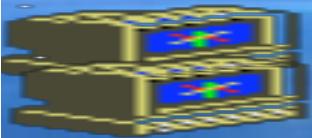


IPv6  
Luxembourg



Pv6



# The Two-way Internet Luxembourg 2009

IPV6  
The NEXT BIG  
BAIL-OUT



Vision & Way Forward

stained, the more quantitatively deformed is the web.



NORMAL

Scrapped on spiders, psychotropic drugs trigger decreased

stained, the more quantitatively deformed is the web.



NORMAL



CAFFEINE

Injected on spiders, psychotropic drugs trigger deformed

stanced, the more quantifiably deformed is the web.



NORMAL



MARIJUANAT



CAFFEINE

Spiders on spiders: psychotropic drugs trigger decreased

STUNED, the more quantitatively deformed is the web.



NORMAL



MARIJUANA  
**NAT**



CAFFEINE



BENZODIAZEPINE  
**STUN-ed**

Based on spiders, psychotropic drugs induce decreased



From

InterNET

to

InterNAT



From

Network of Networks



to

NATwork of NATworks

# Internet Generations

ArpaNET

NCP

Pioneers

Email, FTP

**TOURISTS**

Gov. Internet

Internet  
InterNAT

**IPv4/NAT**

Innovators  
NAT engineers

WWW- Client/Server

Public Internet

New InterNET

**IPv6**

EveryOne  
Everything

Wireless, Streaming  
Media, P2P, GRID

**RESIDENTS**

Global Internet

**Yv4**

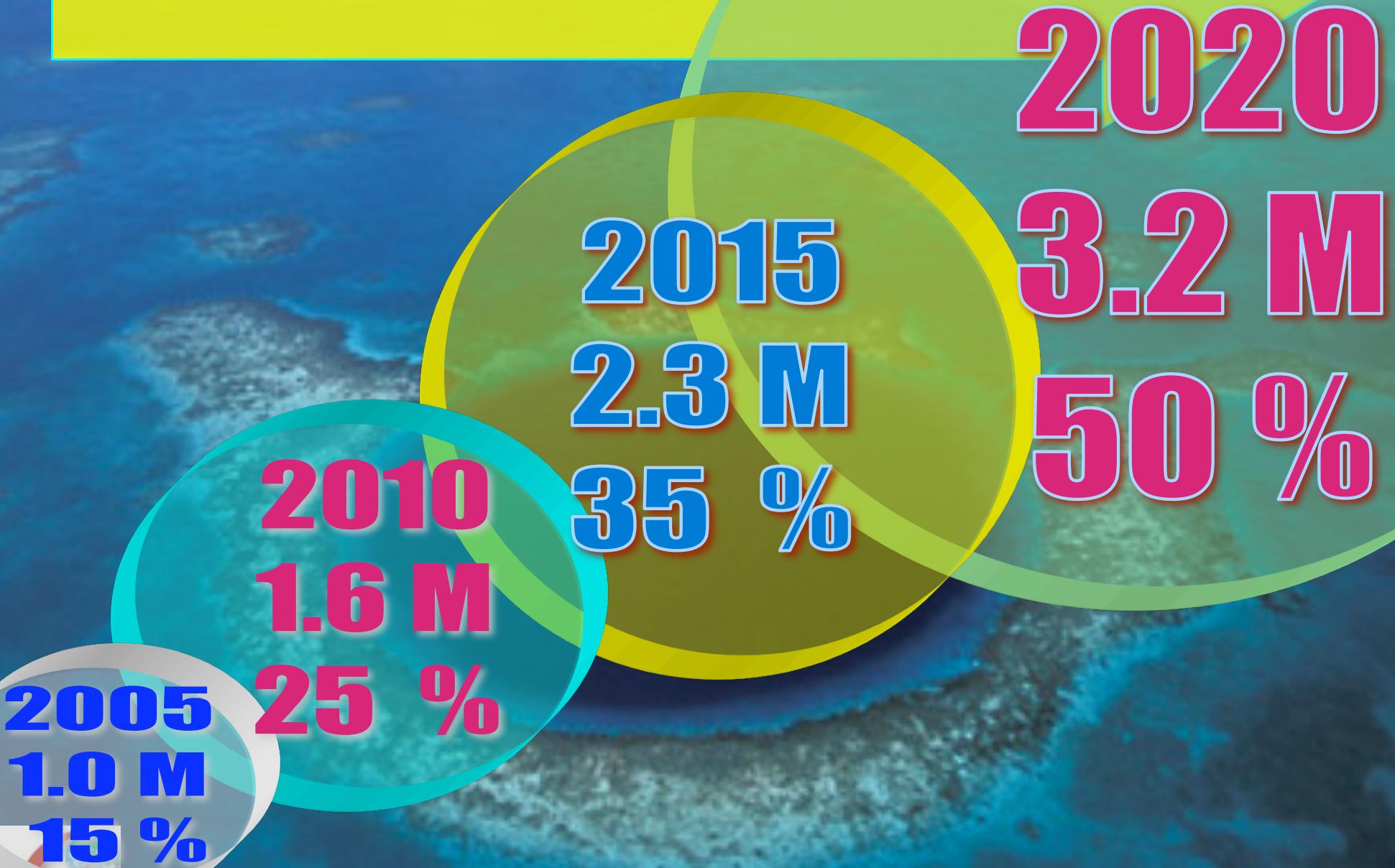
## WORLD INTERNET USAGE & POPULATION STATISTICS

**Yv6**

World Regions	Population ( 2008 Est.)	Internet Users Dec/31, 2000	Internet Usage, Latest Data	% Population ( Penetration )	Usage % of World	Usage Growth 2000-2008
<a href="#">Africa</a>	955,206,348	4,514,400	51,065,630	5.3 %	3.5 %	1,031.2 %
<a href="#">Asia</a>	3,776,181,949	114,304,000	114,304,000	15.3 %	39.5 %	406.1 %
<a href="#">Europe</a>	700,000,000	108,096,800	108,096,800	44.4 %	20.0 %	266.0 %
<a href="#">Middle East</a>	7,000,000,000	1,800,000,000	1,555,200	2.6 %	2.2 %	1,176.8 %
<a href="#">North America</a>	337,167,248	108,096,800	248,241,969	73.6 %	11.5 %	129.6 %
<a href="#">Latin America</a>	550,001,673	18,068,919	139,000,000	24.1 %	9.5 %	29.3 %
<a href="#">Oceania</a>	1,000,000	1,000,000	766,000	7.7 %	0.0 %	5.1 %
<b>WORLD TOTAL</b>	<b>6,673,300,000</b>	<b>199,992,992</b>	<b>1,463,632,361</b>	<b>21.5 %</b>	<b>10.0 %</b>	<b>5.5 %</b>

**Killer App!** IPv6 Achieved the Critical 20%  
IPv6 Can Drive Growth & Continuity!

# World Internet Penetration



# The Next Big Internet

Trillions of

- RFIDs
- Sensors

Billions of  
Smart Devices  
- Vehicles  
Buildings

3-5 Billions  
- Mobile Phones  
- PDAs

3-500 M  
- PCs



# Power throughout the world



# Internet throughout the world

*Internet Map*

Connection Density



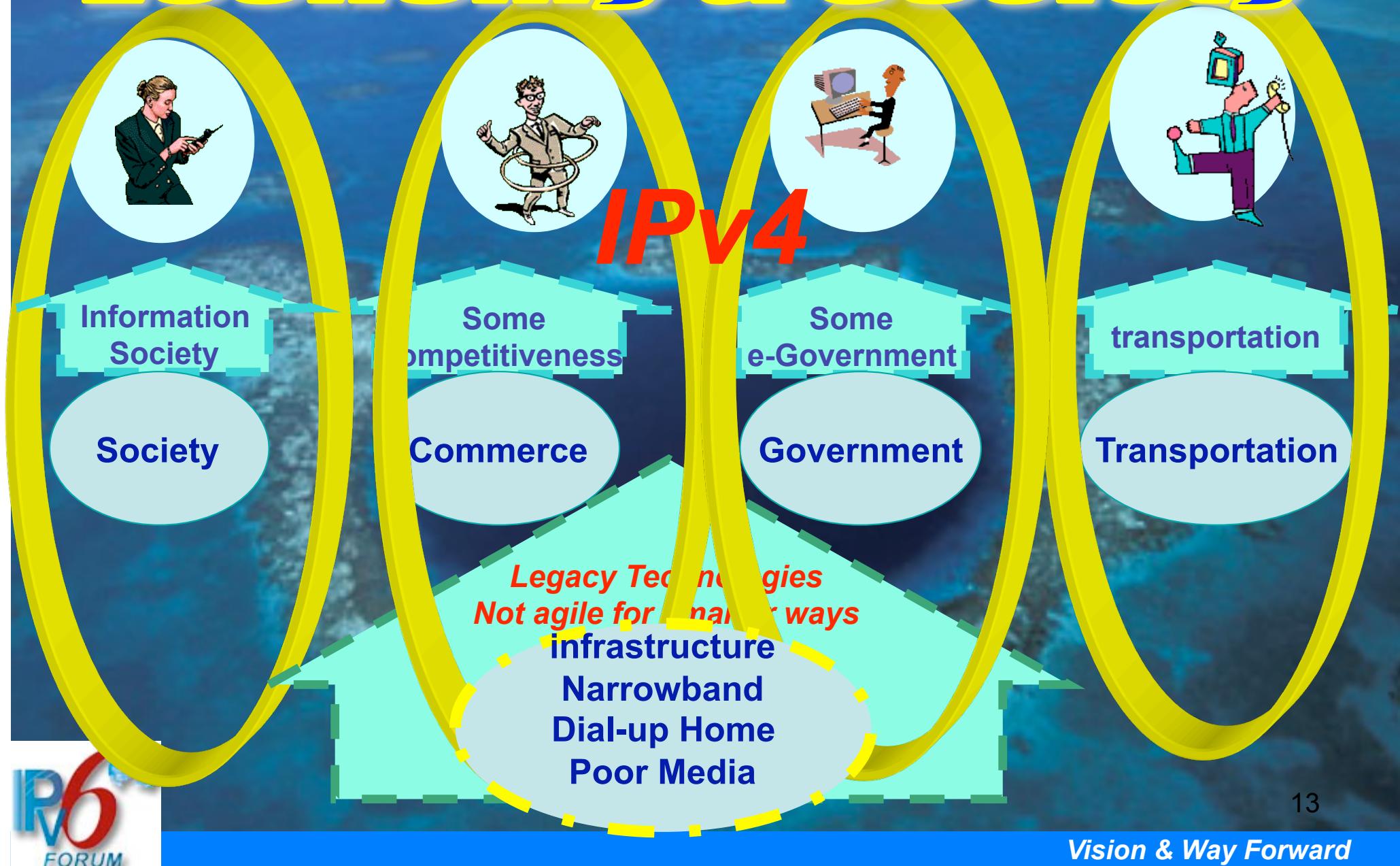
ChrisHarrison.net



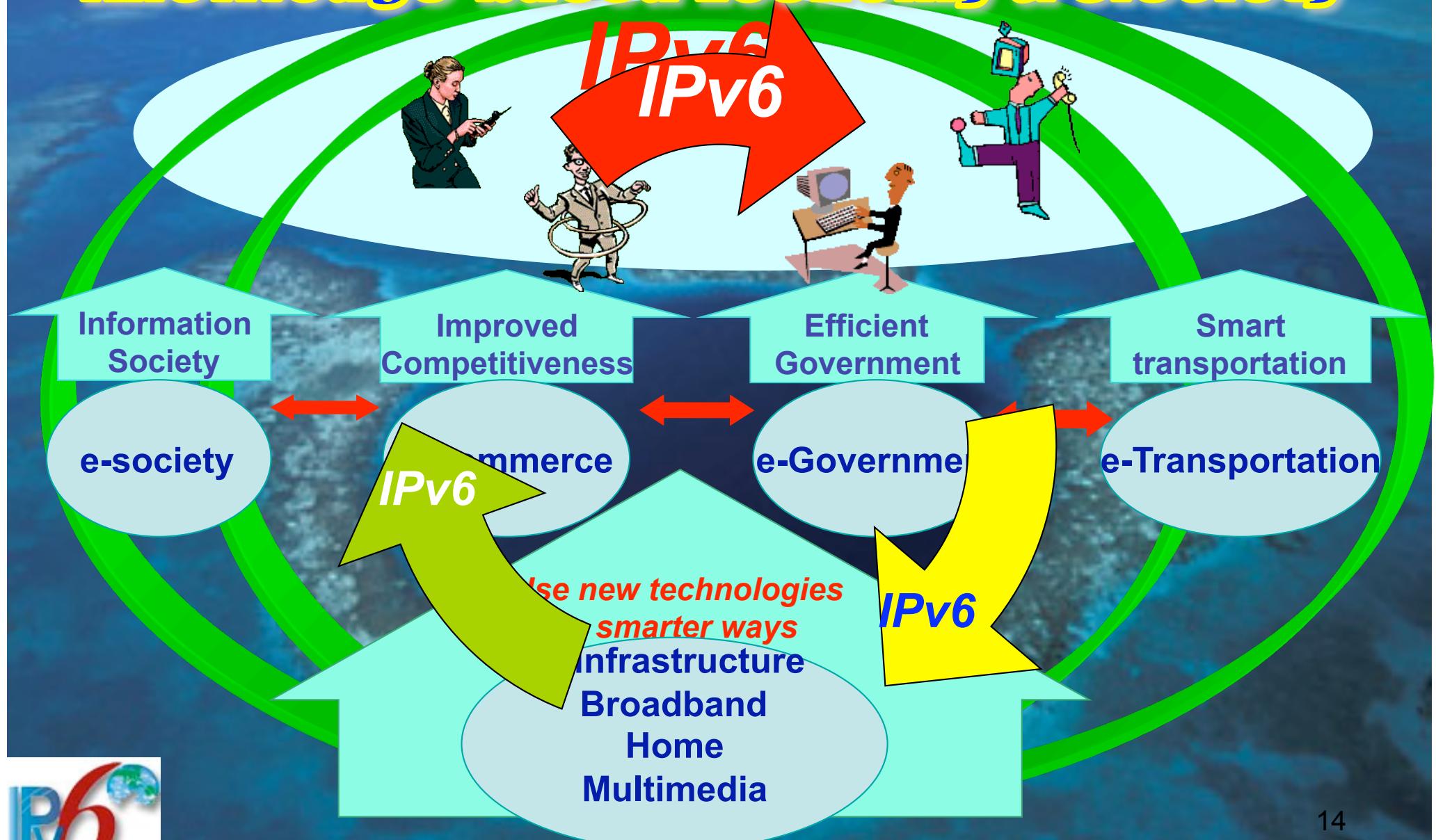
12

Vision & Way Forward

# ***IPv4: Fragmented Economy & Society***



# *IPv6: For Most Advanced Knowledge-based Economy & Society*



# *Empowerement*

*from*  
***Hidden Consumer***  
*to*  
***Known PRODUCER***



# *Time Person of the Year*

You

2006



# *Mega Trends*

Device  
Commoditisation

Connectivity  
Commoditisation

Shrinking  
MARGINS

Personal  
Device  
Convergence

# The IPv4 Address Exhausting Debate ☺

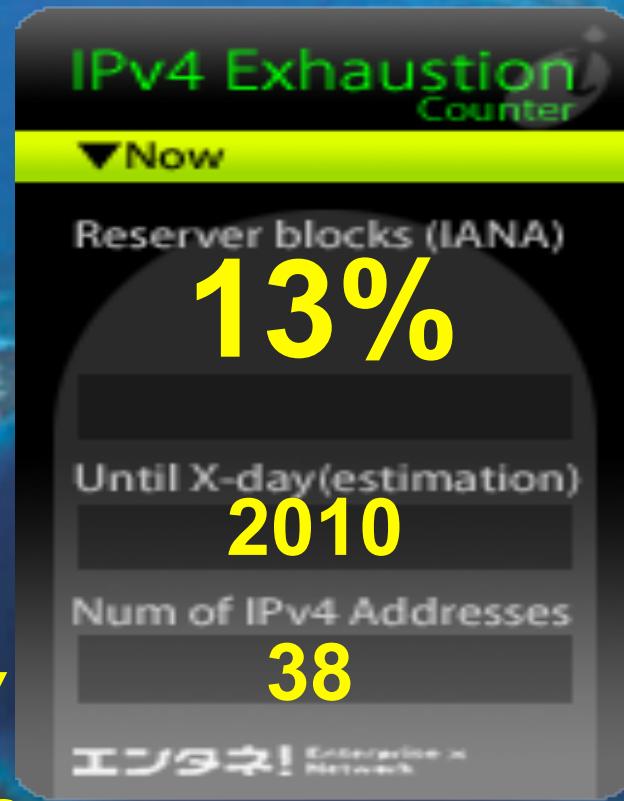


Geoff Huston

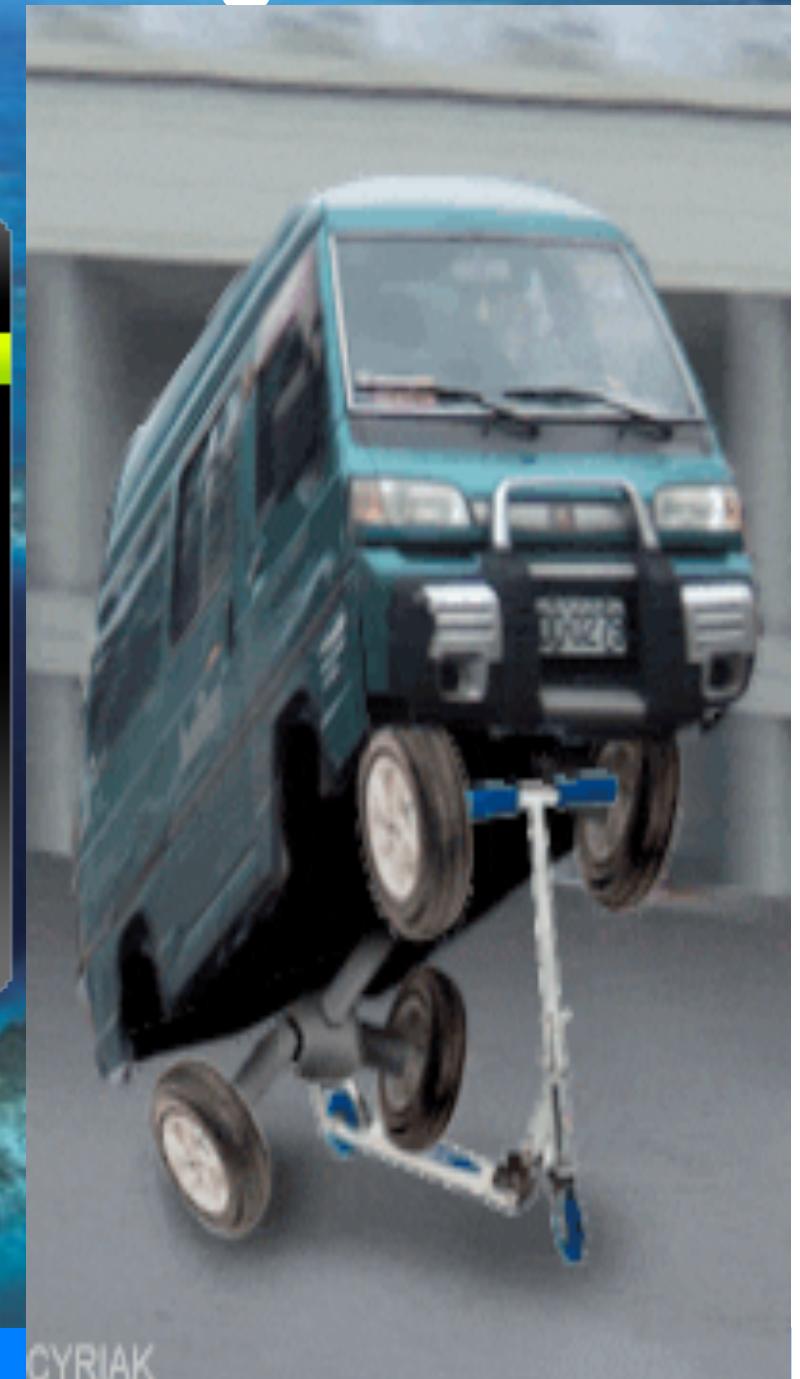


Tony Hain

2030



2010

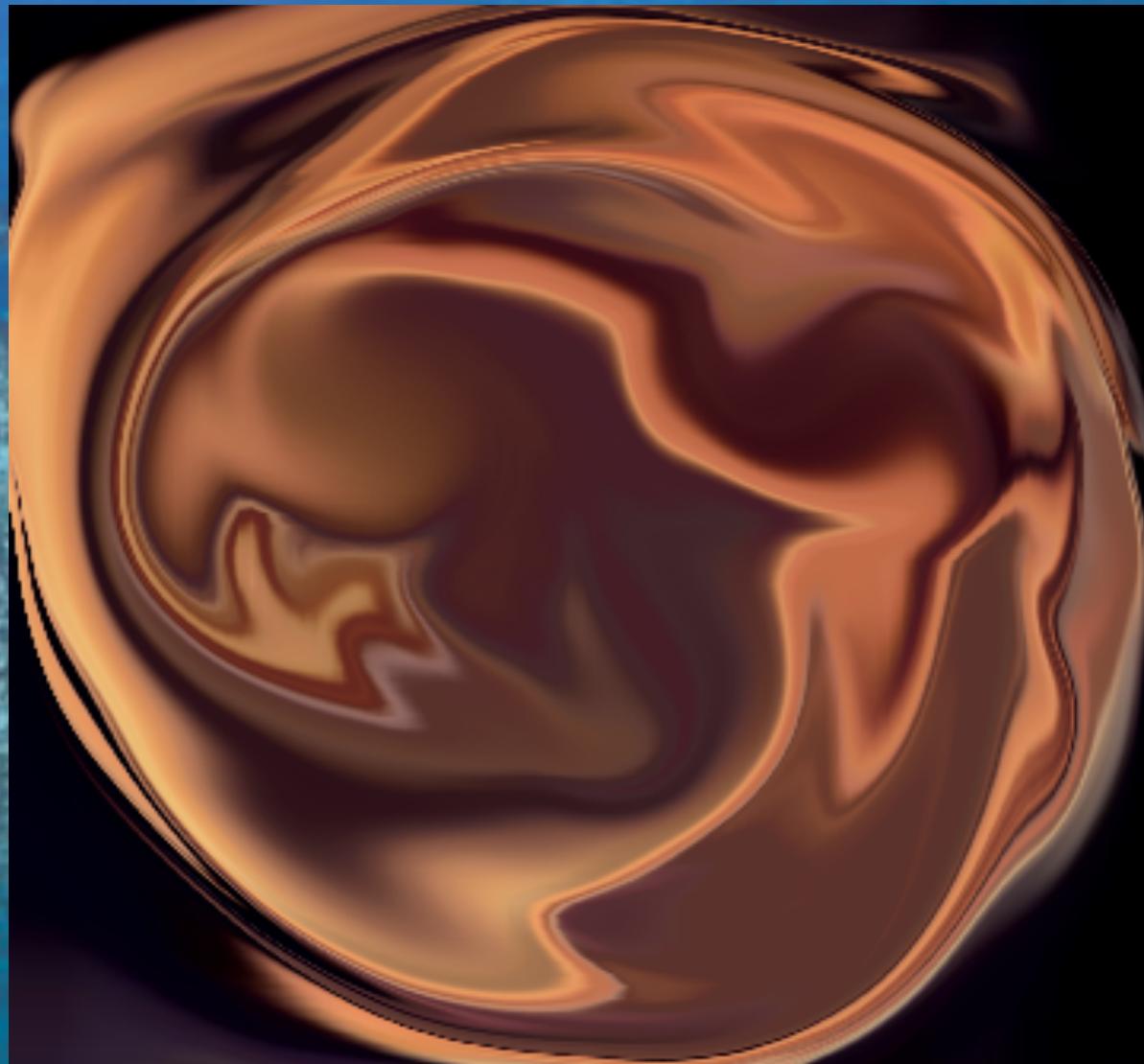


CYRIAK

# Yv4: The Y2K for Internet!



# The Internet is losing its original Design



**IPv4**  
**500 M**



**IPv6 Vision**  
**Billions of Nodes**

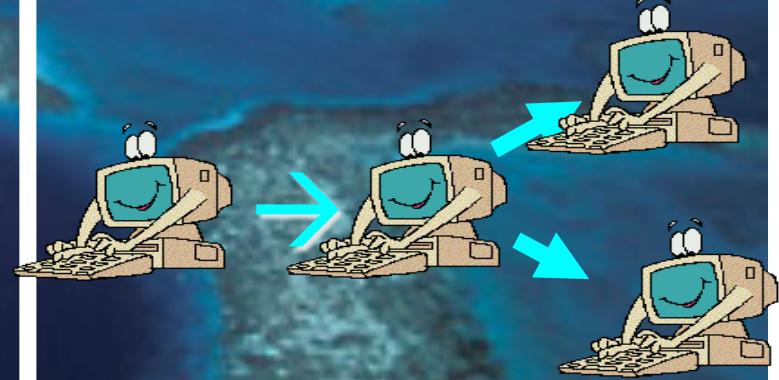
**Always-on**



**Autoconfig**



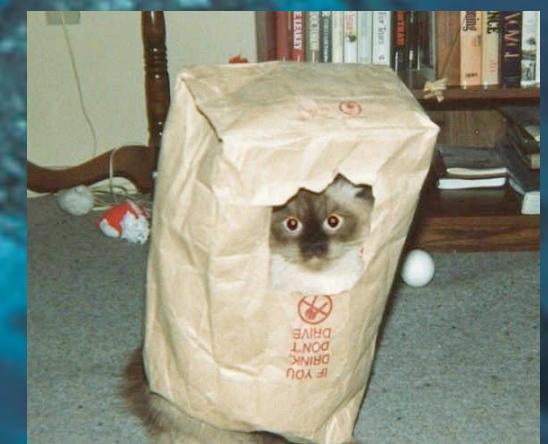
**Multicast**



**mobile**



**Always-on  
Security  
Privacy**



# Perception: IPv4 is Innovation - IPv6: an Upgrade

Political Goodwill

Business Drivers

Technology Value

Infrastructure

Yv4  
Not needed

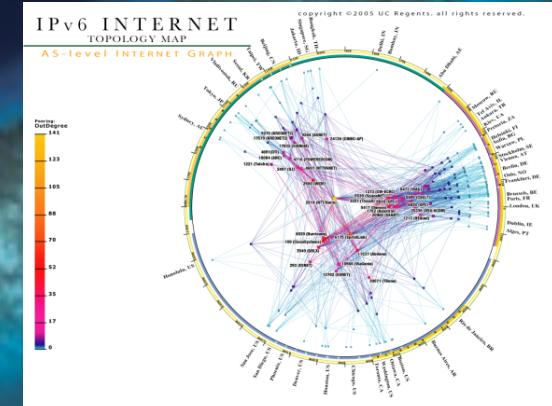
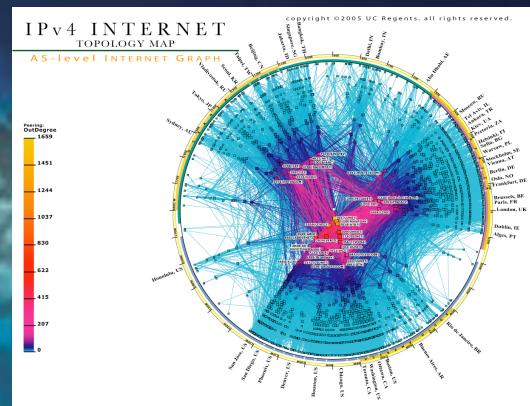
Innovation

Powerful

Yv6  
Needed?

Upgrade

Same & More



22

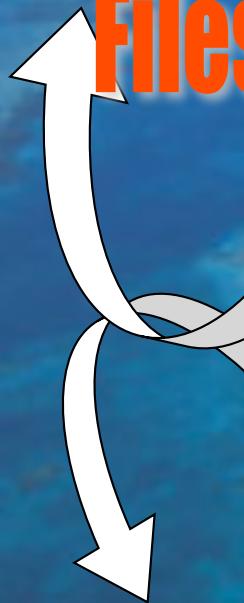
“The IPv6 Final Marathon” Vision & Way Forward

# The New Internet The TWO-WAY Internet

## End 2 End

Filesharing

Ressource Sharing



Instant  
Communication

Interactive

Collaborative  
Computing

*Wide Open Again for INNOVATION*

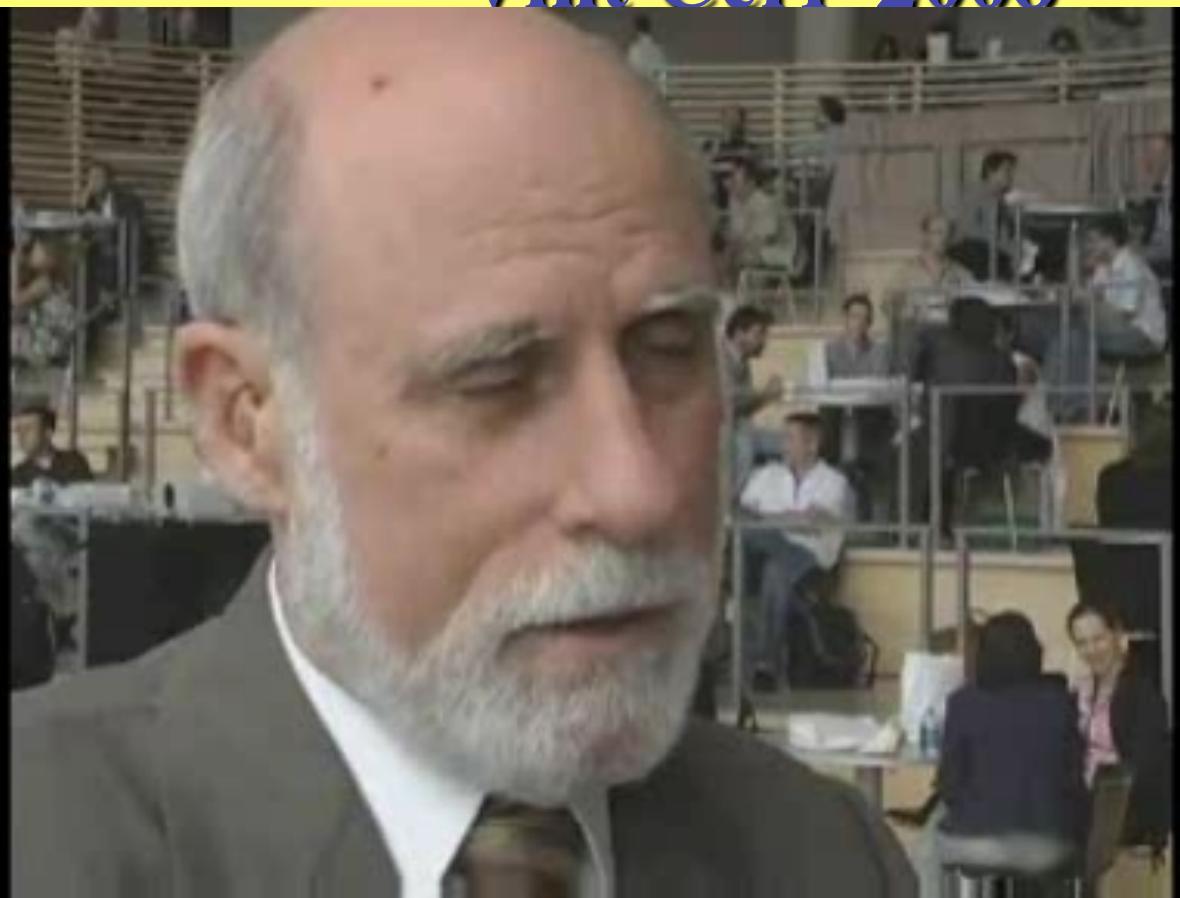
# Killer Apps





# ”The Myth of the IPv6 Killer App”

Vint Cerf 2008



# SHORT TERM DRIVERS

**VPN**



**VOIP**



**3 G**



**GAMING**



**Broadband**



# LONG TERM DRIVERS

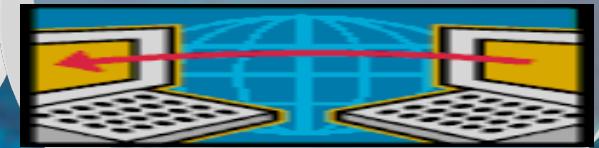
**NGN**



**Triple Play**



**Remote Control**



**Embedded**

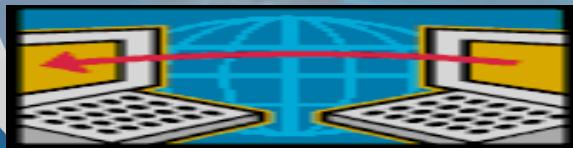


**Wimax**

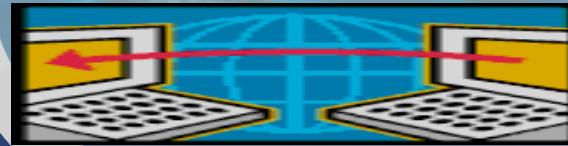


# LONG TERM DRIVERS

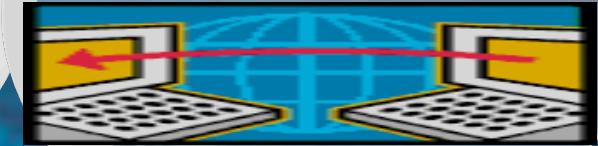
**Home**



**GRID**



**PLC**



**IPTV**



**CAR2CAR**



# LONG TERM DRIVERS

**Building  
Automation**



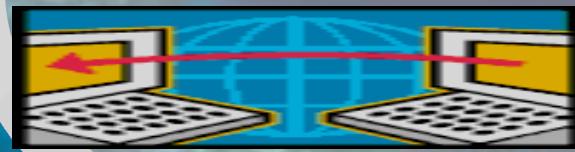
**P2P**



**RFID**



**Sensors**



**Emergency**

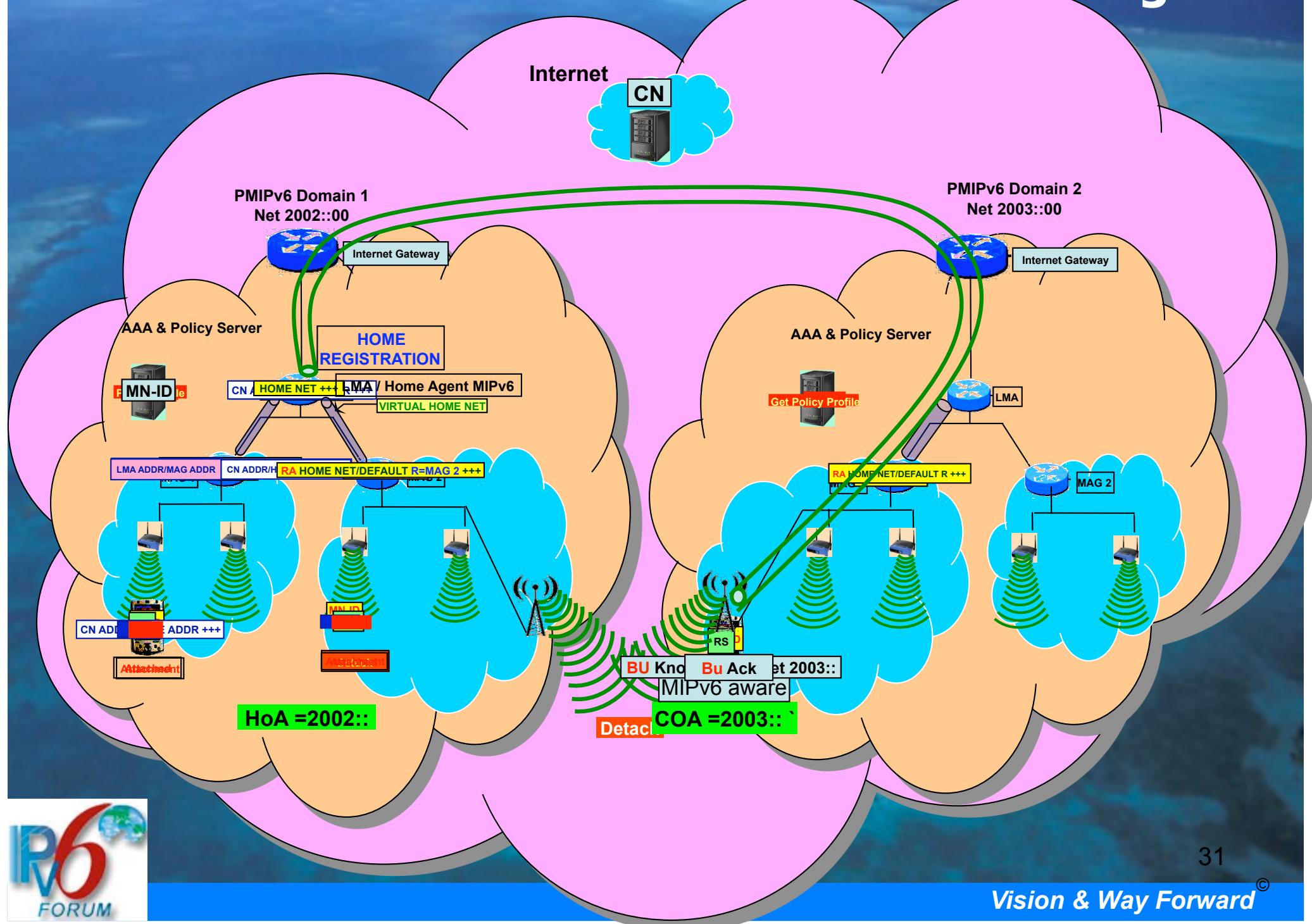


# IPv6 Vertical Drivers

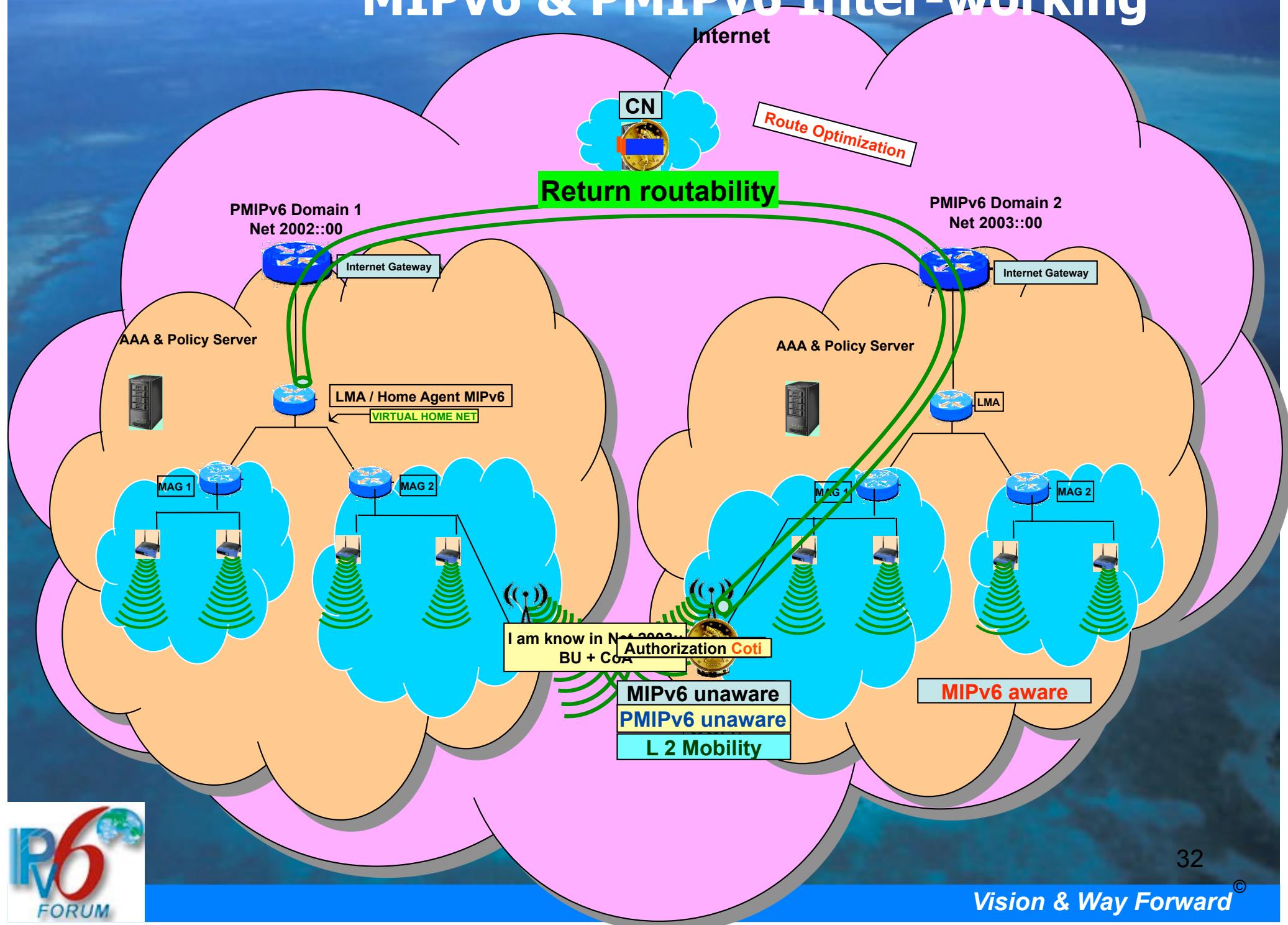
## European Commission Funded IPv6 Impact Study



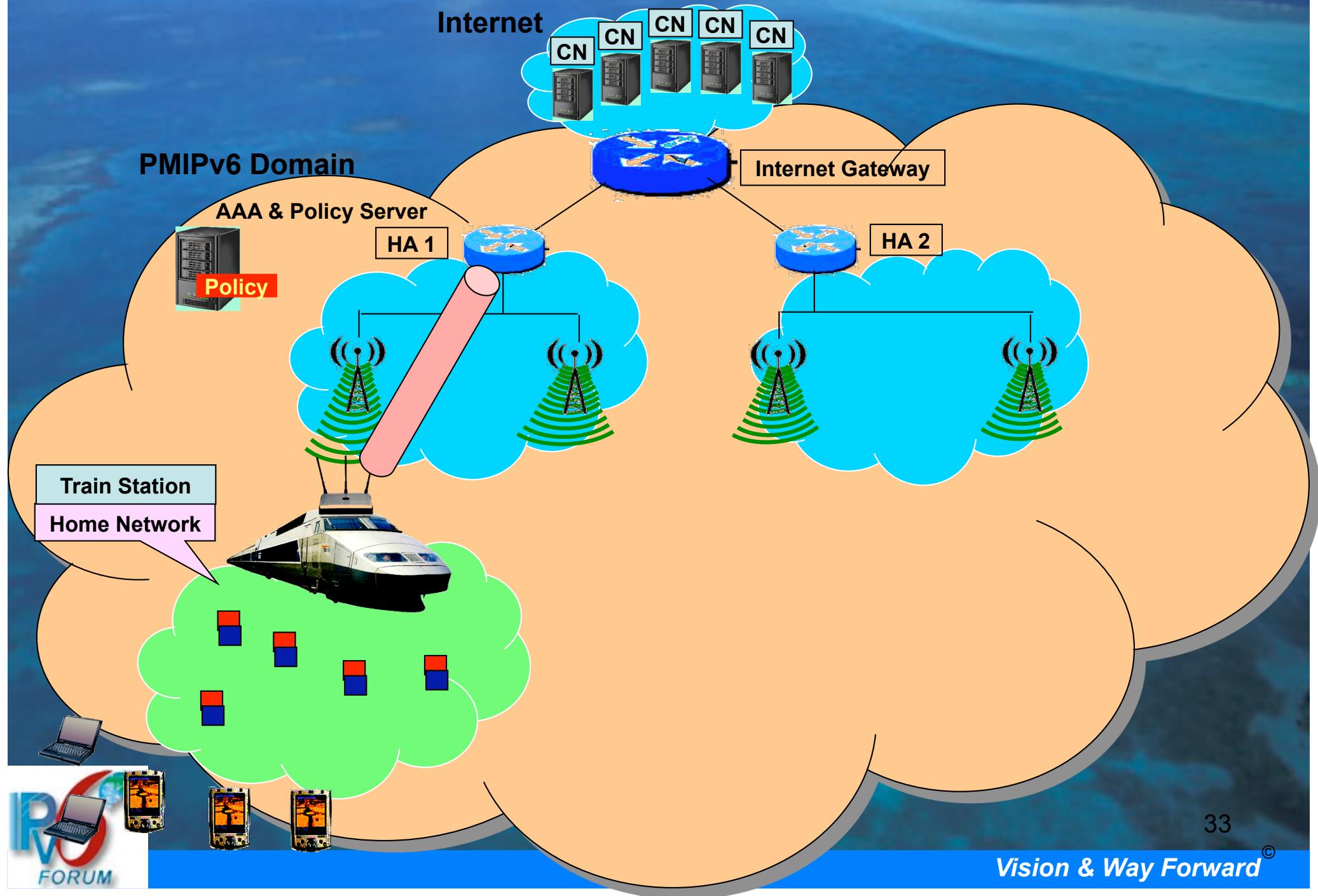
# MIPv6 & PMIPv6 Inter-working



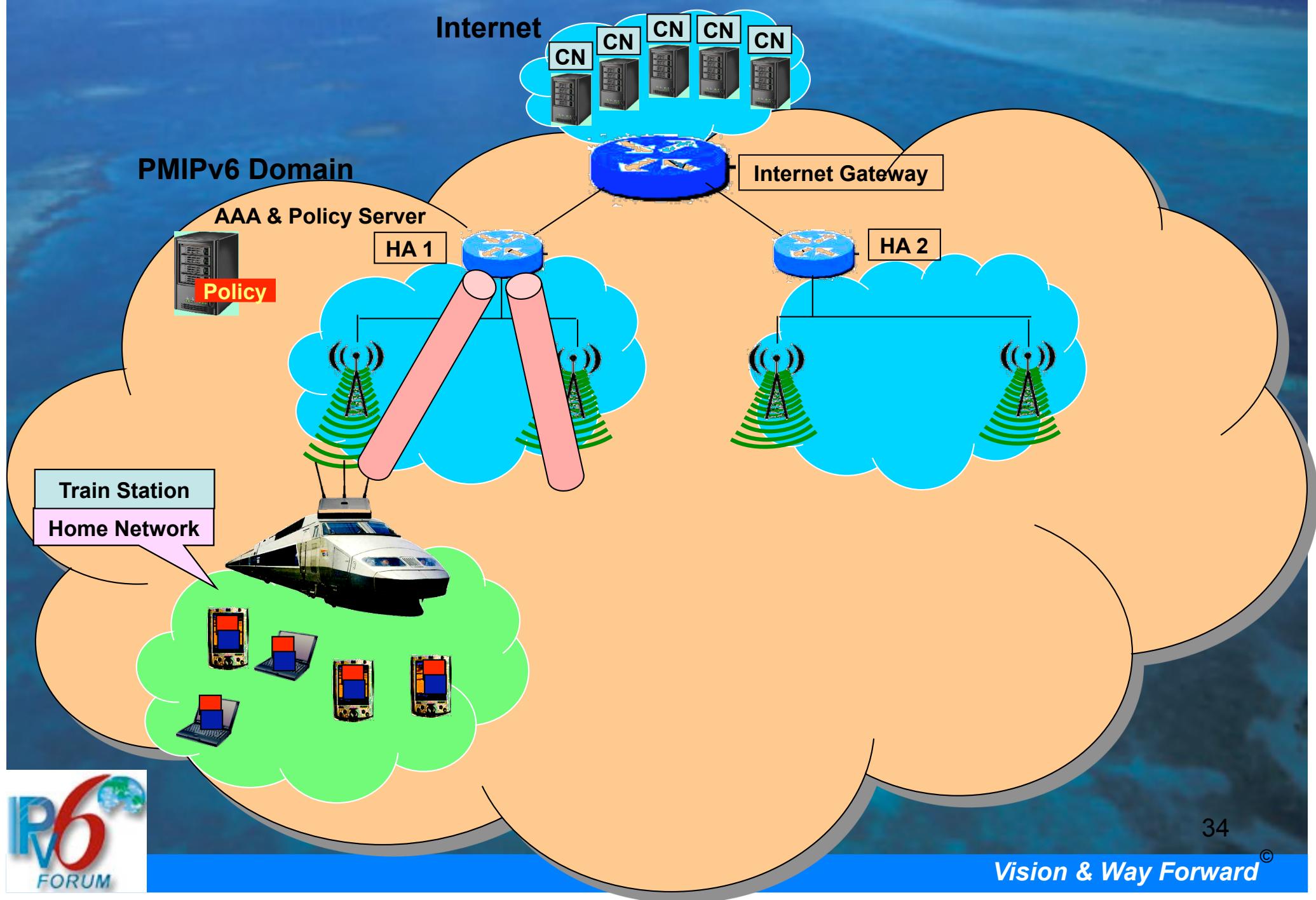
# MIPv6 & PMIPv6 Inter-working



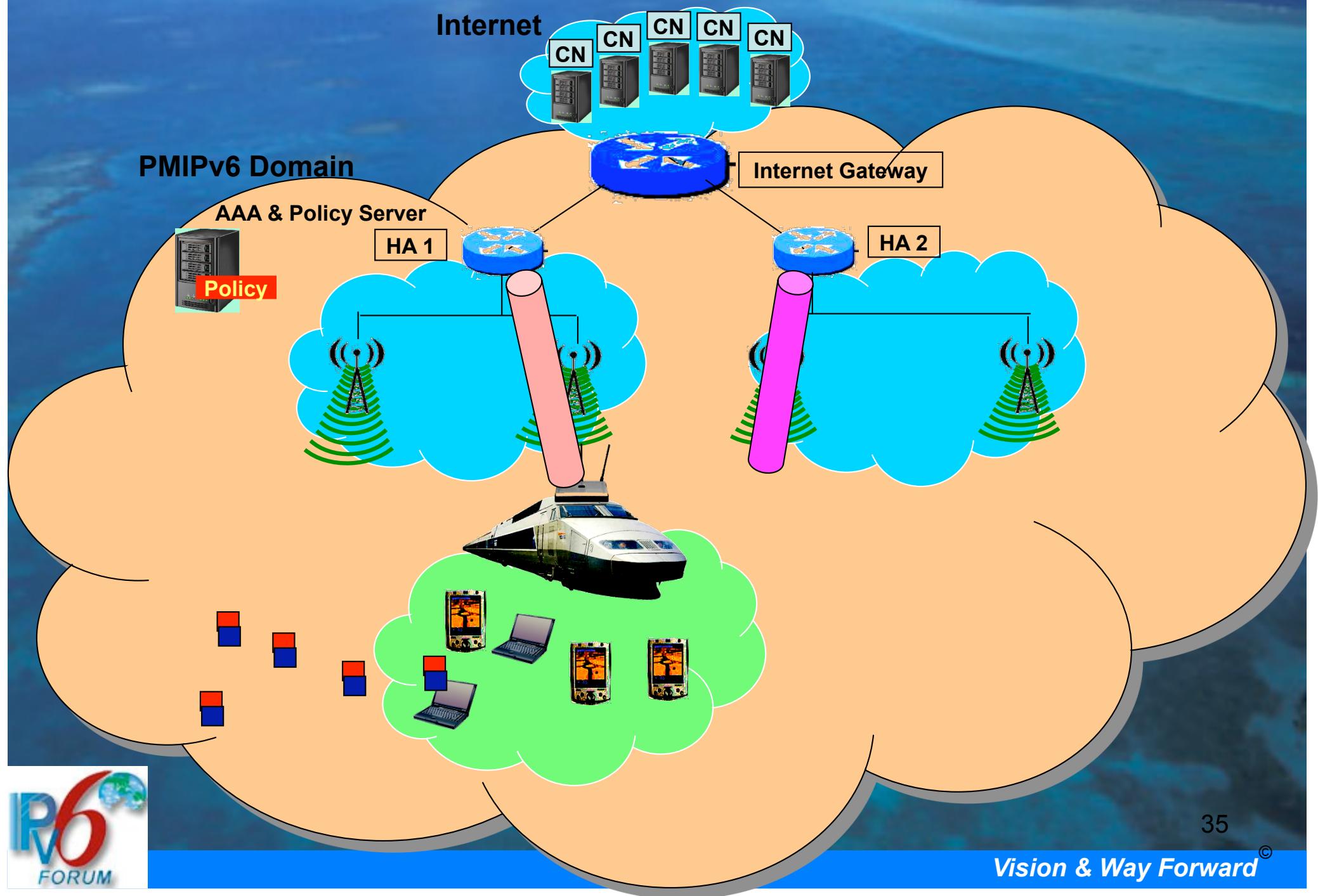
# NEMO : Network Mobility



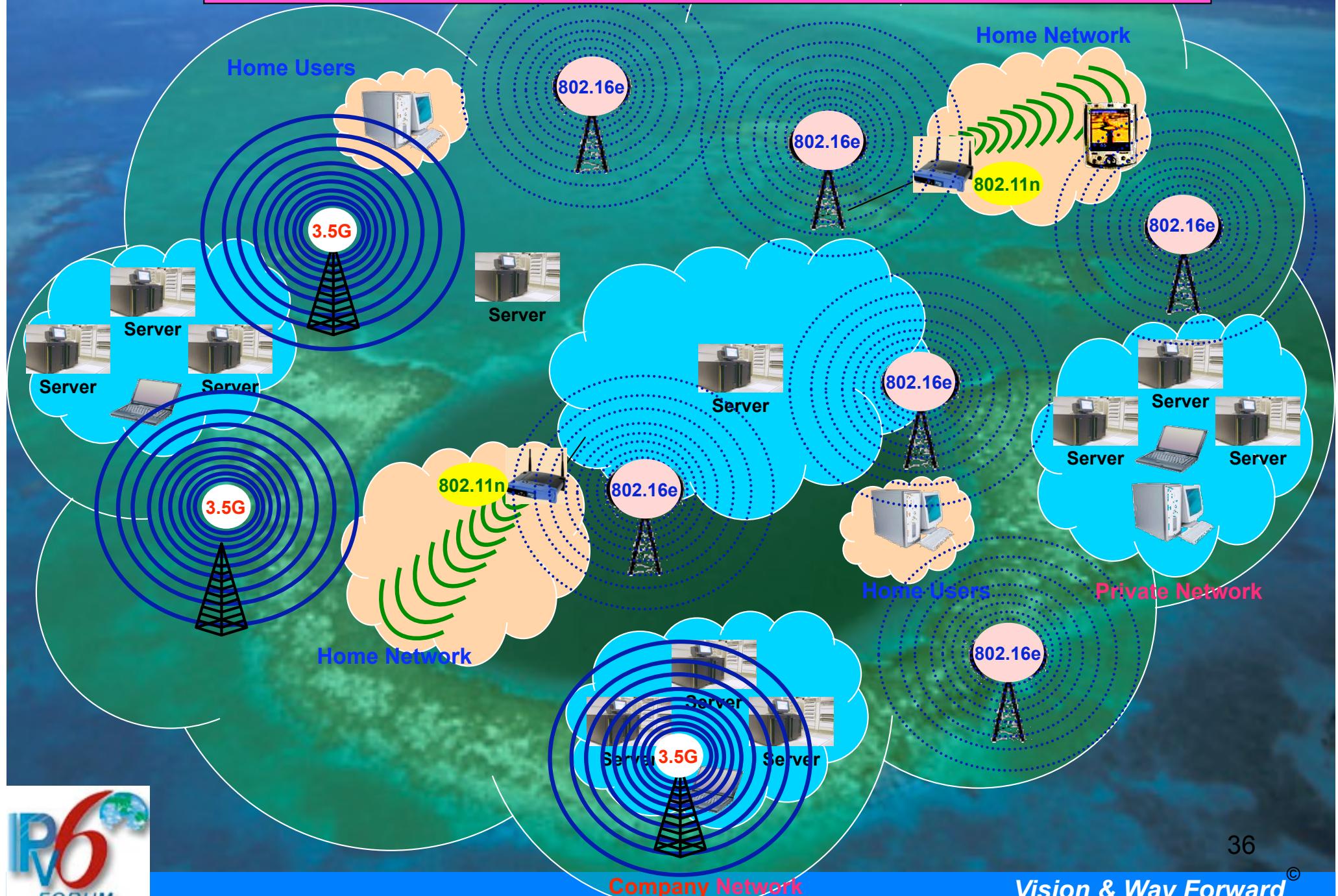
# NEMO : Network Mobility



# NEMO : Network Mobility

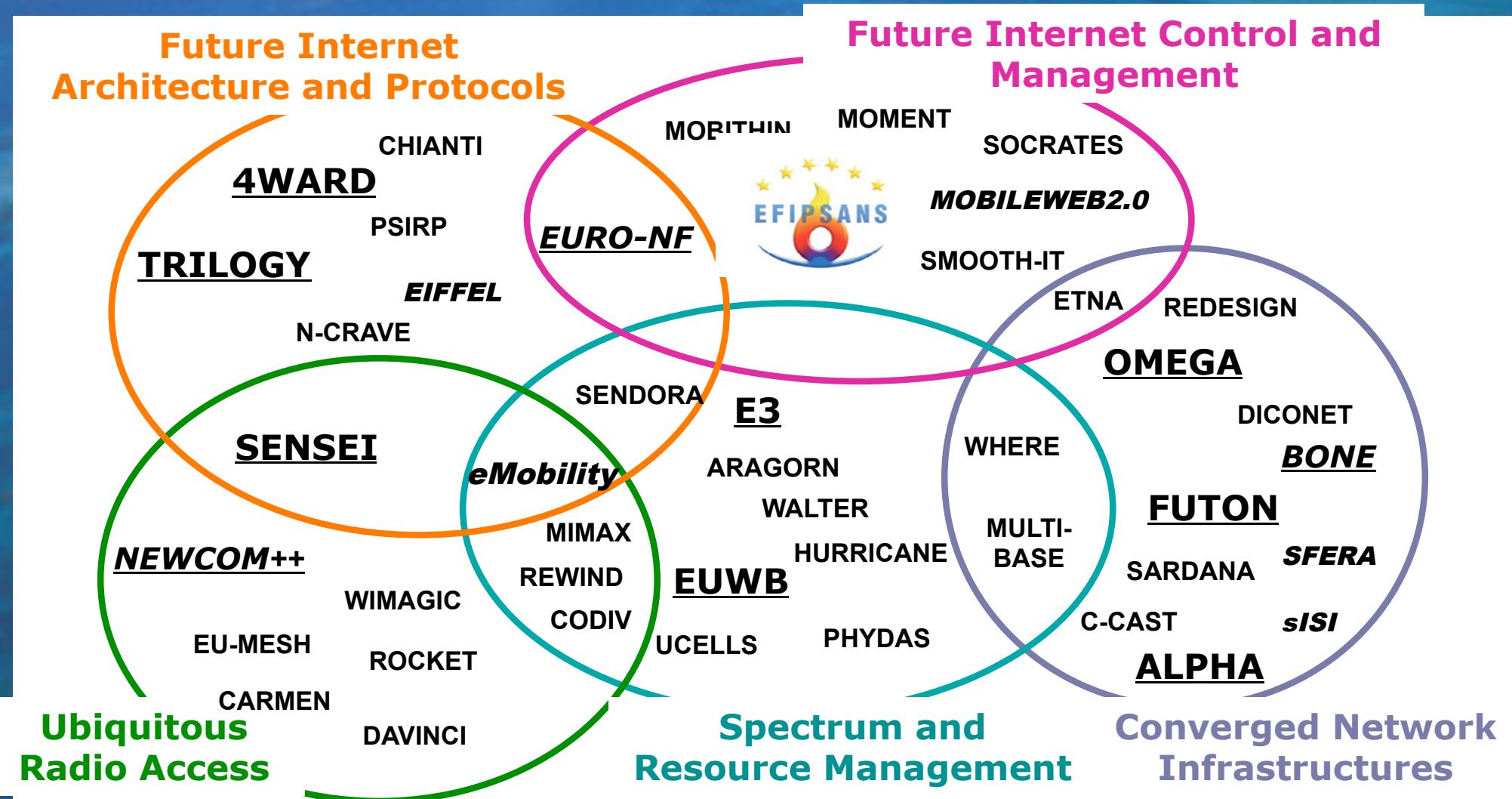


# IPv6:The Ultimate converged Internet



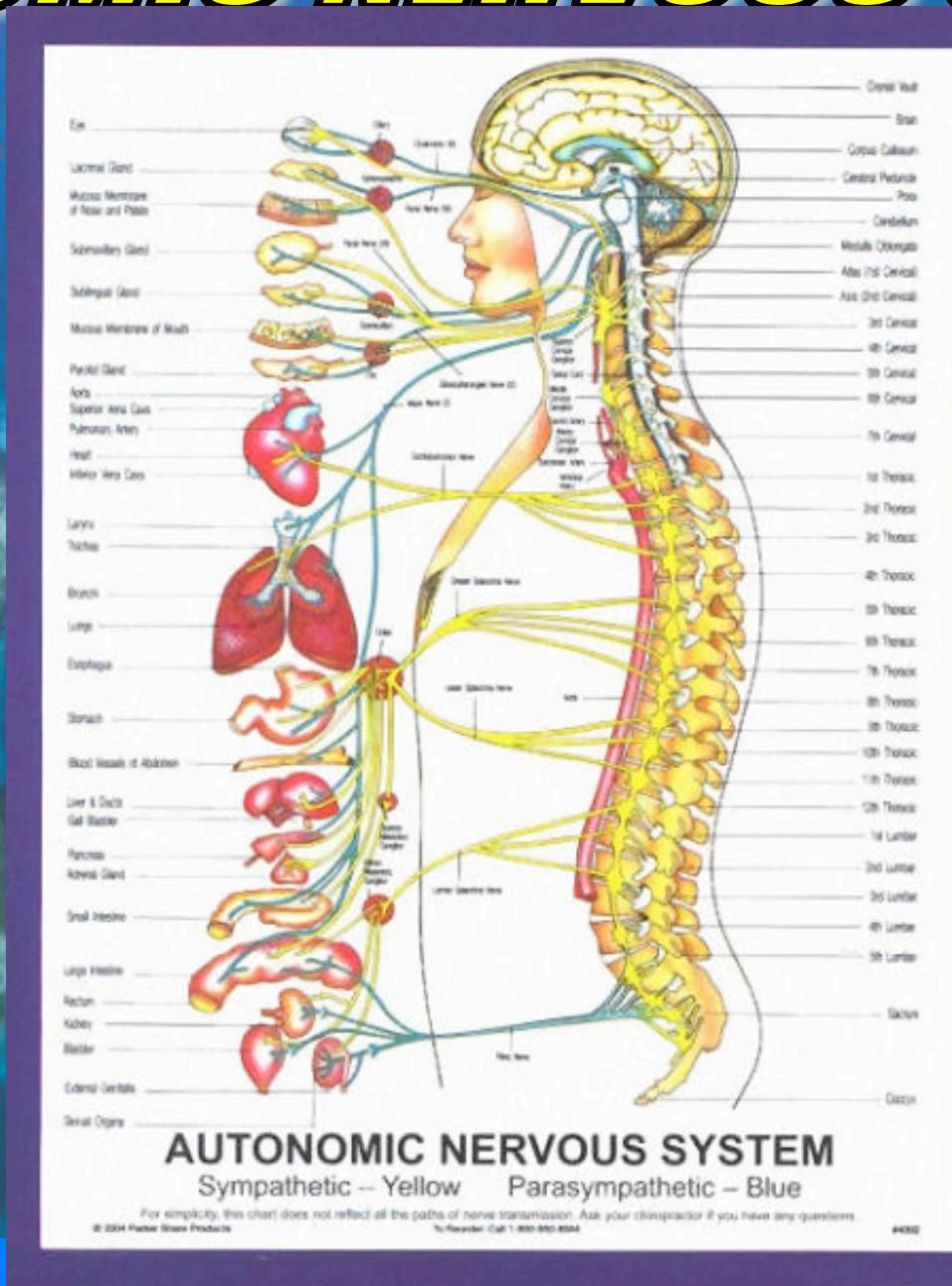
# **COLLABORATION**

## Networks of the Future Projects



# **AUTONOMICITY NETWORKING**

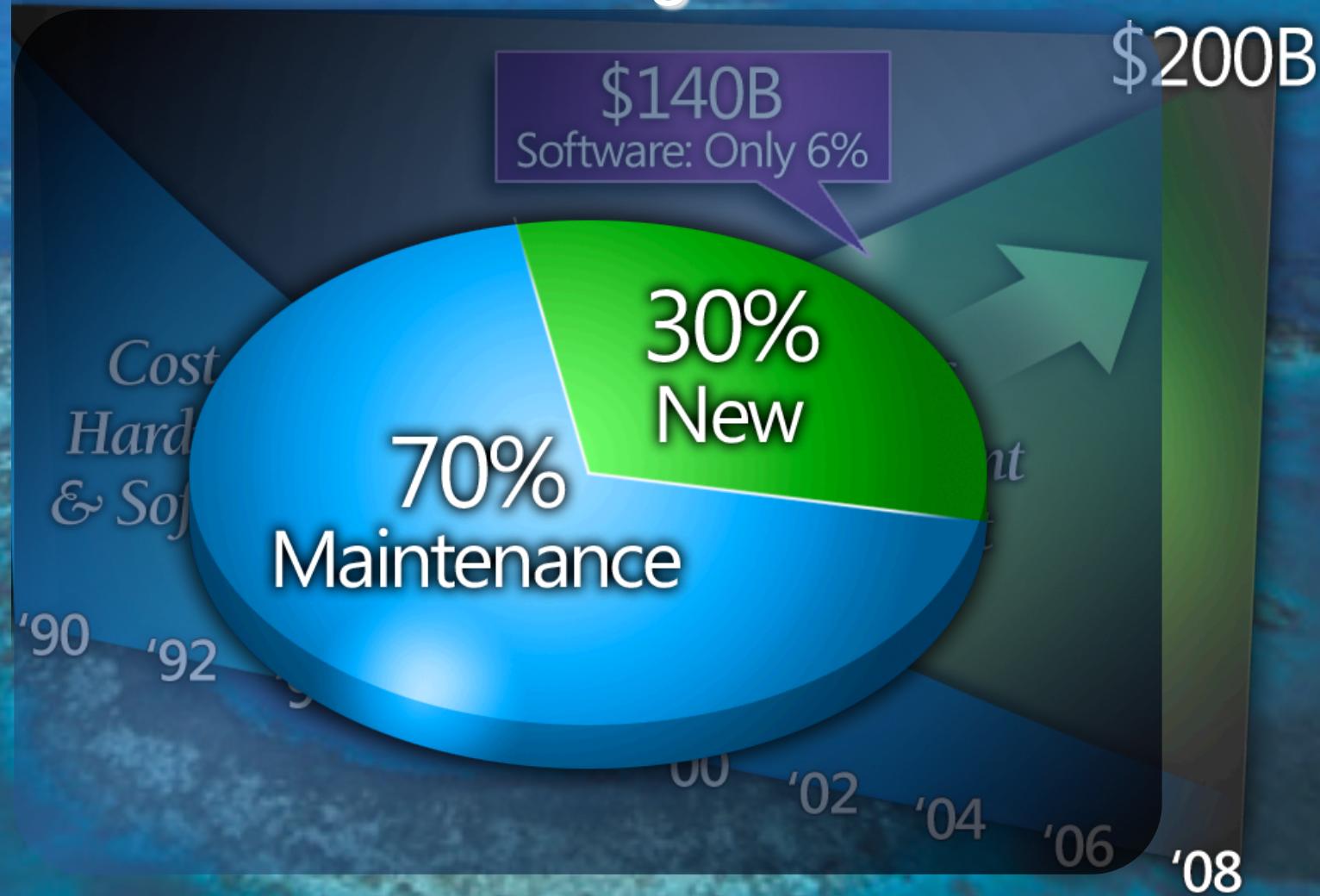
# **AUTONOMIC NERVOUS SYSTEM**



# IT Complexity & Cost

## IT Budgets

**Microsoft®**  
Your potential. Our passion.™

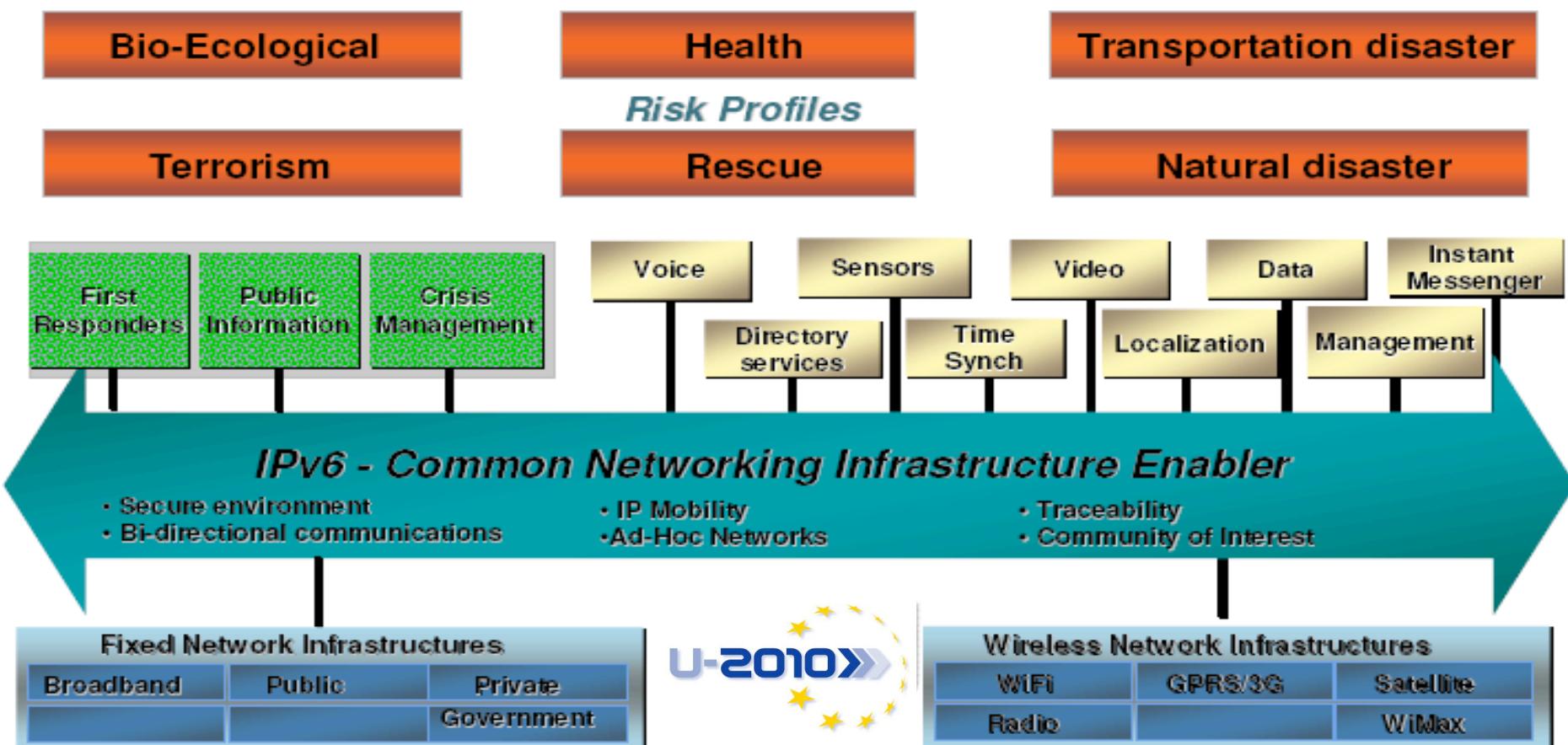




# Government & Industry Emergency & Crisis

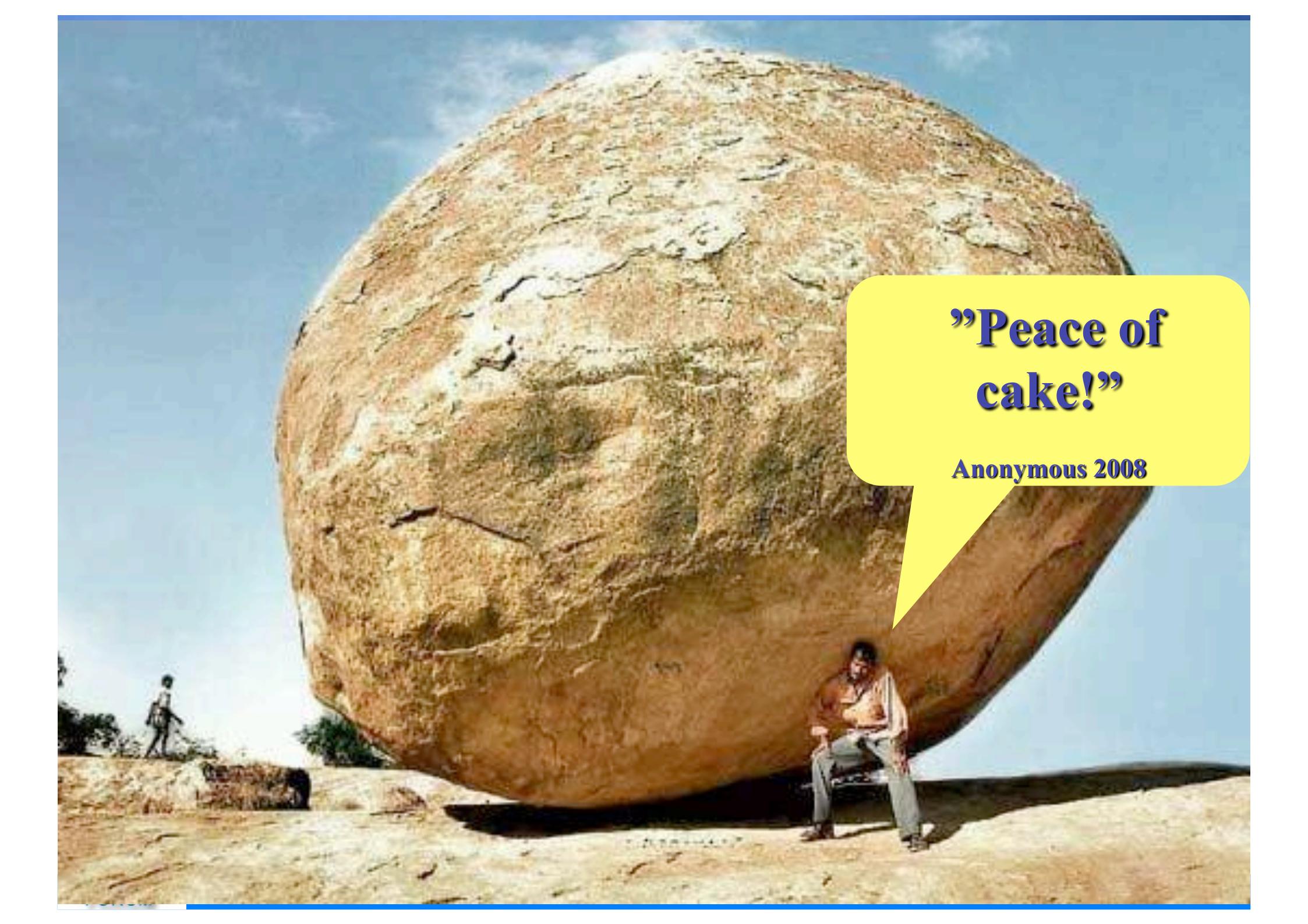


## U-2010 – an IPv6 Public Safety Framework



# Putting The Internet Back Together!



A photograph of a massive, rounded rock formation with a textured, light brown surface. A man is sitting on the ground at the base of the rock, appearing very small in comparison. Another person is walking away from the camera on the left side of the frame.

**"Peace of  
cake!"**

Anonymous 2008