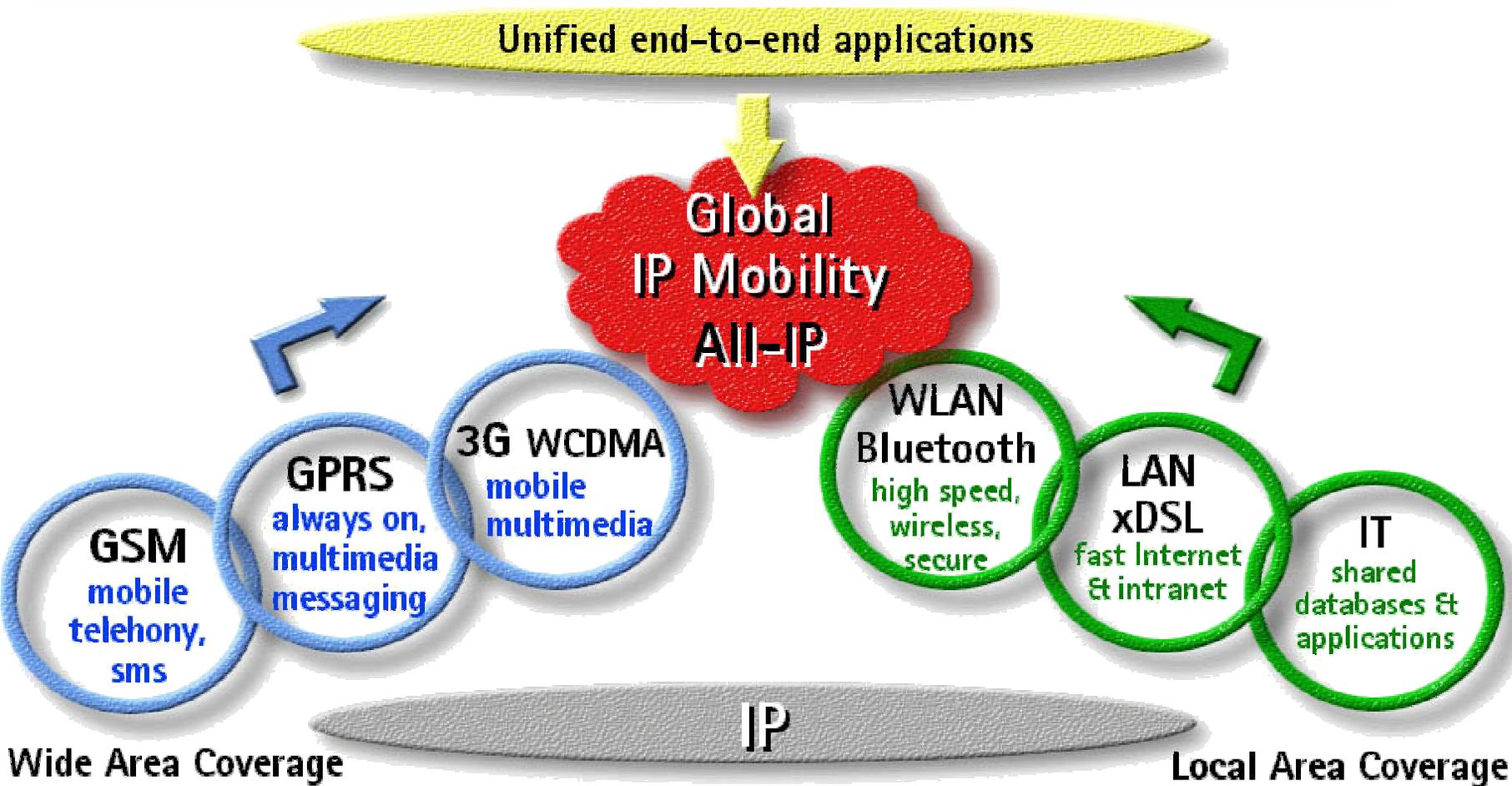


The benefits of using IPv6 in the context of new business Environments

Bosco Eduardo Fernandes
IPv6 TF-SC member
IPv6 Technical Directorate
Chair ICTG (IT-Media) and Manufacturers Sector
Group UMTS Forum

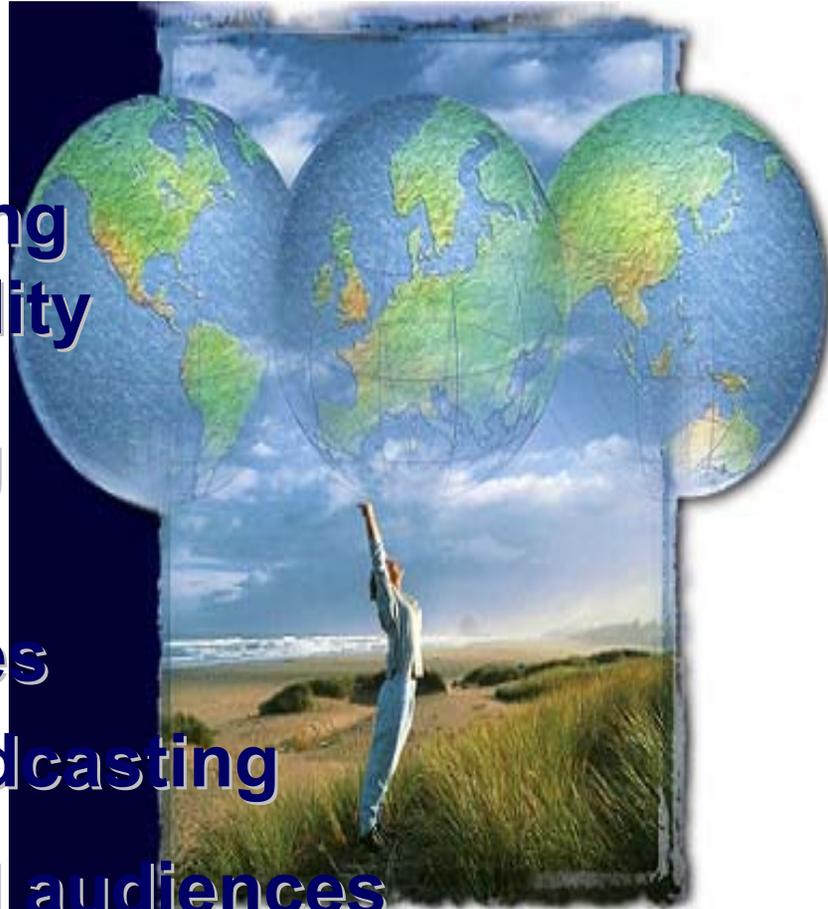


INTERNET CONVERGENCE



IP as the World Catalyst

- **Common & More Flexible Service bundling**
- **Millions of different peering options and levels of quality**
- **Flexible way of accessing and distributing content**
- **New revenue opportunities**
- **Dynamics of new IP broadcasting**
- **IP streaming to dispersed audiences**



APPPLICATIONS

BROADBAND ACCESS

CONVERGENCE =

IT'S THE NEXT GENERATION INTERNET



The Roadmap to one User preceived Service Delivery



IPv6 Implementation

- IPv6 implementations are available a cross the spectrum of hardware and software products for carriers, enterprises, and consumers.
(A survey of IPv6 products and implementations is at

<http://playground.sun.com/ipng/ipng-implementations.html>)

- The protocol's use is mandated in next generation mobile wireless standards.



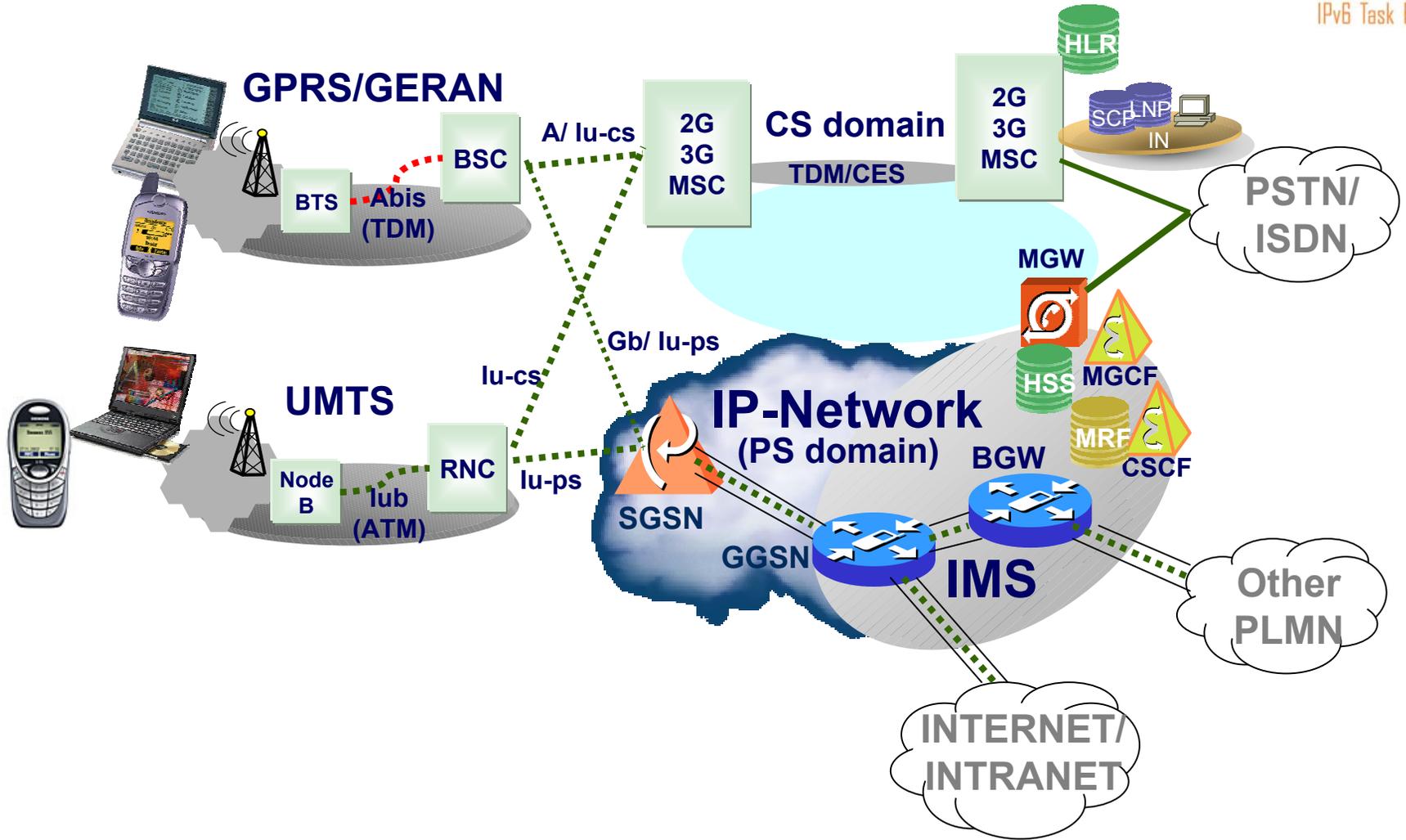
Status of IPv6 Rollout is slow

- Innovation – a challenge for Operators and ISP's.
- The fear of heavy investments with risks?
- The needs of the Enterprise market in terms of Applications and Tools is no different.

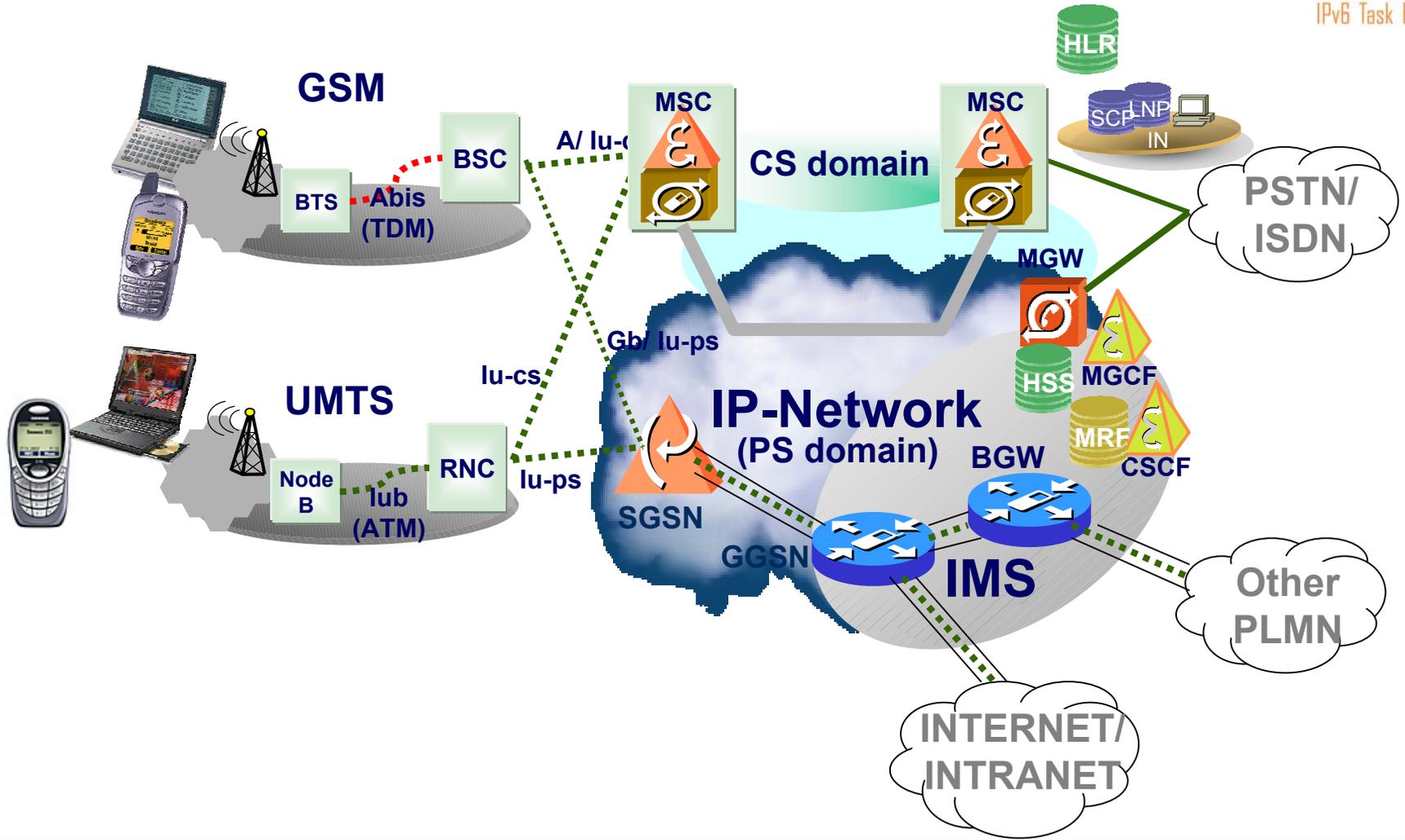
However, IPv6 is a natural convergence protocol for tomorrow's IP centric world.



IMS Introduction



IP-Transport for CS-Domain



Handset Challenge



**Multi-
Modes
Frequencies
Standards**

more than 75%
of the world's
wireless market

**W-CDMA
TD-(S)CDMA
EDGE(GERAN)**

**IMT-
2000**

GSM / GPRS

2.5G

CDMA2000

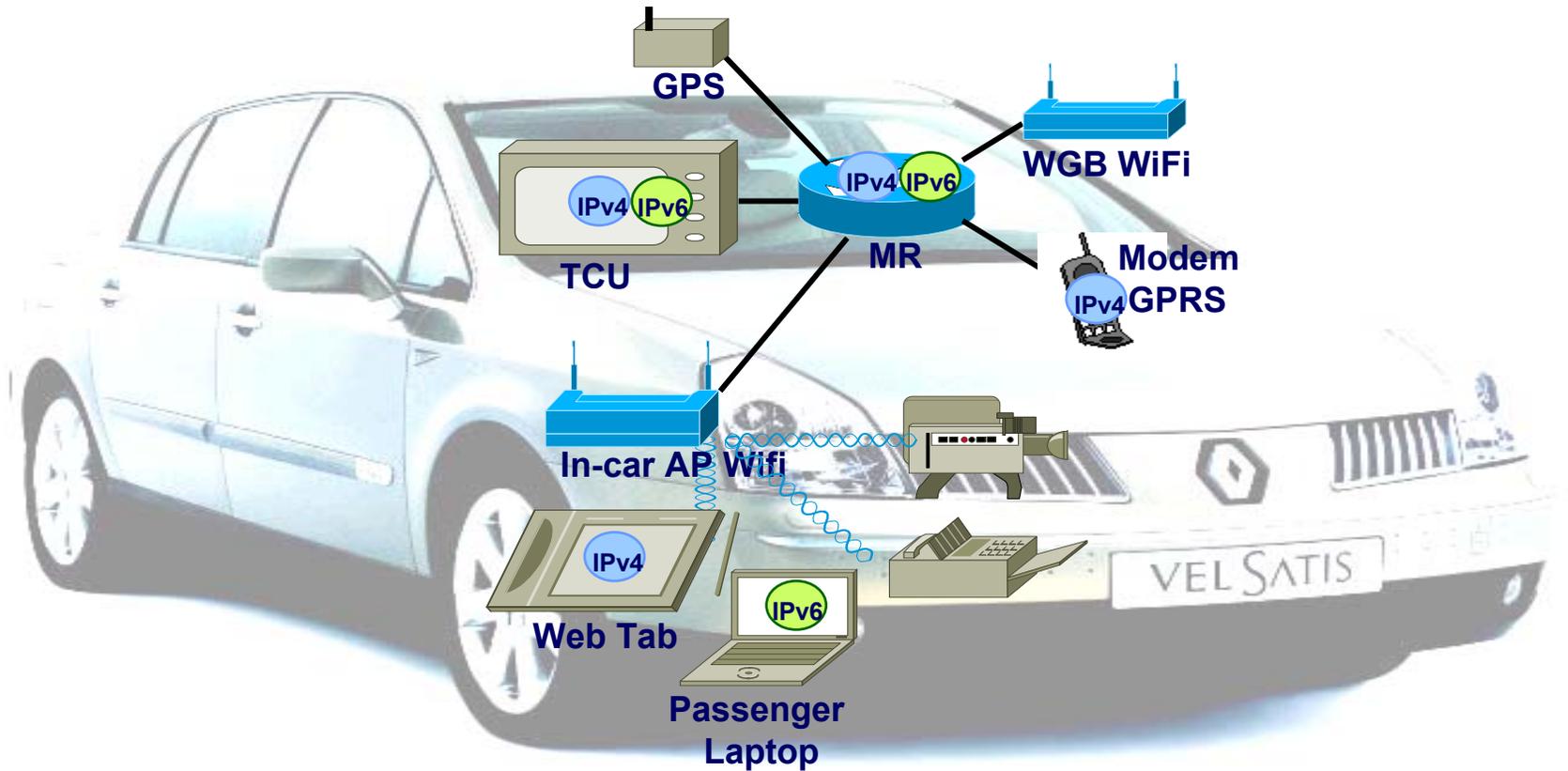
**IMT-
2000**

CDMA 1X

2.5G



Research E-vehicle



In-car architecture

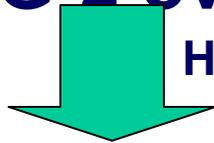


DVB-T as Multimedia delivery system



European Commission
IPv6 Task Force

MPEG-2 over DVB-T



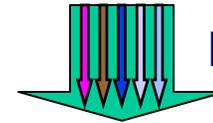
High bit rate MUX
24 Mbps



5 Mbps

3 – 4 TV programs for large screen

IP over DVB-T



Mobile MUX
11 Mbps



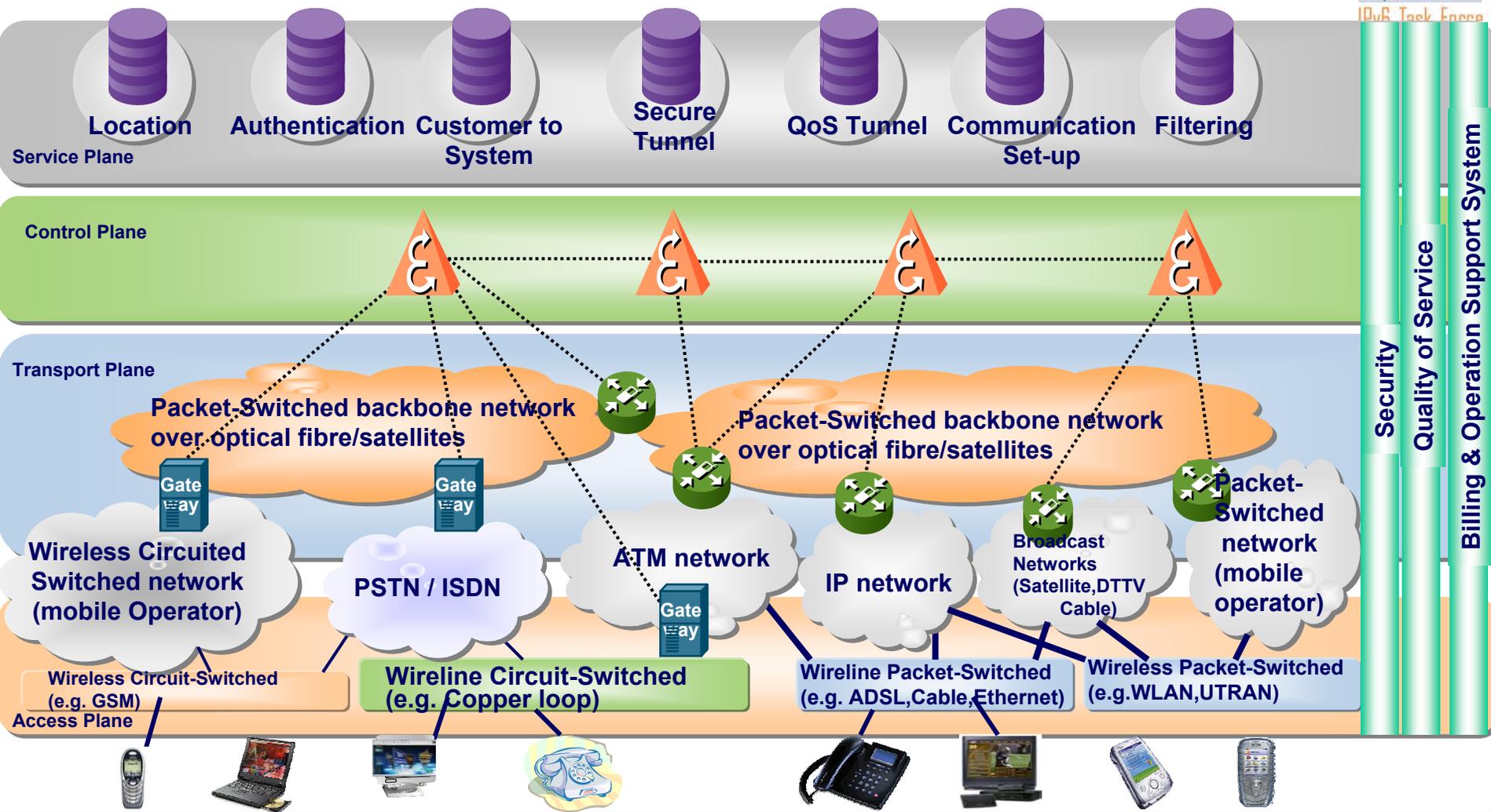
150-200 kbps

- 50 – 80 video streams for small screen and/or
- 5 - 11 Mbits/s data containing music, web pages, software, etc
- encryption of content (keys delivered over GPRS or similar)



SERVICES
TO REACH THE
WORLD

A vision & Market Concept enabled by different Technologies



EC IPv6 Task Force SC

INITIATIVES TOWARDS WORLD IPv6 DEPLOYMENT PLAN

REGIONAL
-LEVEL



IPv6 TF-SC

eEUROPE 2005 PLAN

IPv6-TF
NATIONAL
-LEVEL

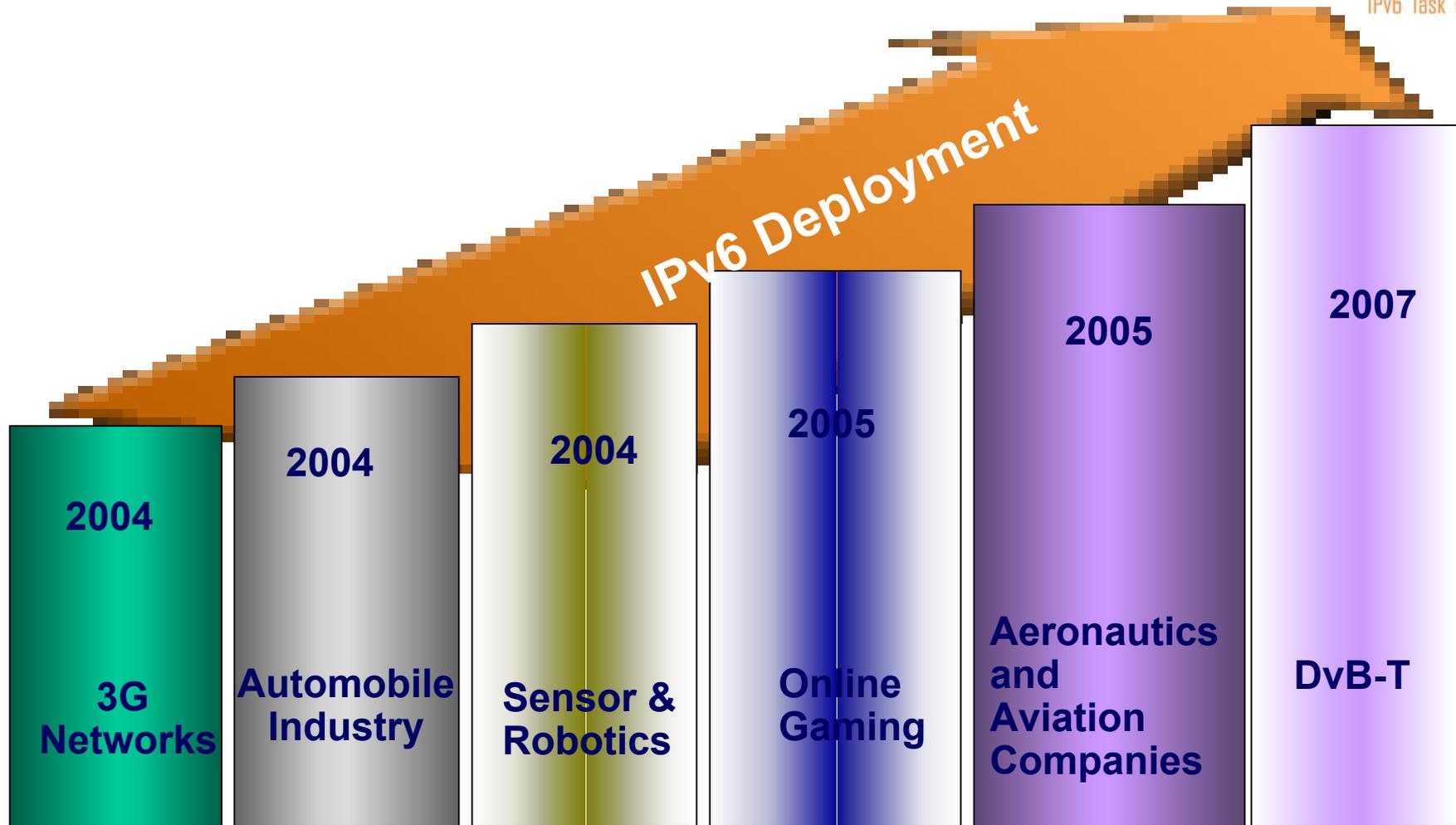
UK
Spain
France
Germany
Belgium
Switzerland
Luxembourg
Portugal

Education/Awareness
Trials (Security, QoS)
R&D
Applications/Tools

Standards
Bodies
Industry at Large
Enterprises
Consumer
Corporate Users



Various Industry Sectors



Conclusions

- IPv6 has its merits, so it is worth moving to IPv6 today, rather than wait.
- Application, middleware and Scalable Deployment scenario's are IPv6 Focused and currently a challenge.
- End to End QoS has been investigated by the QoS Forum and is future proof.
- IPv6/SIP will be the door opener for future Applications and services opportunities.
-e.g. Web Services



Conclusions

- **Update Status and “Barriers” removed list.**
- **Extending social interactions will create demand**
 - **Intermediate solutions will fill the gap**
 - **Peer-to-Peer applications will help adoption**
 - e.g. Video Conferencing over IP,**
 - **Instant messaging,**
 - **Interactive games,**
 - **VoIP**



Thank you for your attention!!

