

BT/SmarTone/Ericsson IPv6 Trial

Martin Hills

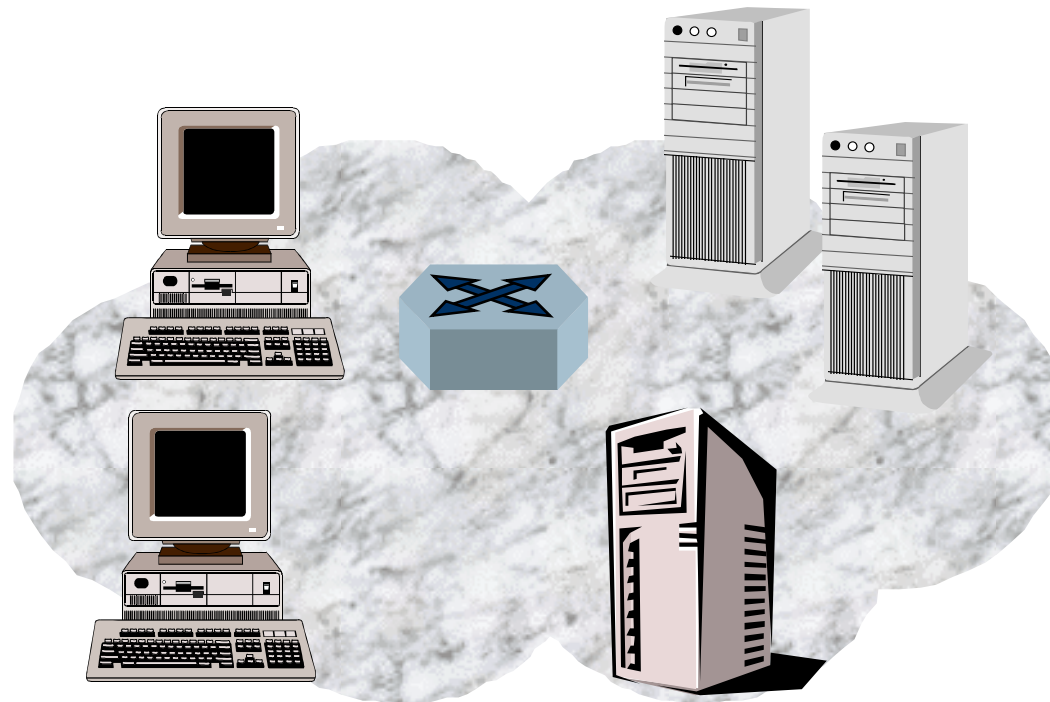
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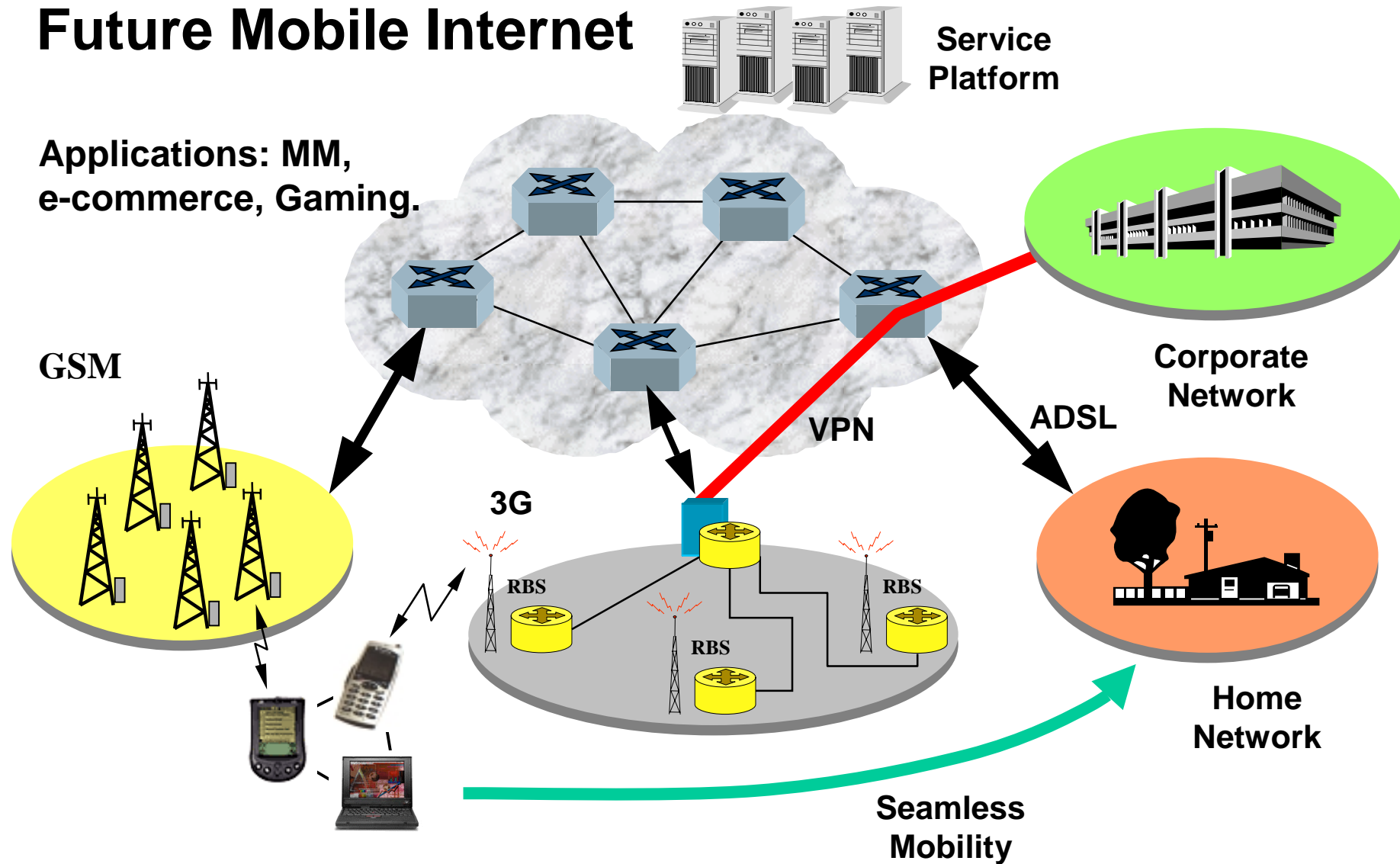
Today's Internet

Terminals: PCs

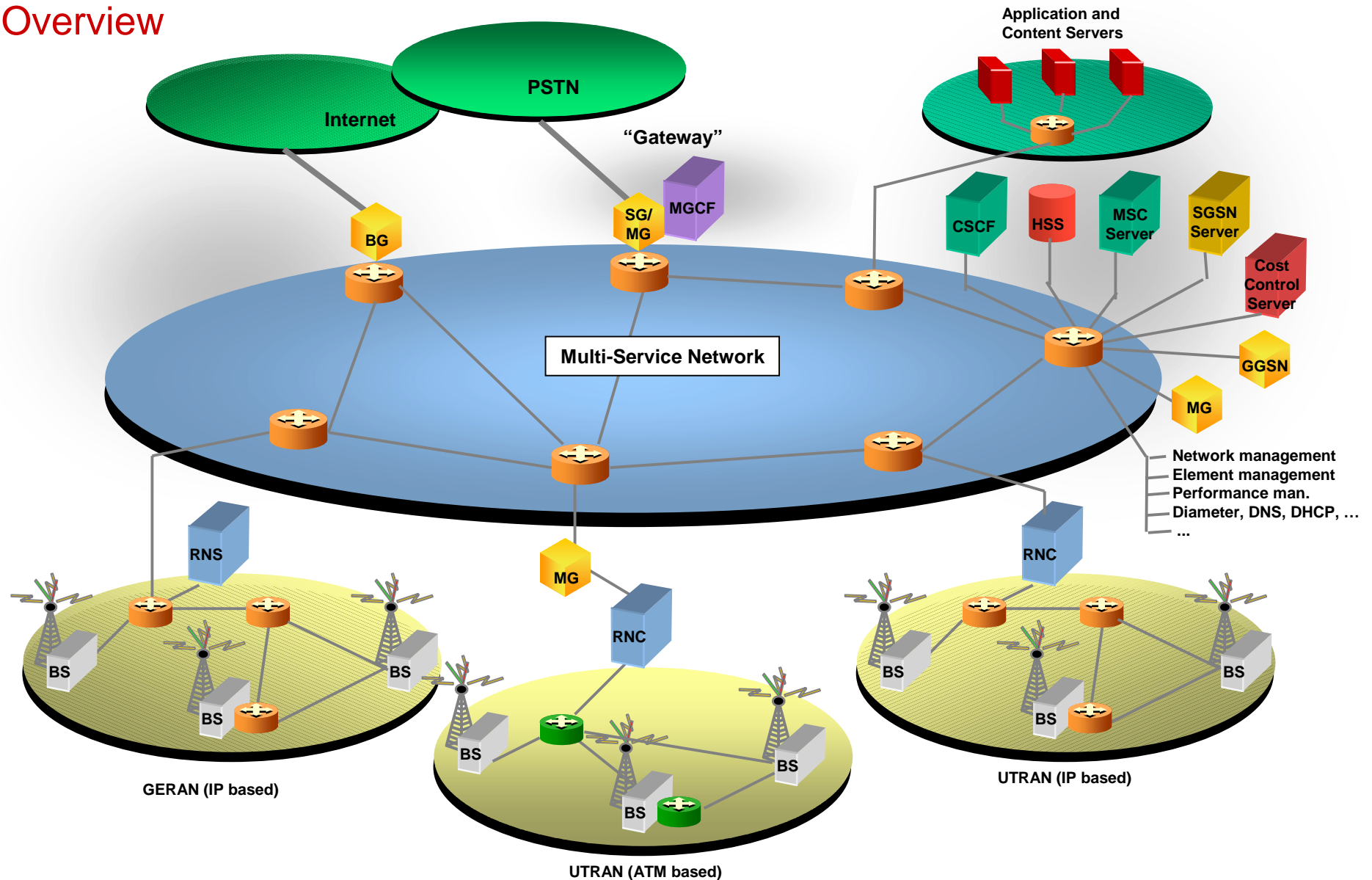
Applications : Best effort, email, FTP, surfing ...etc



Future Mobile Internet



Overview



Always Connected

The biggest driver for IPv6 is
“Always Connected”

Fixed high speed connections to the households (Cable modems, Ethernet etc) and wireless IP hosts (GPRS, UMTS etc.) requires a fixed IP Address

IPv6 has 4 million addresses
per square meter of the earth



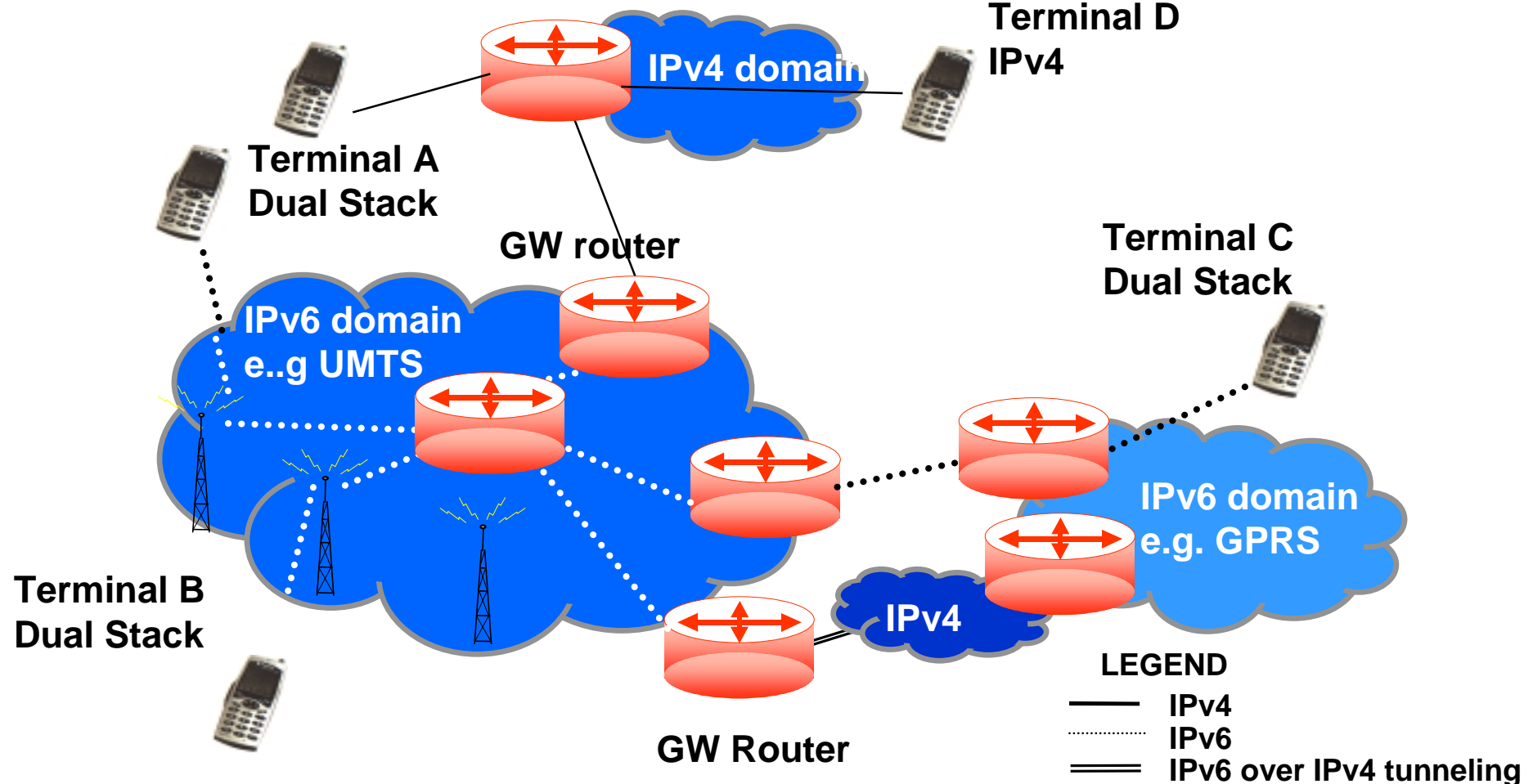
Drivers for IPv6 in wireless networks

- Scalability
 - Very large address space
 - Auto-configuration for hosts and easy renumbering for routers. Important for large mobile networks
 - Simple to maintain => Less management cost
- Built in Security
- Built in Mobility support
- Better address architecture
- Better QoS support
- Future proof design, due to flexible header

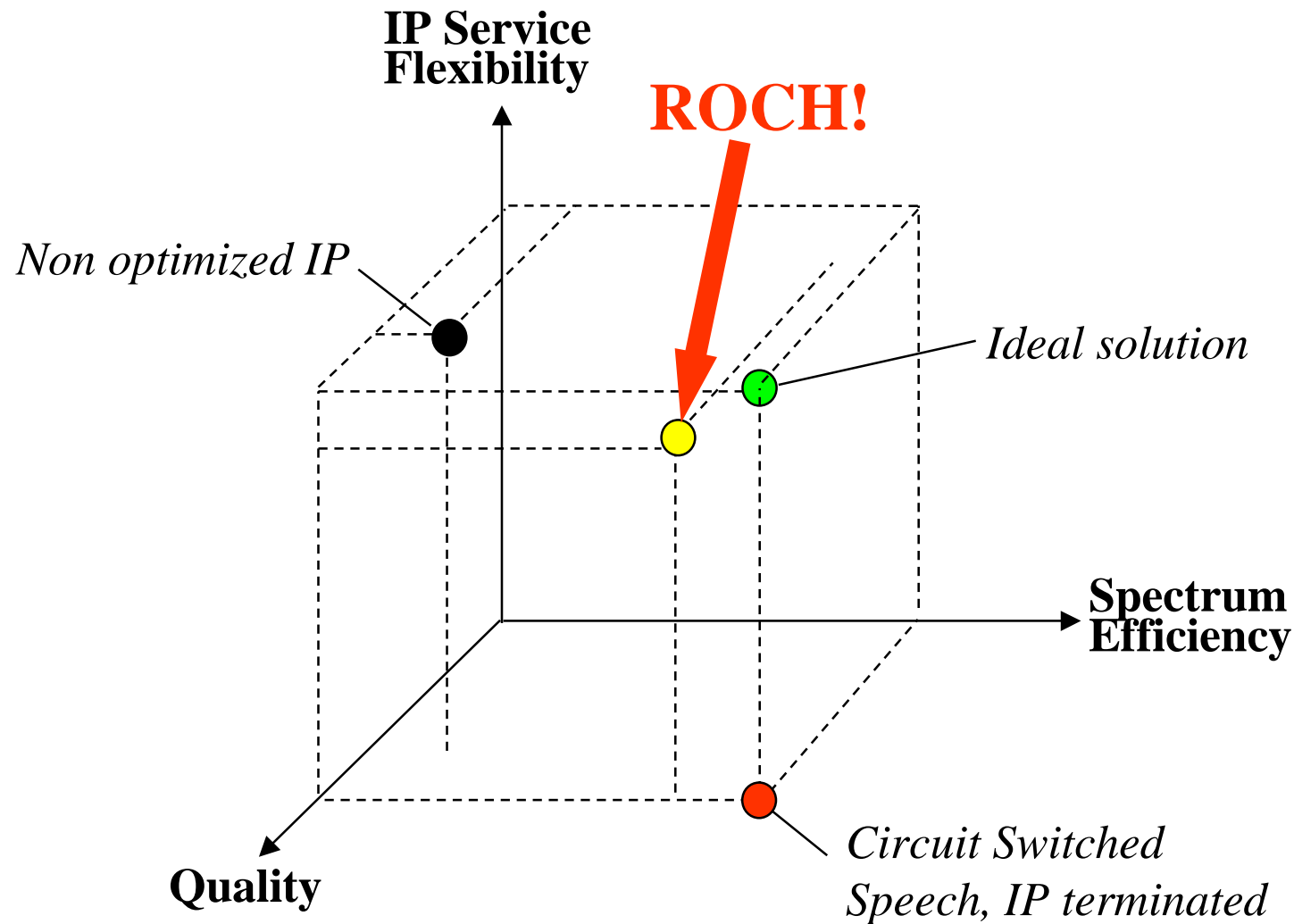
Challenges for IPv6

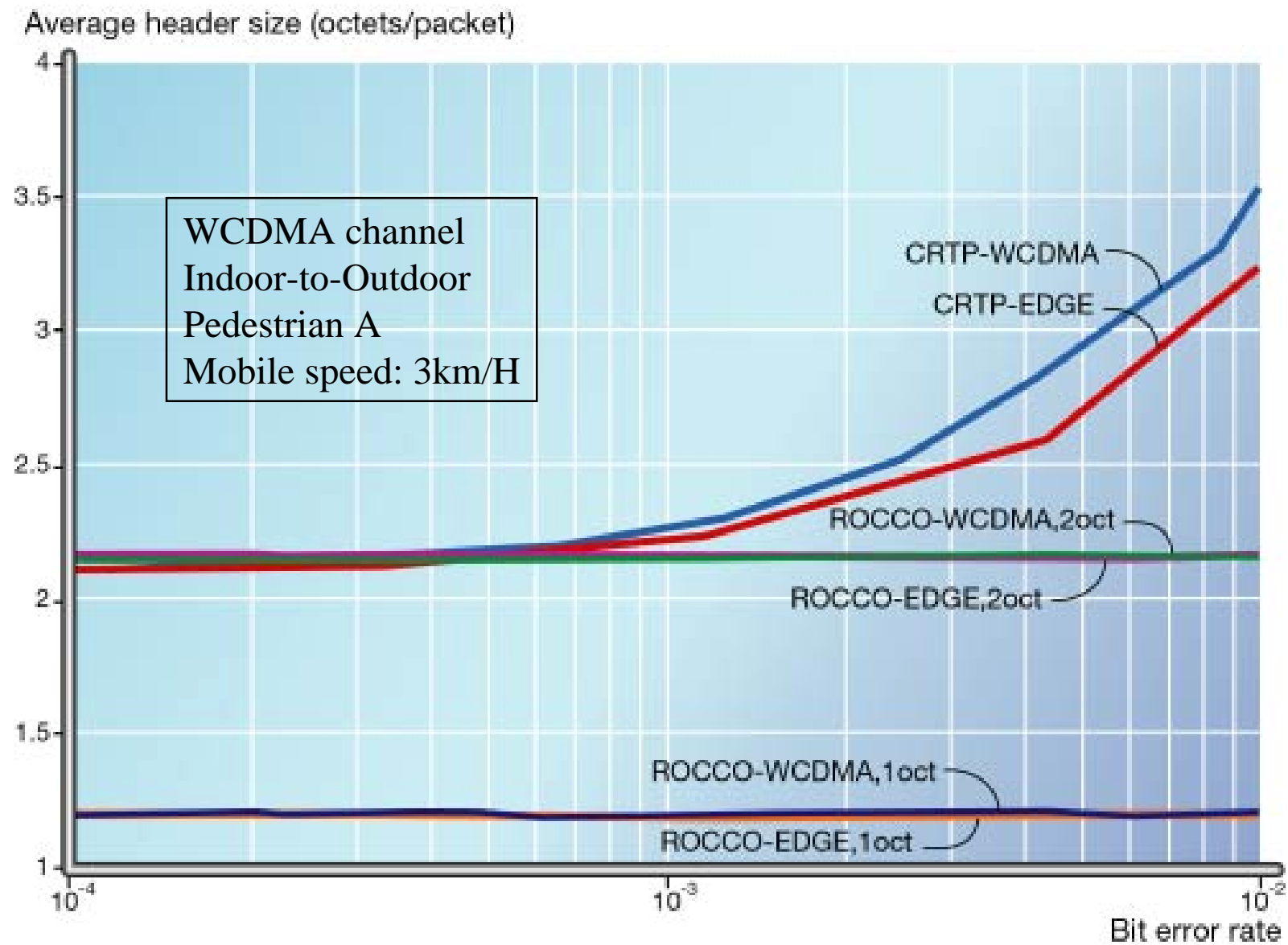
Migration and coexistence

Efficiency over the air



The IP-over-radio tradeoffs





SMARTONE v6 Trial
Hong Kong
Oct 2000

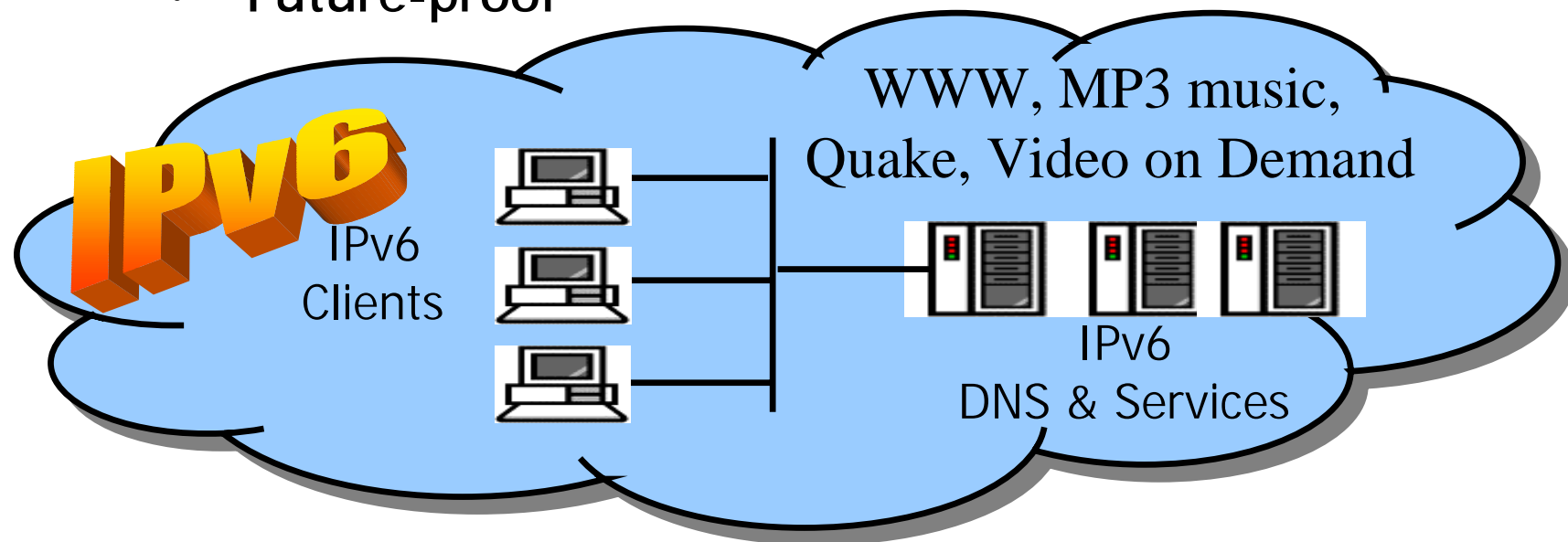
*World's first trial of
mobile applications using IPv6*





Scenario I - IPv6 network and applications

- Ample IP addresses for all
- Plug-and-Play networking
- Built-in security and mobility
- Future-proof

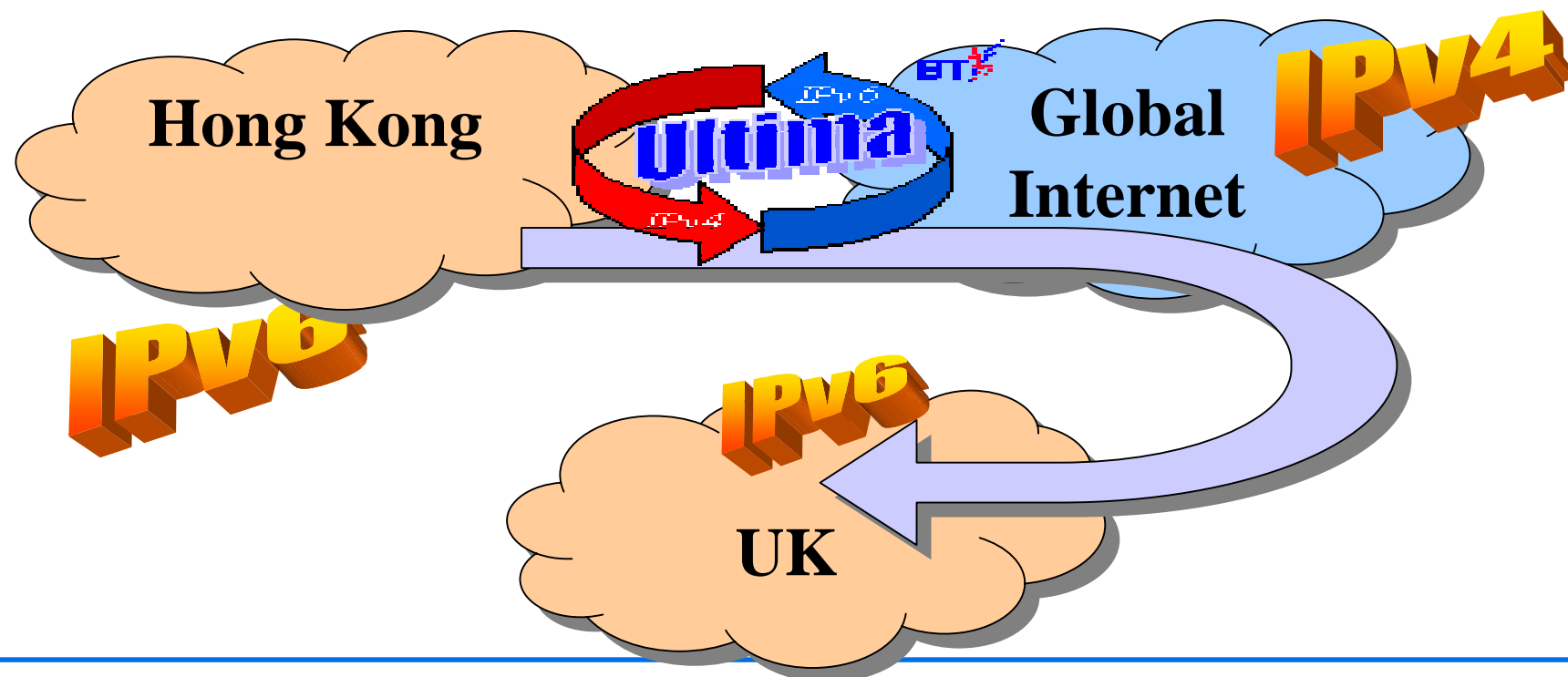




數碼通
SMARTONE

Scenario 2 “IPv6 meets IPv4”

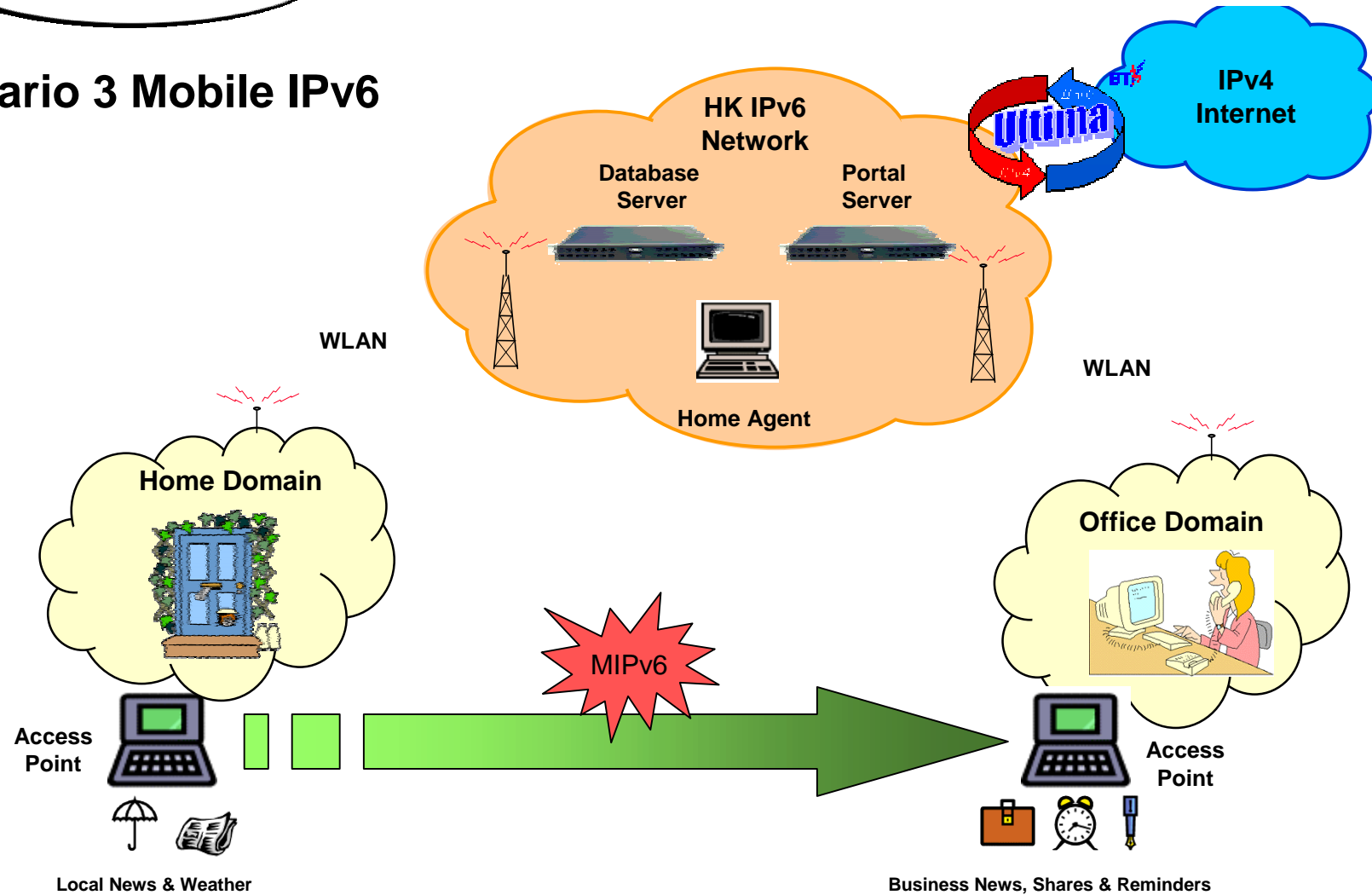
- v4/v6 transparent interworking
- Interconnection of v6 islands over v4





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SMARTONE

Scenario 3 Mobile IPv6





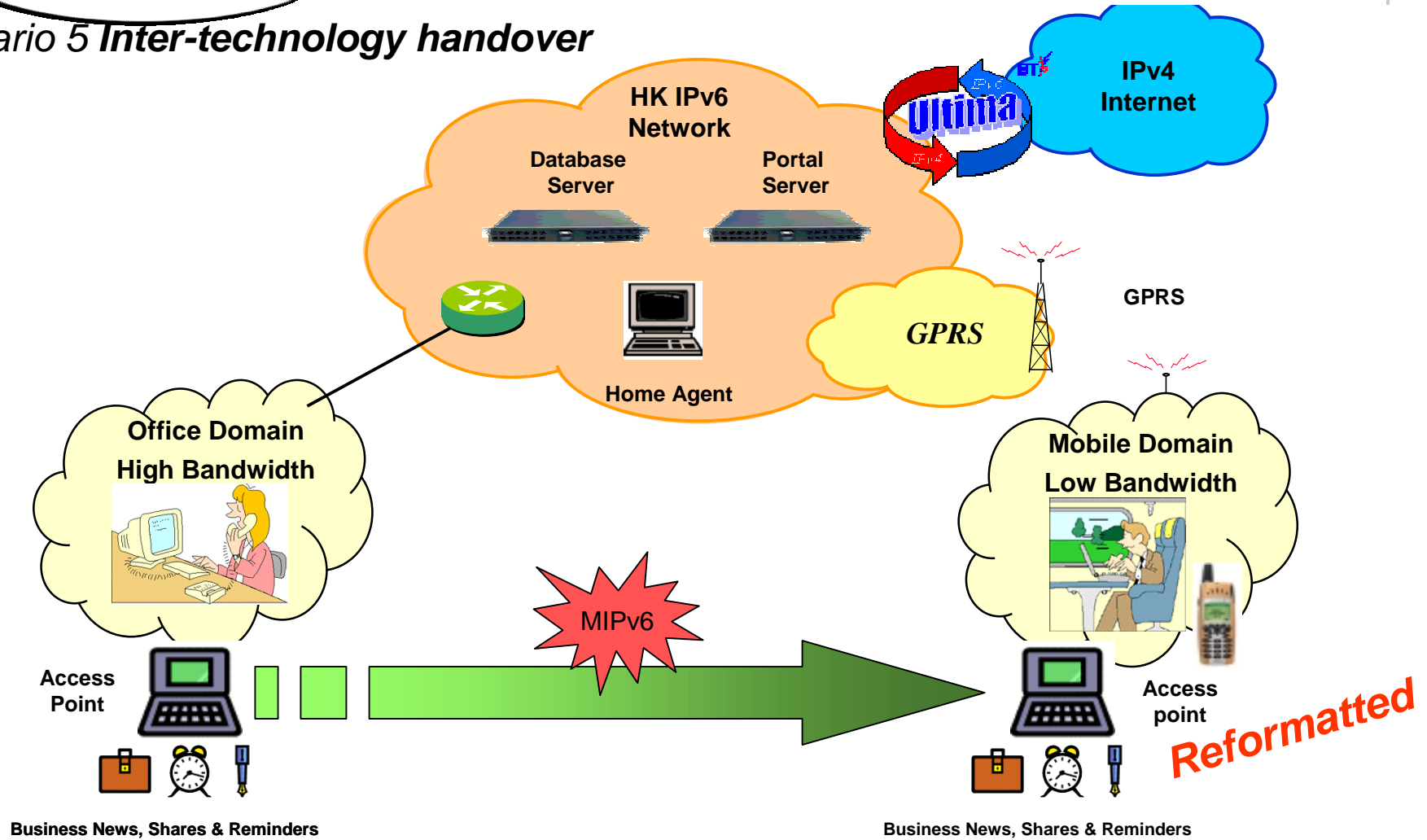
Scenario 4 “v6 over cellular GPRS/3G”

- Always-On Internet access – anywhere, any time
- Uses IPv6 for addresses, security ...
- New devices, greater bandwidth

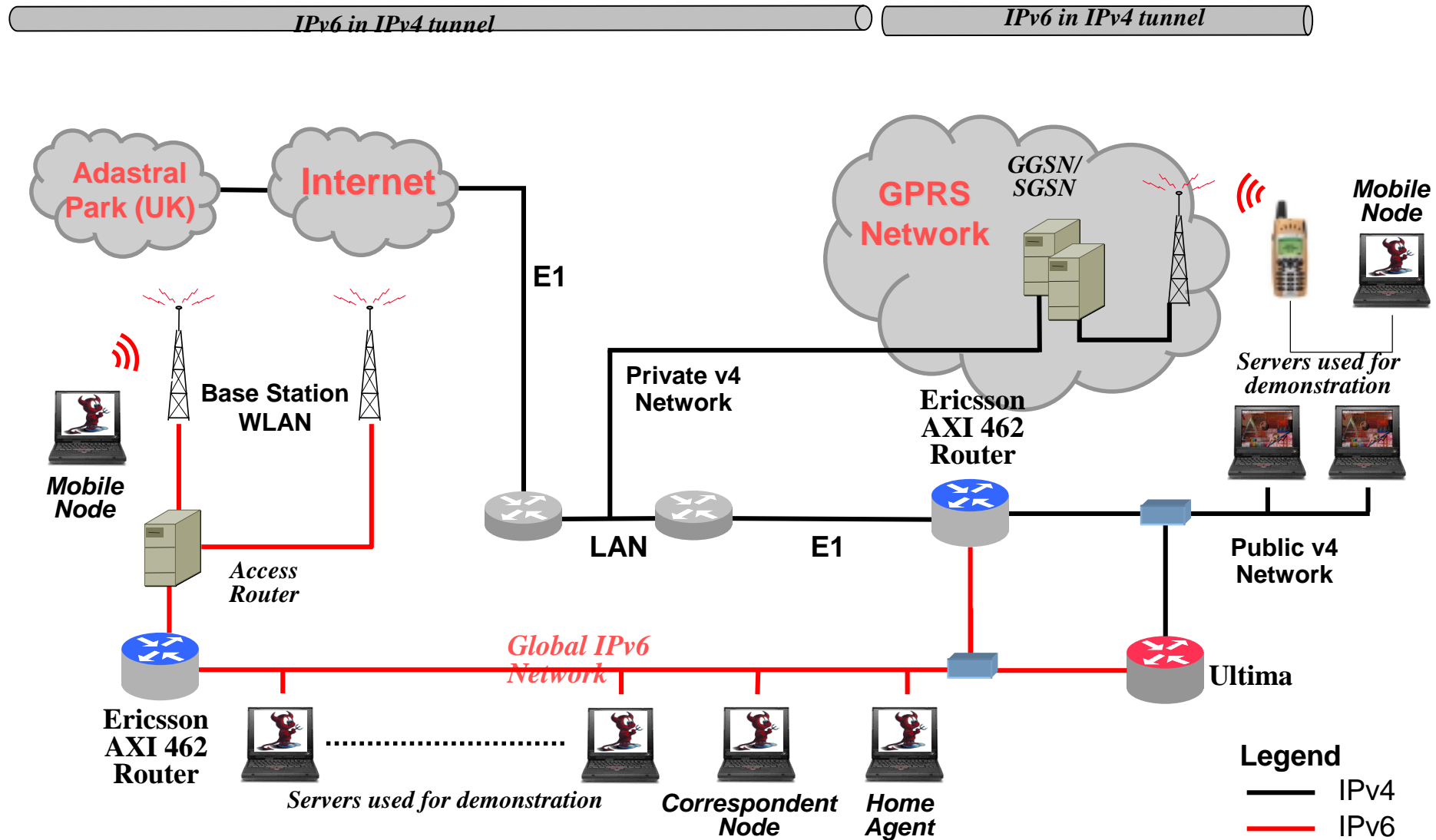




Scenario 5 Inter-technology handover



BT Ericsson SmarTone Experimental Network



A part of Ericsson's vision

- Every device always on line
- End user session experience
- Embedded in all new products



- **Why IPv6**
 - **Addresses, Security, auto-configuration ...**
 - **explosion in mobile users, IP appliances on home networks**
- **When**
 - **Mobile**
 - **First mass deployment of IPv6 will be in 3G mobile systems**
 - **Standards in place, major vendors developing kit**
 - **Fixed networks**
 - **key vendors announcing product - but phased delivery**
 - **Trials in progress. Serious planning started**