



中国2010年上海世博会全球合作伙伴
Global Partner of Expo 2010 Shanghai China

IPV6 in China Telecom: Policies and Try

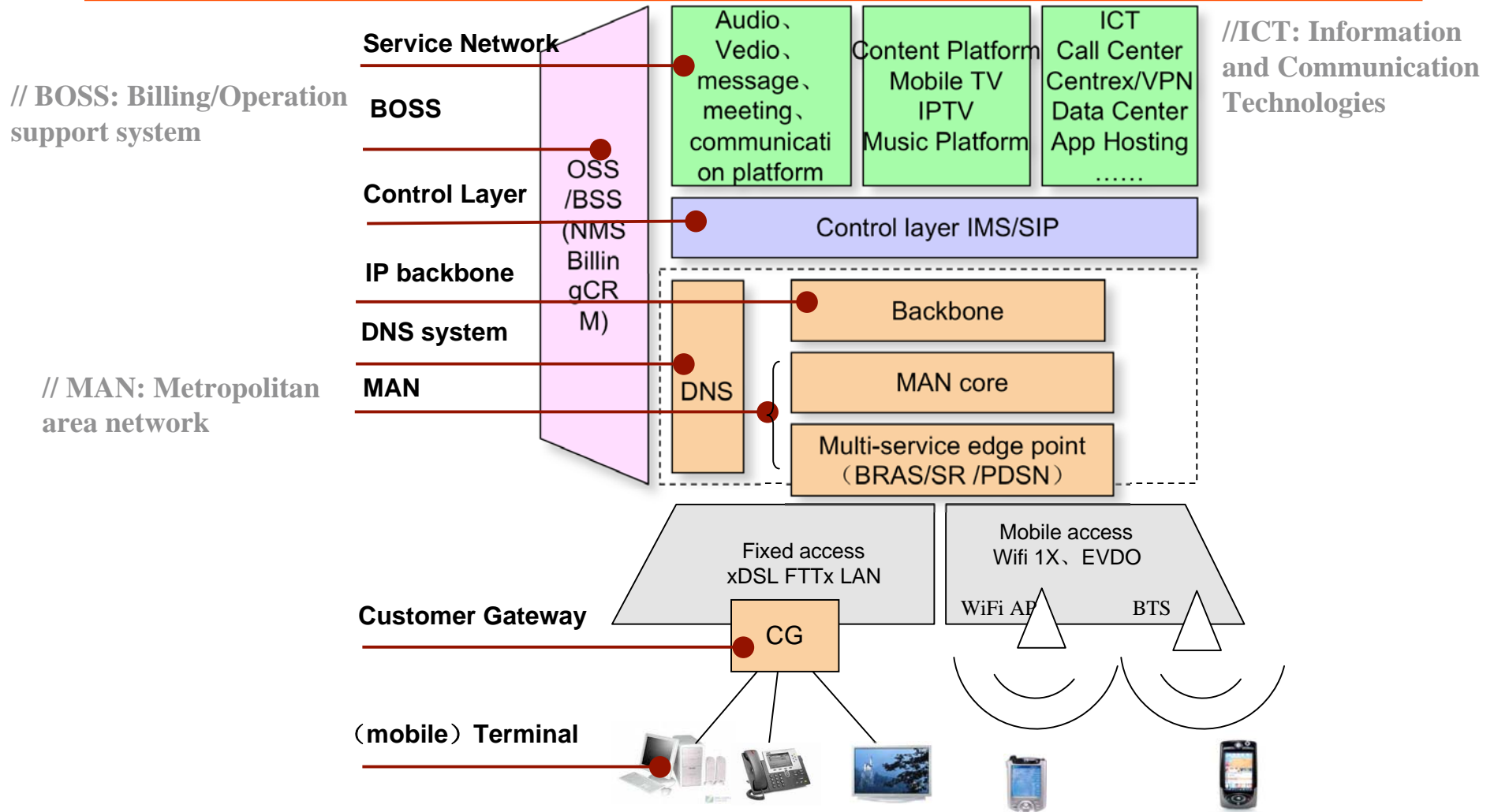
Cancan Huang, China Telecom

2009-8-24

⇒ **IPV6 deployment polices**

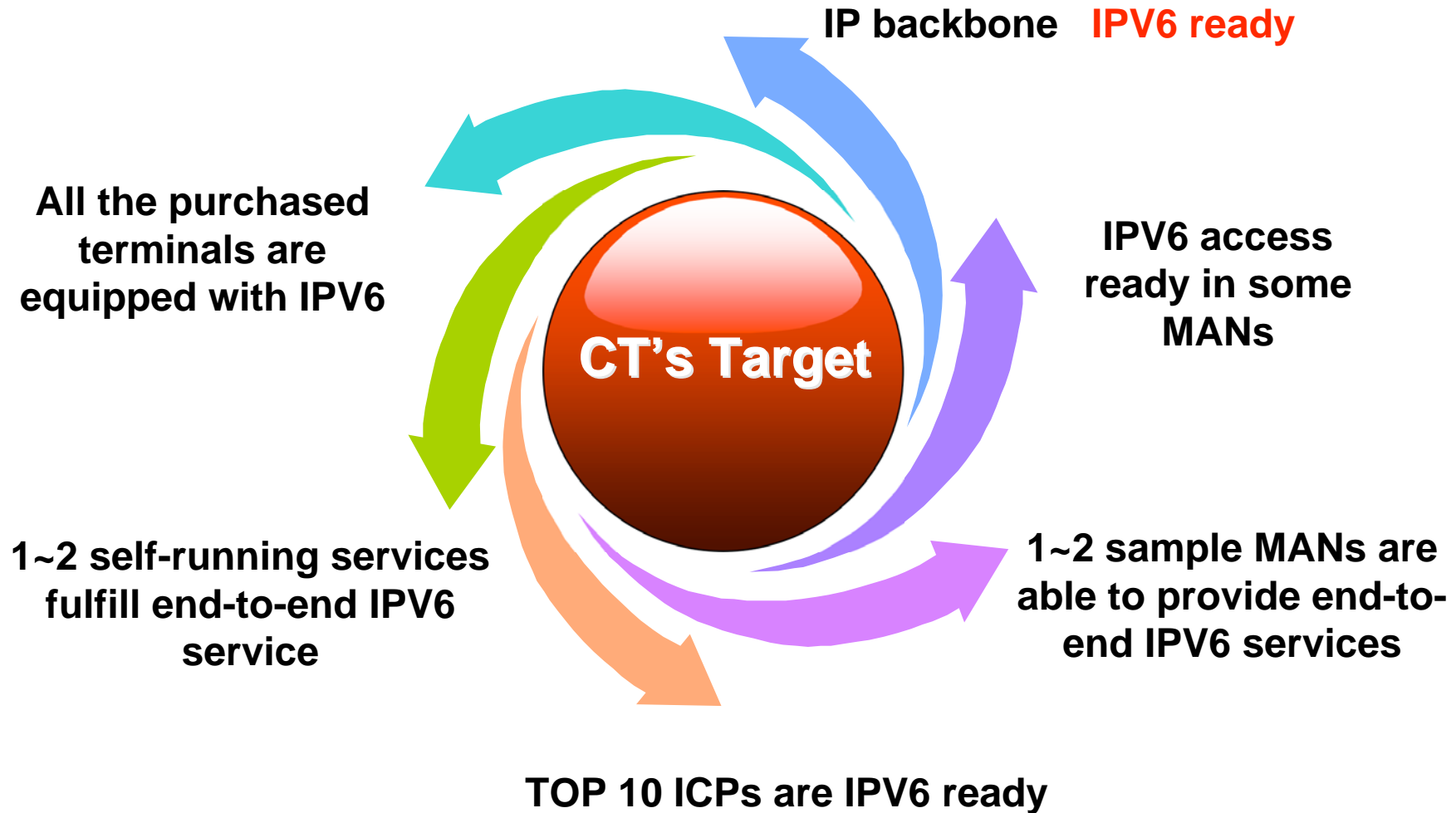
⇒ **C T ' s t r y**

Who will be involved?

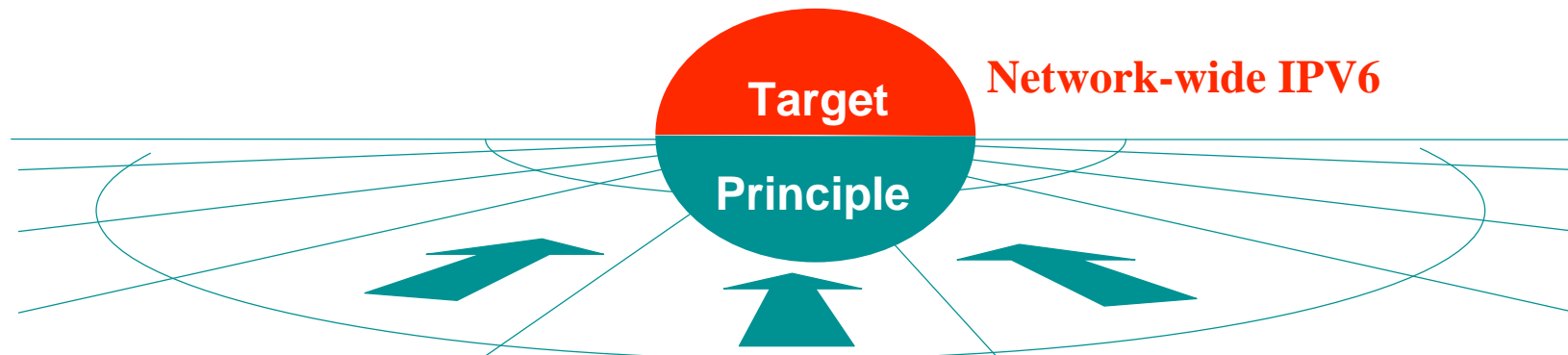


Introducing IPV6 involves the fundamental network, service network, terminal, support system, CP,SP, government and media

CT's goal in the next two years



What are the principles?



1

Protecting Investment

Keeping user experience

Reducing impact on network

Minimizing price

2

Fundamental Networks come first

Service Networks soon after

CP/SPs come later

3

Conducting tests at selected points
come first

Popularizing all-around come after

4

Existing services need to be seamlessly
moved

New services need to be IPV6 enabled
directly

The details of deployment policy--network

Backbone

- Backbones use dual-stack for transiting, both core and aggregation network;

MAN

- MAN use dual stack for transition. Most of the subscribers will use dual stack connection and a small number of subscribers will use tunnel in case they don't have IPV6 ability.
- For small number of applications, protocol translation mechanisms will be put into use.

Support System

- Old DNS software system's need to upgrade to support IPV6 record. The new built DNS are required to support IPV6 access.
- The new built dual-stack Network management system should support IPV6 MIB database.
- AAA system doesn't need be changed, only need supporting IPV6 subscriber certification by software upgrading.

The details of deployment policy--service

Self-running service

- New services should be IPV6 enabled as early as possible, while existing service should be support IPV6 gradually by upgrading.
- For those platforms which are directly exchanging information with the client terminals should be IPV6 ready as quickly as possible. On the other hand, back-end management systems are not so urgent.

Mobile core Network and Soft-switching Network

- Mobile core Network and Soft-switching Network should be transited to IPV6 gradually according to the requirement of services.
- The new built IMS system should be equipped with IPV6 directly .

Third-party CP/SP

- CT should push the government to work out mandatory policies to give incentives to the CP/SP to introduce IPV6.

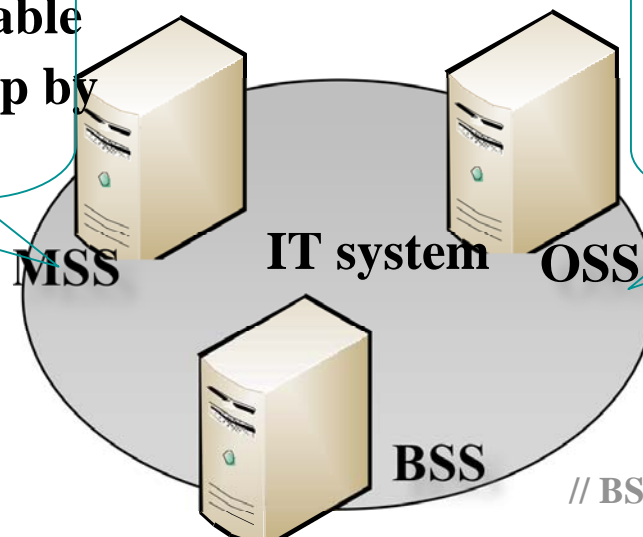
The details of deployment policy-- IT support system

Existing system should be equipped with IPV6 gradually

New system supports IPV6 directly

The subsystem of MSS uses dual-stack to enable the IPV6 function step by step

// MSS: Management support system



OSS should be IPV6 enabled simultaneously according to the fundamental network.

// OSS: Operation support system

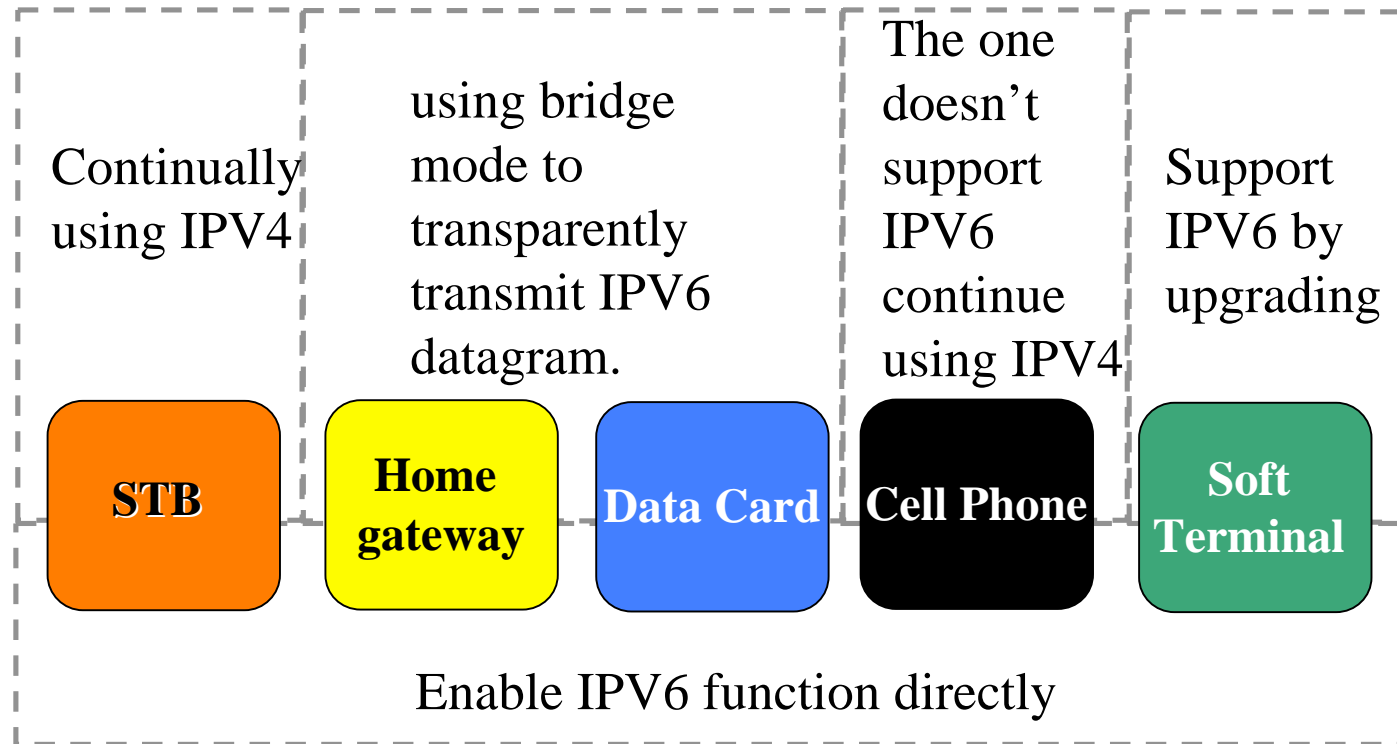
// BSS: Billing support system

BSS keeps pace with services to provide IPV6 ability

The detailed deployment policy – terminal



The existing terminal



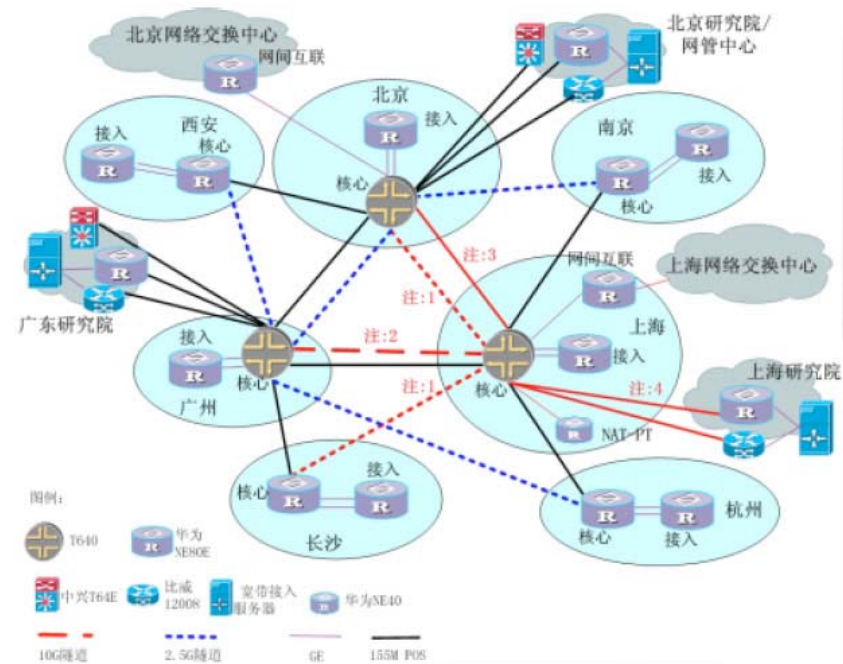
The new terminal

➔ **The policies of IPV6 introducing**

➔ **C T ' s t r y**

CT started CNGI since 2003

- Network testing platform includes core network、management center , exchange center and 7 residential network;
- Applications on Service gateway, service platform and P2P have been researched on the testing platform;
- CT made some studies on IPV6 introduction solutions collaborating with suppliers (eg. cisco, huawei)



CT's trial- Commercial Trial

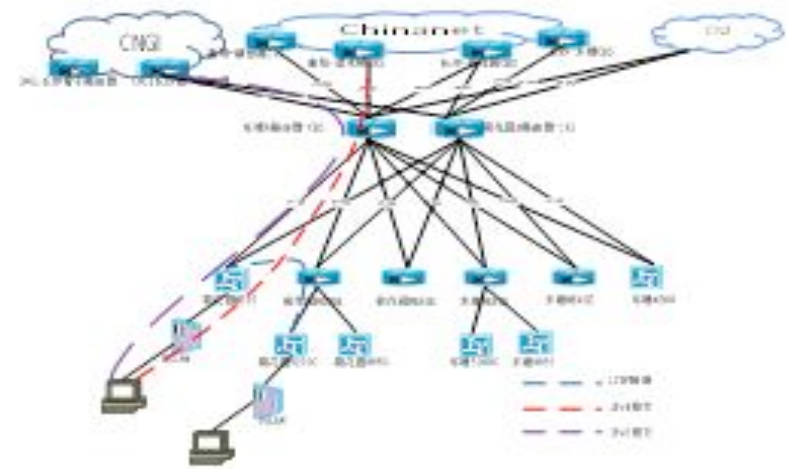


World University Games, Shenzhen, 2011

- Network-wide IPV6, covering 67 competition facilities, serving 75000 clients.
- Carrying Multi-media application based on IPV6.

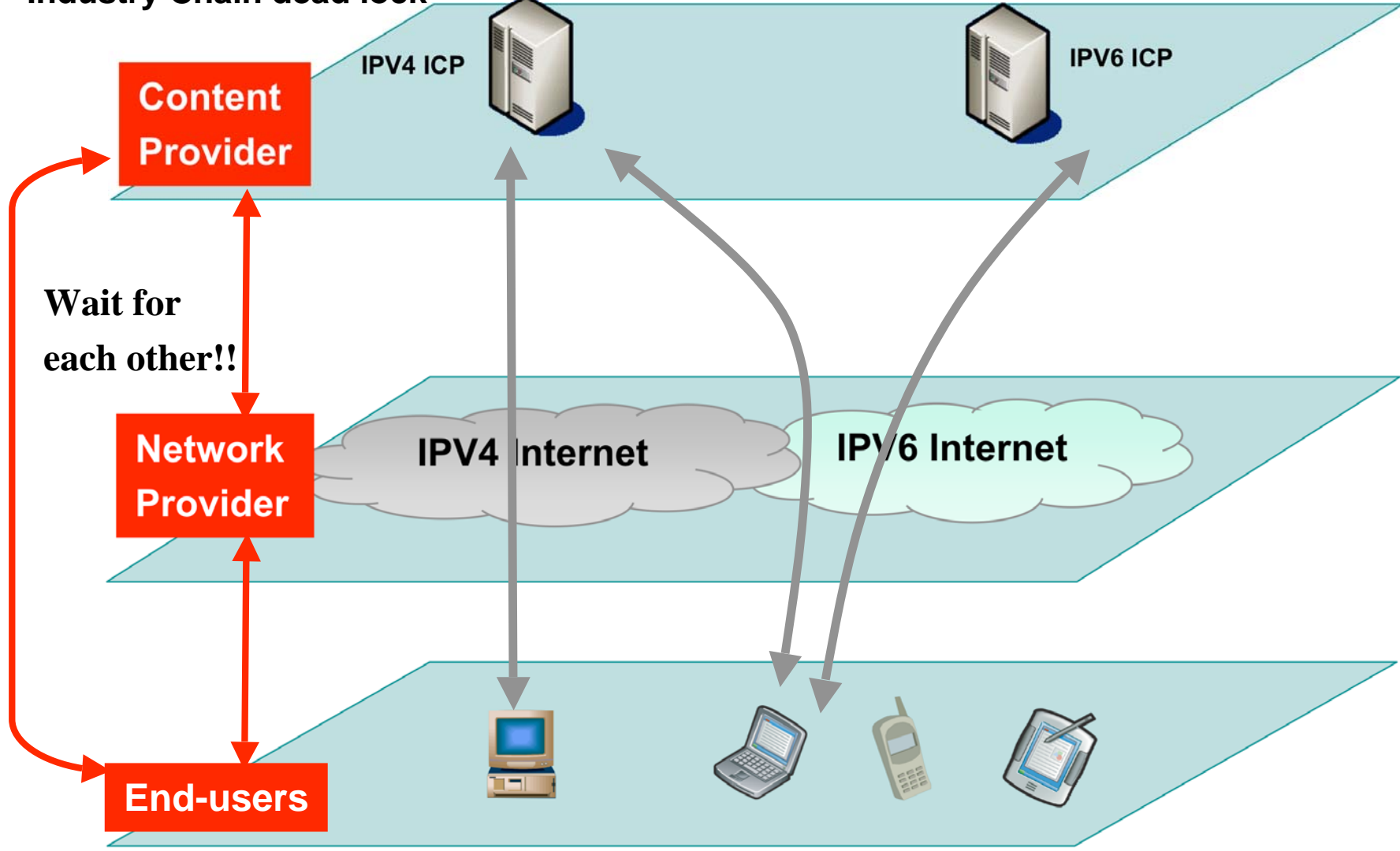
Two-oriented society commercial trial

- Various types of access methods, including ADSL, EPON and WLAN;
- Upgrading the access network and IT system.

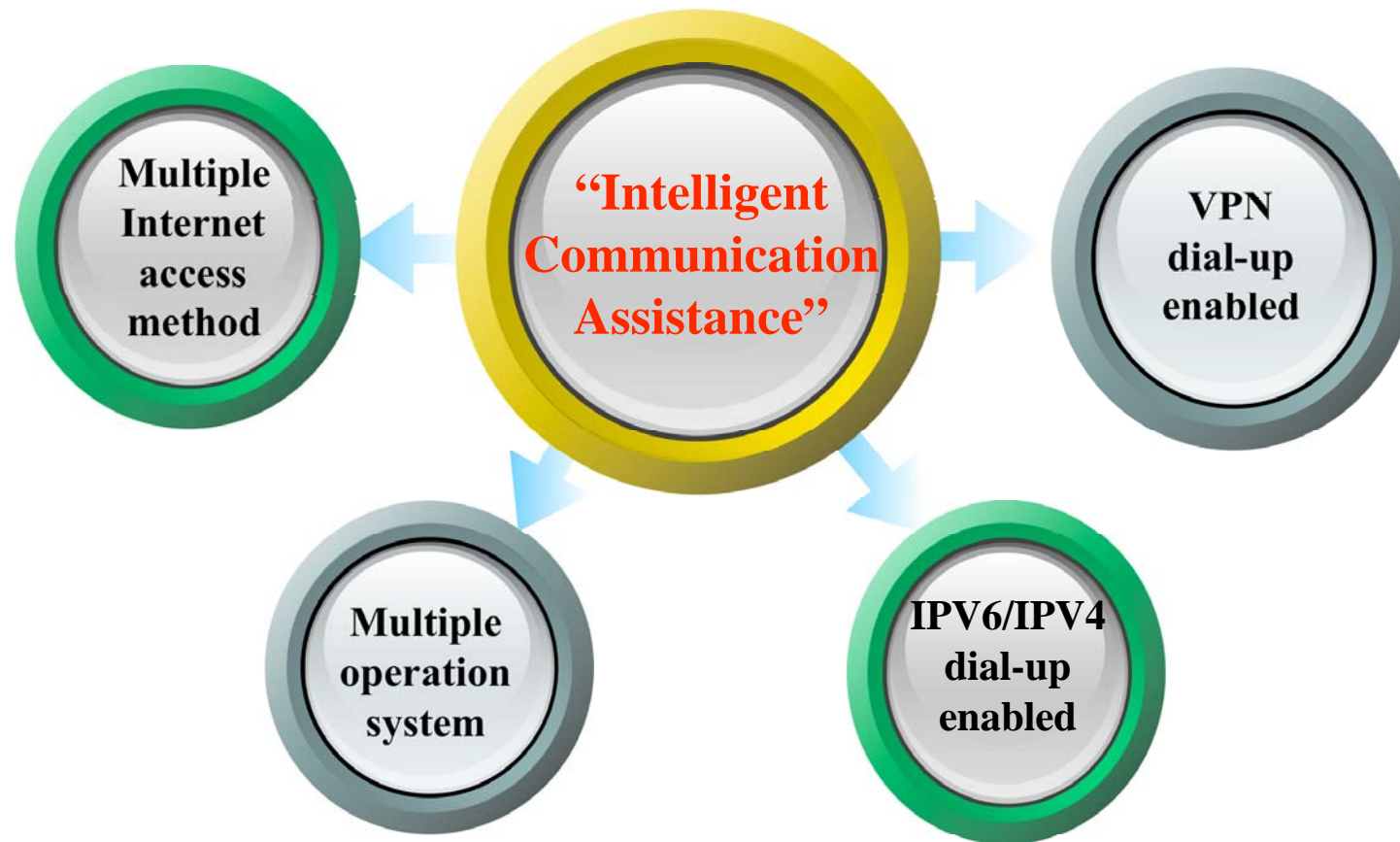


CT's trial—Product Development

Industry Chain dead lock

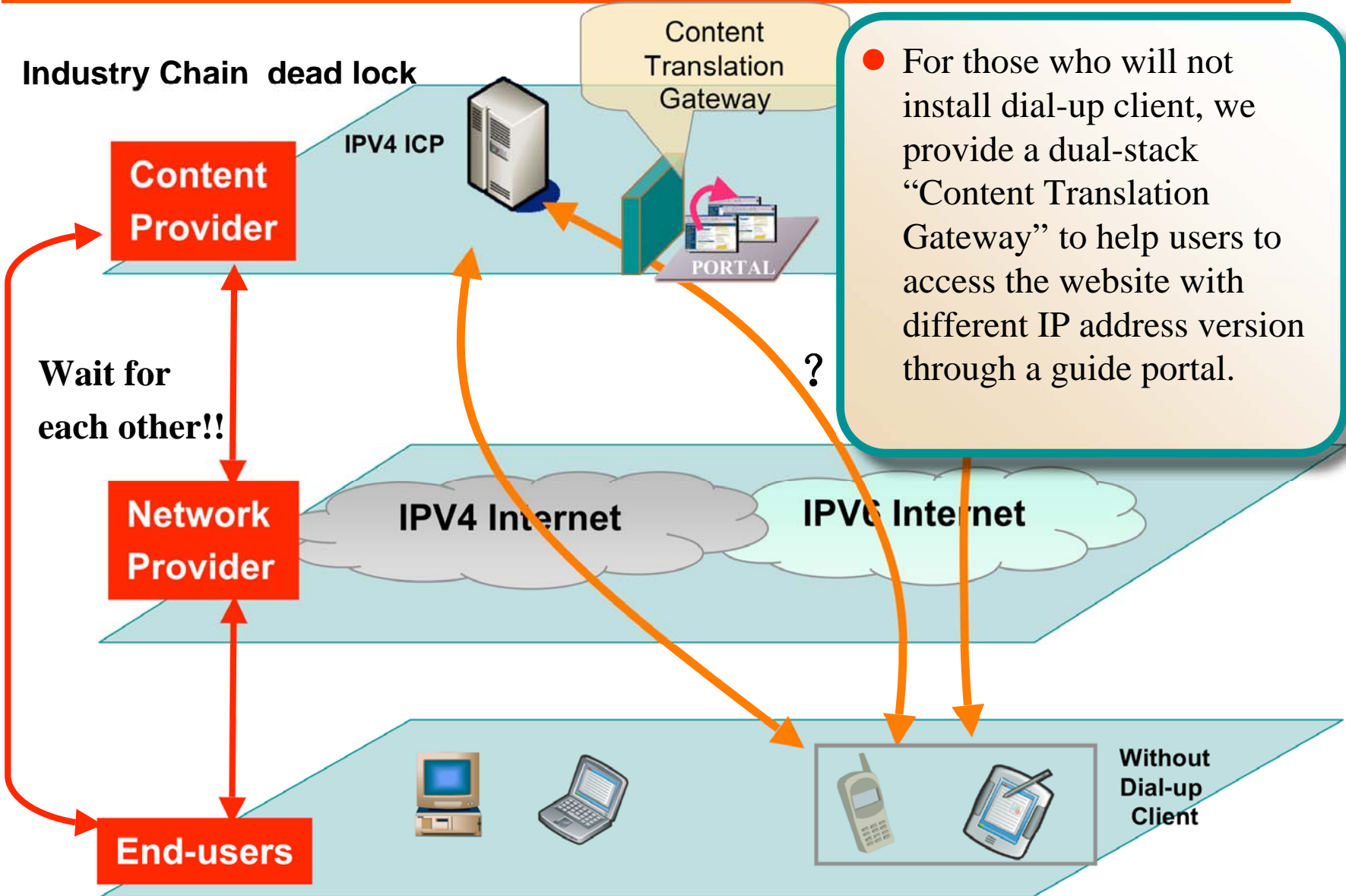


CT's trial—product development(1)

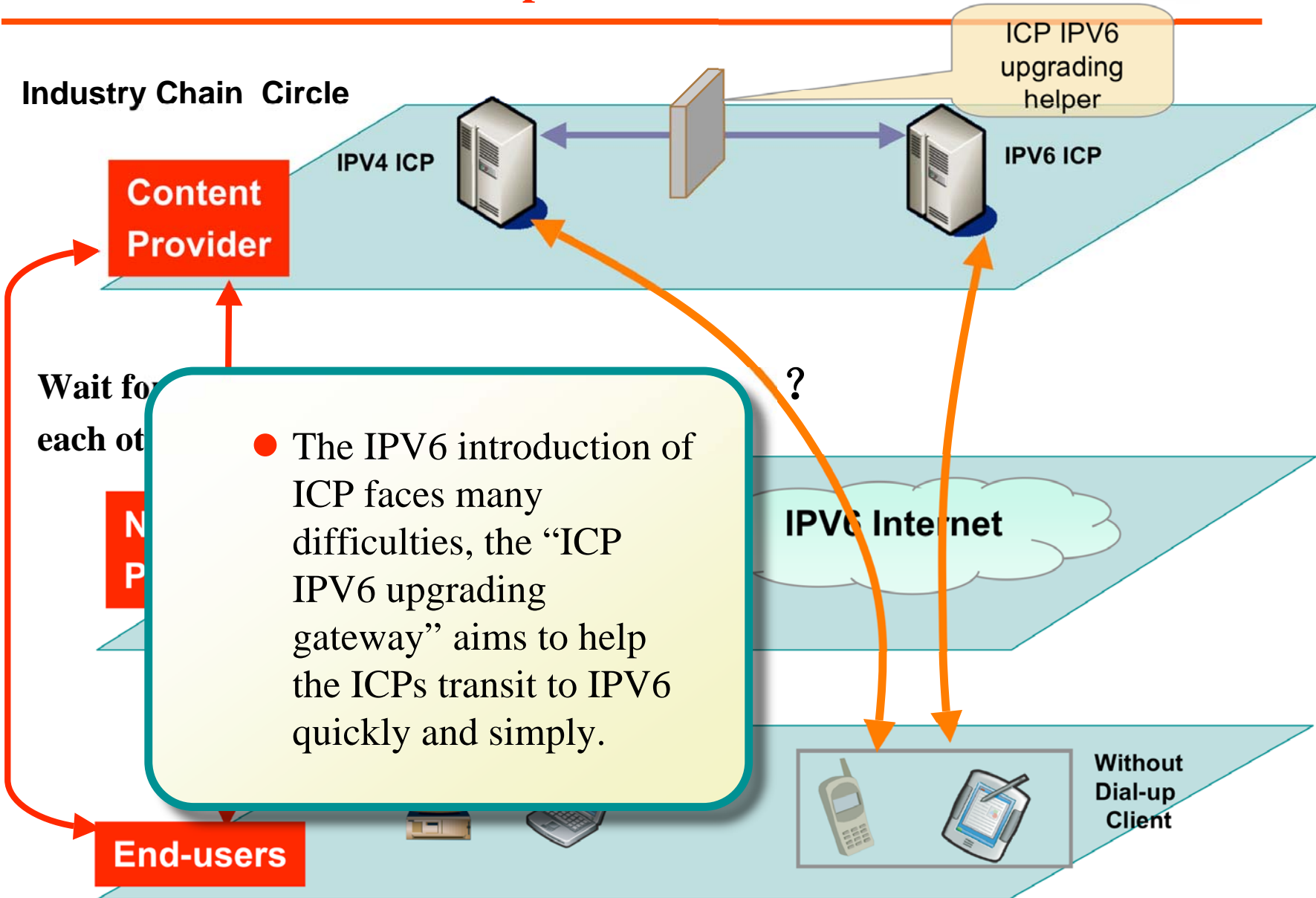


For those who is willing to install the software, the dial-up web client can automatically probes user's operation system, network environment, even what website they want to browse and help users accessing the internet intelligently.

CT's trial—Product Development



CT's trial—Product Development



⇒ **The policies of IPV6 introducing**

Who will be involved?

CT's goal for next 2 years

What are the principles?

Detailed deployment Policies
(fundamental network/ service network/
support system/ terminal)

⇒ **C T ' s t r y**

➔ **The policies of IPV6 introducing**

➔ **C T ' s t r y**

C N G I

Commercial trial – World sports Game/ Metro network

P r o d u c t d e v e l o p m e n t

Intelligent communication assistant

Content translation gateway

ICP IPV6 upgrade helper



Thanks !