Project no. 015926

6DISS

IPv6 Dissemination and Exploitation

Instrument: SPECIFIC SUPPORT ACTION

Thematic Priority 2

D02: Workshop Schedule

Due date of deliverable: 30th June 2005
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Executive Summary
This Deliverable defines the schedule of the workshops, the locations, the parallel events with which synergy will be exploited, the local organiser, the lead partner from 6DISS and the partners that will support the lead partner with presentations of specific modules.

History
V1.0:   This initial version gives accurate information for the first workshops, but the dates of some future events are not yet known. These details will be inserted into new releases of this document, and also listed on the project's Website (www.6diss.org/calendar).

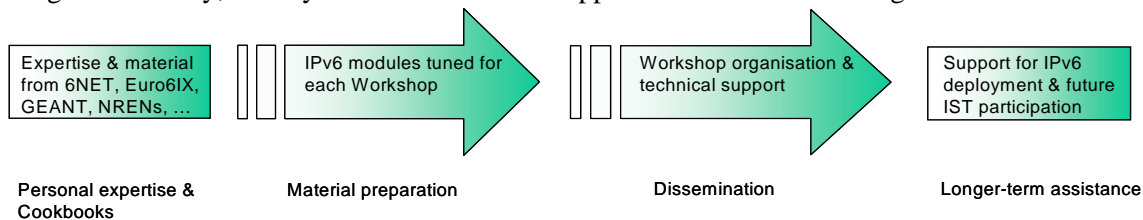| Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	✓
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1. Executive Summary

The declared objectives of 6DISS are:

1. To establish and operate a Specific Support Action of information exchange for the optimal transfer of knowledge on Internet deployment and evolution to emerging research network operators, Universities, commercial organisations, ISPs, governments and regulators in the following countries[1]:

   - The Asia-Pacific region,
   - Africa[2],
   - South and Central America,
   - Mediterranean partner countries[3],
   - Balkan countries[4],
   - Newly-Independent States (NIS)[5],
   - The Caribbean.

2. To enhance the knowledge base of the partners by exchanging deployment experiences with especially India and China.

Diagrammatically, the key thread of the 6DISS approach is shown following:

The target countries for 6DISS are also often ones most likely to benefit from IPv6 adoption, due to their current shortage of global IPv4 addresses.

6DISS provides training courses and practical workshops to those responsible for the installation, operation and maintenance of the National Research and Education Networks in these developing regions, and also informs strategists/decision makers in these countries of the benefits of deploying IPv6. Specific material includes how to install IPv6 versions of: DNS, DHCP, routing, multicast, QoS, renumbering, monitoring and management, and applications. The presentation material will be improved throughout the 6DISS project, taking into account feedback from the developing countries. Reports will also be made available on the status of standardisation, IPv6 Forum activities, etc.

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[1] The specific countries targeted in each region were selected on the basis that:

- the developing countries are precisely those identified by the Call,

- the countries are generally lagging behind in the deployment of broadband and preparedness for IPv6, and can therefore benefit most from the support of projects which already have the experience,

- the countries are precisely those with which 6DISS partners have very close working relationships,

- the developing countries in Europe are those that - in the longer term - might become candidates for membership of the EU, or are amongst those with which the EU has special international collaborative agreements for participation in the RTD Programmes.

[2] Including sub-Saharan Africa, South Africa, Angola and Mozambique.

[3] Including Turkey

[4] Including the Associated Countries of Bulgaria and Romania. Turkey and the Republic of Moldova will be invited too

[5] Including the neighbouring country of Afghanistan

The dissemination will take the form of workshops or other regional/local events to build constituencies, raise awareness, and exchange best practices.

The following additional unique features support the workshops:

1. E-learning material

    This has several purposes:
    - an advertisement, to encourage people to attend the workshops
    - a guide as to what one can expect to learn more about in a workshop
    - a pre-study prior to attending a workshop
    - a means of self-assessing one's own ability (helps persons decide if they should attend the workshop)
    - a means for the organisers (who can access the results) to decide who should attend the workshop
    - a means for the trainers (who can access the results) to determine the level of ability of the attendees
    - a pointer to reference material where more detail can be found
    - answering questions, without needing to involve the Tiger Team

2. Remote Testbeds

    Two testbeds are being built (at Cisco in Brussels, and at RENATER in Paris) which can be accessed remotely from the workshops, especially for occasions when only limited equipment is available at the local site. These testbeds will be equipped with IPv6-capable devices from several different manufacturers. The testbeds will also be used for IPv6 training (both for engineers and for training the trainers), and as an integral part of the e-learning programme.

3. Tiger Team

    A helpdesk service (helpdesk@6diss.org) is offered for assisting with any aspect of IPv6 deployment.

This Deliverable gives the schedule of the workshops, the locations, the parallel events with which synergy will be exploited, the local organiser, the lead partner from 6DISS and the partners that will also attend for support (see section 4). Whilst the details for the first workshops are known, the information is understandably less precise for the later ones. As the dates for the future workshops approach and these workshops become better defined, this Deliverable will be updated.

2. Motivation

Workshops are the main mechanism employed by 6DISS for the information transfer and building of collaborations.

In WP1, the material for the workshops is collected and maintained, and the workshops are tailored in conjunction with the local organisers, in terms of the type of participants, the focus of the material to be presented, the location, sponsoring, etc. The information to be disseminated relates mainly to IPv6 deployment that has been collected from partners' participation in several European initiatives, led by experts from the 6NET, Euro6IX and GÉANT projects. In this way, existing European R&D results are given increased value and visibility through a structured programme of information exchange and practical support.

In order to ensure that the impact of the 6DISS workshops is effective, the target audience for the co-operation comprises the early adopters of the technology and strategists/decision makers; namely, specialists responsible for the research infrastructure, University network managers and ISPs (typically the NREN[6] community). Presentations by 6DISS partners in other events (for example, in association with IPv6 Forum conferences/workshops) also enables the project to address government ministers and regulators. These people are the ones who will collectively determine the rate of deployment of the latest Internet technologies, and therefore the impact will be that they will promote the upgrading of the networks to a state of the art that is comparable with EU countries. These people are also from precisely those organisations that we wish to encourage to be active participants in future IST projects. Through the personal contacts, and knowing more about their skills and network infrastructures, we will be able to learn better how to integrate them into future project proposals.

The 6DISS project will therefore engage both the strategic decision makers and the network managers and administrators who operate day-to-day facilities and services. Different audiences will require different material and approaches.

Other groups that will feel the impact of 6DISS will be the students in the Universities. As the IPv6 deployment spreads outwards from the NRENs to the University communities, other deployment issues will be raised. 6DISS has been structured to provide the ideal platform for the discussion of such deployment scenarios, and the exchange of best practices, thereby avoiding duplication of effort, wasting effort on inappropriate solutions, and generally making the most efficient usage of the available resources. Partners in 6DISS are active in deploying IPv6 on a production basis in their own University networks, and documenting their experience in Cookbooks and in IETF informational/best common practice RFCs; this first-hand experience is being exploited in 6DISS.

The co-operation with 6DISS will therefore not only lead to an improved quality of the Internet infrastructure in the targeted countries, but will also raise the competence of the organisations and - exploiting the personal contacts made through 6DISS - facilitate and encourage their participation in future FP6 Calls and beyond. The long-term effects are therefore almost unlimited; even in the medium-term (i.e. before the end of the project), the impact will be felt, through greater co-operation and new proposals (within and outside the EU Programmes) involving partnerships with some of these countries.

It is to be expected that while IPv6 standards and services remain constant, regional variations in practices and operations will require slightly different approaches for collaboration and dissemination. The 6DISS partners already have experience in dealing with organisations in the regions covered by the project, and are thus well prepared for such occurrences.

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[6] National Research and Education Network

Impacts from the workshops are expected to include:

- a positive effect in preventing the "brain drain" from certain countries, by bringing interesting and state-of-the-art activities into these regions, making information and knowledge resources accessible to the scholars.
- the establishment of a communication channel between the scientific communities in the targeted regions and European industry, thus resulting in an increase in the demand for the specialised services provided by the highly skilled academics and researchers of the region.
- an expansion of the conditions for growth, by enabling the exchange of ideas, launching of joint experiments and projects, disseminating RTD results, and activating market forces; all 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 to an increase of the demand for specialized services provided by the highly skilled academics and researchers of the region.

3. Workshop Details

3.1. Programme outline

First indications (also supported by experience from similar events in these countries that partners have already attended/ organised) are that the events will be particularly attractive for employees of NRENs and commercial ISPs, since these people will gain the most from a mix of both theory and hands-on training. A typical format for these participants will be a 3-4-day workshop, comprising both theory and practice, along the following lines:

In co-operation with the local organisers, 6DISS partners will tailor the presentations to provide the appropriate subset in order to focus on specific issues of interest. Partners can communicate in several of the locally-spoken languages (English, French, Spanish, Portuguese, Russian, Serbo-Croat).

IST projects having the goal to inform organisations in these regions about participation in EU Programmes will be invited to some workshops in order to complement our activities.

3.2. Partners responsible for the material

The basic set of material is available, and is being checked for correctness, updated, extended with the latest information, supplemented with notes for the trainers and brought into a consistent 6DISS style, in preparation for the first workshop.

Specific partners have been allocated to manage the various topics, as shown below:
- General IPv6 introduction (RENATER, Cisco) – this is also used as the basis for the e-learning programme
- IPv4 -> IPv6 transition mechanisms and co-existence scenarios – especially dual stack (Soton-ECS)
- IPv6 and associated protocols (RENATER)
- Addressing and Multihoming (RENATER)
- Renumbering (Soton-ECS)
- Security (UCL)
- Multicast (RENATER)
- Mobility (Cisco)
- QoS (GRNET)
- Monitoring and Management – including Network Operation Centre (NOC) procedures (RENATER)
- DNS (FCCN)
- Autoconfiguration and DHCP (FCCN)
- Routing (and RPSLng) (FCCN)
- Applications (UCL)
- Relationship between IPv6 and Grids – e.g. the work in EGEE and the Global Grid Forum (UCL)
- Emerging new IPv6 Features in Products (Cisco, Alcatel)
- News from the IPv6 Forum and IPv6 Task Force(s) (Soton-ECS)
- News from the IETF (status of key specifications) (Soton-ECS)
- Information for Regulators (RENATER)
- Deployment example, e.g.:
  - Multicast (RENATER)
  - TV Broadcast (GRNET)
  - 6NET application demonstrators (UCL, Soton-ECS)
  - Transition scenarios in NRENs and end-user sites (e.g. Universities) (Soton-ECS)

Note that HUNGARNET has additional material on security and has presented courses for NOC staff within the framework of the 6NET project. They have offered to make their material available and also assist with the workshops (taking responsibility for the hands-on configuration training) if they can be incorporated into the consortium with a minimum of resources. The

Each workshop will be organised by a local host.

6DISS has already made contact with the following projects and organisations, regarding collaboration for the co-locating our workshops, thereby ensuring synergy with upcoming events and that the most appropriate participants will attend:

The partner with responsibility for the liaison with the country hosting the workshop will inform the project of the material to be presented. The partners who are responsible for providing the corresponding material will make their presentation available in time for TERENA to create the CD-ROMs prior to the workshop (for those locations where Internet connectivity is insufficient to download the material on-line).

3.5. Workshop presentations

The presentations will be given by the representative partner, plus approximately two other partners, according to the material to be presented (see Section 4 below).

4. Workshop Schedule

4.1. Workshop schedule

The current workshop schedule is as follows:

WS	Date	Region	Country	Remarks	Lead Partner	Supported by
1	2005: 22-23 August	Asia-Pacific	Taiwan (Taipei)	Immediately prior to the Global IPv6 Summit and the 20th APAN meeting (both also in Taipei)	SOTON-ECS	Cisco HUNGARNET
2 *	2005: 19-20 September	Southern Africa	South Africa (Port Elizabeth)	The local organizer is TENET: The Tertiary Education Network (the South African NREN). The workshop is held in collaboration with the DITCHE (Development of IT Capacity in Higher Education) conference for ISPs	Cisco	RENATER HUNGARNET
3	2005: November	South and Central America	Uruguay	In conjunction with the CLARA conference	TERENA	FCCN GRNET
4	2006: January-March	Mediterranean countries	Invitations received from Algeria, Malta and Cyprus	The precise location will be selected on the basis of minimizing the travel costs for the participants. The date will be selected to coincide with an appropriate event	RENATER	GRNET Cisco
5 **	2006: April-June	Balkan countries	Ochrid, Former Yugoslav Republic of Macedonia	The precise date is being fixed, in conjunction with the planning of an appropriate parallel event	GRNET	Alcatel UCL
6	2006: October-December	Sub-Saharan Africa	To be decided	This workshop is being organised through the Ecole Superieure Multinationale de Telecommunications (ESMT) in Senegal. A training workshop has already been given in Togo through this organisation in 2004	RENATER	Cisco
7	2007: April-June	NIS countries in Central Asia	To be decided	This workshop is being organised by UCL, who provide the Project Manager of the SILK (NATO) and SPONGE (IST) projects, which are providing Internet connectivity to the NIS countries and Afghanistan	UCL	SOTON-ECS
8	2007: July-September	The Caribbean	To be decided	There is currently no specific organisation that co-ordinates Internet deployment throughout all the Caribbean region. The countries that will be addressed in 6DISS will therefore depend upon the local organisation that is chosen for the collaboration. Contacts have been made with CLARA, ALICE and the NGO ICAmericas	RENATER	TERENA FCCN

Notes:

* 6DISS has responded to an urgent request from the South African NREN "TENET" to bring forward this workshop from September 2006, since TENET is immediately deploying IPv6. We anticipate being able to make an additional workshop in this region, in conjunction with the SATNAC conference (organized by the University of Western Cape in September 2006), in accordance with the origin plan.

In addition to the structured workshops above, &DISS is also comitted to liaise with IPv6 deployment work in China and India.

4.2. China Events

Given that IPv6 deployment is at least as advanced in parts of China as in Europe, the regular 6DISS workshops are not considered necessary or suitable for this region. However, 6DISS will explore with the organizers the possibility to hold round-table discussions at events such as Euro-China, at which deployment examples and best practices can be exchanged. RENATER attended the IPv6 Summit in Beijing in May and GRNET made a presentation of 6DISS at the ICCI conference, Beijing, in June.

5. Conclusion

This Deliverable has provided the schedule of the workshops, the locations, the parallel events with which synergy will be exploited, the local organiser, the lead partner from 6DISS and the partners that will also attend for support (see section 4). Whilst the details for the first workshops are known, the information is understandably less precise for the later ones. As the dates for the future workshops approach and these workshops become better defined, this Deliverable will be updated.

The workshop material is based on inputs from RENATER's involvement in the French "G6" forum and the 6NET Cookbooks, supplemented with knowledge from partners' participation in events (such as IPv6 Forum meetings, Internet2 meetings, and the IETF). The countries in which workshops will be held are:

1. The Asia-Pacific region,
2. Southern Africa,
3. South and Central America,
4. Mediterranean partner countries,
5. Balkan countries,
6. Sub-Saharan Africa,
7. Newly-Independent States (NIS),
8. The Caribbean.

These workshops are the key mechanism through which information will be transferred to the developing countries. The workshops will enable to build constituencies and raise awareness; disseminate, benchmark and validate the research results from IST; promote European technologies; exchange best practices; and explain about activities related to standards and interoperability issues.

The full set of dissemination material will include all issues of Internet deployment and evolution; especially IPv4-IPv6 transition/coexistence strategies, DNS, DHCP, Routing, QoS, Mobile IP, Multicast, Renumbering, Security, Monitoring and Management tools, and Applications.

The precise format of each event will be determined through discussion with the local organisations, and 6DISS will refine the content material according to the programme and the requirements, experiences and qualifications of the participants.

The project is aware that the workshops do not represent the end of the co-operation, but are rather only an intermediate stage towards the ultimate goal of encouraging the participation of the developing countries into the IST Programme. This goal will be achieved by maintaining contact with the local organisers in each region, and particularly the organisations that attend the workshops. This extended contact will be stimulated by 6DISS through:

- The Tiger Team, comprising 1 expert for each topic, who will give practical expert operational support for configuration, bug fixes, technical queries, (via phone or e-mail) to implementers and deployers,
- The remote testbeds, which can be used both for the hands-on training sessions, and for training trainers from the developing countries on the full set of material and equipment available within 6DISS,
- The E-learning programme.

The basic set of material for the workshops is available, but additional material will become available throughout the project lifetime (white papers, books, etc.). The remote testbeds are also operational.

The project has proved itself flexible to respond to the demands of the targeted regions, and has advanced its schedule accordingly, to make workshops in the Asia-Pacific region (August 2005) and in Southern Africa (September 2005) much earlier than initially planned.

A strategic contact to be accepted as the "official training partner" for the Middle East and Emerging Nations IPv6 Task Force has also been established.