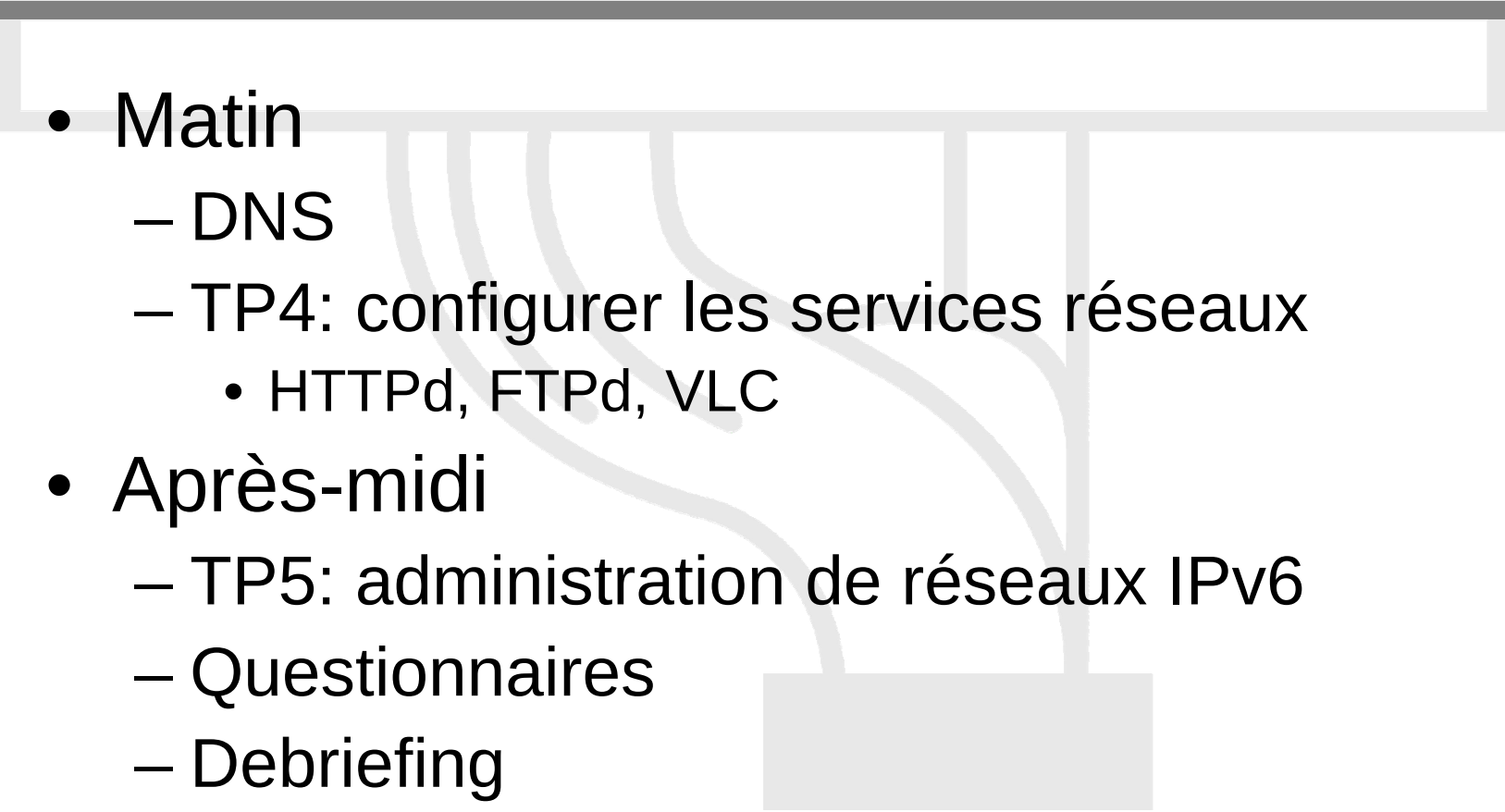


Mercredi 25 Octobre 2006

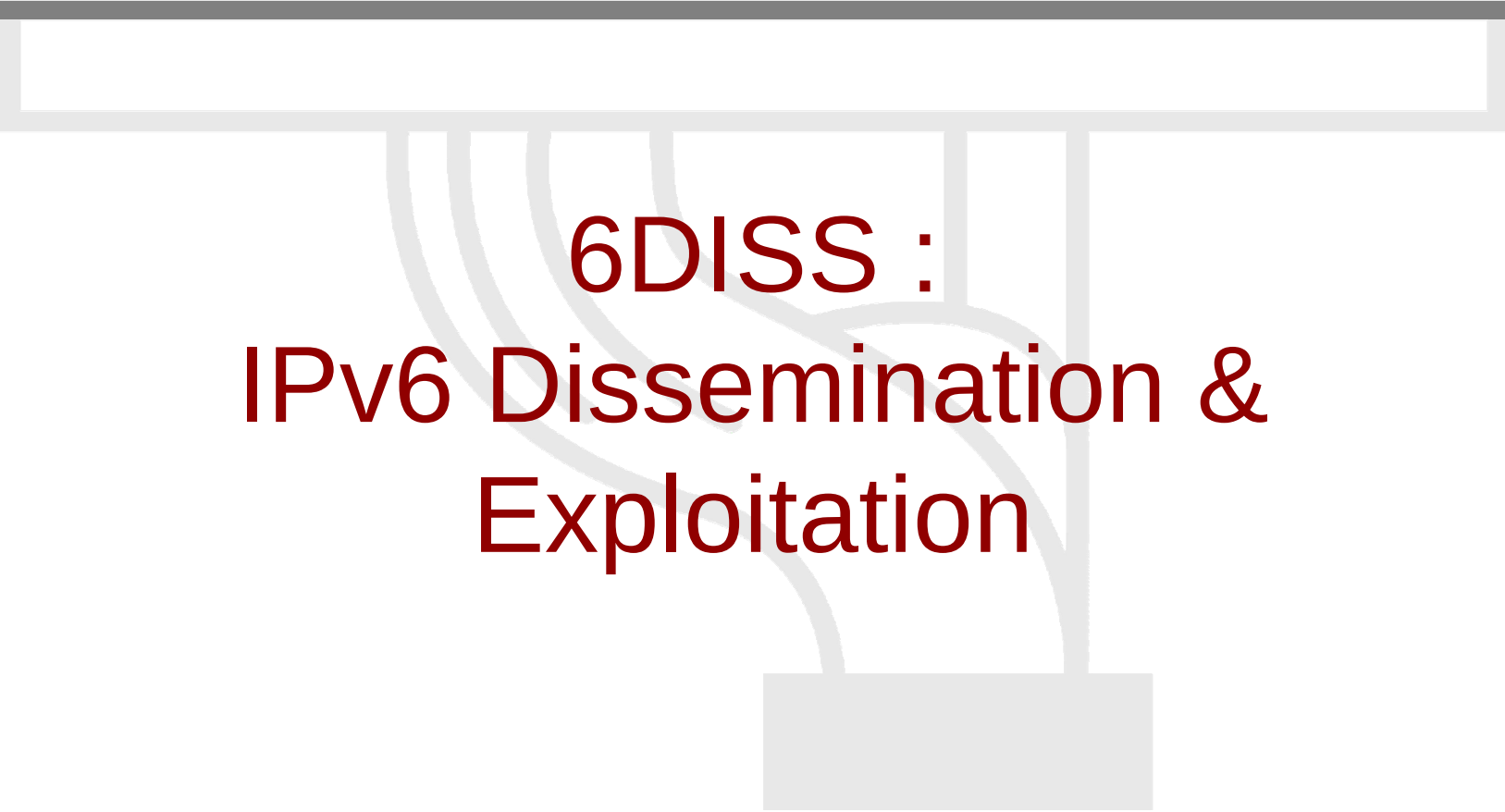
- Matin
 - Protocoles de routage IPv6
 - TP3: configuration IGP et EGP
- Après-midi
 - Administration des réseaux IPv6
 - Applications IPv6
 - TP3 (fin) : IGP et EGP



Jeudi 26 Octobre 2006

- 
- Matin
 - DNS
 - TP4: configurer les services réseaux
 - HTTPd, FTPd, VLC
 - Après-midi
 - TP5: administration de réseaux IPv6
 - Questionnaires
 - Debriefing

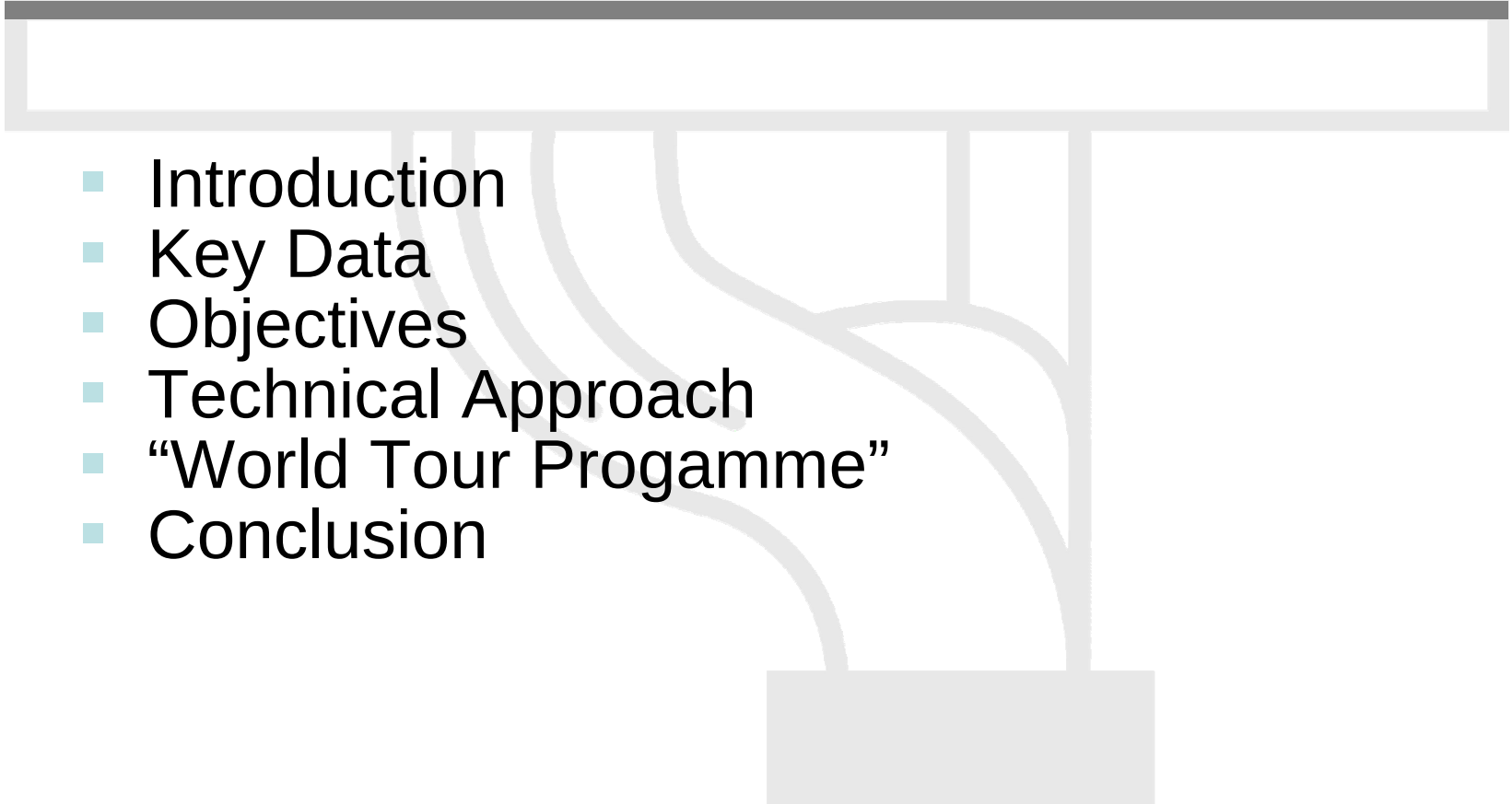




6DISS : IPv6 Dissemination & Exploitation



Agenda

- 
- Introduction
 - Key Data
 - Objectives
 - Technical Approach
 - “World Tour Programme”
 - Conclusion



Introduction

- **6Net** is over ...
- A lot of experiences have been gained during the 3,5 year-project
- and documentation produced
 - Should you have any technical question related to IPv6 ... look at <http://www.6net.org>
- A new project (smaller) has been set up to share the experience on a practical basis



Key Data

Partners : 10

- Martel (project leader)
- Vendors
 - Cisco, Alcatel
- NRENs
 - RENATER, GRNET, FCCN, NIIF/HUNGARNET
- TERENA
- Universities
 - University College London (UCL)
 - University of Southampton (Soton)

Duration:

1st April 2005, for 30 months

EC Funding



Objectives (1)

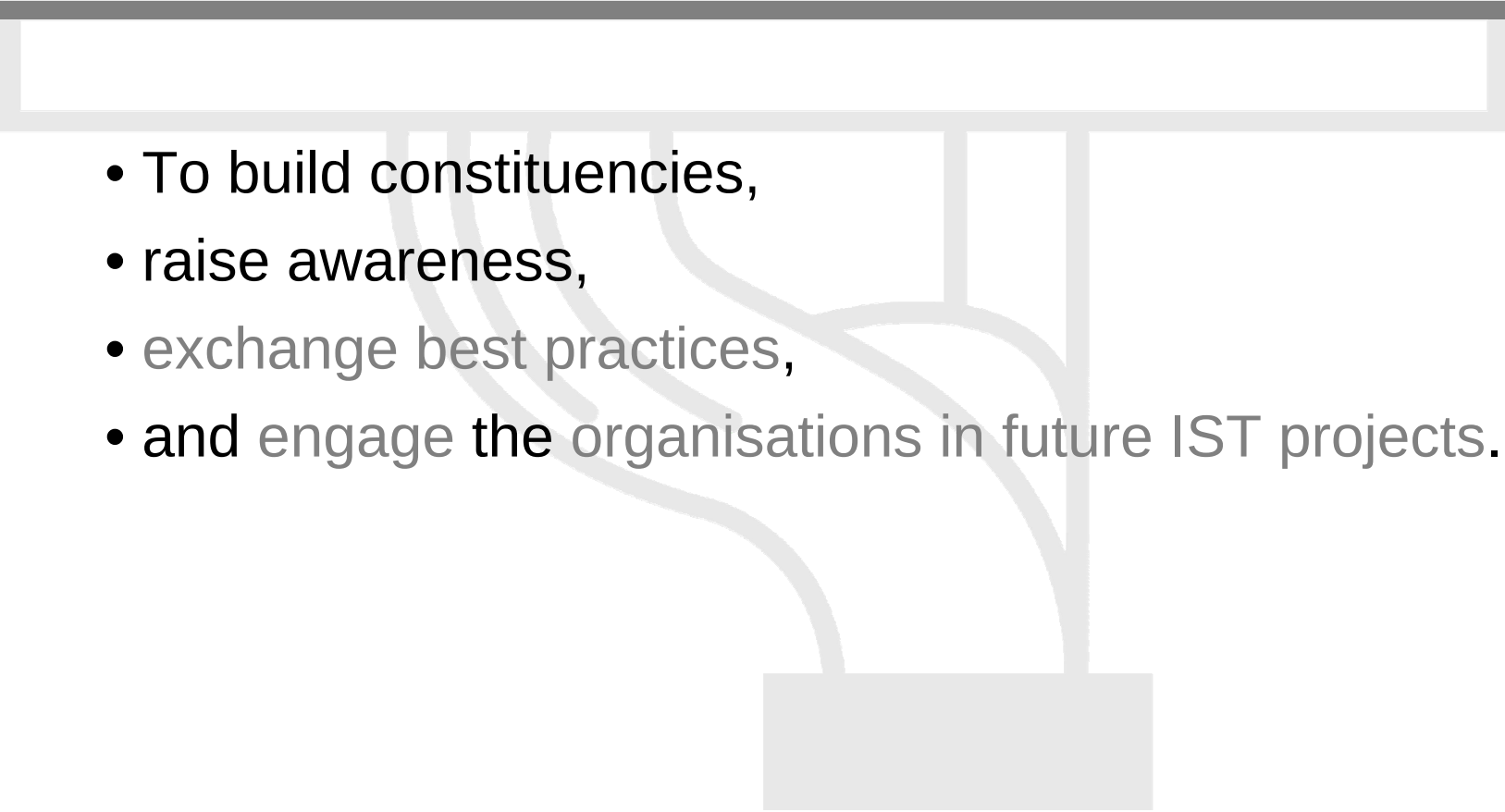
To transfer knowledge and deployment experiences from European IPv6 projects (6NET, Euro6IX, GEANT), TERENA, European NRENs, etc. to research network operators, universities, commercial organisations, governments and regulators in:

- . **Balkan** countries (inc. Bulgaria, Romania, Moldova & Turkey)
- . **Mediterranean** countries
- . Newly-Independent States (**Central Asia**, including Afghanistan)
- . **Sub-Saharan Africa**
- . **Southern Africa**
- . The **Caribbean**
- . **Asia-Pacific** region
- . **South and Central America**

and will exchange information with such organisations in **India & China**



Objectives (2)

- 
- To build constituencies,
 - raise awareness,
 - exchange best practices,
 - and engage the organisations in future IST projects.



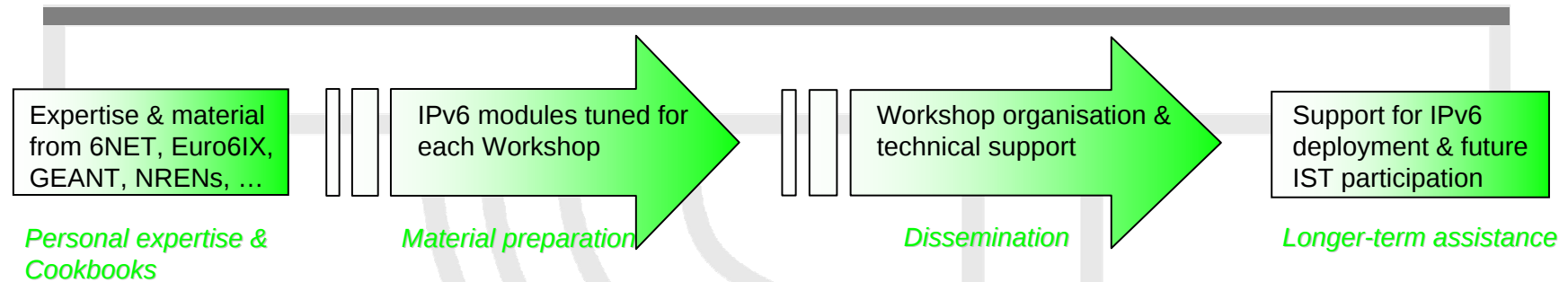
Technical Approach: Workshops

To organise 8 workshops to disseminate the information on:

- IPv6 Addressing & Routing
- IPv6 deployment and migration strategies
- Making network services ready for IPv6
 - DNS, DHCP, HTTPd, SMTP, ...
- IPv6-enabled applications
- Security
- Monitoring and management tools
- Multicast
- And others, like
 - QoS, Renumbering, Mobility ...



Technical Approach: Workshops /2



8 Workshops (1 per Region) :

Balkan countries
Mediterranean, Sub-Saharan Africa & Caribbean
Newly-Independent States
South & Central America
Southern Africa
Southern Asia

GRNET
RENATER
UCL
TERENA/FCCN
Cisco, FCCN
Uni SOTON

plus exchange of best practices and deployment examples at events in India and China

Uni SOTON, Martel



Dakar, SN -Octobre 2006

IPv6DISSEmination and Exploitation

Technical Approaches /3

To complement the Workshops :

- IPv6 tutorial material is under preparation
 - for technical trainings
 - to “train the trainers”
 - e-learning for remote self-teaching
- IPv6 permanent Labs are available (hands-on)
 - at Cisco in Brussels
 - at Renater’s in Paris
- An IPv6 “Tiger Team”
 - available 24/7 to
 - answer any question related to IPv6 deployment & operation
 - help people willing to start
 - email to : helpdesk@6diss.org

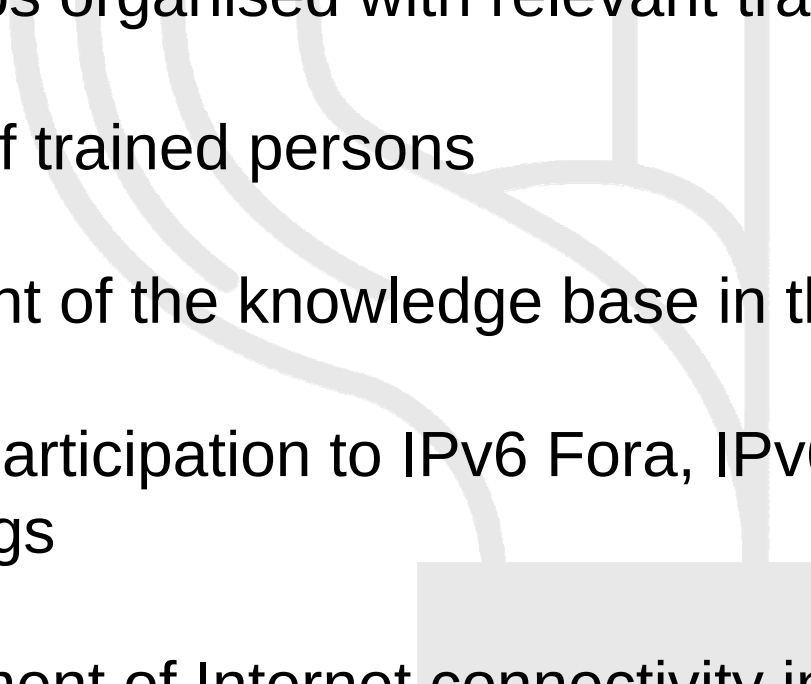


Potential Impact

- To assist less-developed regions to deploy the latest technology in the most efficient manner
- To build contacts to organisations in these regions to support and enable their subsequent participation in projects within the IST Programme
- To increase opportunities for EU manufacturers to open new - or enhance existing - markets in these developing regions
- To make European research and industrial concerns aware of the highly skilled personnel who can contribute to the urgently needed improvement of ICT infrastructures



Expected Results

- 
- 8 Workshops organised with relevant training material
 - A number of trained persons
 - Improvement of the knowledge base in the regions
 - Increased participation to IPv6 Fora, IPv6 Task Forces, RIR meetings
 - An assessment of Internet connectivity in the regions



“world tour programme”

- Done so far
 - IPv6 summit , Taipei, TW (08/2005)
 - TENET IPv6 workshop, Port Elizabeth, ZA (09/2005)
 - Afrinic-3, Cairo, EG (12/2005)
 - S-E Europe IPv6 Summit, Serbia/Montenegro (03/2006)
 - EUMEDconnect, Malta (04/2006)
 - AfriNIC-4, Lomé, TG (07/2006)
 - WALC, Quito, EC (08/2006)
 - Training the Trainers, Brussels, BE (10/2006)
- Running
 - Dakar, SN (10/2006)
- Planned
 - IPv6 summit, Cannes, FR (11/2006)



Conclusion

- 6DISS project will achieve part of the work
- There is room for lots of other initiatives
- Cooperation, sharing info, ... is a must
- If you're planning an event with a bit of IPv6 info, training, ...
 - Don't hesitate to be in a touch with us
- Contact : helpdesk@6diss.org



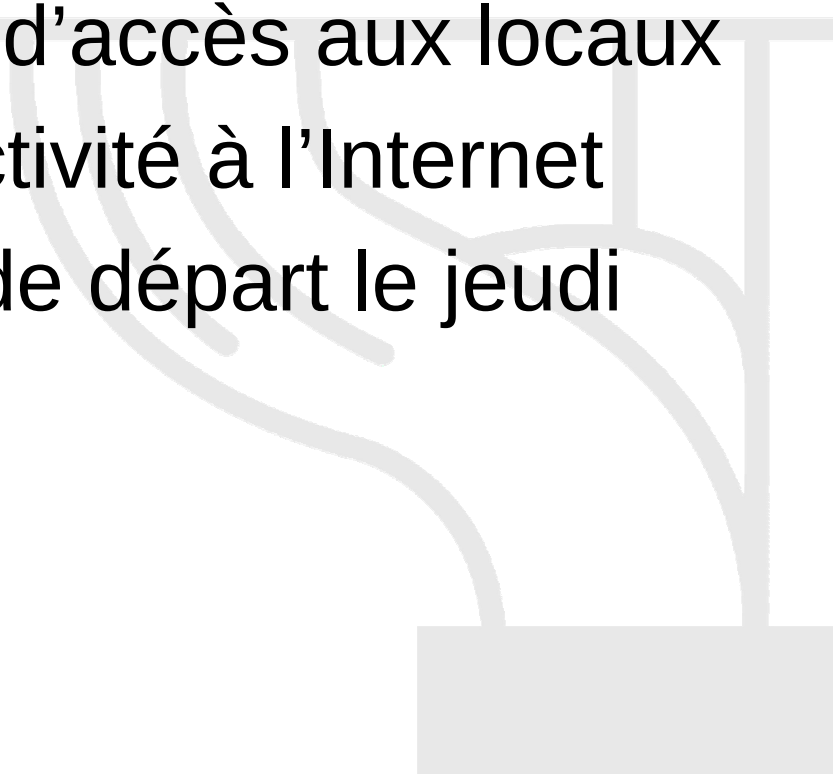


Considérations pratiques

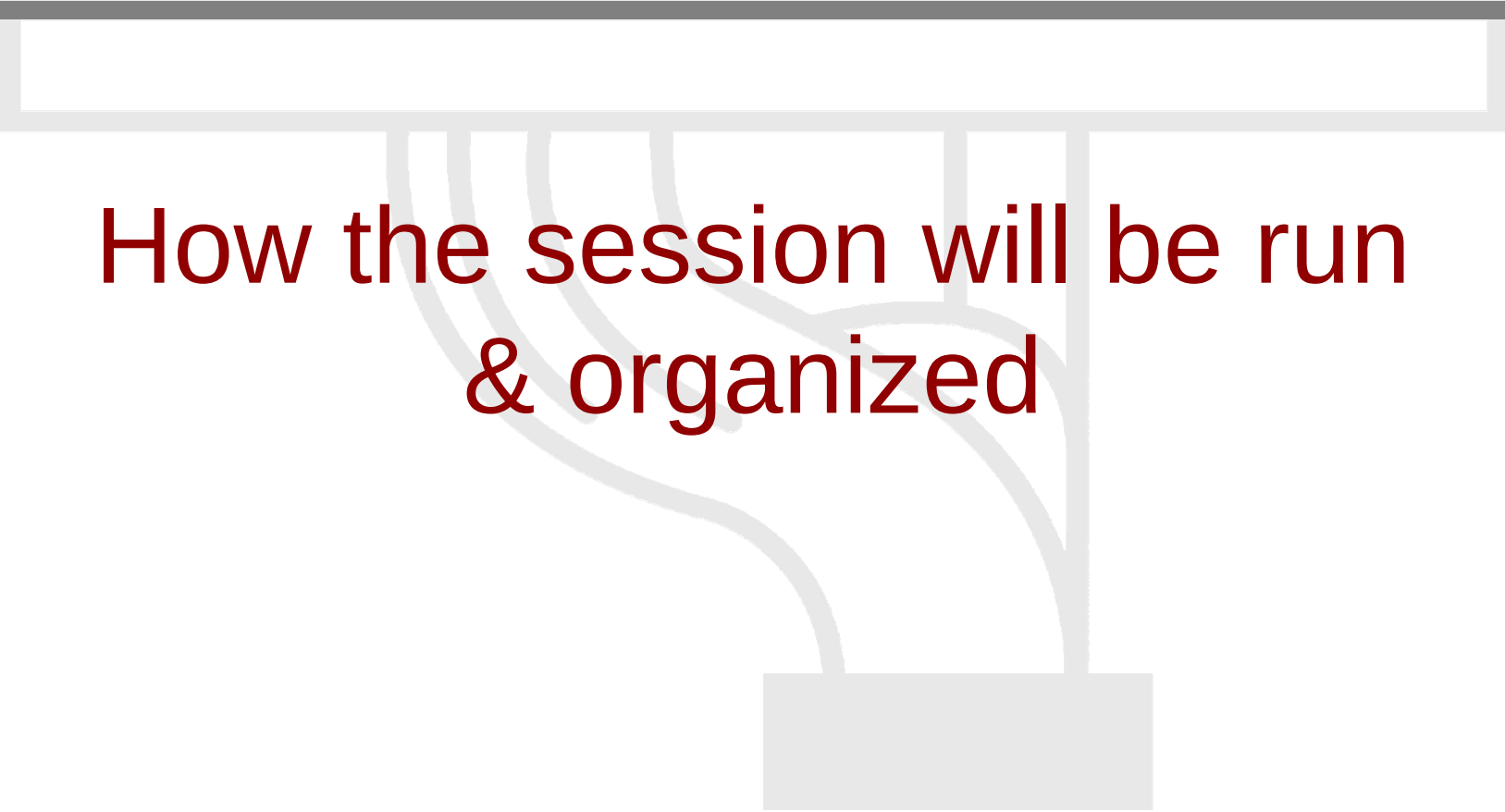
Logistique

...



- 
- Règles d'accès aux locaux
 - Connectivité à l'Internet
 - Heure de départ le jeudi
 - ...





How the session will be run & organized



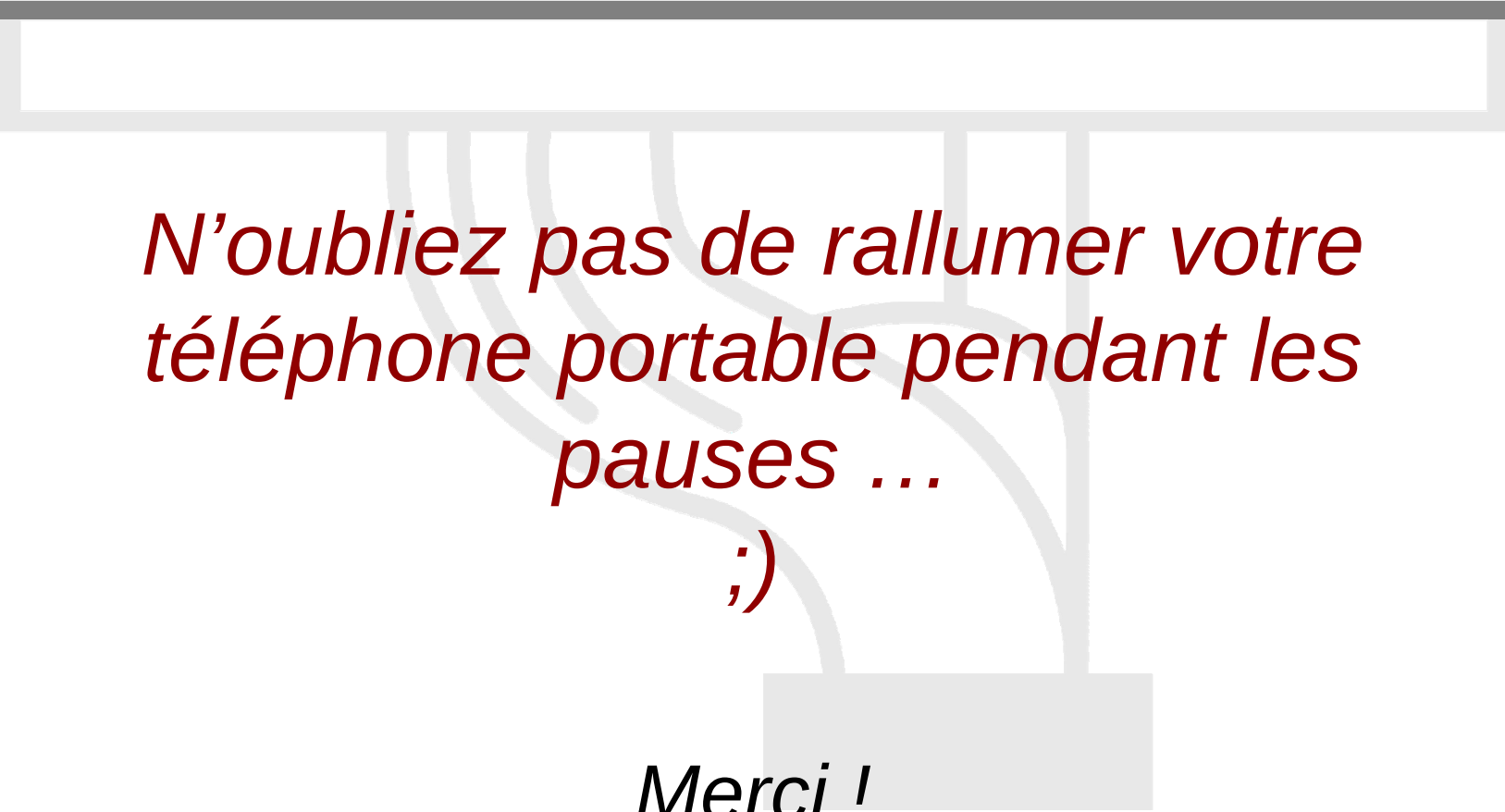
- Discussion (Day#2) + Cases studies on Day#3
 - Be prepared to present
 - Your network topology
 - Your plan to deploy IPv6
 - Your questions / issues
- Workshop language is (kind of) english
- Gifts ... at the end of every day (only)





Questions ?

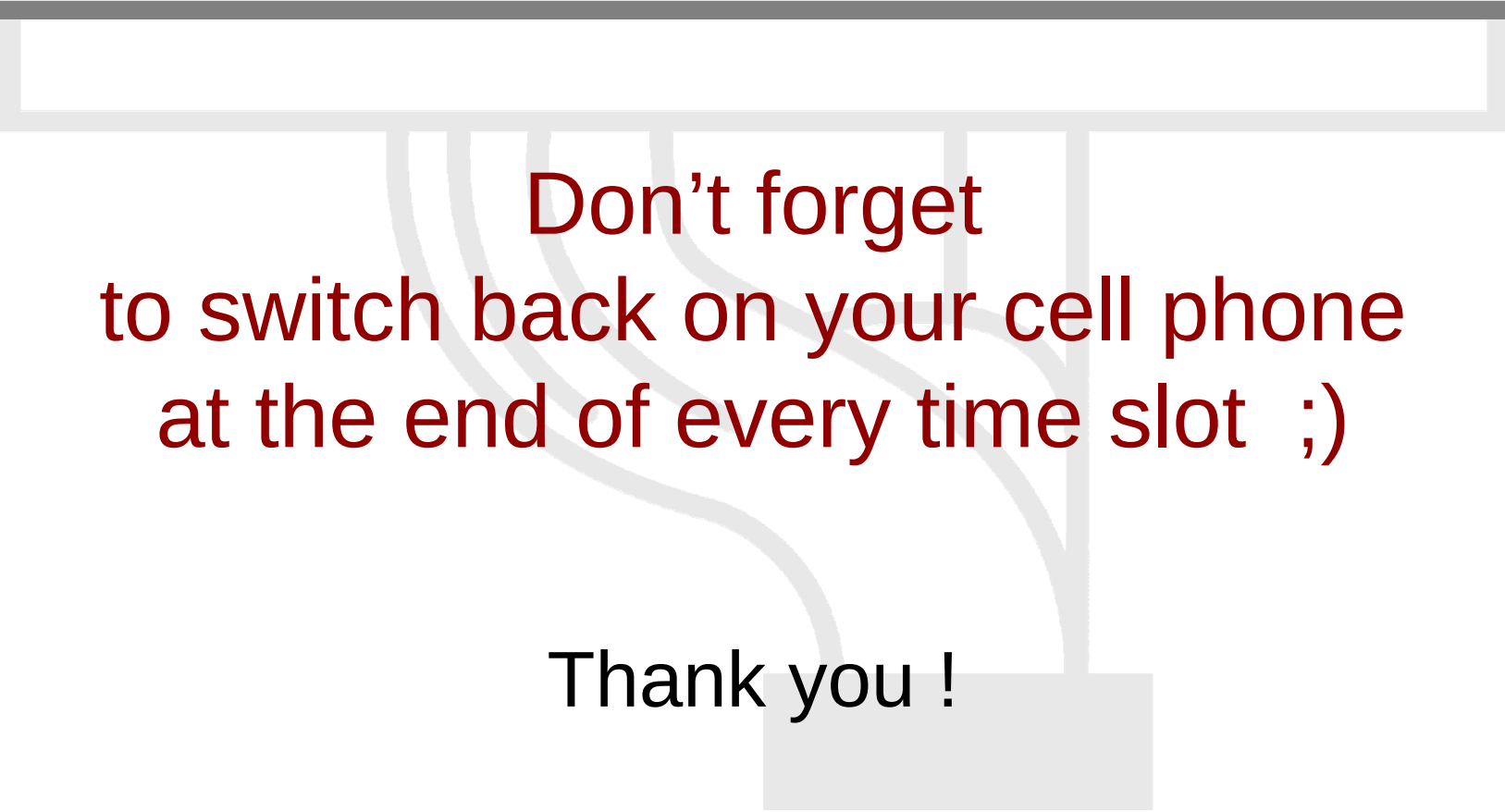




*N'oubliez pas de rallumer votre
téléphone portable pendant les
pauses ...
;)*

Merci !





Don't forget
to switch back on your cell phone
at the end of every time slot ;)

Thank you !

