SNMP Transition Tool

Management of IPv6 Networks with IPv4/IPv6 SNMP Gateway

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Introduction

IPv6 is the „next generation” protocol designed by IETF to replace the current IPv4

- since January 1995

- more and more popular regular service

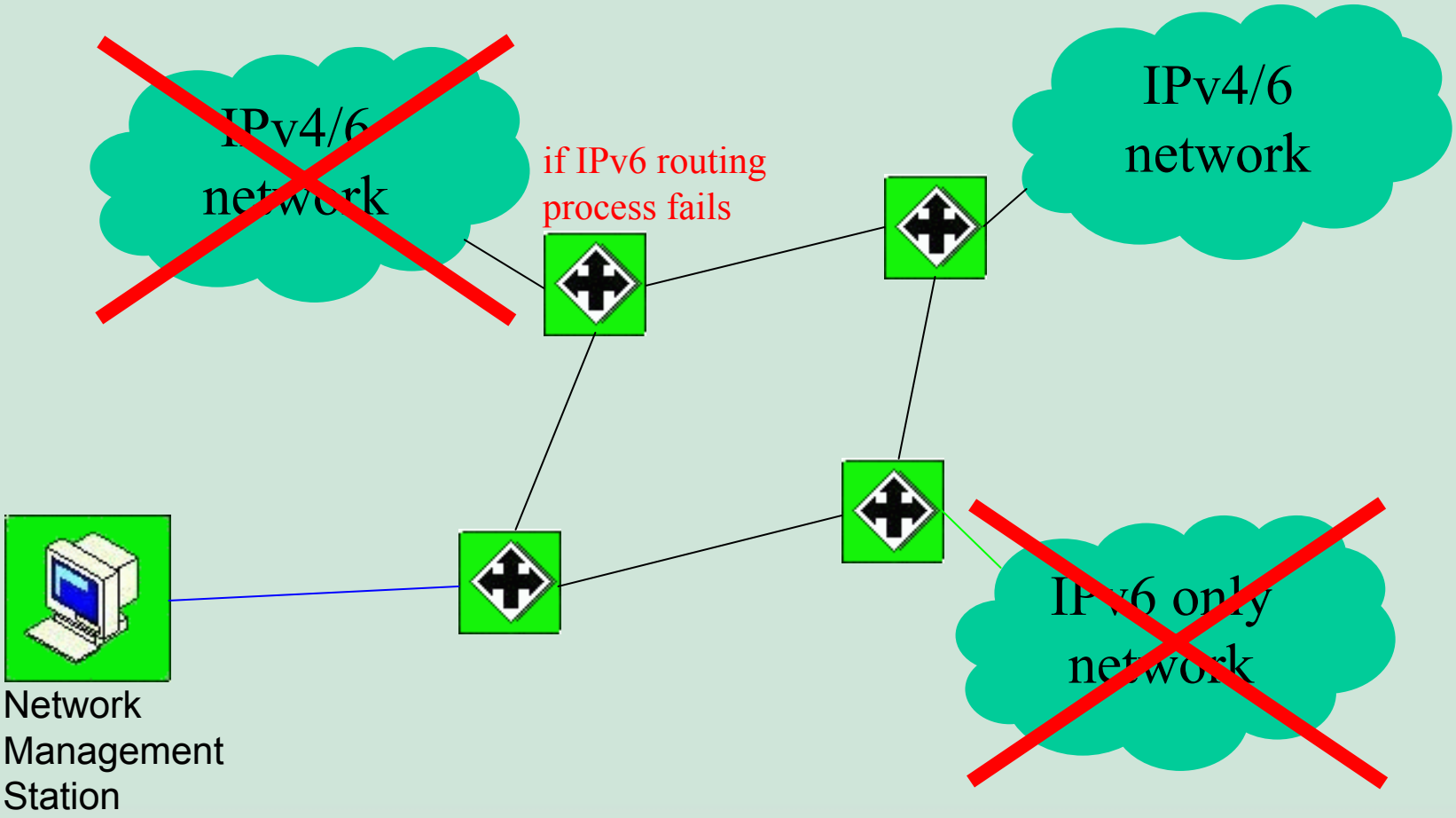
- no support for IPv6 in commercial management platforms

No Support for IPv6 in Management Platforms

Management platforms:

- HP OpenView 
- Tivoli NetView 
- Cisco CiscoWorks 
- IPSWITCH WhatsUp 

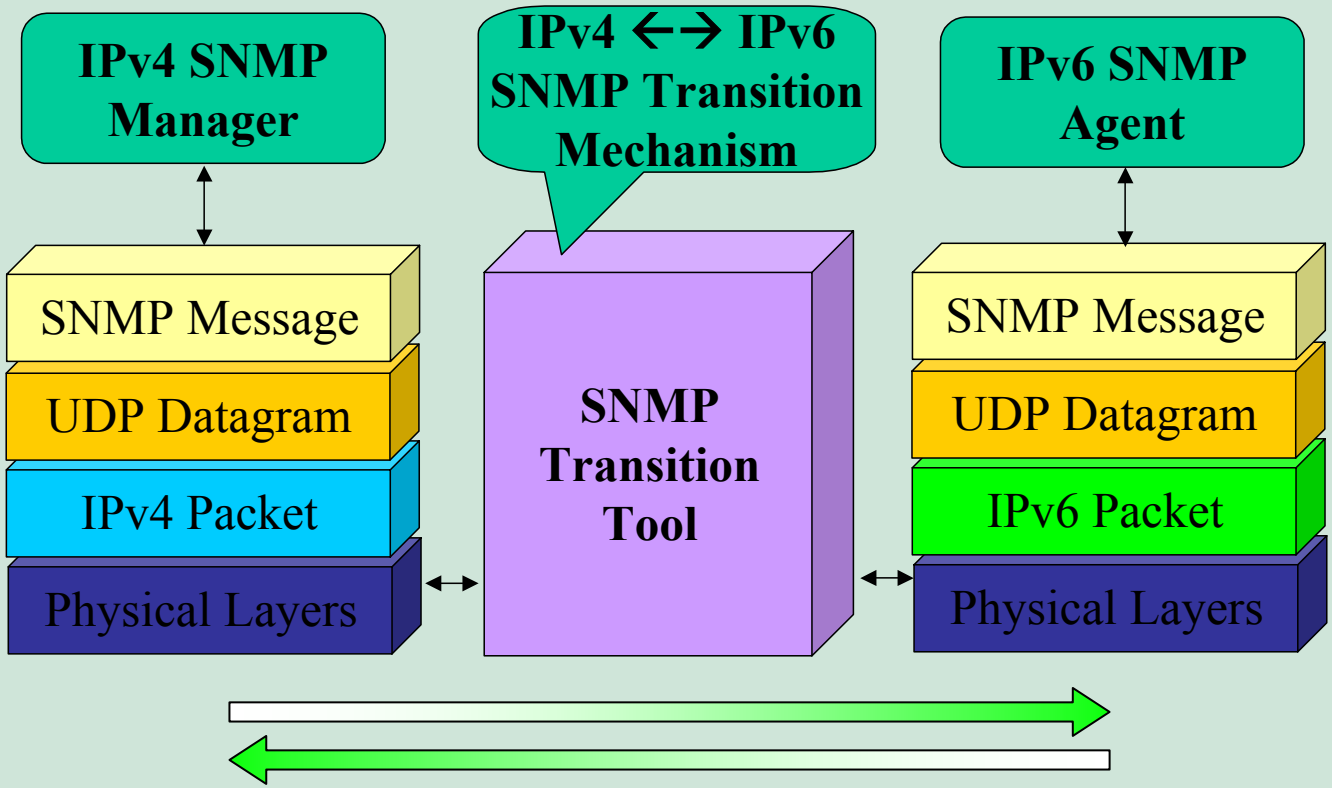
Possible Solution – Dual Stack



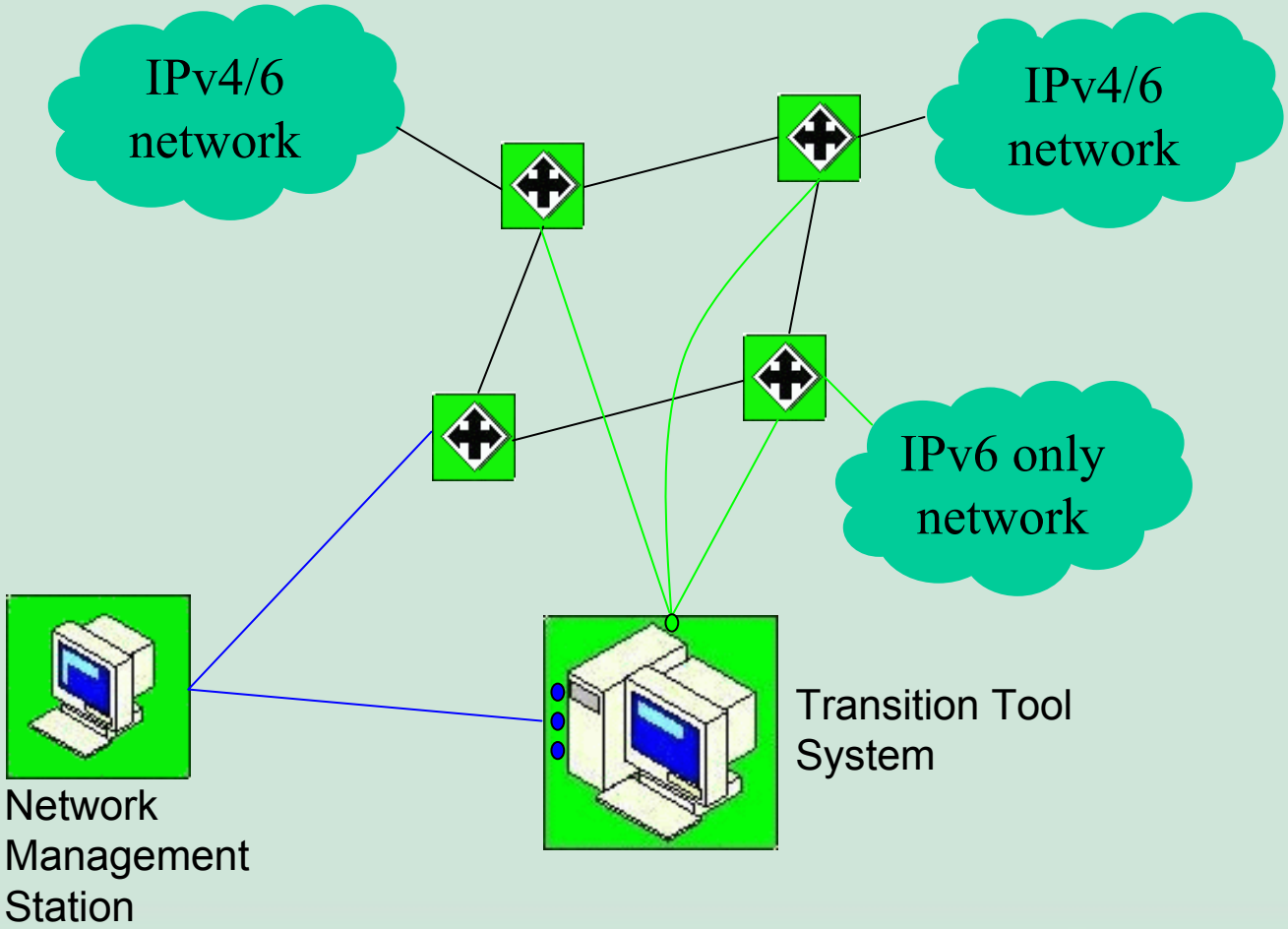
The Idea of SNMP Transition Tool

The main purpose of the development the SNMP Transition Tool is to enable the existing IPv4 network management platforms to monitor and configure the native IPv6 networks. The SNMP Transition Tool will translate SNMP protocol messages between IPv4 and IPv6 networks using its Address Translation Table.

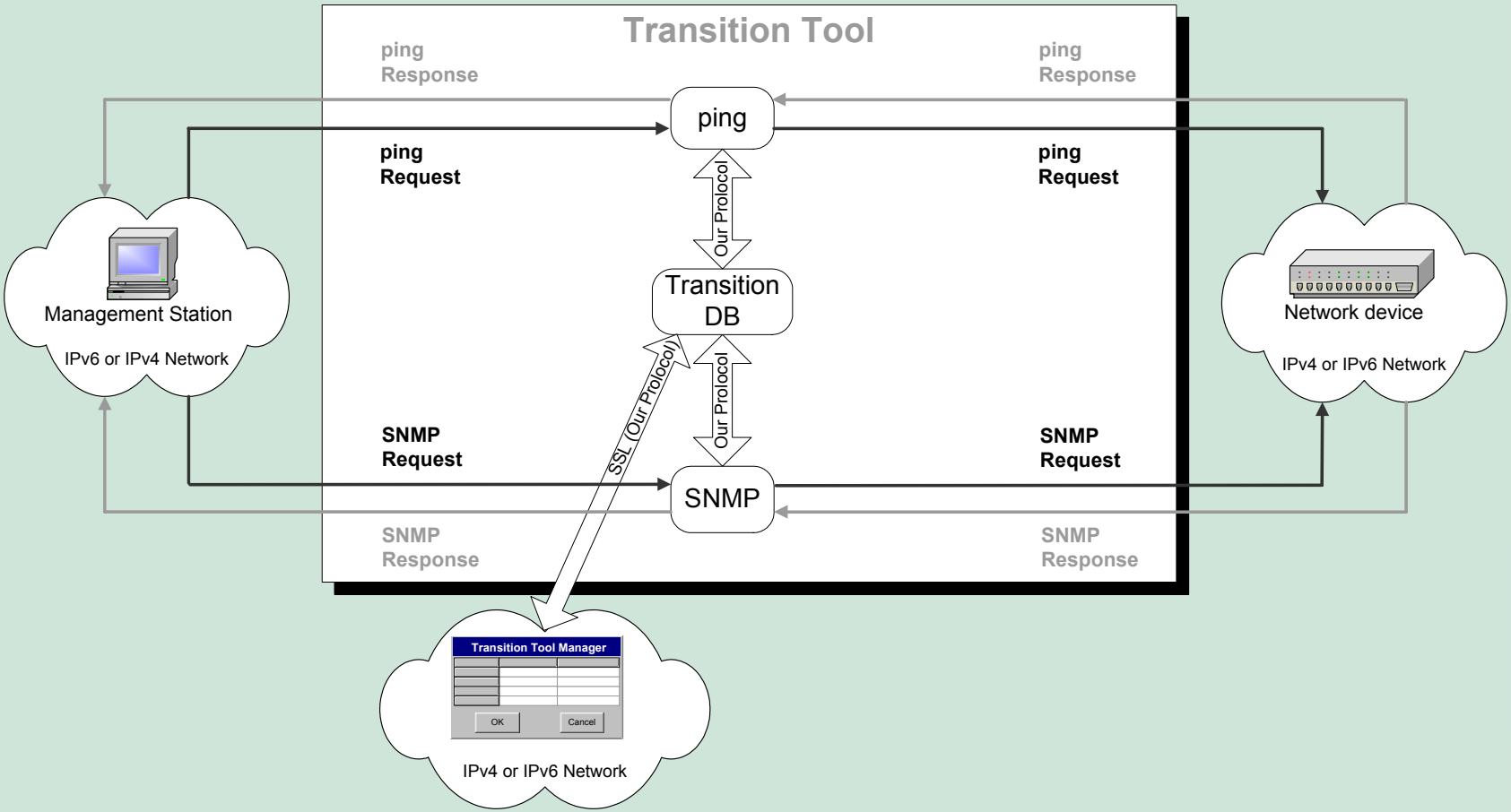
Overview of SNMP Transition Tool



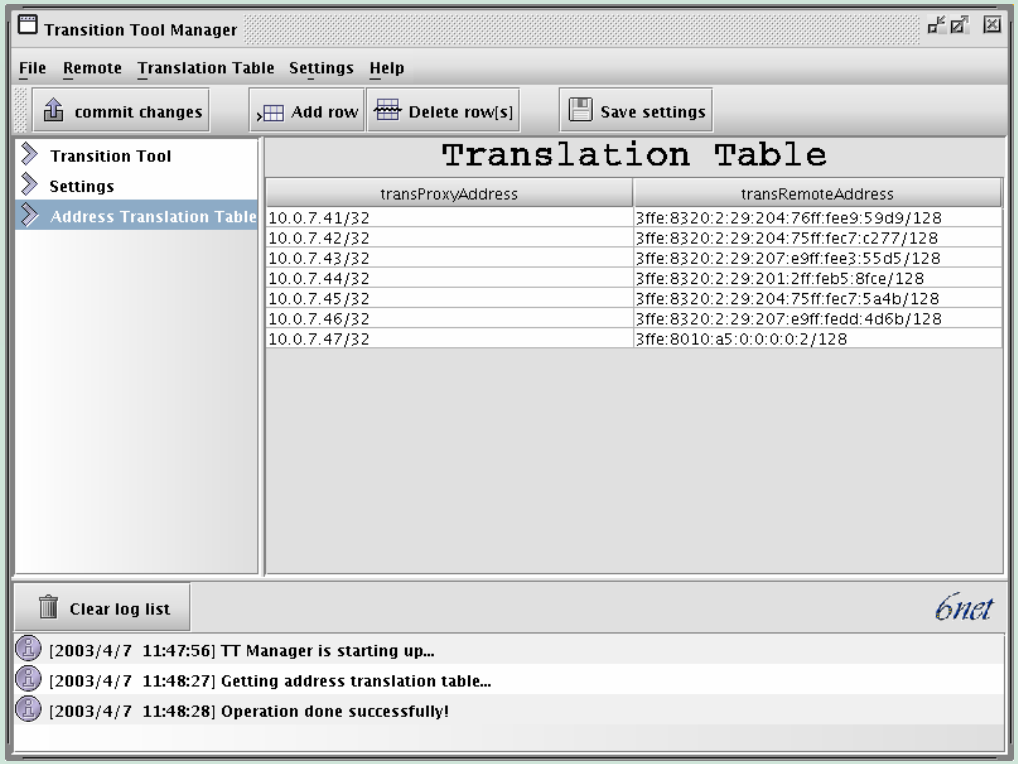
Transition Tool Architecture 1



Transition Tool Architecture 2



Graphical User Interface of Transition Tool



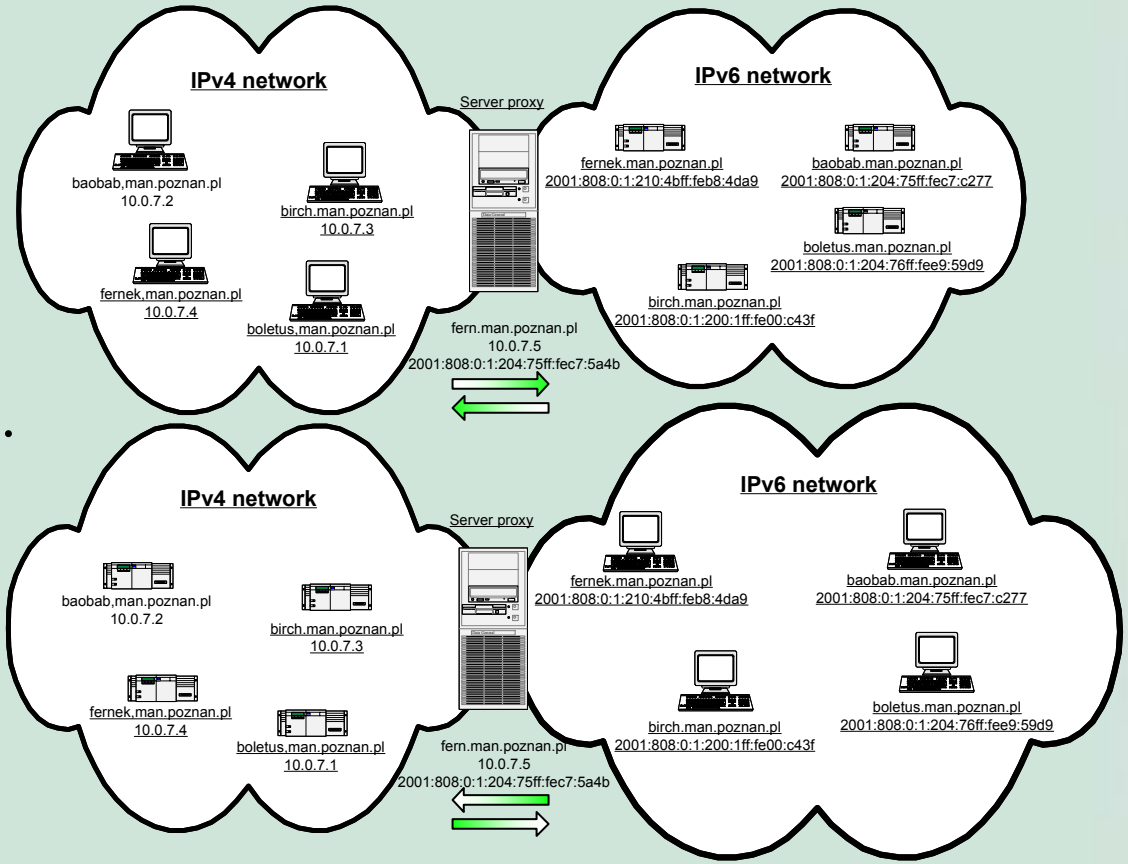
- user friendly
- written in Java 1.4
- secure protocol - SSL
- X.509 PKI

Tests and Results 1

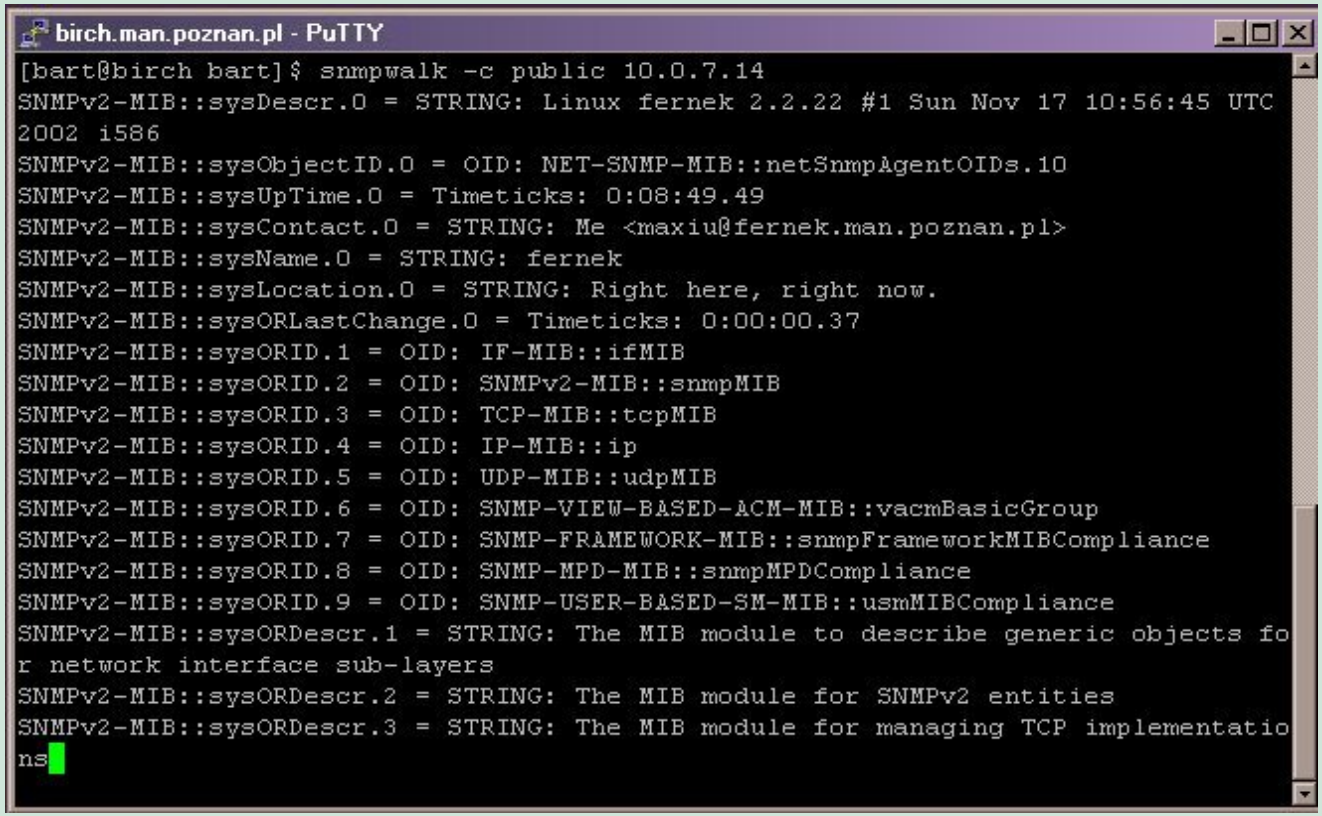
Efficiency

Every station performs a *snmpwalk* towards all agents simultaneously using the Transition Tool.

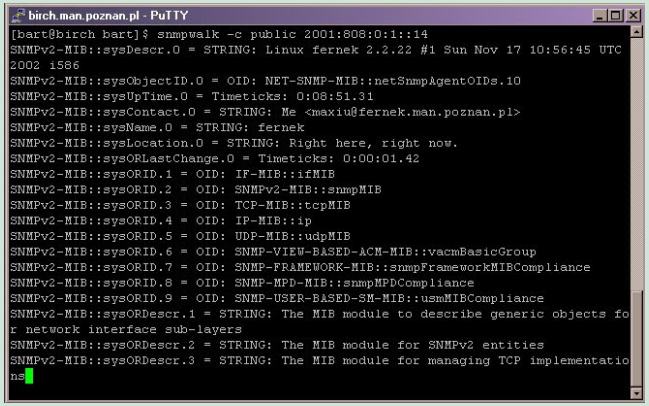
The Transition Tool translates SNMP packets between IPv4 and IPv6 networks in both directions.

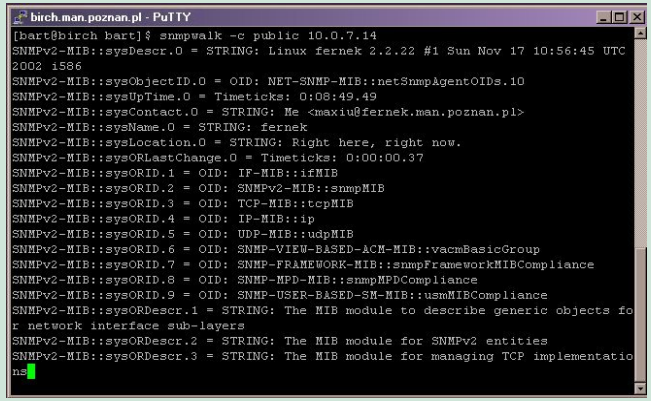


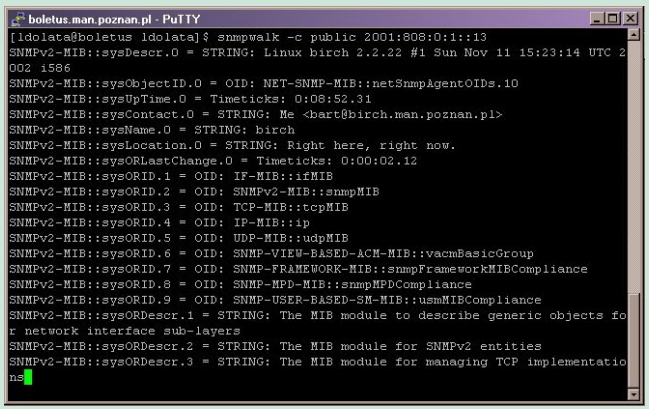
Tests and Results 2

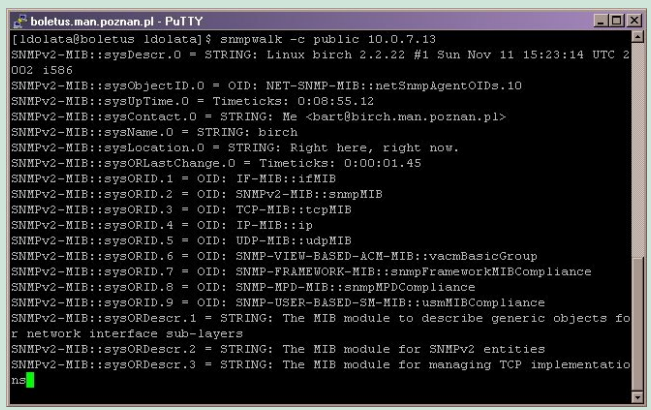


Tests and Results 2

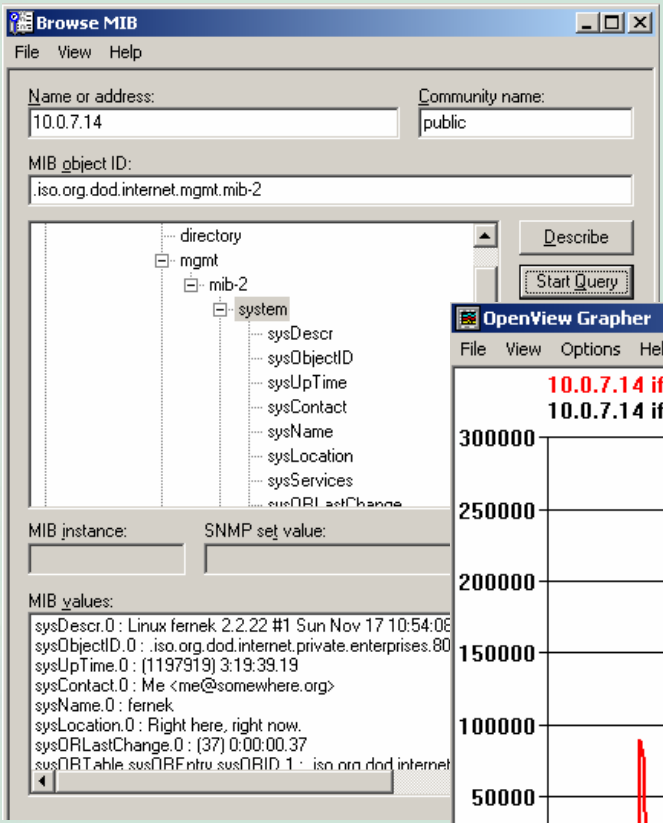


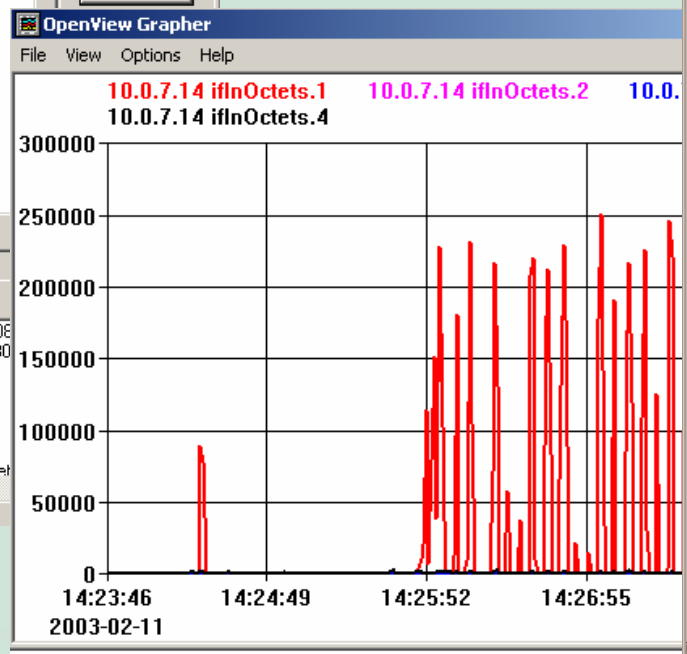




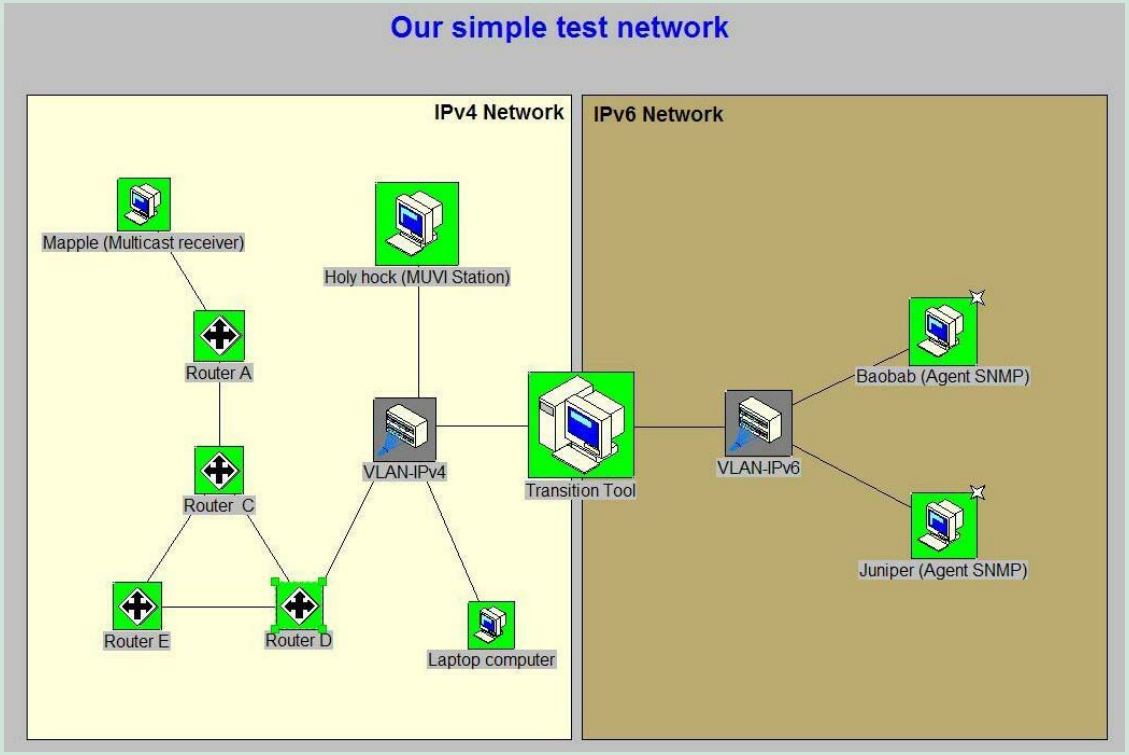


Tests and Results 3





Implementation



Testbed presented on TF-NGN, Poznan, May 2003:

-IPv4 network

-WhatsUp Web interface possible

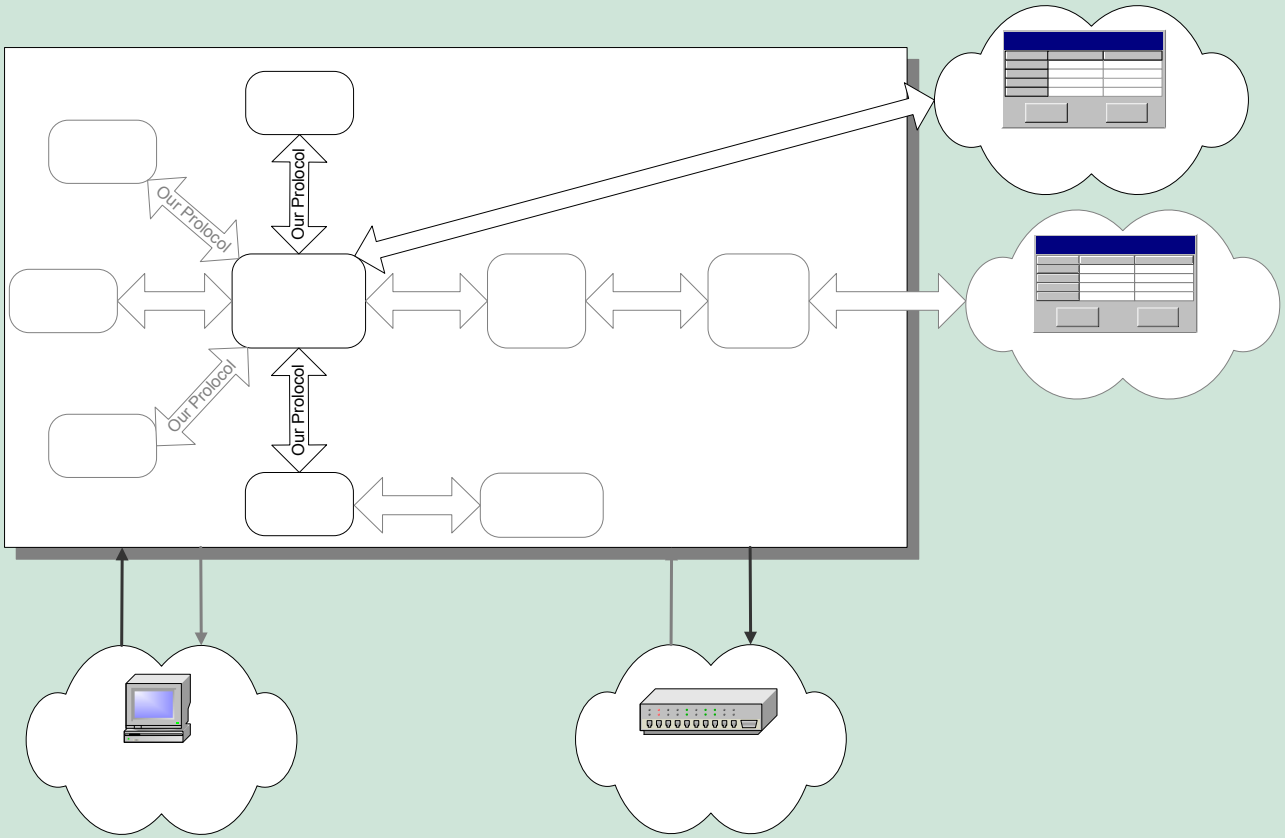
-SNMP Transition Tool

- IPv6 network

Future Development

- Extend tool with new modules – DNS, 6tunnel, etc
- Trap forwarding
- SubAgent – collaborates with any SNMP agent AgentX protocol compatible
- Automatic address configuration
- MIB conversions – lots of problems to solve, e.g. see RFC 2962 - "An SNMP Application Level Gateway for Payload Address Translation"

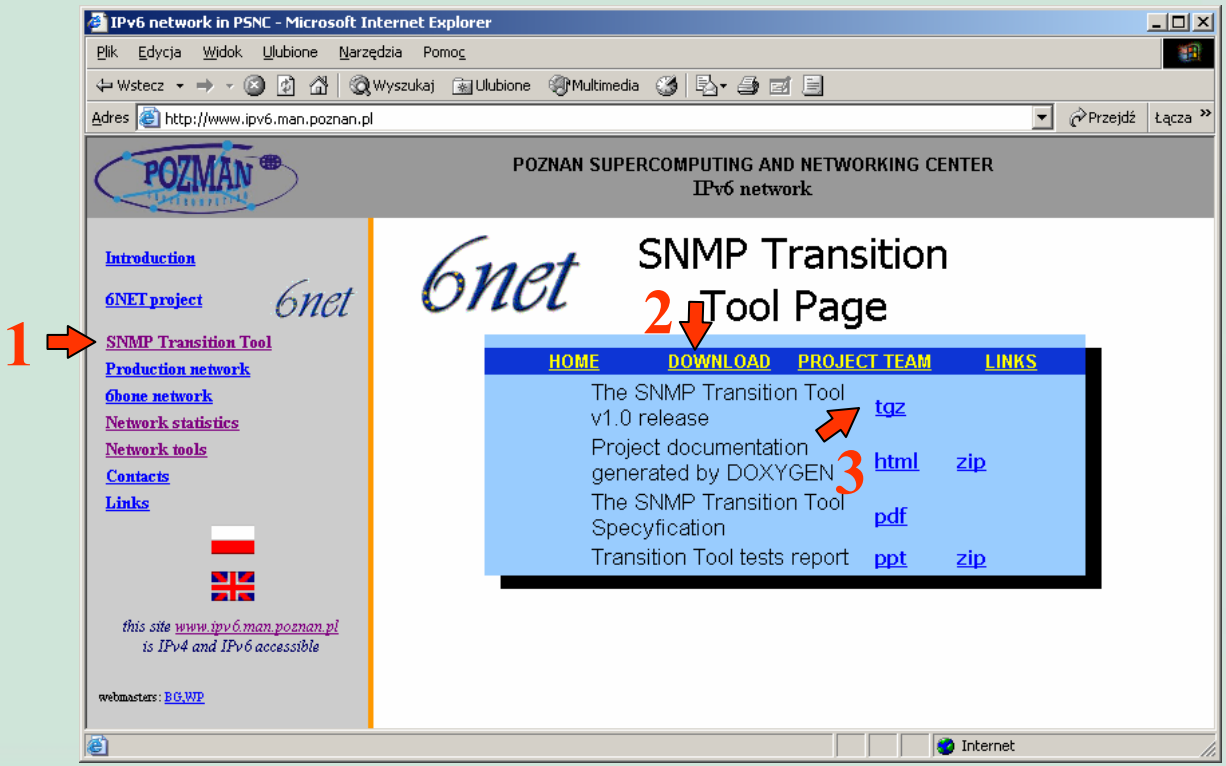
Proposition of the New Transition Tool Architecture



How to Get it

http://www.ipv6.man.poznan.pl

License Type: GPL



Thank you!

Any questions, comments or remarks are very welcome.

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