

The Tunisian IPv6 Project

Afrinic 3, Cairo, Egypt
December 2005

Hichem MAALAOUI
hichem@ati.tn

IPv6

IPv6

IPv6

IPv6



Internet Statistics

- Number of users (Nov. 2005): 1,000,000
- Number of subscribers (Nov. 2005): 140,000
- Number of Public Internet Access Centers: 300
- Number of ISPs: 13
- ADSL connections :
 - 30,000 in progress
 - 120,000 in 2006
 - 1,000,000 in 2009



Infrastructure

- Multi-service IP/MPLS backbone
- 1 Gigabit International connection



Backbone IP Tunisien



Objective of the Project

- Implement an IPv6 operational network at a national level to prepare for the progressive transition to IPv6 in Tunisia.
- Prepare a technical staff able to manage IPv6 networks and applications
- Permit to Internet users to benefit from the advantages of IPv6



IPv6 Deployment in Tunisia

- Since 1999 :
 - Connection with 6Bone using IPv6 experimental address block
 - First IPv6 Networks
 - Experimental services : Web, Mail, DNS
 - Tunneling techniques, to avoid dependencies when upgrading hosts, routers, or regions
 - dual-stack techniques, to allow IPv4 and IPv6 to co-exist in the same devices and networks
 - translation techniques, to allow IPv6-only devices to communicate with IPv4-only devices

IPv6

IPv6

IPv6

IPv6



IPv6 Deployment in Tunisia (II)

- 2002 :
 - Pseudo-Top Level Aggregator (p-TLA) submitted to the 6Bone in august (to become a node of 6bone – local tunnel broker)
 - Change of deployment strategy to follow the recommendations from 6bone and RIPE (phase out of the 6Bone planning)
 - Allocation of an IPv6 address block to ATI (LIR for Tunisia) 2001:970::/32 in October 2002

IPv6 Deployment in Tunisia (III)

- 2003:
 - Distributed /48 address blocks to the 13 ISPs as well as some public institutions
 - Experiments with some ISPs
 - Tunisian IPv6 Task force
 - IPv6 conference in April
 - IPv6 full deployment at the primary DNS level ns.ati.tn
 - Testing IPv6 multicast by CCK (ISP for universities) and Renater France

IPv6 Deployment in Tunisia (IV)

- 2004-2005
 - Production phase
 - Training of ISP's technical staff
 - Training of some public sector network administrators
 - Hosting national web sites in IPv6 platforms
 - UIT workshop (July 2004)
 - Providing IPv6 connectivity to customers



Next steps

- Add IPv6 support on the national IP/MPLS backbone
- Provide native IPv6 in all new ADSL connections
- Developing new IPv6 applications to benefit from IPv6 advantages
- Plan the migration of IPv4 only networks to Dual stack networks



Next steps

- IPv6 International peering
- Native IPv6 interconnections in all Tunisian exchange points
- Planning the migration of some national networks
(administrations, education, ...)
- Advising customers to take into account IPv6 support when purchasing network devices and software

Thank you !

The Tunisian Internet Agency

<http://www.ati.tn>

<http://www.ipv6net.tn>

IPv6

IPv6

IPv6

IPv6

