

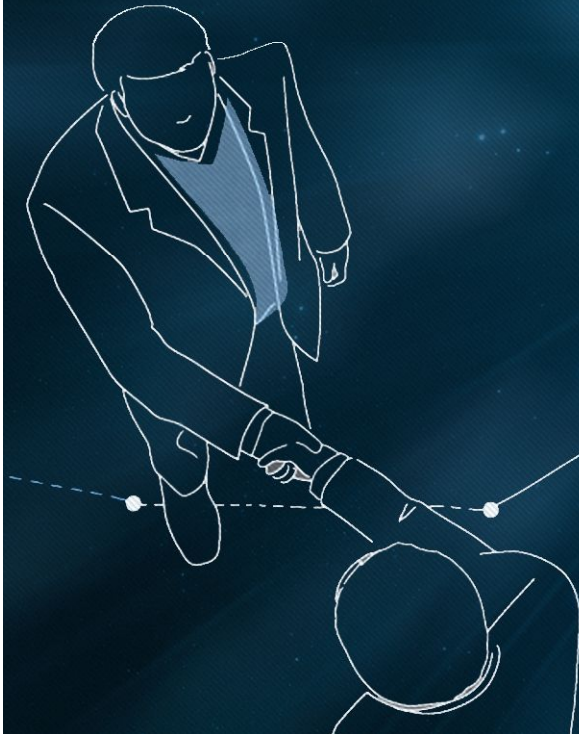
Next Generation Internet Address (IPv6) Transition Plan

2011. 2. 22
NIR SIG @ APNIC 31

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KRNIC of KISA

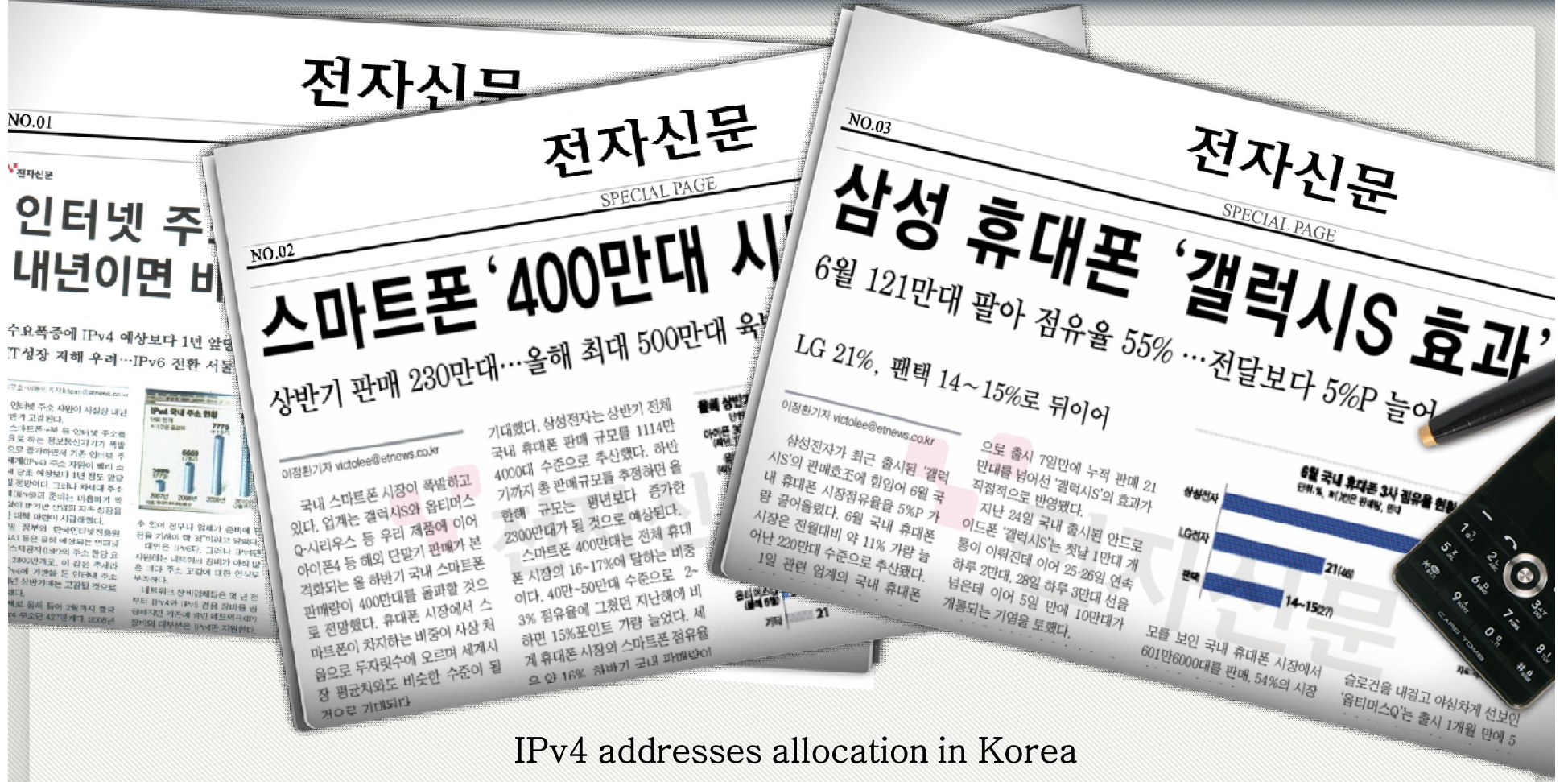
01

Current Status

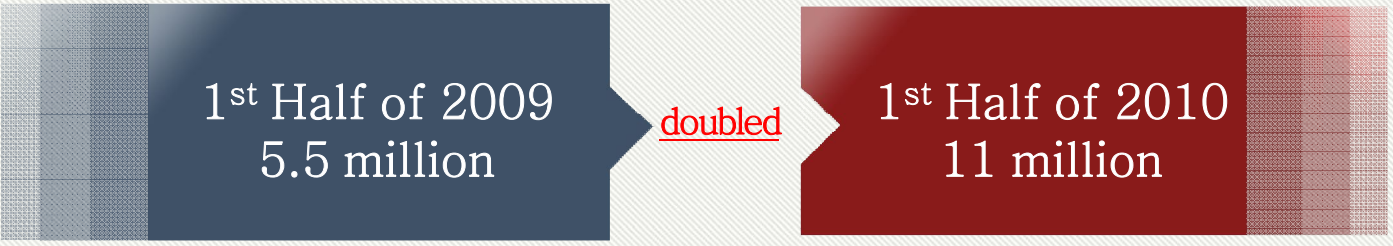


total market share of the 100,000 is 42% at suggested price of KRW 9,200 ME.
using the suggested price of KRW 11,500 increases 100,000 market share with 10% (currently, expected market share of the 100,000 share 10% when increase the price about KRW 11,500
because high market share of KRW 10,000 is inferred mainly due to the relatively low value price which depends on buying behavior and its result, it may not reflect the overall market situation.

Explosive Demand for IP addresses



IPv4 addresses allocation in Korea



ISP

- ISP Backbone Network : the level of upgrade to IPv6 equipment is high(70.7%)
- ISP Subscriber Network : the level of upgrade to IPv6 equipment is low(27.7%)

Public Sector

- Purchase specifications of IPv6-supporting equipment are reflected in the government guideline
- Transition rate to IPv6 is around 47% in the public sector

Network Vendor

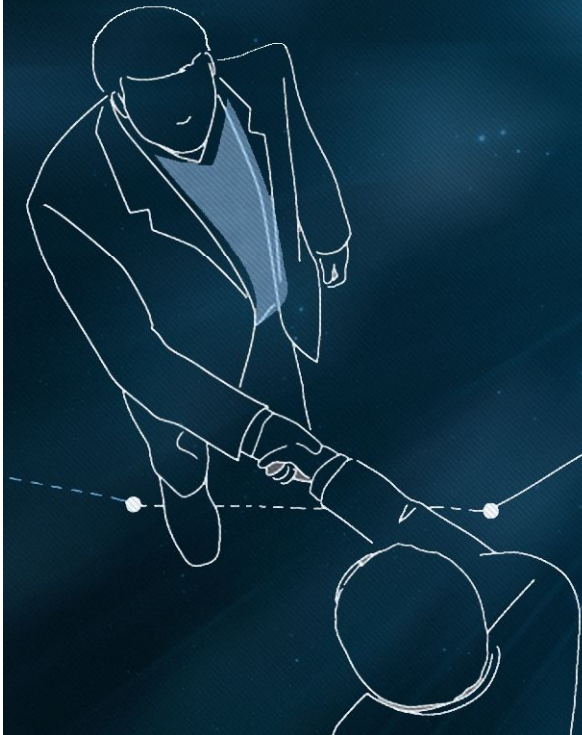
- Dual stack equipment using IPv6 are supplied for backbone network
- Small subscriber network devices such as medium-sized switches and modems are of Korean development

Others

- Transition to IPv6 is low in portals, online shopping malls and user organizations

02

Strategy & Tasks



선도적 인터넷서비스기반구축을 위한
차세대인터넷주소(IPv6) 전환 추진 계획

2010. 9. 15.



IPv6 Transition Plan

- Established on Sep. 15th, 2010
- Declared by KCC(Korea Communications Commission)
- It aims to deal with the IPv4 exhaustion issue and to build the infrastructure for the next generation Internet

IPv6 Readiness in ISP Backbones: "77% in 2011 and 100% in 2013
IPv6 Readiness in Korean made equipment: 20% in 2011 and 100% in 2013

3 Key Tasks

▼Key Task 1

Groundwork development for IPv6 Commercial Service Support

□ Commercialization of IPv6-based, new Internet services

- Commercial Web service
- IPTV service
- Mobile telecommunication network services

□ Prioritization of IP address allocation

- Step by step transition to IPv6
- Planning for efficient measures for managing IPv4 addresses

▼Key Task 2

Increase of Awareness of IPv6 Transition and Support of Groups in Need

Announcement of the flag month of IPv4 exhaustion and increasing public awareness

- Announcement of flag month (June 2011)
- Preparation of IPv6 transition scenarios for each area

Enhancement of support systems for groups in need

- IPv6 transition support for groups in need
- Development of IPv6 professionals

▼Key Task 3

Enhancement and Inspection of IPv6 Systems

Expansion and operation of IPv6 Transition Steering Committee

- Strengthening of cooperative systems
- IPv6 promotion and proliferation

Enhancement of inspection systems

- ISP
- Service provider and user (public and commercial enterprise)
- Manufacturer

4 Strategies

Action plan for IPv6 transition

Initiate a virtuous circle for IPv6 conversion

Step by step transition to IPv6

□ Global leadership of IPv6-based industries

Key Policy Tasks 1

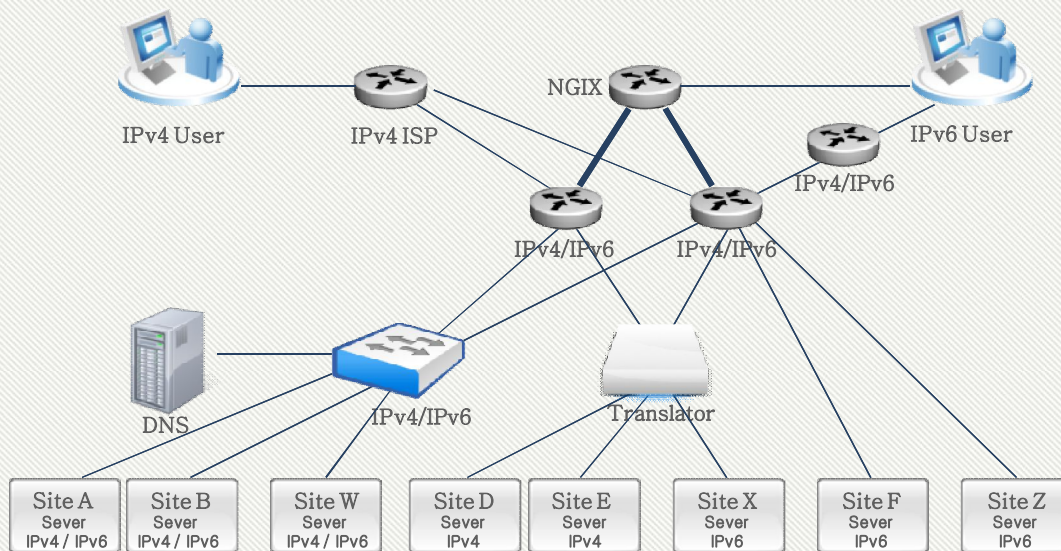
Groundwork Development for the Support of Commercial IPv6 Services

Task 1

Commercialization of New IPv6 Services

Development of IPv6-
Based Commercial Web
Services

Web service providers such as IP Web hosting is supported to develop IPv6 Web services and networks



< Development of IPv6-Based Commercial Web Services >

Key Policy Tasks 1

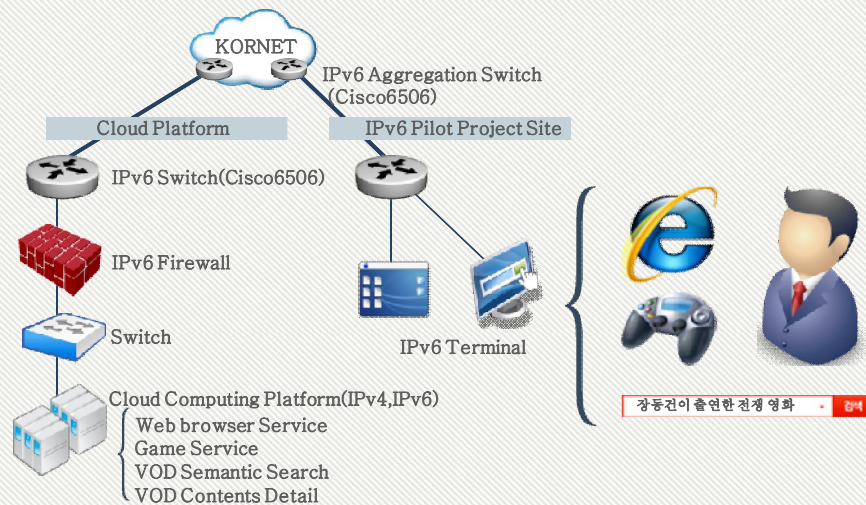
Groundwork Development for the Support of Commercial IPv6 Services

Task 1

Commercialization of New IPv6 Services

Development of IPv6-
Based IPTV Services

The cloud IPTV network is developed utilizing the next generation Internet address (IPv6) system in order to provide various content such as N-screen, Web and game services to encourage transition to IPv6



< Development of IPv6-Based Green IPTV Service Cloud Test Platform >

Key Policy Tasks 1

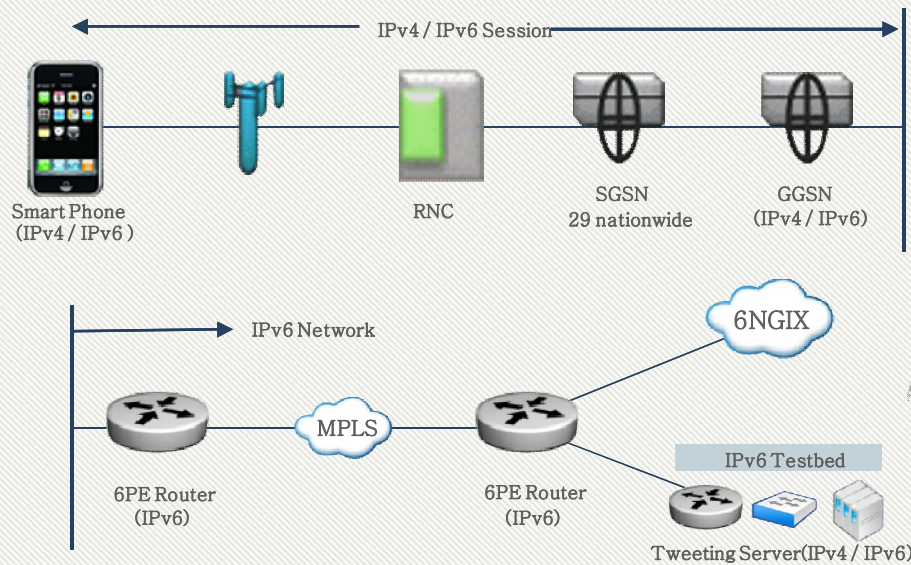
Groundwork Development for the Support of Commercial IPv6 Services

Task 1

Commercialization of New IPv6 Services

Development of IPv6-
Based 3G mobile Services

IPv6 is introduced to national 3G mobile telecommunication networks to develop application and handset technologies



< Development of IPv6-Based Mobile Telecommunication Networks >



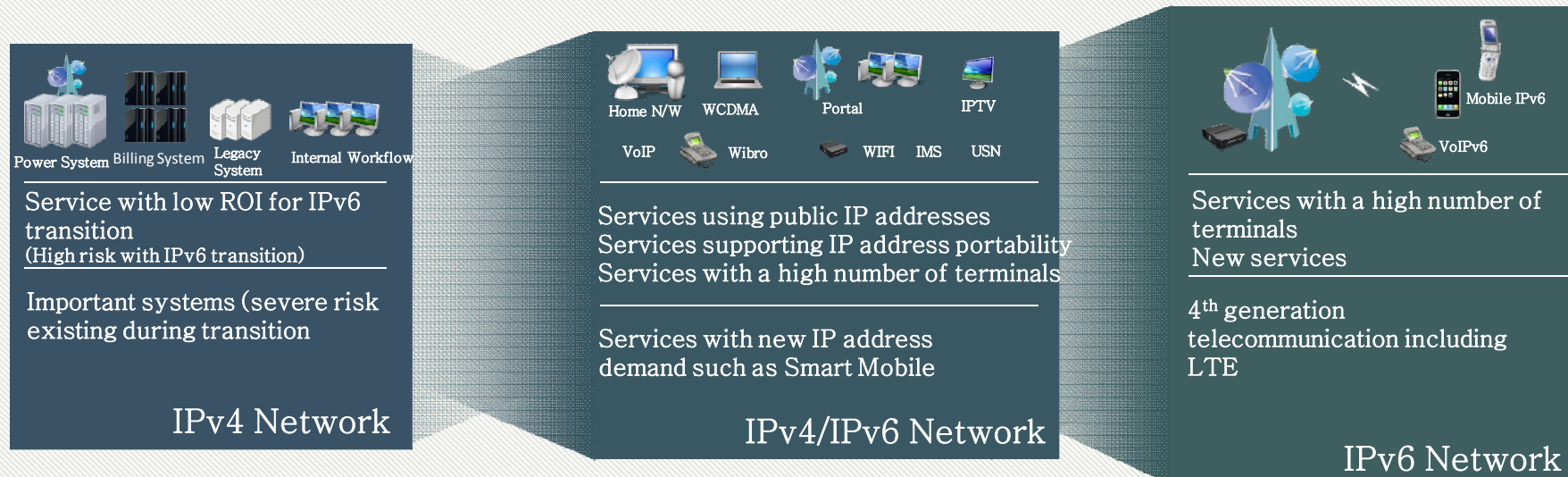
Key Policy Tasks 1

Groundwork Development for the Support of Commercial IPv6 Services

Task 2

Prioritization of IP Address Allocation after IPv4 Exhaustion

A phased approach to IPv6 transition is adopted with consideration to the importance of Internet services and operating environments



Establishment of an Efficient Management Policy Plan for the Allocation of Remaining IPv4 Addresses

The IPv4 address management policy of International Internet Registries (IANA and APNIC) will be adopted so as to implement efficient reallocation of IPv4 addresses and conduction of management policies

Key Policy Task 2

Raising IPv6 Transition Awareness and Support of Groups in Need

Task 3

Announcement of the IPv4 Exhaustion Point (Flag Month) and Raising Awareness

Announcement of IPv4 Flag Month



- It will be difficult to allocate IPv4 addresses after the point announced by IANA
- South Korea will also announce 1st half of 2011(June at the latest) as the Flag Month

Key Policy Task 2

Raising IPv6 Transition Awareness and Support of Groups in Need

Task 3

Announcement of the IPv4 Exhaustion Point (Flag Month) and Raising Awareness

Announcement of IPv4 Flag Month

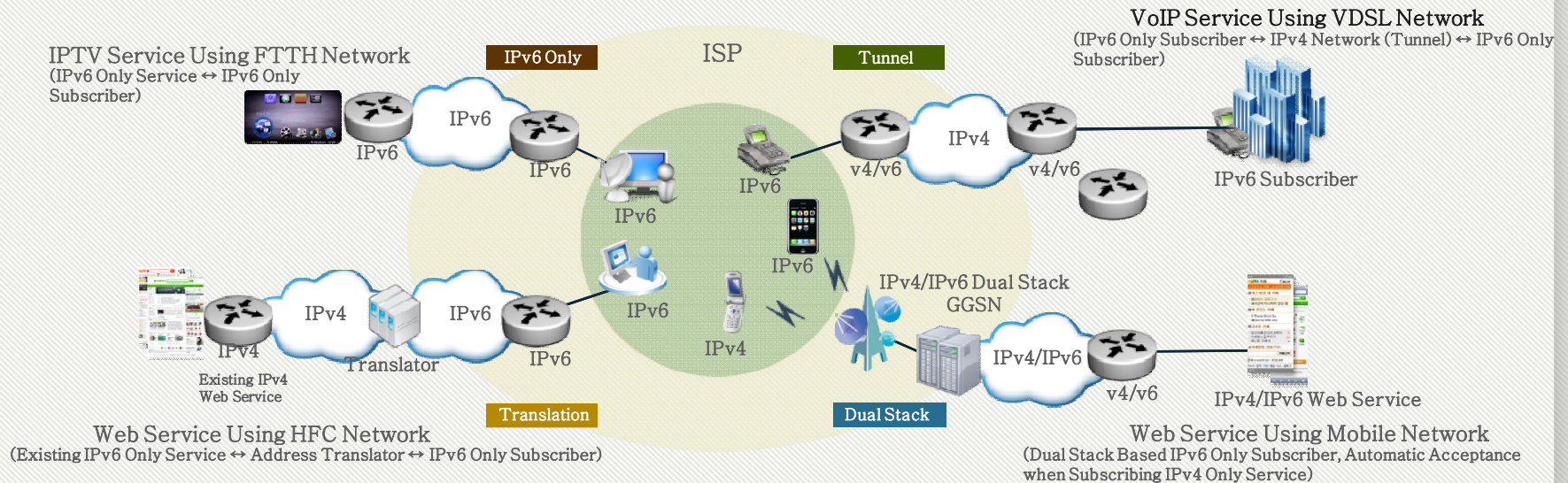
- For each service area, scenarios for handling IPv6 service users in IPv4 environments is prepared in order to provide guidelines of action

IPv6
Subscriber/Service
Acceptance Scenarios

Example cases of IPv6 address allocation to new users and existing IPv4-only customers using IPv6 services will be separately prepared

IPv4 ↔ IPv6
Communication
Scenario

Scenarios enabling communication between IPv4 and IPv6 networks will be prepared



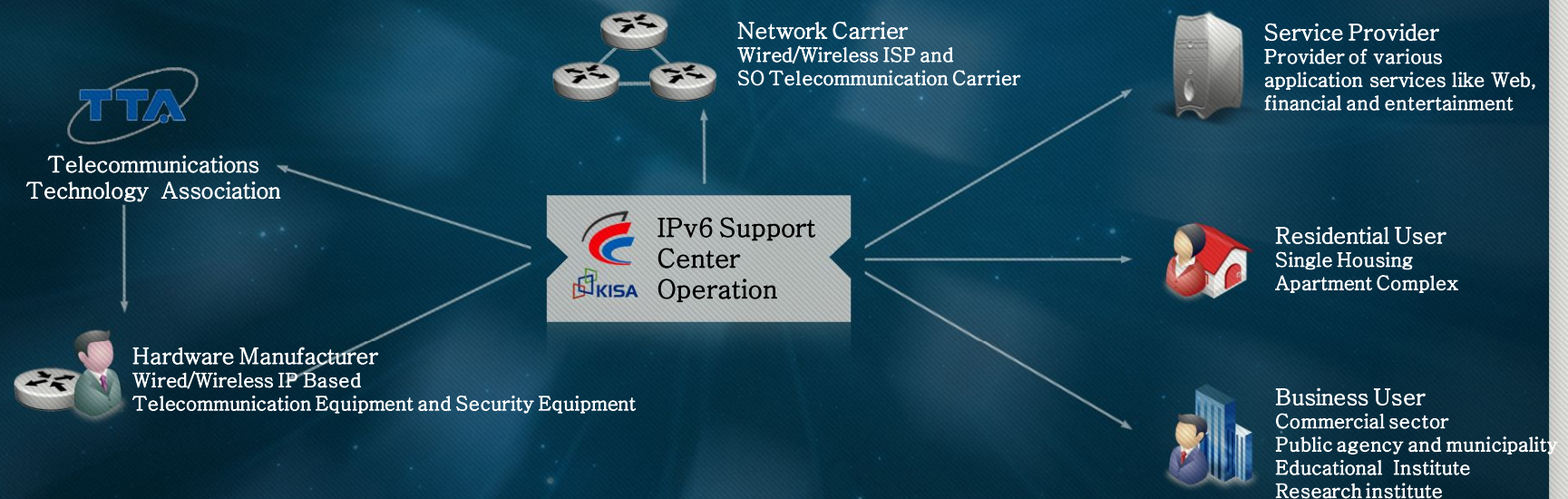
Key Policy Task 2

Raising IPv6 Transition Awareness and Support of Groups in Need

Task 3 Announcement of the IPv4 Exhaustion Point (Flag Month) and Raising Awareness

Strengthening of Support System

•The current "IPv6 Transition Center," which focuses on providing support for IPv6 transition training, is expanded to the "IPv6 Transition Support Center."



- Support, such as technical consulting and user protection support for resolving IPv6 service-related difficulties will be provided
- A domestic IPv6 foundation will be established and various IPv6 service developments will be guided and promoted by providing IPv6 Internet Exchange services and upgrading IPv6 equipment certification systems

Key Policy Task 2

Raising IPv6 Transition Awareness and Support of Groups in Need

Support of Groups in Need

- An IPv6 transition support plan for small B2B and B2C Internet businesses (small ISPs, contents providers, etc.) is prepared

- Latest technical information, customized training and consulting will be provided
- Public-private cooperative projects will be carried out for the development and distribution of low-cost, high-performance IPv6 transition technology so that users can easily and quickly adopt it.

Development of IPv6 Support Professionals

- Specialized technical training at the customer level for IPv6 transition is conducted (an estimated 2,400 people by 2013), and consultations for transition support is provided.

General Program

A nationwide tour for the training of managing executives and working-level people will be conducted to increase the awareness of the need for IPv6

Intermediate/Advanced Program

Visiting and group education of network administrators and IT engineers will be conducted for the development of professionals in the area of IPv6 transition

Professional Development

IPv6 transition professionals will be developed by way of IPv6 technology and applications instruction to network professionals in public and private sectors

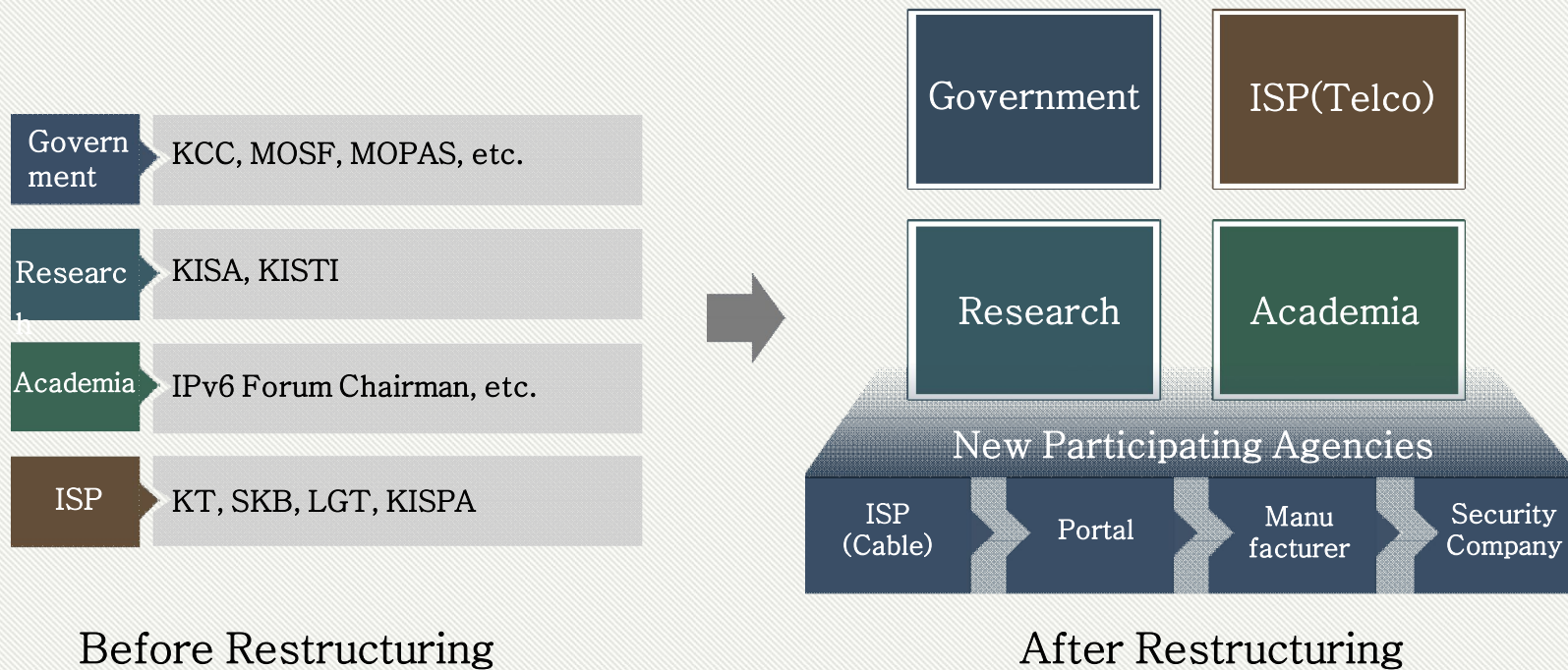
Key Policy Task 3

Enhancement of IPv6 Transition Systems and Inspection

Task 4 Enhancement of IPv6 Transition Systems and Inspection

Expansion of the "IPv6 Transition Steering Committee"

- Portals, equipment manufacturers, cable ISPs and security companies is encouraged to apply IPv6 throughout the whole Internet cycle (networks, application services, etc.) so as to proliferate IPv6 transition and strengthen public promotion



03

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Future Plans



Future Plan

Phase 1 (2010)

Responding to IPv4 exhaustion

- Dec. '10 : Production and Distribution of IPv6 Guides for Each Service Area
- Dec. '10 : PR of IPv6 based service pilot project(Mobile, Web, IPTV)

Phase 2 (2011)

Responding to Flag Month

- June. '11 ~ : Delivery of IPv6 Transition Support Services
- ~'11. June : PR of IPv4 Exhaustion using various Media
- '11. ~ '13. : Support for the expansion of IPv6-based commercial wired/wireless services and the proliferation of IPv6 handsets

Phase 3 (2012 ~)

Phased IPv6 transition

- '12. ~ '13. : Enhancement of IPv6-based application services and support systems
- '11. ~ '13. : Enhancement of 6NGIX networks to support commercial services

Thank You