# Taiwan IPv4/IPv6 Status -- MOVING TOWARD IPV6 SUPPORTED NETWORK

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# Agenda

- Current IPV4/IPV6 Status in Taiwan
- The Drives for IPV6
- IPV6 Development Plan
   NICI/MOTC/TWNIC
- The Strategy of IPv6 Development in Taiwan
- Network Setups for IPV4/IPV6 Evolution
- Summary

# **Current Status in Taiwan**

- Total IP addressed to LIRs in Taiwan:
- IPV4:~/8(~0.7 address per person)
  - NATs, dynamatic IP allocations are used to bridges the gaps
  - New LIRs (ISPs) and services keep drive the need for new IPs
- IPV6:2309 /32(~6 /48 per person)

### The Drives for IPv6

- Free IPv4 address reduced rapidly
- 3G/WIMAX/Digital Cable data/voice/video multimedia integrated services require more IPs
- Personal communication requires more IPs
- New ISPs require more IPs
- To bridge digital divide require more IPs
- All-IP era (U-Japan, U-Korean, U-Taiwan, ...) becomes a trend, it also require more IPs
- DNS support in the Root become strong
- IPv6 ready devices grow

# IPV6 Development Plan NICI/MOTC/TWNIC

- From 2002~2007,NICI/MOTC/TWNIC have conducted an IPv6 development plan to promote the research/development in Taiwan
- Bridging Local Industries and International IPv6 Testing Bodies
- 49 Phase I and 23 Phase II ready logo devices from Taiwan
- Devices for different IPv6 services have been developed, MIPv6, SIPv6, Carv6, VoIPv6, Healthcarev6, etc
- To try out the IPv6 only subscriber network
   Taiwan Network and Information Center (TWNIC);

#### The Strategy of IPv6 Deployment in Taiwan

- Equipment/services New services and new equipments requires IPv4/IPv6 dual stack support
  - FTTX, WIMAX/3.5G etc
- Users Elementary School/College/Government requires dual stack
- Users new subscribers network support IPv6
- Servers CSP servers support dual stack
- Connection IPv6 tunnel broker to bridge IPv6 islands

### The Strategy of IPv6 Deployment in Taiwan (Cont)

- Education ISOC Taiwan/TWNIC work together to educate users in college/schools
- Education Demonstration and Education of IPv6 in Science Education Museum (Start Jan. 2008)
- Clean up the stones in commercial network - IPv6 ready camera in PingTung Aquarium Museum through Hinet(Start July 2007)

#### Network Setups for IPV4/IPV6 Evolution

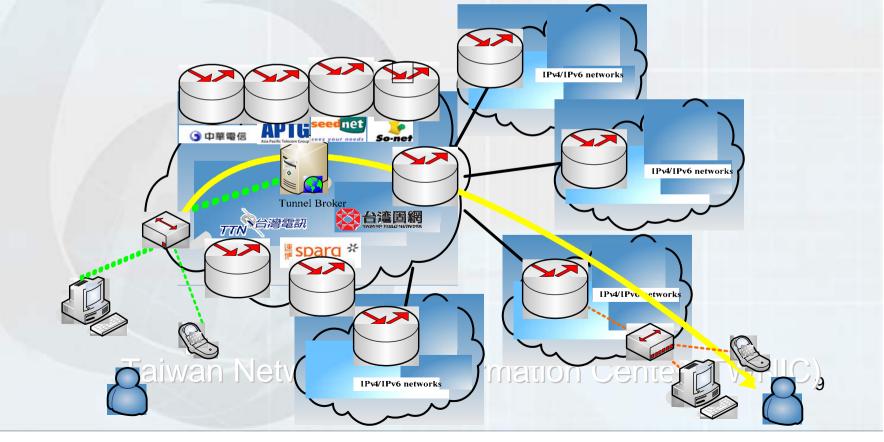
- Tunneling to bridge different ISPs
- Dual Stack support for new services
- Subscribers:
  - FTTx access, broadband access through IPv4/IPv6 dual stacks
- Servers:
  - CSP servers move to dual stack support

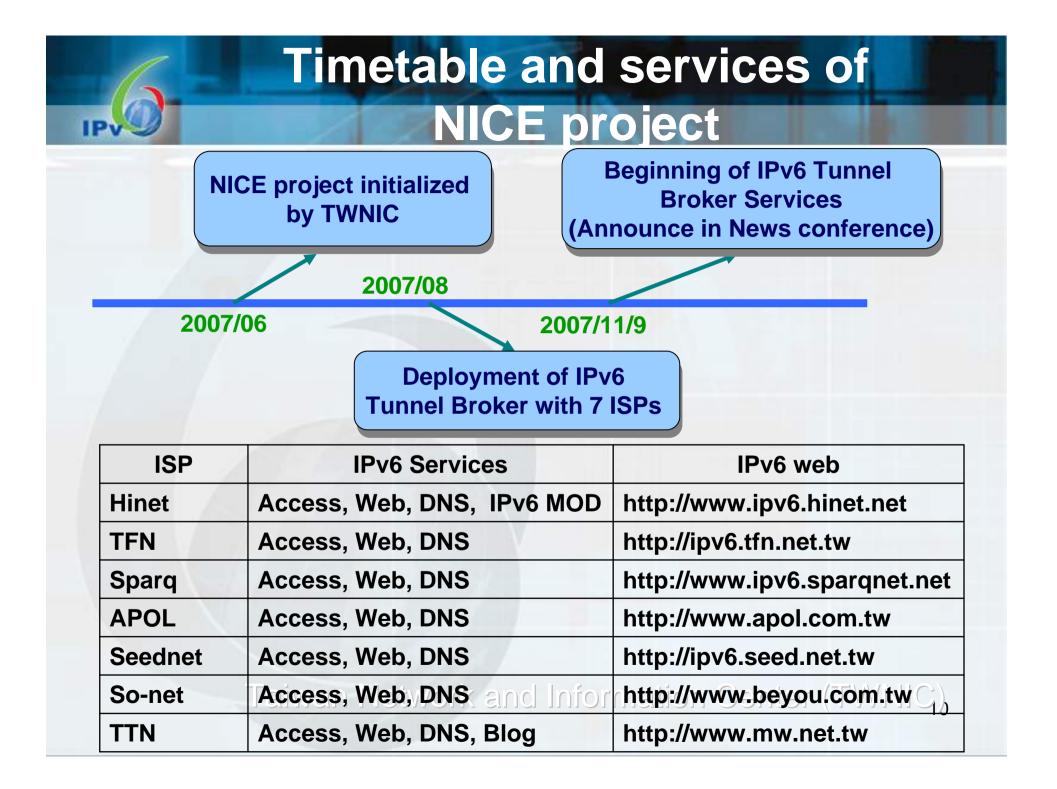
#### 7 ISPs provide IPv6 access Service by IPv6 Tunnel Broker

#### Next-generation Internet Connectivity Environment (NICE)

IPv6 Tunnel Broker Service

- 7 major ISPs join project
- They provide their users to use free IPv6 tunnel broker service since 9 November, 2007.





### News Conference for beginning of ISP IPv6 Tunnel Broker Services



November 9, 2007 in Taipei, Taiwan

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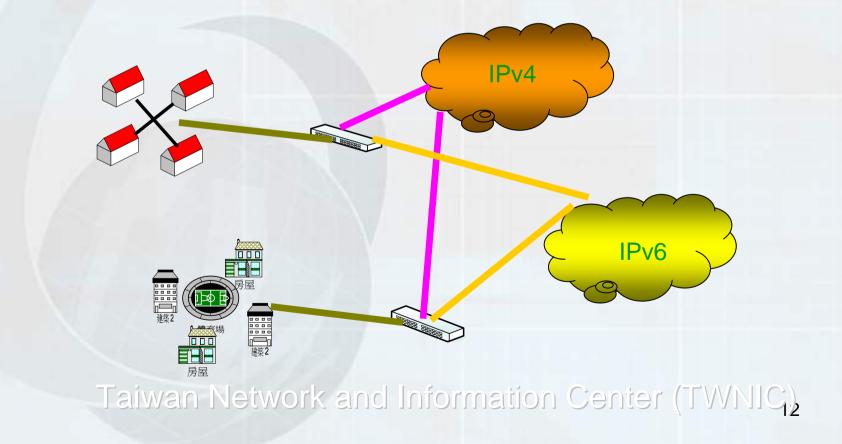
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# Universally Accessible IPv6

- Optical Fiber plus Dual Stack Services v4/v6 in specific communities
  - Expect to provide FTTx dual stack services v4/v6 since Q2 2008



### **Content Service Providers**

- IPv6 content service provider is one of the most important player in the development
- TWNIC/ISOC Taiwan is working with Hinet/TFN/Sparq etc to bring CSPs in IDC to support IPv4/IPv6 dual stacks

#### **IPv6 Content Services**

#### • http://www.ipv6.hinet.net

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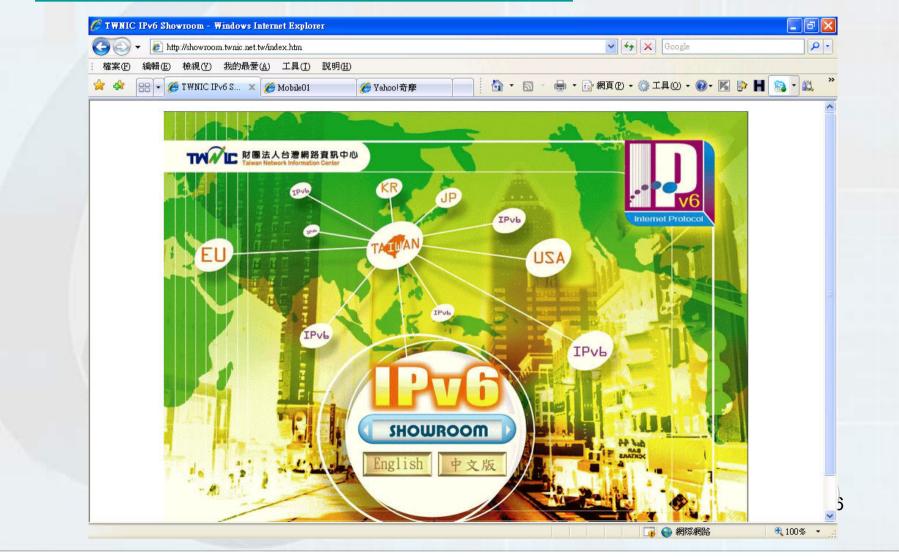
#### **IPv6 Content Services**

#### http://ipv6.taco.hinet.net

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### **IPv6** Content Services

#### http://showroom.twnic.net.tw



#### Summary

- TWNIC is working actively with government and ISPs to bring the local internet to support IPv6
- An IPv4/IPv6 dual stack network support commercial network is developing
- To incorporate CSP servers to support IPv4/IPv6 is the next goal



# **THANK YOU !**