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Abstract:
 Deliverable D3.3.18 is produced when almost Euro6IX network infrastructure is up and running and services are maintained in a stable way.
 Last month a list of these services has been published.
 From now to the end of the project, this list will be updated. The main goal of these documents is to report Euro6IX networks status, deployment stage and usage by internal activities as well as public events.

Keywords:
 Euro6IX, IPv6, Network Maps, Network Reports, Network Status, Statistics, Services, Traffic.

Revision History

The following table describes the main changes done in the document since its creation.

Revision	Date	Description	Author (Organization)
v0.1	04/08/2003	Document creation and Addition of Stat6 graphics	Jesús López (TID) Aurora Ferrándiz (TID)
v1.0	05/08/2003	Addition of Stable Services List, Euro6IX Web Access Statistics and Comments on GIS 2003 event	Aurora Ferrándiz (TID)
v1.1	06/08/2003	Comments on MRTG Statistics	Antonio Lucientes (TID)
v1.2	31/08/2003	Final review	Jordi Palet (Consulintel)

Executive Summary

D3.3.18 deliverable has been produced in the context of activities A3.1 and A3.2.

Activity A3.1 covers the deployment of the local networks attached to the different Euro6IX IXs nodes. Activity A3.2 deals with all deployments related to Euro6IX Backbone network.

Deliverables D3.3.x are being produced every month, and this document corresponds to month number 18 (June 2003).

As a first approach, the structure of these network usage reports is the following:

- First section (Current Network Status) is intended to clarify which links have been already deployed and which concrete networks have been attached.
- Second section (Network Stability and Global Traffic Reports) is intended to show the reachability of all network sections as well as a global view of the total traffic exchanged in Euro6IX network.
- Third section (Detailed Network and Services Usage in Events/Trials) is intended to show and analyze the traffic produced in some internal trials and in all public events where Euro6IX contributes in any way.

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1. INTRODUCTION

Euro6IX network monthly reports are intended to show network and services evolution, current status, stability and usage.

Since D3.3.15 (March 2003 Network Monthly Report), an updated list of stable services per partner will be included in this document.

Only stable and operational services are listed, since there are other lists for specific trials/tests within A4.1, A4.2 & A4.3 including also unstable services.

2. CURRENT NETWORK STATUS

This section is intended to update and clarify which links have been already deployed and which concrete networks have been attached to Euro6IX backbone.

2.1 Remarkable News Related to Euro6IX Network & Services

In this period (June 2003, M18) the relevant news include:

- **TOR6IX-ZUR6IX:** Same as in March 2003: Physical connection Up & Running thanks to a link provided by Swisscom/Fixnet. It stills need some configuration to be IPv6 reachable.
- **LIS6IX and TOR6IX** have implemented and configured the Routing policy agreed in WP2. This policy is necessary to keep Euro6IX traffic within Euro6IX links and establish useful peerings with external networks (such as 6NET, ABILENE, etc).

2.2 Status of International Links

The updated status of the links is as follows:

- **LIS6IX-MAD6IX:** Up and running.
- **MAD6IX-LON6IX:** Up and running.
- **LON6IX-PAR6IX:** Up and running.
- **PAR6IX-BER6IX:** Up and running.
- **BER6IX-TOR6IX:** Up and running.
- **TOR6IX-ZUR6IX:** Up and running.
- **TOR6IX-MAD6IX:** It was decided to use a tunnel to enable routing tests depending on a ring topology. Not configured yet.

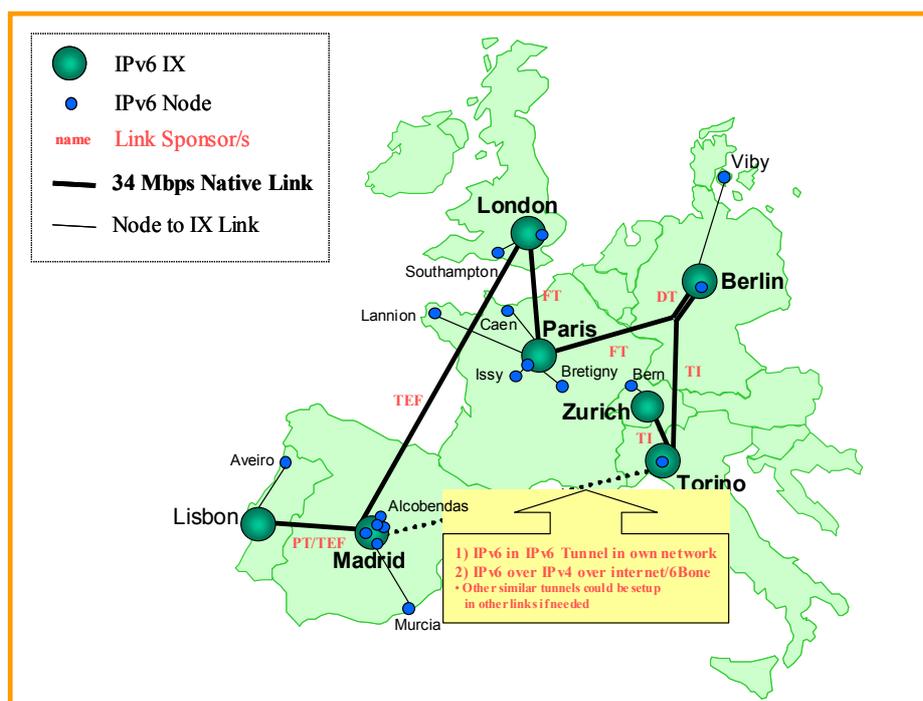


Figure 2-1: Planned Euro6IX International Links as of June 2003

3. NETWORK STABILITY AND GLOBAL TRAFFIC REPORTS

The following subsections show the global statistics systems that have been identified as necessary to characterize the Euro6IX network stability and usage each month.

3.1 Hosts/Networks Reachability Statistics from TID

The “ping_stat” tool, or simply “stat6”, automatically generates these statistics from TID premises (<http://stat6.tid.euro6ix.org/>). This system allows through the WEB interface to display any day or month graphic on demand.

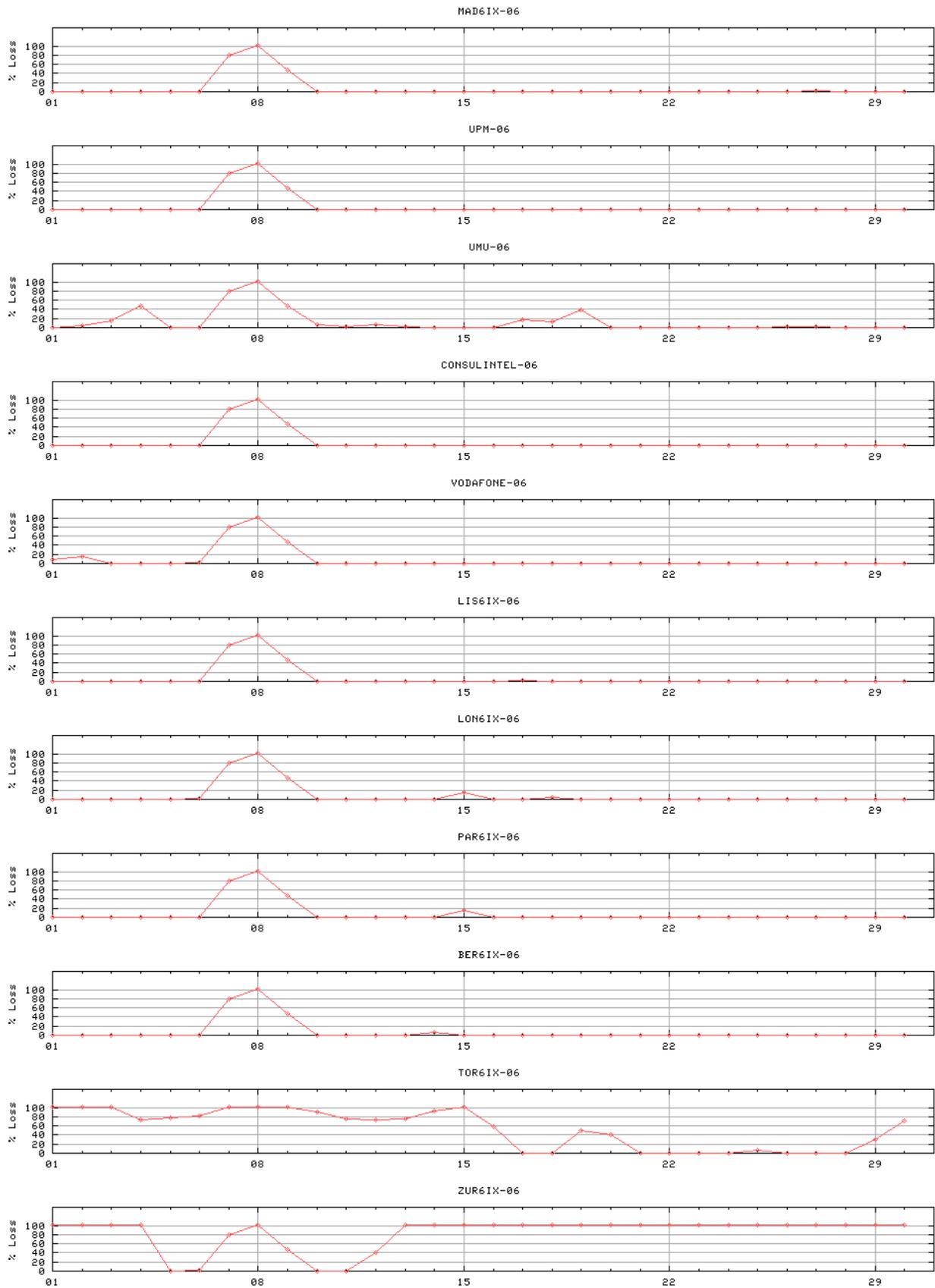


Figure 3-1: Euro6IX IXs LOSS Measured from TID Premises in June 2003

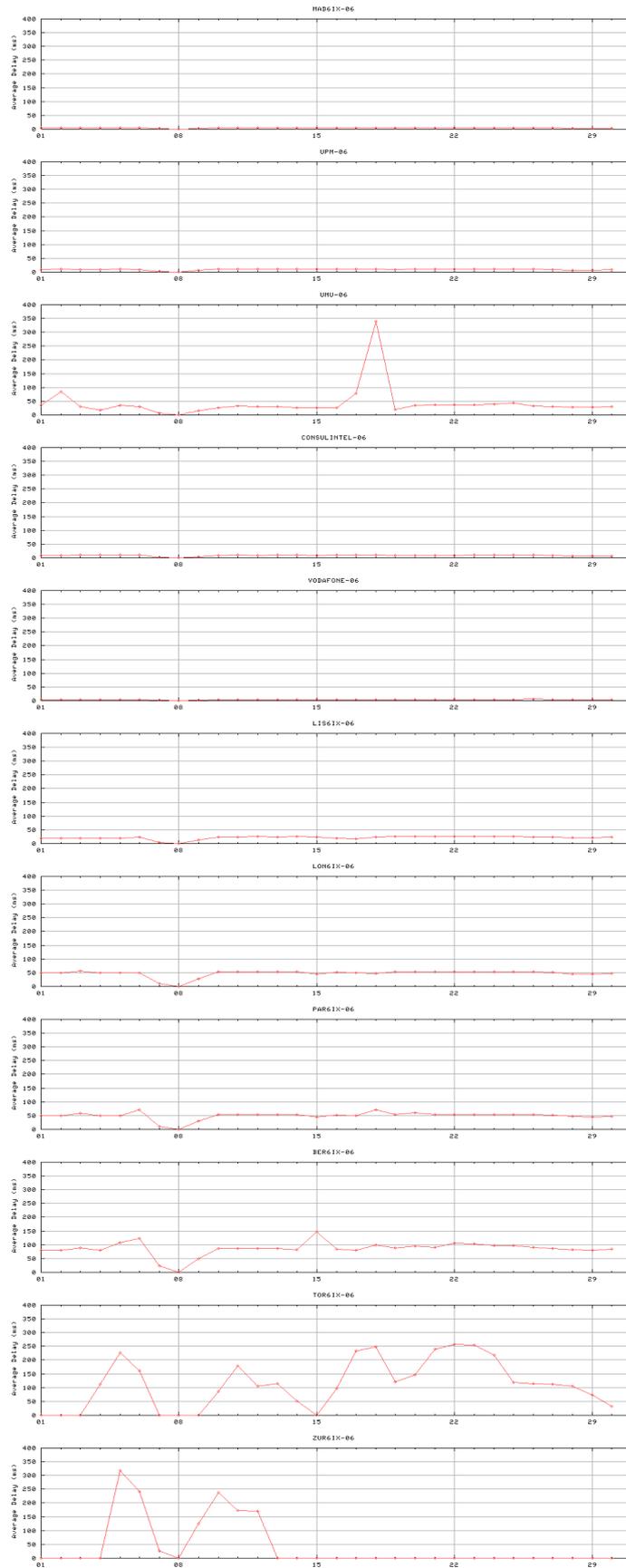


Figure 3-2: Euro6IX IXs DELAY Measured from TID Premises in June 2003

3.2 Links Traffic Measurement Statistics

Until today, only an IPv4 MRTG tool has been installed in TID premises. When nGn porting of MRTG to IPv6 is ready more partners will install it obtaining useful link traffic statistics.

Although MRTG IPv4 is used at TID, it measures only IPv6 traffic since it is configured to show all ATM interface throughputs and there is no IPv4 traffic on those ATM PVCs.

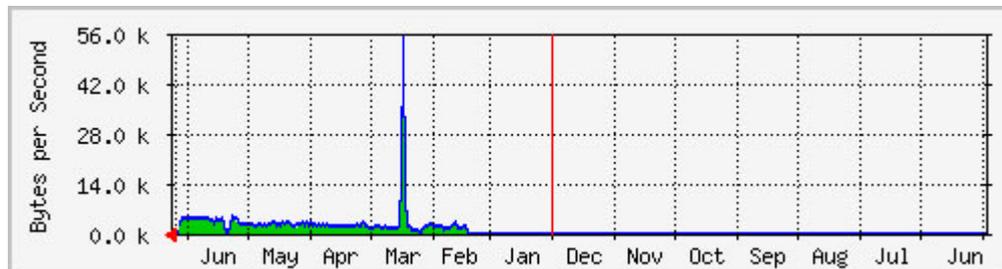


Figure 3-3: Monthly Graph, IPv6 Traffic, TID to Euro6IX (June 2003)

As seen in the graphics above, there is about 5 Kbytes/s traffic from TID to Euro6IX and vice-versa (symmetric. Blue = TID to Euro6IX, Green = Euro6IX to TID) due to some M6Bone and Magalia tests. There is a little bit more traffic due to the increment of internal test users at TID and external ADSL tunneled users connected to TID. In the middle of June it can be seen that connectivity from TID was lost for weekend due to a physical problem.

3.3 Euro6IX Servers List and Stability Statistics

This section is an updated list (end of June 2003) of the stable services running in Euro6IX network.

6WIND

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.6wind.euro6ix.org		IPv6 Web Browser
Webmail	https://Proxy.ipv6.6wind.com	https://Proxy.6wind.com	
Web proxy	www.6wind.euro6ix.org	Proxy.6wind.com	

BT

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.uk6x.com/	http://www.uk6x.com/	IPv6 Web Browser
Looking Glass	https://lg.ipv6.btexact.com/	https://lg.ipv6.btexact.com/	IPv6 Web Browser
Nagios	http://www.uk6x.com/nagios/	http://www.uk6x.com/nagios/	IPv6 Web Browser
Quake 1 and Quake 2	quake1.ipv6.btexact.com quake2.ipv6.btexact.com	V4 access via Ultima	Quake

Server	URL IPv6	URL IPv4	Recommended Client
	quake.ipv6.btexact.com		
Video Streaming	http://vod.ipv6.btexact.com	V4 access via Ultima	VLC
MP3 Streaming	http://radio.ipv6.btexact.com:8000/	V4 access via Ultima	Winamp (http://www.uk6x.com/applicationservices/radio.m3u) Windows Media 9 (http://www.uk6x.com/applicationservices/radio.asx) mpeg123 for Unix Systems xmms for Unix and Linux Systems Freeamp, now called zinf is a multimedia player for Linux or Windows systems. It has been tested under Linux and Windows 2000/XP. VLC
Tunnel Broker		https://tb.ipv6.btexact.com/	
GPRS Access	http://www.uk6x.com/networkservices/gprs.html		
6to4		6to4.ipv6.bt.com	

Consulintel

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.consulintel.euro6ix.org (.com, .net)	www.consulintel.euro6ix.org (.com, .net)	IPv6 Web browser
Euro6IX Official Web	www.euro6ix.com www.euro6ix.org www.euro6ix.net	www.euro6ix.com www.euro6ix.org www.euro6ix.net	IPv6 Web Browser
Web Site Statistics	http://www.consulintel.euro6ix.net/private_euro6ix/statistics/statistics.htm	http://www.consulintel.euro6ix.net/private_euro6ix/statistics/statistics.htm	IPv6 Web Browser
Project Repository	ftp://ftp.euro6ix.org	ftp://ftp.euro6ix.org	IPv6 Web Browser
Web Mail Tool	http://webmail.novagnet.euro6ix.org/	http://webmail.novagnet.euro6ix.org/	IPv6 Web Browser
Video Streaming	mms://6stream.consulintel.euro6ix.com/		Windows Media 9
DNSSec	https://pki.umu.euro6ix.org		IPv6 Web Browser
Free Radius IPv6	6radius.consulintel.euro6ix.org		

FTRD

Server	URL IPv6	URL IPv4	Recommended Client
Webcam	webcam.ftrd.euro6ix.org		
Proxy Web	proxy.ftrd.euro6ix.org		
Quake2	quake2.ftrd.euro6ix.org		Quake
Teg	teg.ftrd.euro6ix.org (not running yet)		

nGn

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.novagnet.euro6ix.org		IPv6 Web Browser
Project Repository	ftp://ftp.euro6ix.org		IPv6 Web Browser
Web Mail Tool	http://webmail.novagnet.euro6ix.org/		IPv6 Web Browser

PTIN

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.ptin.euro6ix.[com/org/net] www6.ptin.euro6ix.[com/org/net]	-	IPv6 Web Browser (IE, Netscape, Mozilla)
Chat/IRC	irc.ptin.euro6ix.[com/org/net] irc6.ptin.euro6ix.[com/org/net]	-	IPv6 Chat Client (kvinc an xchat)
Jabber	jabber.ptin.euro6ix.[com/org/net]	-	Gabber
Quake 1 and Quake2	quake.ptin.euro6ix.[com/org/net]	-	Quake I and Quake II
MP3 Streaming	mp3server.ptin.euro6ix.[com/org/net]	-	FreeAMP
Audio Streaming	rat.ptin.euro6ix.[com/org/net]	-	Rat
Video Streaming	vic.ptin.euro6ix.[com/org/net]	-	Vic
6to4 router relay	6to4.ptinovacao.pt 6to4.ptin.euro6ix.[com/org/net]	-	-
Multicast (Router)	multicast.ptin.euro6ix.[com/org/net]	-	-
DNS (Router)	ipv6-dns.ptinovacao.pt dns.ptin.euro6ix.[com/org/net]	-	-
Mobility (HA)	ha.ptin.euro6ix.[com/org/net] ha-in.ptin.euro6ix.[com/org/net] ha-out.ptin.euro6ix.[com/org/net]	-	Linux MN (draft15). no Sas (Security Associations)
Isabel	isabel.ptin.euro6ix.[com/org/net]	-	

T-Nova

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.t-nova.euro6ix.org	www.t-nova.euro6ix.org	IPv6 Web Browser

Server	URL IPv6	URL IPv4	Recommended Client
Looking Glass/ Route Server	Accessible through Web Service		
TILAB AS-Path Tree	Accessible through Web Service		
MRTG	Accessible through Web Service		
Chat/IRC	irc.t-nova.euro6ix.org		IPv6 Chat Client
NTP	ntp.t-nova.euro6ix.org		NTP Client/ntpdate
Video Streaming	video.t-nova.euro6ix.org		Windows Media 9
Tunnel Broker	http://tb.ipv6.berkom.de		Web Browser

Telscom

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.telscom.ch		
MMS Video Streaming	http://dsv6.telscom.ch:8100/mediaplayer6.html		WindowsMedia
RTSP video streaming	rtsp://dsv6.ipv6.telscom.ch		mp4player (MPEG4IP)
6Voice	http://www.telscom.ch/6voice/index.htm		
DNS	dsv6.ipv6.telscom.ch		
Home Environment	http://napoli.ipv6.telscom.ch/TelscomHomeEnvironment		

TID

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.tid.euro6ix.com		IPv6 Web Browser
Web Usage Statistics	www.tid.euro6ix.com/usage		IPv6 Web Browser
Magalia	Running at: mortadelo.tid.euro6ix.com:4444		Xges
Looking Glass	http://lg.tid.euro6ix.com		IPv6 Web Browser
MRTG	http://mrtg.tid.euro6ix.org/mrtg/		IPv6 Web Browser
MRTG for TID DNS	http://mrtg.tid.euro6ix.org/mrtg_dns/dns1.i-st-long.com.html		IPv6 Web Browser
Web Statistics Tool	http://stat6.tid.euro6ix.com		IPv6 Web Browser
Chat/IRC	irc.tid.euro6ix.com		Chat IPv6 Client
Video Streaming	vod.tid.euro6ix.com:9999		VLC
Free Radius IPv6	Running at: mortadelo.tid.euro6ix.com:4444		
Digital TV Multicast	dtv.tid.euro6ix.com:1234		
Access to a Digital Home through a	http://hogardigital6.tid.euro6ix.com		IPv6 Web Browser

Server	URL IPv6	URL IPv4	Recommended Client
NAT-PT			
Access to a Multimedia IPv4 Portal through a NAT-PT	http://cba.tid.es	http://cba.tid.es	IPv6 Web Browser

TILAB

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.ngnet.it		
Web Statistics Tool	Running at TILAB's IPv6 laboratory		IPv6 Web Browser
TILAB AS-Path Tree	Running at TILAB's IPv6 laboratory		
Chat/IRC	irc6.ngnet.it		IPv6 Chat Client
News	news6.ngnet.it		IPv6 News Client
Mail for IPv6 Users	http://mail.ngnet.it/e/		IPv6 Web Browser (mail server available from Web)
Jabber	jabber.ngnet.it		
Quake 1 and Quake 2	games.ngnet.it		Quake
Tunnel Broker	http://tb.ngnet.it/		

UMU

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.umu.euro6ix.org		IPv6 Web Browser
Looking Glass	http://www.umu.euro6ix.org/cgi-bin/router-wan/ntools.pl http://www.umu.euro6ix.org/cgi-bin/router-lan/ntools.pl		IPv6 Web Browser
Nagios	http://nagios.umu.euro6ix.org/nagios/		IPv6 Web Browser
Chat/IRC	http://www.uc3m.ist-long.com/irc/		IPv6 Chat Client
VPN Enforcement Tool	https://shire.umu.euro6ix.org		IPv6 Web Browser
PKIv6	https://pki.umu.euro6ix.org		IPv6 Web Browser
DNSSec	https://pki.umu.euro6ix.org		IPv6 Web Browser
PMTv6	https://shire.umu.euro6ix.org/pmtool		

UoS

Server	URL IPv6	URL IPv4	Recommended Client
Surge Radio	http://surge.ecs.soton.ac.uk:8090		

UPM

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.upm.euro6ix.org	http://wamba.dit.upm.es	
FTP	ftp://ftp.upm.euro6ix.org	ftp://wamba.dit.upm.es	
Magalia	magalia.upm.euro6ix.org	nevada.saba.rediris.es	
Free Radius	radius.upm.euro6ix.org	nevada.saba.rediris.es	
Looking Glass	http://www.upm.euro6ix.org/cgi-bin/looking-glass-upm-v0.6/ntools.pl	http://wamba.dit.upm.es/cgi-bin/looking-glass-upm-v0.6/ntools.pl	IPv6 Web Browser
Nagios	nagios.upm.euro6ix.org	nevada.saba.rediris.es	IPv6 Web Browser
Chat/IRC	irc.upm.euro6ix.org:7000	viena.saba.rediris.es:7000	IPv6 Chat Client (i.e. xchat)
Quake 2	quake2.upm.euro6ix.org	wamba.dit.upm.es	
Teg	teg.upm.euro6ix.org	wamba.dit.upm.es	
Tetrinet	tetris.upm.euro6ix.org	wamba.dit.upm.es	
mangbad	mangbad.upm.euro6ix.org	wamba.dit.upm.es	
Mail	mail.upm.euro6ix.org	viena.saba.rediris.es	
WebCam	http://idefix.upm.euro6ix.org/webcam.html	http://idefix.saba.rediris.es/webcam.html	
m6bone	m6bone.upm.euro6ix.org		
DNSSec	https://pki.umu.euro6ix.org		

Vodafone

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.vodafone.euro6ix.org		IPv6 Web Browser

TID Euro6IX Statistics Service (“Stat6”) will show in the future the availability of some relevant or public Euro6IX IPv6 servers listed above (to be included also in <http://stat6.tid.euro6ix.org>).

3.4 Euro6IX Web Server Statistics

This section contains the statistics related to IPv6 accesses to Euro6IX official WEB page, that are already being logged in advance to the start of the project, so it can be processed and displayed at any time.

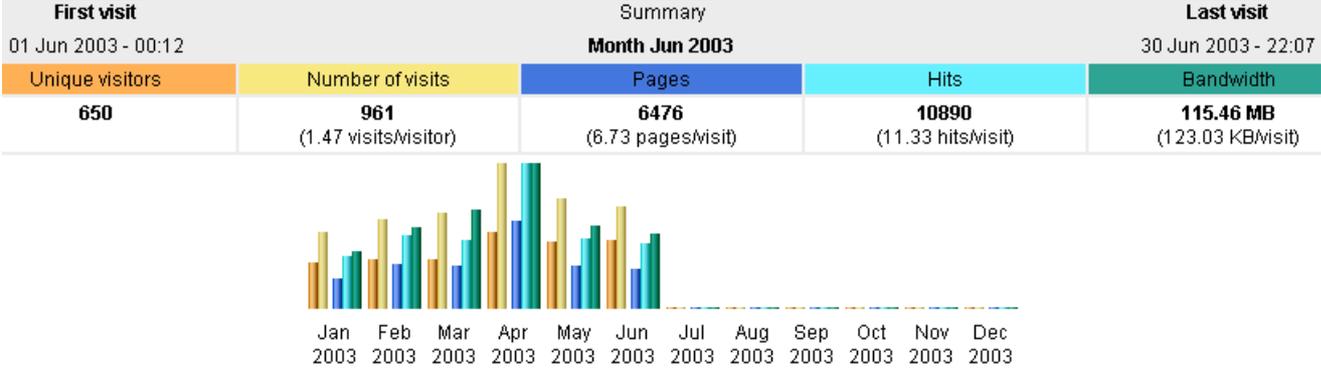


Figure 3-4: Web Usage Summary this Month and Last 12 Months

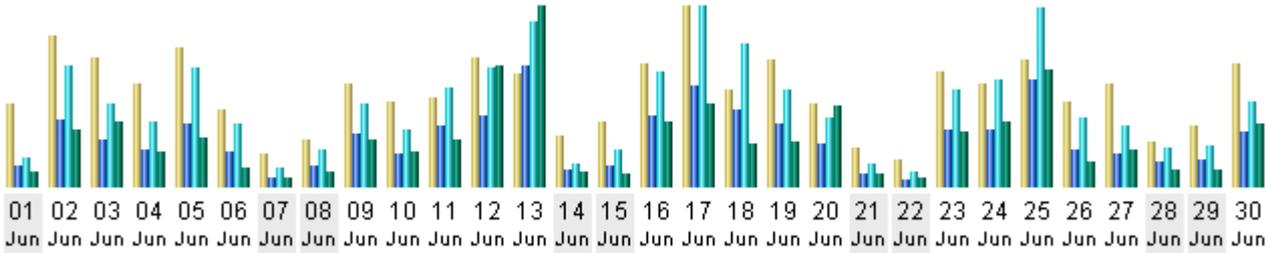


Figure 3-5: Monthly Statistics for June 2003

Day	Number of visits	Pages	Hits	Bandwidth
01 Jun 2003	28	93	129	1.22 MB
02 Jun 2003	51	298	541	4.45 MB
03 Jun 2003	44	209	369	5.09 MB
04 Jun 2003	35	161	286	2.74 MB
05 Jun 2003	47	281	531	3.85 MB
06 Jun 2003	26	158	283	1.44 MB
07 Jun 2003	11	40	83	681.44 KB
08 Jun 2003	16	98	166	1.25 MB
09 Jun 2003	35	238	374	3.79 MB
10 Jun 2003	29	145	254	2.85 MB
11 Jun 2003	30	275	446	3.66 MB
12 Jun 2003	44	313	532	9.67 MB
13 Jun 2003	38	544	734	14.28 MB
14 Jun 2003	17	75	102	1.12 MB
15 Jun 2003	22	93	163	1.06 MB
16 Jun 2003	42	318	517	5.23 MB
17 Jun 2003	61	451	804	6.58 MB
18 Jun 2003	33	346	640	3.35 MB
19 Jun 2003	43	280	437	3.53 MB
20 Jun 2003	28	193	308	6.36 MB
21 Jun 2003	13	55	101	995.68 KB
22 Jun 2003	9	32	63	790.47 KB
23 Jun 2003	39	254	433	4.37 MB
24 Jun 2003	35	259	477	5.23 MB
25 Jun 2003	43	481	796	9.33 MB
26 Jun 2003	29	163	306	1.95 MB
27 Jun 2003	35	147	269	2.94 MB
28 Jun 2003	15	109	178	1.36 MB
29 Jun 2003	21	120	187	1.32 MB
30 Jun 2003	42	247	381	5.04 MB
Average	32.03	215.87	363.00	3.85 MB
Total	961	6476	10890	115.46 MB

Figure 3-6: Web Daily Usage for June 2003

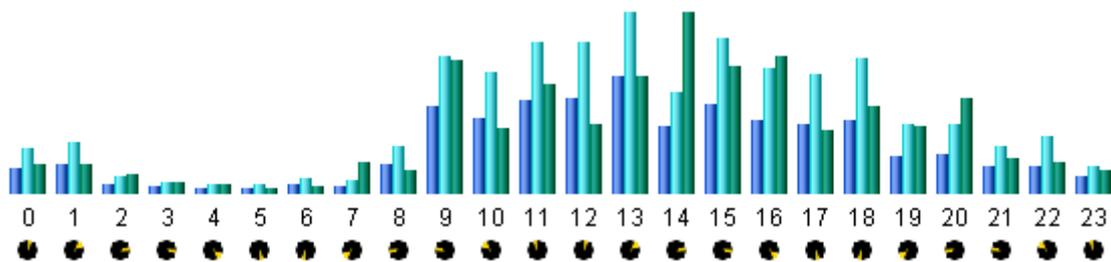


Figure 3-7: Web Hourly Usage for June 2003

4. DETAILED NETWORK AND SERVICES USAGE IN EVENTS/TRIALS

This section is intended to study and analyze the network traffic generated in the following situations:

- **Internal Trials:** Internal Euro6IX trials performed in the context of activity A4.3 will generate traffic within the Euro6IX networks. In some of these trials, the detailed study and analysis of the traffic generated could be interesting. In such cases, particular diagrams and statistics will be shown in this section although they could be included in the general statistics showed in previous sections.
- **Public Events:** After a public event has been performed, the traffic processed by the network during it must be studied and analyzed. The study must be focused in the traffic obtained as a result of this concrete event.

During June 2003 there was no relevant events with the participation of Euro6IX.

5. SUMMARY AND CONCLUSIONS

The contributions of all partners communicating their updates on the services deployed is helping to have a global view of Euro6IX network and to build the future beta-testers users test-bed.

The correct geographical distribution of IPv6 stable services contributes to involve all the partners in a more equal manner in project experiments and demonstrations.

Once the network is stable and there are tools to manage and control it, the next A4.2 should focus on development of attractive final-user services. WP3 will use these services developed in A4.2 to join more users to the IPv6 experience within Euro6IX. The traffic generated by these users will be measured and presented as a result of the project.