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**Abstract:**

This deliverable presents a report from the workshop held in Skopje (FYROM) from June 29<sup>th</sup> - 30<sup>th</sup>, 2011. The presentation material is listed, the attendees and their affiliations are given, and the opportunities for further co-operation and follow-up actions are described.

**Keywords:**

IPv6, Support, Training, Testbeds, Modules, 6DISS, 6DEPLOY, Hands-on exercises

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# Executive Summary

One of the main activities in the 6DEPLOY-2 project is to organise workshops to train the different Internet communities in the areas of IPv6 deployment, configuration, and usage. This project is a follow up of previous project activities within and outside the Framework Programmes of the European Commission.

This report details the IPv6 workshop which took place at the Boris Trajkovski Congress Center in Skopje (Former Yugoslav Republic of Macedonia) from June 29<sup>th</sup> - 30<sup>th</sup>, 2011. The workshop was attended by technical staff different national organisations from FYRoMacedonia. The workshop received some national attention in some websites.

The following workshop details are described in this report; the workshop attendees and their affiliations, the programme outline, the material presented, and an assessment of the opportunities for further co-operation and follow-up actions planned.

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## 1. INTRODUCTION

### 1.1 6DEPLOY2 Objectives

The following comprise the 6DEPLOY-2 objectives:

- to support the deployment of IPv6, in Europe and developing regions
- to sustain the wealth of 6DEPLOY training material (e-learning package with subtitles in national languages, presentation material, exercises, etc.)
- to create a catalyst of global IPv6 expertise through the installation of strategically-placed sustainable IPv6 training labs
- to synchronise with the training schedules of AfriNIC and LACNIC (and also APNIC) to exploit training opportunities cost effectively in Africa, Latin America and Asia
- to revive the IPv6 Cluster
- to describe deployment examples on the project Website
- to exploit the expertise and high quality training material from 6DEPLOY, including presentations, the e-learning course and the available IPv6 Labs, and - whilst continuing to offer professional training to organisations in Europe and developing countries - focus on supporting real deployments
- to maintain and update the 6DEPLOY material and include new training media, and multiply its training effectiveness through courses which educate other trainers about the basics of IPv6, so that they can teach others ("training trainers")
- to extend to global scale the IPv6 Labs. Sustainability is achieved initially through the careful selection of locations for the installations (e.g. within NRENs) where the connectivity, funding and qualified staff support are all secured
- to support the (human) networking between the Lab managers with regular workshops.

One of the main activities in the 6DEPLOY-2 project is therefore to organise workshops to train the different Internet communities in the areas of IPv6 deployment, configuration, operation, and management. This activity is a follow up of previous project's activities within and outside the Framework Programmes of the European Commission.

## 1.2 6DEPLOY-2 Workshop Methodology

The 6DEPLOY-2 methodology relating to the workshops is shown in the diagram below:

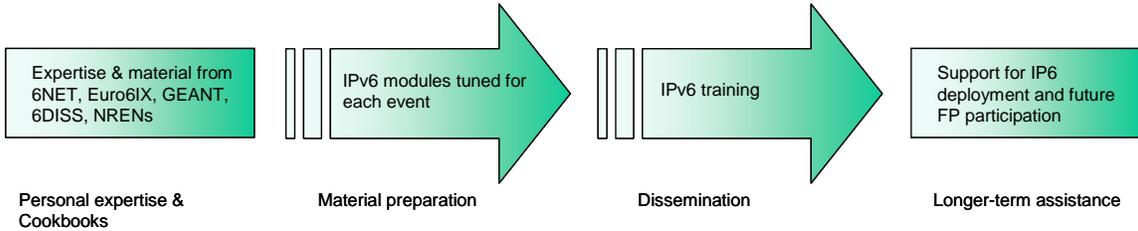


Figure 1-1: 6DEPLOY methodology (diagrammatically)

The approach is to use course material available from 6DEPLOY and elsewhere that relates to IPv6, the e-learning course, and the 6NET IPv6 Deployment Guide book, together which will form the basis of the training material. This training material is supplemented with knowledge from partners' participation in events such as IPv6 Forum meetings, IPv6 Task Force meetings, Internet2 meetings, and the IETF, and from the experience of similar activities brought to the project by the representatives of the Internet Registries in North and South America, the Asia-Pacific region, Africa, and Europe. The knowledge is disseminated through training sessions that, for practical reasons, are often held in conjunction with AfriNIC, LACNIC, APNIC, AfNOG, APRICOT, and ISOC meetings.

After each workshop, feedback reports are collected from the participants, enabling 6DEPLOY-2 to assess the impact of the presentations and to identify any areas that need improvement.

The full set of dissemination materials (including the e-learning course and several managed testbeds) is available from 6DEPLOY and partners' own sources. This includes presentation slides on all issues of Internet deployment and evolution; especially IPv4-IPv6 transition strategies, DNS, DHCP, routing, QoS, MobileIP, multicast, renumbering, auto-configuration, security, monitoring and management tools, and applications. This material was described in the deliverable D1.1.1 "Report of the available training material and the assignment of partners responsible for maintaining each item".

This deliverable presents a report from the workshop held in Skopje at the Former Yugoslav Republic of Macedonia from June 29<sup>th</sup> - 30<sup>th</sup>, 2011. The workshop comprised of theoretical presentations and talk configurations exercises through the 6DEPLOY-2 labs. The initially planned hands-on exercises were postponed since the workshop venue was not suitable; e.g. there were no desks for enabling small groups of participants to working together in order to solve configuration exercises.

Chapter 2 of this document explains the general motivation for running IPv6 workshops, and Chapter 3 describes the specific details of this workshop, in terms of the attendees, the modules that were presented, and the configuration exercises that were demonstrated using the remote testbed. Chapter 4 describes the results of the questionnaires, Chapter 5 identifies opportunities for further collaboration in the region and follow up actions, and Chapter 6 provides some general conclusions.

## 2. THE WORKSHOPS (GENERAL)

Workshops are one of the main mechanisms used by 6DEPLOY-2 to transfer information and to build collaboration.

6DEPLOY-2 is structured to provide an ideal platform for the discussion of deployment scenarios and the exchange of best practices, thereby avoiding duplication of effort, by preventing the waste of time on techniques that are known not to have been deprecated, and generally making the most efficient use of the available resources in a region. Partners in 6DEPLOY-2 have deployed IPv6 on a production basis in their own NRENs, University networks and even on much larger scales. They have documented their experiences in Cookbooks and in IETF informational/best common practice RFCs. The manufacturer in the consortium is building IPv6 products.

The workshops are not only intended to lead to an improved quality of the Internet infrastructure in developing countries, but will also raise the competence of the attendees and, in exploiting the personal contacts made through 6DEPLOY, facilitate and encourage the participation of their organisations in future FP7 calls and beyond.

Impacts from the workshops will include:

- a positive effect towards preventing the “brain drain” from developing countries by bringing interesting and state-of-the-art activities into these regions, thus making information and knowledge resources accessible to scholars both locally and globally;
- an expansion of the conditions for growth by enabling the exchange of ideas, launching joint experiments and projects, disseminating R&D results, and activating market forces; all of which are substantial elements in the process of regional development;
- making European research and industrial concerns aware of the highly skilled personnel who can contribute to the urgently needed improvement of ICT infrastructures, resulting in an increase of the demand for specialized services provided by the highly skilled academics and researchers of the region; and
- the identification of IPv6 deployment activities in the region and an exchange of information about deployment experiences.

While IPv6 standards and services are quite stable, regional variations in practices and operations will require slightly different approaches for collaboration and dissemination. Therefore, the material for these workshops was collected, and the workshop schedules,

formats, and contents were tailored in conjunction with the local organisers so as to suit the type of participants, the subjects to be addressed, the location, the host organisation, the sponsors, etc.

### 3. THE 6DEPLOY-2 WORKSHOP IN SKOPJE (FORMER YUGOSLAV REPUBLIC OF MACEDONIA)

This workshop was held Boris Trajkovski Congress Center in Skopje (Former Yugoslav Republic of Macedonia) from June 29<sup>th</sup> - 30<sup>th</sup>, 2011, and was organised by NIIFI and GRNET, and with local support from NEOTEL (<http://neotel.mk/>). The workshop is described below, including descriptions of the attendees and their affiliations, the programme outline, and the material that was presented.

There was coverage of the IPv6 workshop from the local press. One typical publication is shown in Annex A.

#### 3.1 The Venue and Funding

NEOTEL is an ISP operating in several locations of FYRO Macedonia and it has good relationship with other ISPs, telecommunication providers and educational sector, e.g. local universities and MARNET (NREN). The venue took place at the Boris Trajkovski Sports Centre in Skopje, i.e. a multi-functional indoor sports arena and congress centre. It is located in the Karpoš municipality of Skopje.

The 6DEPLOY-2 budget was used to cover travel expenses and accommodation for the 6DEPLOY-2 trainers. The participants paid a small fee, covering the costs of lunches provided on site. The venue place was provided for free by NEOTEL.

##### 3.1.1 The IPv6 Workshop

The IPv6 workshop consisted of a number of presentations, with practical sessions based upon the material from the lectures and lively discussions about enabling IPv6 in various environments.

NEOTEL provided wireless LAN access for the participants while IPv6 connectivity was provided by an IPv6 tunnel terminated at the NIIFI network. The workshop was conducted by János Mohácsi (NIIFI), Athanassios Liakopoulos (GRNET) and Andrew Yourtchenko (Cisco). In addition, Jan Zorz, member of Slovenian Go6 ([go6.si](http://go6.si)) was also invited to provide insights for the IPv6 activities in Slovenia and give an overview about the latest Mobile IPv6 tests conducted by Go6.

All the presentations were given in English.

### 3.2 Attendees

Below is a list of participants of the workshop.

<b>Name</b>	<b>Affiliation/Organisation</b>	<b>Remark</b>
Igor Vojnovski	S&T	
Maksim Tocevski	S&T	
Dimitar Mojsovski	Assecco	
Kole Mavrov	NetKabel	
Marjan Gorgiev	G Beton	
Tome Josifoski	KDS Kabelnet	
Goran Janikijevik	Semos	
Igor Stameski	Centrium Tech LTD	
Tatjana Stojceska	Macedonian Telekom	
Risto Kocoski	Macedonian Telekom	
Goran Ljubic	ASI	
Ergis Milo	Tring (Albania)	
Agelos Maragakis	Tring (Albania)	
Vladimir Naumovski	KIBS	
Goce Gjorgjijoski	Marnet	
Tomica Georgievski	Makpetrol	
Arben Ali	Makpetrol	
Besfor Jashari	Konet	
Shqipron Ibrahimimi	Konet	
Bojan Blazevski	Akton	
Vedran Zafirovski	Neotel	
Marjan Atanaskov	Neotel	

Riste Tashkoski	Neotel	
Vlatko Srbinovski	Neotel	
Jovan Karamacoski	Neotel	
Konstanin Dimitrovski	Neocom	
Milko Popov	Neocom	
Milan Temelkovski	Neocom	
Sasso Janevski	Neocom	
Damjan Georgievski	ONE	
Olivera Koteska	ONE	
Vladimir Stefanov	ONE	
Goran Rumenovski	ONE	
Stefan Ivanovski	ONE	
Vladimir Stepic	ONE	
Jove Blazev	ONE	
Goran Jelenkovic	VIP	
Blagoj Arizanov	Spidernet	
Joco Tikvesanski	Univerzitet Stip	
Goce Bogatinov	Univerzitet Stip	
Teodor Dimitrov	Makpetrol	

**Table 3-1: Skopje (Macedonia) Workshop list of participants**

The attendees’ technical background with IP networking and other IT technology was rather heterogeneous since they came from different area of IT sectors. Therefore, the presentations were designed to cover a broad range of IPv6 issues rather than focusing on a specific thematic area.

### 3.3 Workshop programme

The agenda was agreed between 6DEPLOY-2 and the local organisers. The initially proposed agenda and the related material were submitted in advance to the local organisers so as to decide which topics should be prioritised and so manage the logistics accordingly.

The programme of the workshop is presented in the following table:

Date	Time	Title of session
Wednesday 29/06/2011	<b>Lecture Session 1</b>	
	10:15	Introduction to 6DEPLOY-2 - Janos Mohacsi
	10:30	Introduction and awareness / IPv6 Experience in Slovenia - Jan Zorz
	11:00	Introduction to IPv6 - Andrew Yourtchenko
	11:30	IPv6 Basics: Protocol and Addressing - Andrew Yourtchenko
	12:30	<i>Lunch</i>
	<b>Lecture Session 2</b>	
	13:30	IPv6 and associated protocols (autoconfig + other config) - Athanassios Liakopoulos
	15:00	<i>Coffee Break</i>
	15:30	IPv6 DNS - Athanassios Liakopoulos
	16:00	IPv6 addressing case studies + Deployment of IPv6 and Transition mechanisms - Janos Mohacsi
	17:30	<i>End of First Day</i>
	Thursday 30/06/2011	<b>Lecture Session 3</b>
09:00		Routing - Andrew Yourtchenko
09:30		World IPv6 day experiences at NIIF/Hungarnet - János Mohácsi
10:00		World IPv6 day experiences at Cisco - Andrew Yourtchenko
10:30		<i>Coffee Break</i>
11:00		Routing (practical), Configuring routers
12:00		<i>Lunch</i>
<b>Lecture Session 4</b>		
13:00		IPv6 in DSL environment - Athanassios Liakopoulos
15:00		<i>Coffee Break</i>
15:15		IPv6 Security - Janos Mohacsi
16:00		IPv6 Mobility - Athanassios Liakopoulos
16:30		IPv6 Mobility in Emergency response teams - Jan Zorz
17:00	Knowledge evaluation, Q&A (assessment)	
17:30	<i>End of Second Day</i>	

Table 3-2: Skopje Workshop programme

### 3.4 Presentation material

The following 6DEPLOY-2 modules were updated before the workshop and presented:

Modules	Hands-on exercises	Presented by	Affiliation
Introduction to 6DEPLOY-2(2)		Janos Mohacsi	NIIF
Introduction to IPv6		Andrew Yourchenko	Cisco
Introduction and awareness / IPv6 Experience in Slovenia (Non 6DEPLOY-2)		Jan Zorz	Go6.si
Associated Protocols		Andrew Yourchenko	Cisco
IPv6 and associated protocols (autoconfig + other config)		Athanassios Liakopoulos	GRNET
IPv6 Support in the DNS		Athanassios Liakopoulos	GRNET
IPv6 addressing case studies + Deployment of IPv6 and Transition mechanisms		Janos Mohacsi	NIIF
World IPv6 day experiences at NIIF/Hungarnet (Non 6DEPLOY-2)		Janos Mohacsi	NIIF
World IPv6 day experiences at Cisco (Non 6DEPLOY-2)		Andrew Yourchenko	Cisco
Mobile IPv6		Athanassios Liakopoulos	GRNET
IPv6 in DSL environment		Athanassios Liakopoulos	GRNET
Routing		Andrew Yourchenko	Cisco
Routing lab	LAB2	All	
Security		Janos Mohacsi	NIIF

Table 3-3: Skopje Workshop list of modules used

### 3.4.1 Modules

Below is a brief description of each module's content:

- **Introduction to IPv6:** This module explains why a new version for IP, IPv6, has been developed. A brief history of IPv6, its motivation and benefits are given.
- **Associated Protocols:** This module describes new protocols associated to IPv6: e.g. Neighbour Discovery Protocol, SEND, ICMPv6, MLD, DHCPv6, etc.
- **Auto-configuration:** This module describes stateful (DHCPv6) and stateless (Router Solicitation/Router Advertisement) autoconfiguration mechanisms.
- **IPv6 Support in the DNS:** This module describes new Resource Records for IPv6 DNS, availability of IPv6 in the root servers zone and CC-TLDs, etc.
- **Deployment and Transition mechanisms:** This module explains different approaches to deploy IPv6 in an IPv4 environment. Transition concepts are introduced and several transition mechanisms are covered: Dual Stack, tunnels, tunnel broker, 6to4, Teredo, Softwires and translation (at various layers). The deployment scenarios are described various address allocation and address management strategies.

- **Mobile IPv6:** This module describes IPv6 mobility and new features compared to IPv4 mobility.
- **Routing:** This module mainly describes the differences between IPv4 and IPv6 routing protocols for OSPFv3, EIGRP, RIPng, BGP4+, ISIS and MPLS.
- **Security:** Several issues are covered like the IPsec model, privacy extensions, ND threats, IPv4 vs. IPv6 Threat Analysis, IPv6 security issues, practical IPv6 security issues and firewalling IPv6. Security issues from transition and coexistence point of view are also provided.

### 3.4.2 Hands-on exercises

Practical exercises, known as “hands-on” modules, have been designed to help ensure that the workshop attendees will be able to install IPv6 in their own environment after the course is over. Local participants could test the IPv6 connectivity via wireless LAN using their own laptops and access the routing lab in a simulated environment.

The router lab, similarly to previous 6DEPLOY-2 workshops, was used for external (BGP) and internal (OSPFv3) routing protocols exercises.

### 3.5 Photographs taken at the event



Figure 3-1: Opening of the workshop



Figure 3-2: Lecturers at the Skopje workshop



Figure 3-3: Students at Skopje workshop



Figure 3-4: Students at the workshop (2)



Figure 3-5: Presenting at the Workshop



Figure 3-6: Presenting at the workshop (2)



Figure 3-7: Discussion of a Mobile IPv6 problem

## 4. ANALYSIS OF THE FEEDBACK QUESTIONNAIRES

A questionnaire has been specially designed for the purpose of getting feedback from the participants regarding the suitability of the course material, and the presenters' ability to convey information, and the relevance of the information to the expectations of the attendees.

Personal information was not mandatory, so as to allow for anonymous responses.

Each participant was first asked to indicate:

- his/her organisation and job responsibilities, and
- his/her plans for IPv6 deployment in his/her organisation.

Then, for each theoretical presentation and "hands-on" session, each participant was requested to assess "usefulness", "quality of presentation", "familiarity with the topic", "quality of the course documentation", "general organisation", etc.

### 4.1 General questions related to participants and IPv6

<b>About the participants</b>		
40 participants were present, 20 filled the online questionnaire and 20 of them are full and 0 partial		
<b>Employment sector</b>	Government	1
	University or other higher education	2
	Schools or further education	0
	Research	0
	Health	0
	Commercial	10
	Other (please specify)	(9)*
<b>Job function</b>	Government Advisor	0
	Senior Manager	0
	IT Manager	4
	Systems Administrator	7
	Network Administrator	14
	Researcher / Postgraduate	0
	Undergraduate	0
	Other (please specify)	(3)*
<b>Usage of IPv6</b>		
Do you use IPv6 yourself?	Yes	7
	No	7
Does your organisation use IPv6?	Yes	2
	No, but planned in this year	2
	No, but planned in the next year	4
	No, but planned in the longer term	9
	No, and no plans as yet	3

\* See the graphics section for more information

**Table 4-1: General questions related to participants and IPv6**

## 4.2 Questions regarding the workshop

<b>About the Workshop</b>				
<b>Usefulness of the topic</b>	Very useful	Useful	Slightly useful	Not useful
Introduction and awareness/IPv6 Experience in Slovenia	8	7	1	0
Introduction to IPv6	4	11	0	0
IPv6 Basics: Protocol and Addressing	5	10	1	0
Associated Protocols and Autoconfiguration	4	11	1	0
IPv6 Support in the DNS	2	13	1	0
Addressing case studies	3	12	0	0
Deployment and Transition mechanisms	3	10	1	0
Routing Protocols	4	12	0	0
Security	7	7	2	0
IPv6 Mobility in Emergency response teams	4	7	5	0
Routing Configuration laboratory	3	8	4	0
IPv6 clients laboratory	3	8	3	0
<b>Quality of the presentation</b>	Excellent	Good	Average	Poor
Introduction and awareness/IPv6 Experience in Slovenia	10	4	1	0
Introduction to IPv6	8	7	0	0
IPv6 Basics: Protocol and Addressing	8	6	1	0
Associated Protocols and Autoconfiguration	7	7	1	0
IPv6 Support in the DNS	6	7	2	0
Addressing case studies	6	7	1	0
Deployment and Transition mechanisms	6	6	2	0
Routing Protocols	5	9	1	0
Security	9	5	1	0
IPv6 Mobility in Emergency response teams	9	5	1	0
Routing Configuration laboratory	4	11	0	0
IPv6 clients laboratory	5	9	0	0
<b>Familiarity with the topic?</b>	None	Some	Most	All
Introduction and awareness/IPv6 Experience in Slovenia	9	6	1	0
Introduction to IPv6	0	3	11	2
IPv6 Basics: Protocol and Addressing	1	5	8	2
Associated Protocols and Autoconfiguration	1	8	6	1
IPv6 Support in the DNS	3	8	3	2
Addressing case studies	1	10	3	2
Deployment and Transition mechanisms	3	6	5	1
Routing Protocols	2	6	7	1
Security	3	9	2	2
IPv6 Mobility in Emergency response teams	8	6	2	0
Routing Configuration laboratory	2	7	5	1
IPv6 clients laboratory	2	8	3	1
<b>Quality of the course documentation</b>	Excellent	Good	Average	Poor

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		4	11	1	0
<b>General workshop organisation</b>	Excellent	Good	Average	Poor	
	3	10	3	0	
<b>Recommend to your colleagues?</b>	yes	no			
	16	0			

Table 4-2: Questions regarding the workshop

### 4.3 Results graphics

Following are some graphics that represent the above results in a more friendly way, so as to ease their interpretation.

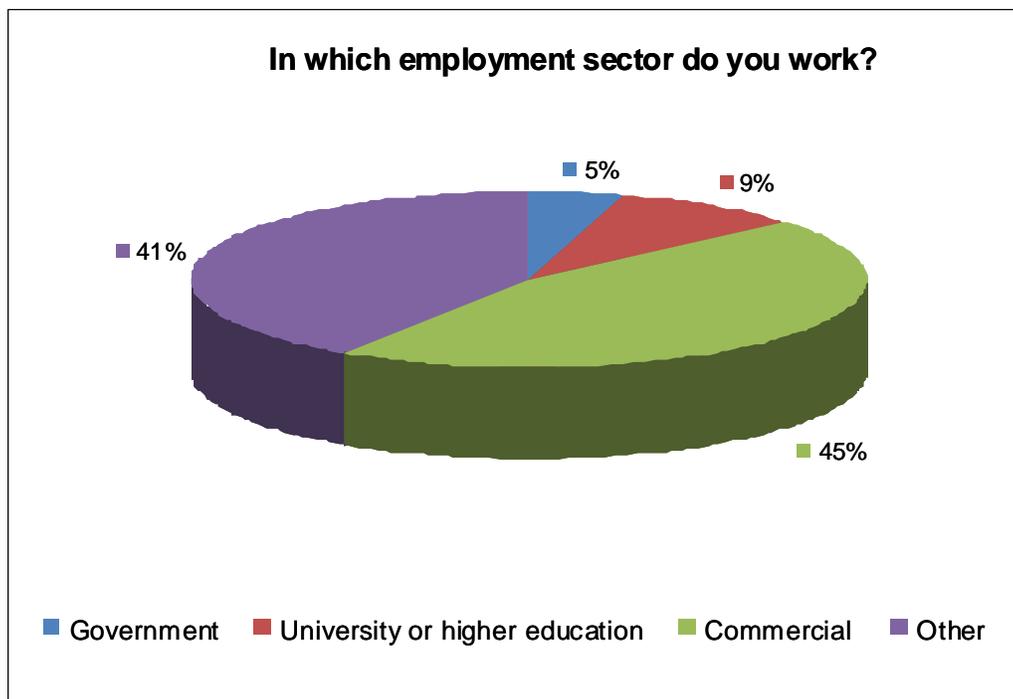


Figure 4-1: In which employment sector do you work?

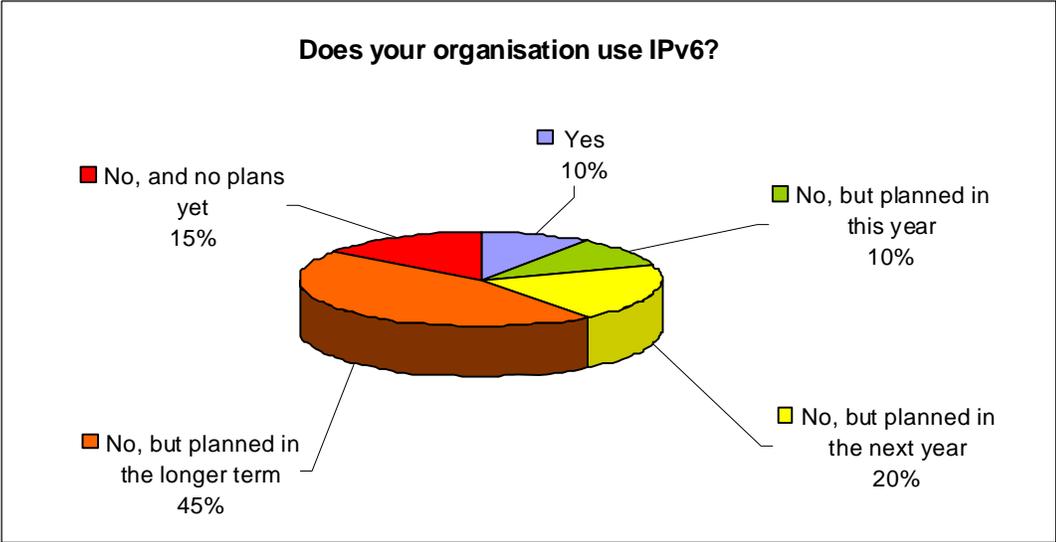


Figure 4-2: Does your organisation use IPv6?

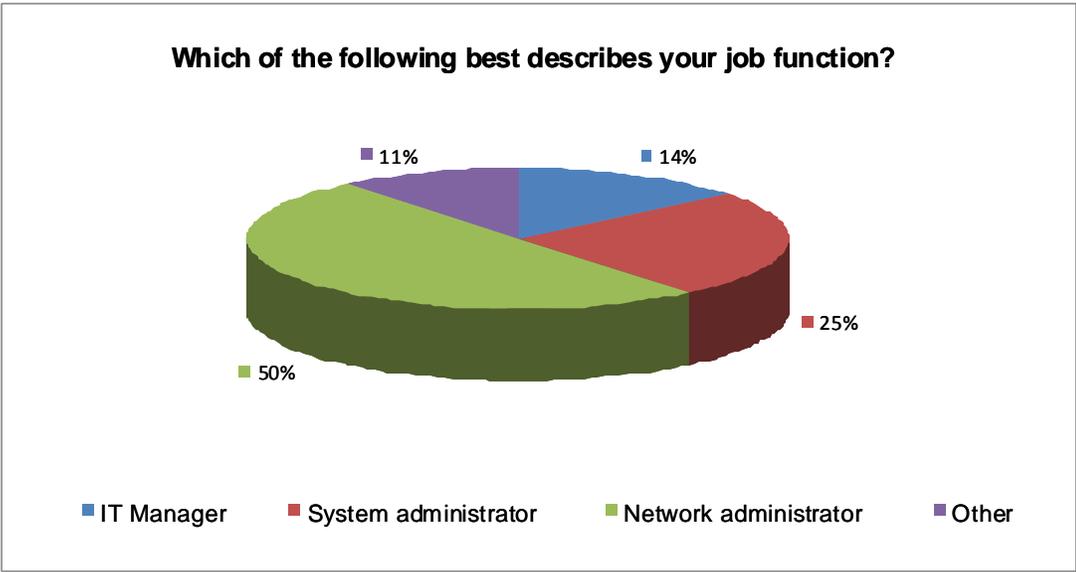


Figure 4-3: Which of the following best describes your job function?

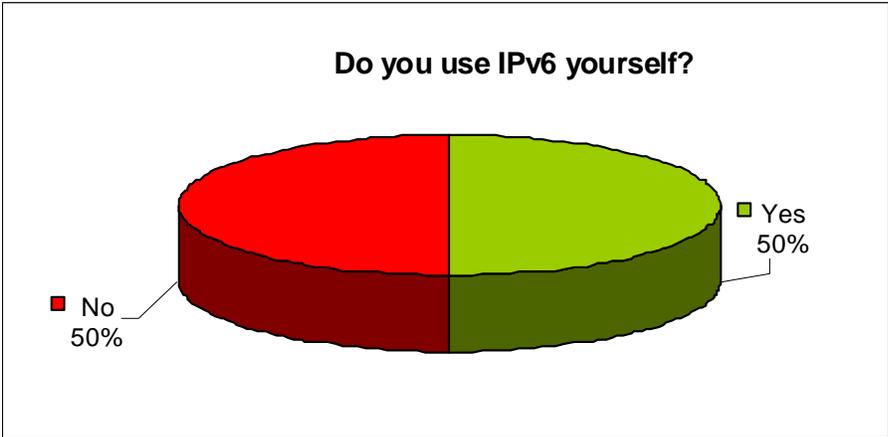


Figure 4-4: Do you use IPv6 yourself?

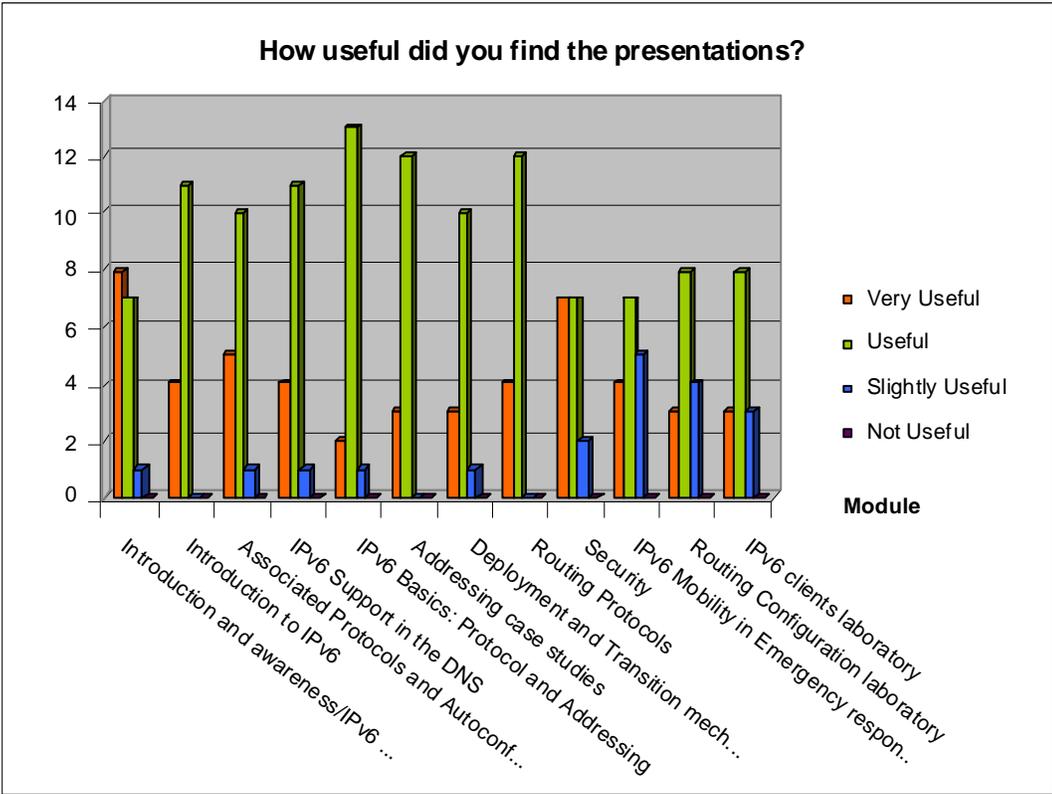


Figure 4-5: How useful did you find the presentations?

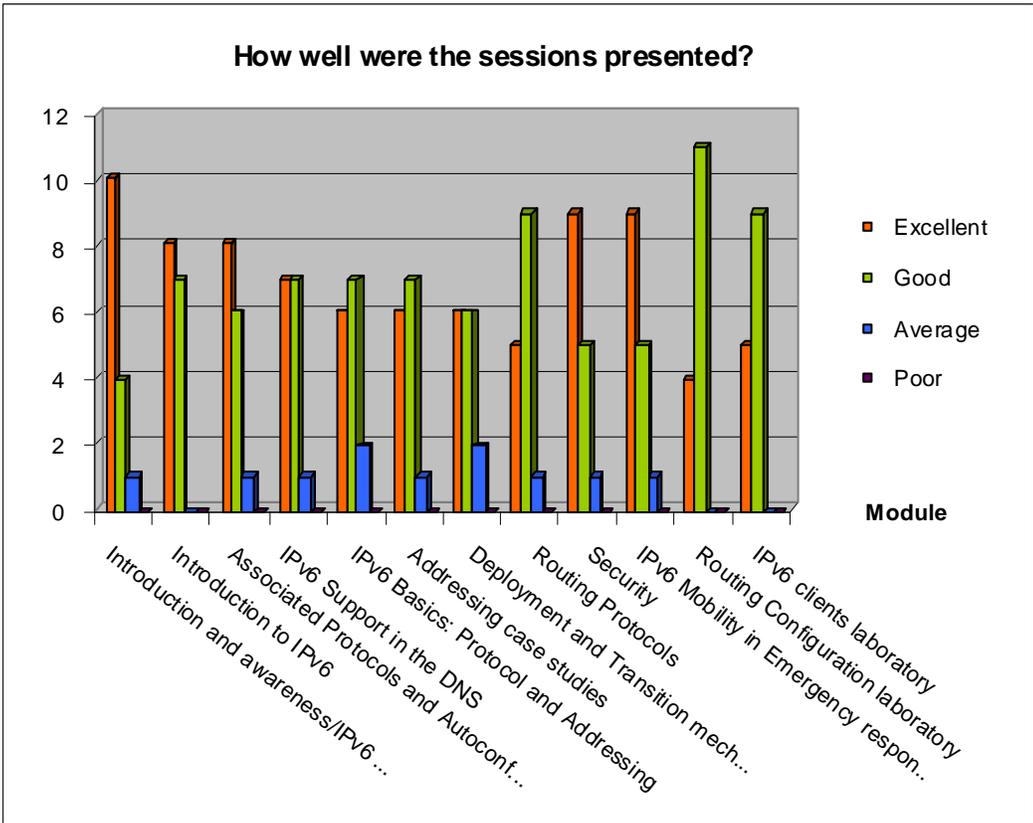


Figure 4-6: How well were the sessions presented?

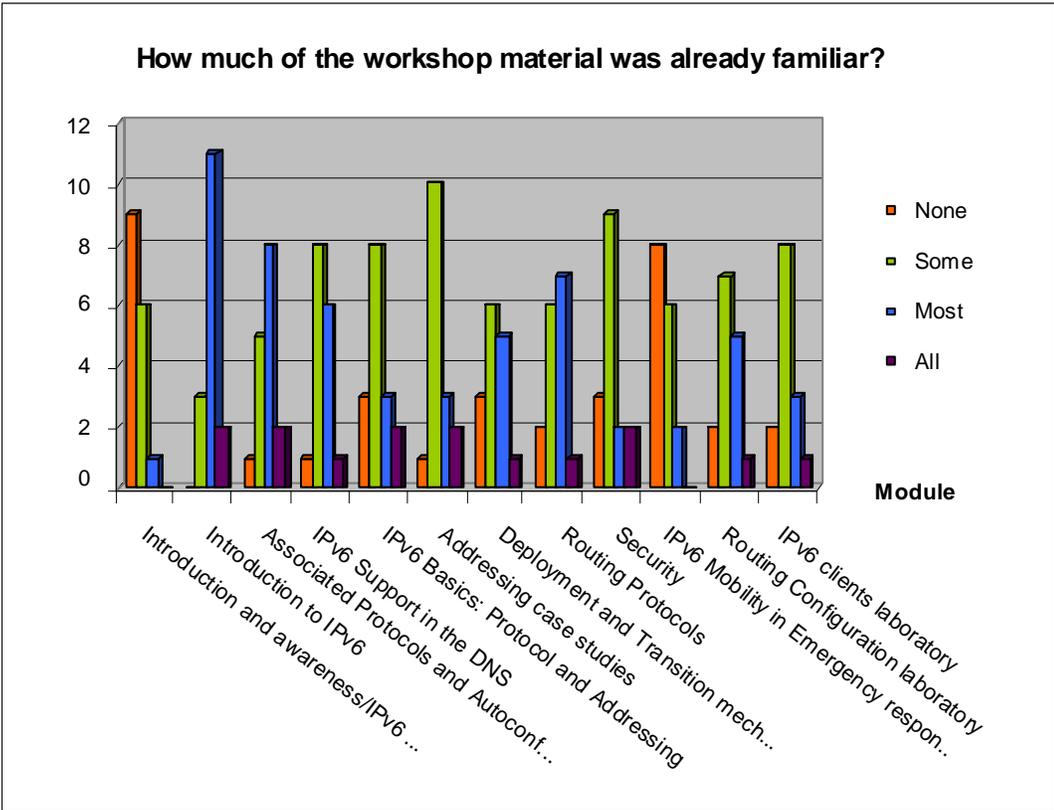


Figure 4-7: How much of the workshop material was already familiar?

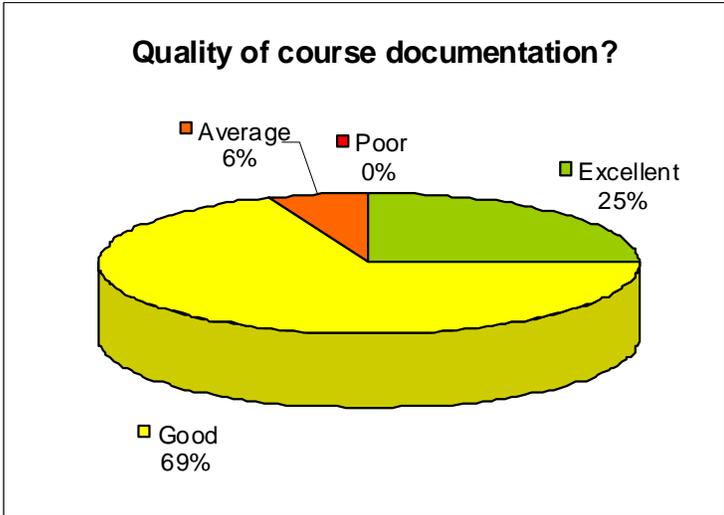


Figure 4-8: Quality of the course documentation?

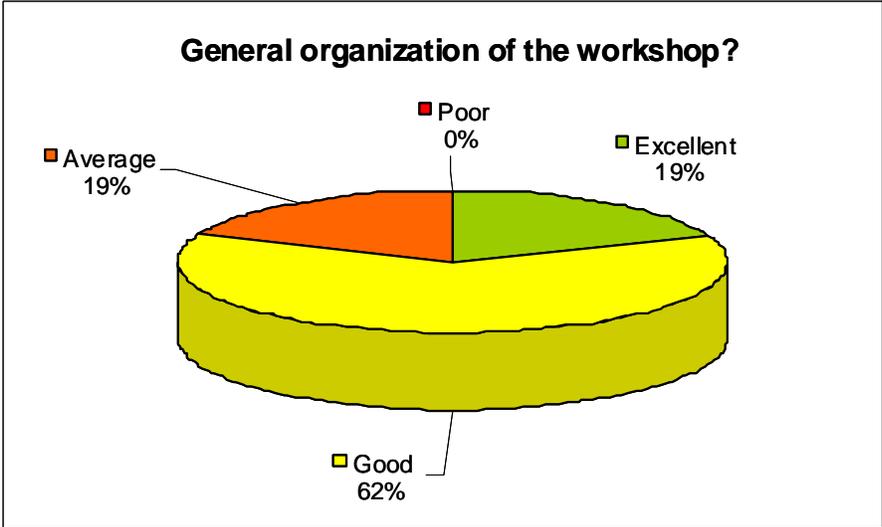


Figure 4-8: General organization of the workshop?

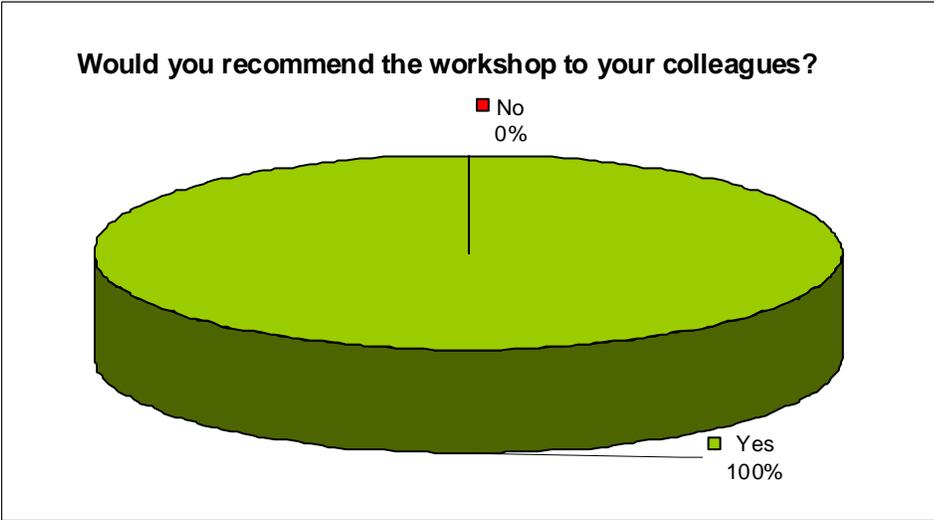


Figure 4-9: Would you recommend the workshop to your colleagues?

### 4.4 Participants comments

It should be noted that the participants had different technical backgrounds. For example, some were network engineers (and therefore more interested in routing protocols and troubleshooting practices) while others were system administrators (and therefore more interested in applications and monitoring tools).

Within the questionnaire there were three open questions where the trainees could give their feedback on the workshop. Below are almost all of the responses. Note that some are repeated (number put between parentheses).

Here are some comments provided by the trainees:

*What topics would you have liked to **hear more about**?:*

- *(IPv6 security, IPv6 transitions and dual stack (working in parallel). The bad side of IPv6 (control over people and citizens!)*
- *Strategies for implementing IPv6, IPv6 Security, Practical experience in deployment of IPv6 and more IPv6 practical implementation examples.*
- *More practical examples.*
- *Detailed description about IPv6 in mobile networks,*
- *More practical deployment, as well more about routing, security, switching*
- *Practical Implementation of IPv6, firewalls and security*

*What topics would you have liked to **hear less about**?*

- *Any commercial and profit that lies behind the transition to IPv6*
- *None in particular, maybe the presentation can be a bit more dynamic.*
- *The conspiracy theory behind use of IPv6 in everyday life, ex: tracking people, controlling devices remotely!!!*

*Any **other comments**:*

- *What would be with the IPv4 after fully implementation of IPv6?*
- *It was very interesting and very educational workshop. Thank you.*
- *Good job*
- *I support this event and I'll try to be promoter of idea for upgrade of existing IPv4 networks with IPv6 compatibility everywhere I can.*
- *Everything was great and there were a lot of details about IPv6, but due to lack of knowledge about IPv6 I cannot understand some things.*
- *Everything was nice, but I think there should be much more practical examples with IPv6, like with the mobile phone. IT people want to see how it works in practice; the theory and readings should be covered at home on lectures and courses.*

## 5. OPPORTUNITIES FOR FURTHER CO-OPERATION

In all the workshops, the attendees were informed on how to stay in contact with the 6DEPLOY-2 partners in case further questions would arise regarding IPv6 deployment, addressing plans, etc. In this respect, the role of the *6DEPLOY-2 Helpdesk* was explained as being the proper way to submit questions to the IPv6 expert group. An email to [helpdesk@6DEPLOY.eu](mailto:helpdesk@6DEPLOY.eu) will be distributed to a mailing list composed of volunteers who are available to answer (or forward) any kind of questions, requests, etc. Also a web form can be used to send requests to the project.

Additionally, the attendees -and any trainers from the region- can follow the e-learning course and/or check the availability of the 6DEPLOY-2 remote labs and use these.

Janos Mohacsi, Anthanassios Liakopoulos and Jan Zorz had several discussions with both Vedran Zafirovski on what was expected of the training programme of an IPv6 workshop. In addition, Athanassios Liakopoulos (GRNET) and members -also workshop participants- from the MARNET and the local university had the opportunity to organise an additional (informal) meeting related with the interconnection of the two neighbouring NRENs using the infrastructure from the SEELight project and discussed further opportunities for collaboration with the other South Eastern European NRENs.

Vedran Zefirovski has the intention to organise another workshop in the Former Yugoslav Republic of Macedonia focusing in hands-on exercises and sharing IPv6 deployment experience with the National IPv6 summit in Macedonia. He is relying on support from 6DEPLOY-2 and GO6.si members.

## 6. CONCLUSIONS

Workshops are a key mechanism through which information, knowledge, and know-how are transferred to less experienced countries and participants. The workshops enable us to build constituencies and raise awareness; disseminate, benchmark, and validate the research results from the EU's Framework Programmes; promote European technologies; exchange best practices; and offer information related to standards and interoperability issues.

The 6DEPLOY-2 workshops provide an important role of informing and enabling the adoption of IPv6. With particular emphasis on the technical aspects of IPv6 the workshops enable participants to go out and deploy IPv6 in their networks and services.

Local participants have proven their interest in deploying IPv6 in their organisations and we proposed the necessary steps to successfully enable IPv6 in the local networks.

The feedback from the workshop was provided via the online feedback questionnaire. The impact of the workshop was good in Macedonia, with involvement of from leaders of the local ISPs and universities. The event attracted some coverage by the national press, especially the electronic media. The knowledge and experience gained will be vital in the continued expansion of the Internet into this country.

## 7. REFERENCES

6DEPLOY-2 website: <http://www.6DEPLOY.eu>

6DISS website: <http://www.6diss.org>

Hands-on modules: <http://www.6DEPLOY.eu/index.php?page=hands-on>

How-to organise an IPv6 workshop:

<http://6diss.6DEPLOY.eu/workshops/workshop-guidelines.pdf>

Training the trainers workshop: <http://6diss.6DEPLOY.eu/workshops/ttt/>

e-learning package: <http://www.6DEPLOY.eu/index.php?page=e-learning>

6DEPLOY-2 Workshops Agenda and detailed information:

<http://www.6DEPLOY.eu/index.php?page=workshops>

NEOTEL: <http://www.neotel.mk>

## ANNEX A: PRESS COVERAGE/INTERNET APPEARANCE

There was coverage of the event in local press and in the national electronic publication. This is an article from a Macedonian internet publication, <http://365.com.mk>, which is one of the most popular Macedonian technical and scientific Internet portal.

