

IPv6 Status in Taiwan

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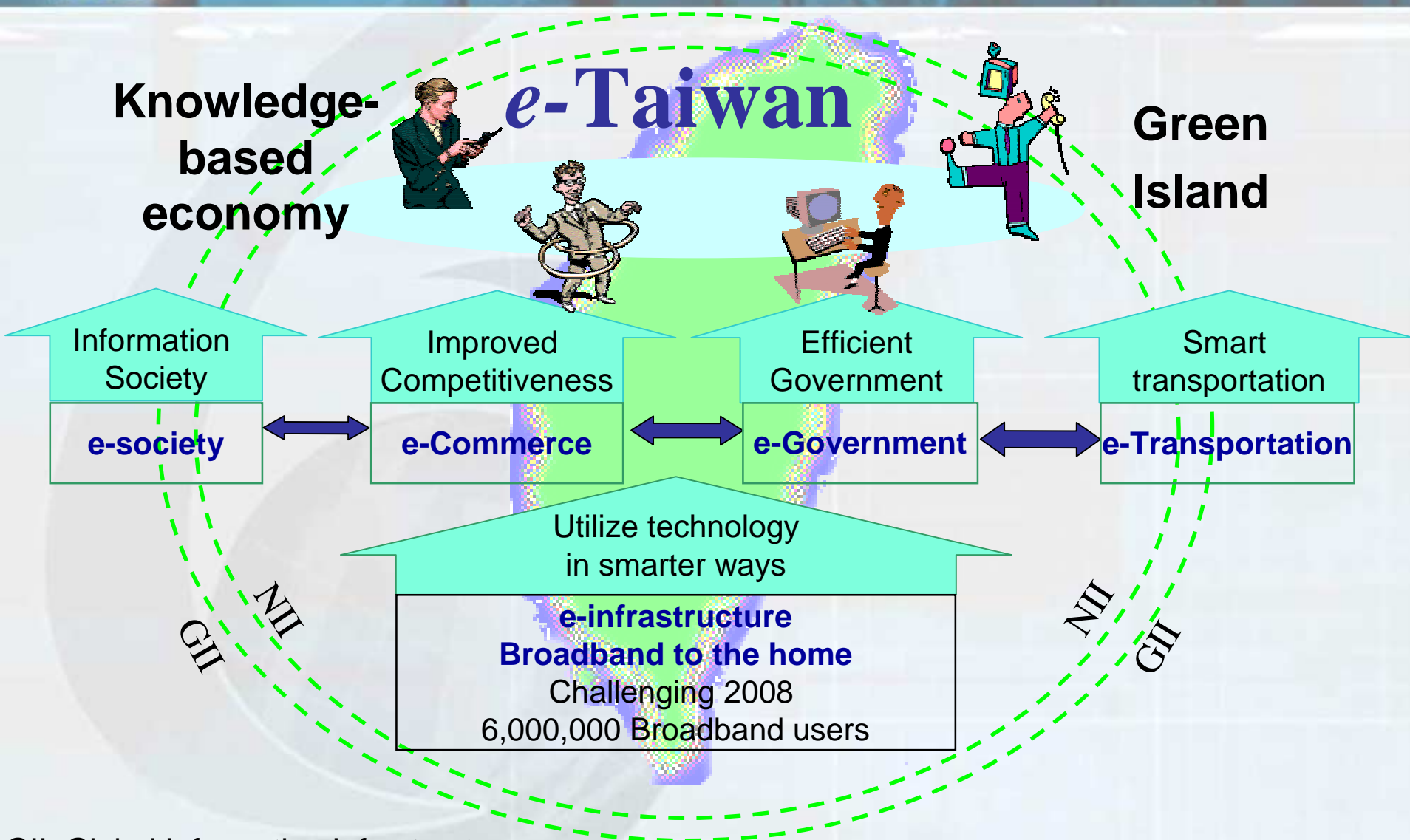


IPv6 Status in Taiwan

- **Development**
 - Government
 - Industry
 - Infrastructure
 - Research
- **Promotion and Cooperation**
- **Upcoming Event**



National Information and Communications Initiative Committee

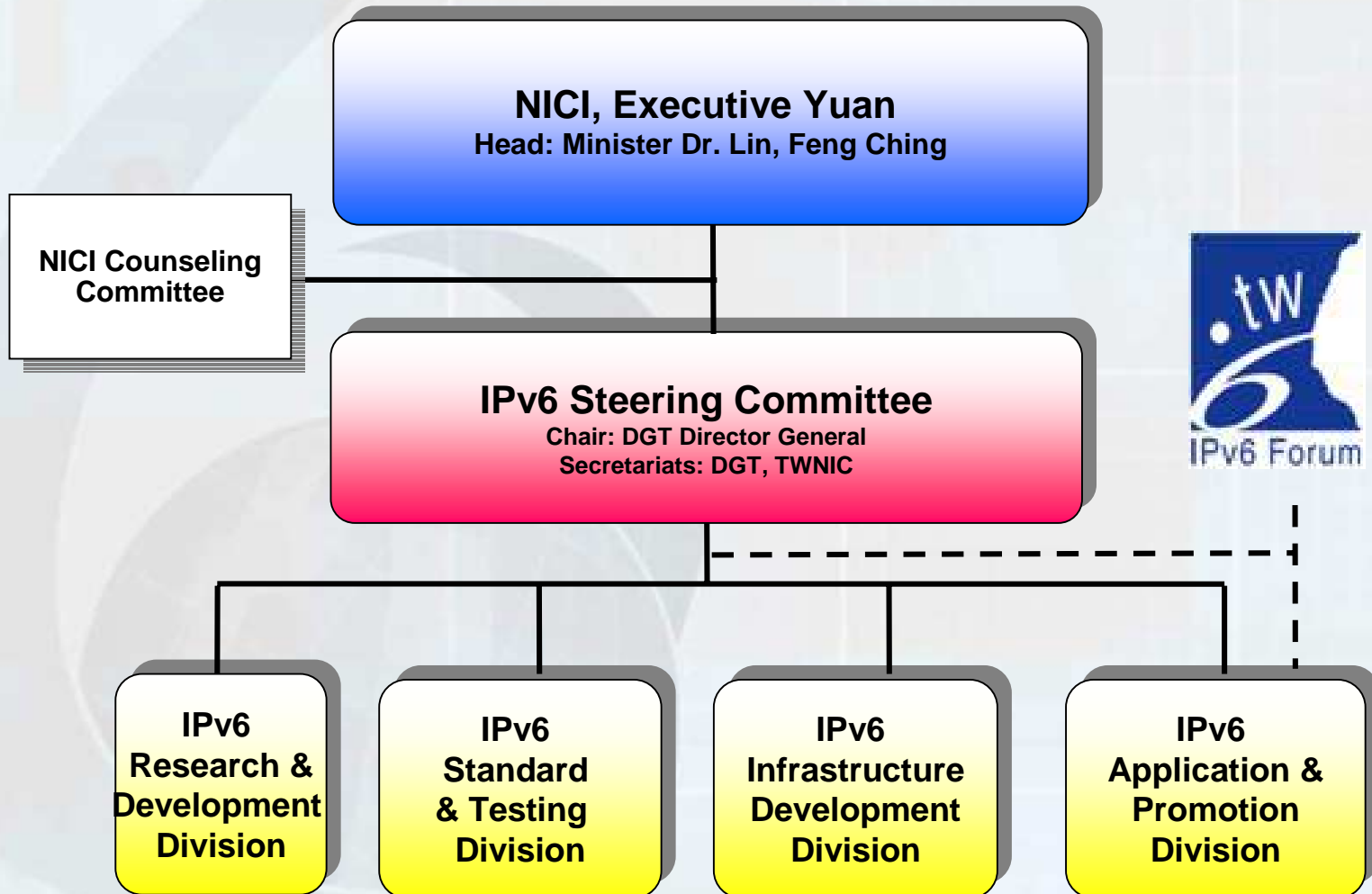


GII: Global Information Infrastructure
NII: National Information Infrastructure

(Total Budget: US\$1 billion)



NICI IPv6 Steering Committee

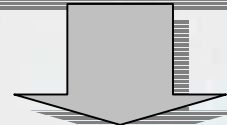




National IPv6 Deployment and Development Program(2003-2007)

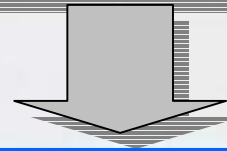
Phase I
(- 2002)

NICI IPv6 Steering Committee
IPv6 Forum Taiwan



Phase II
(2003 - 2005)

IPv4/v6 transition mechanisms development
Native IPv6 network environment deployment
education and human resource develop

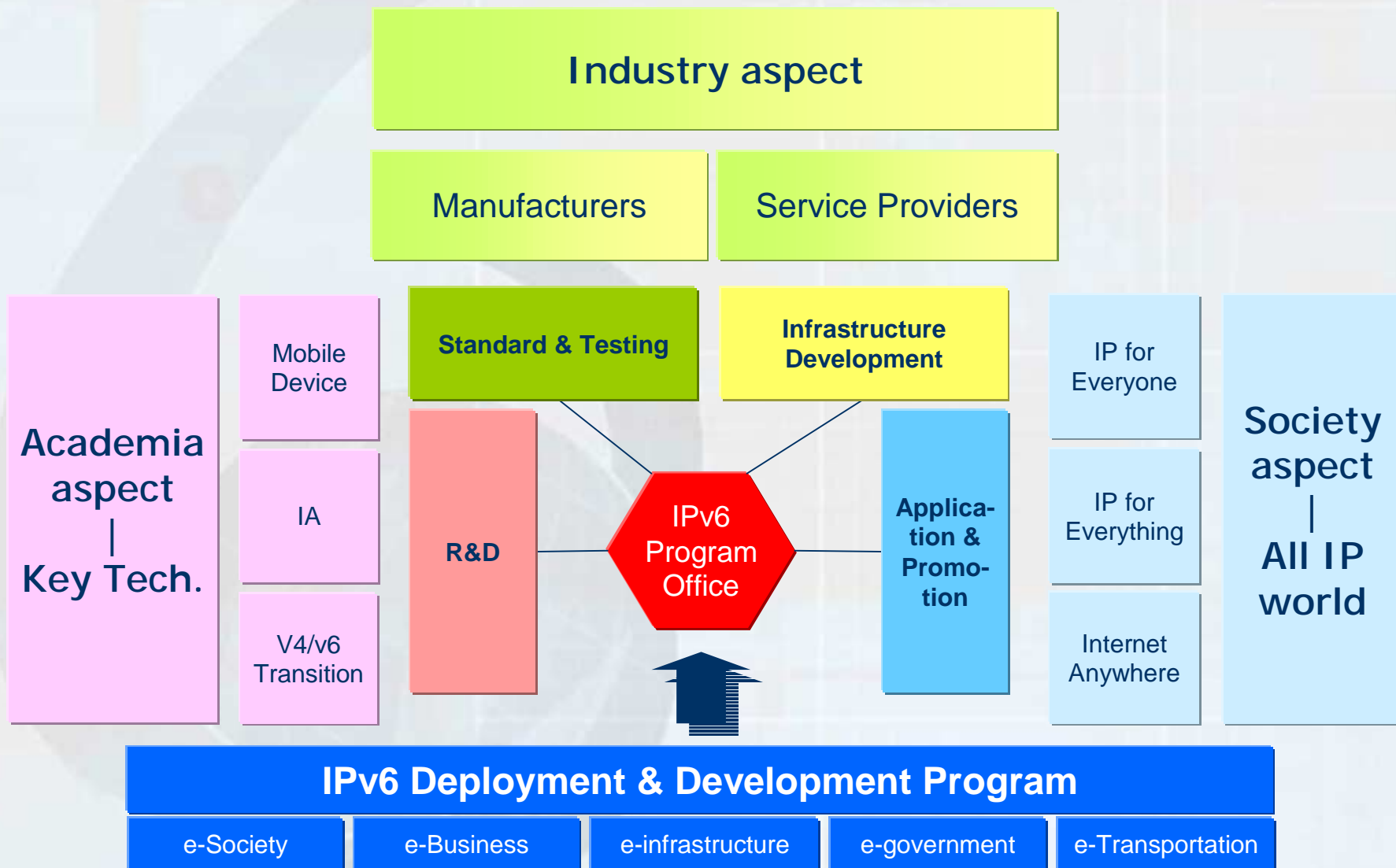


Phase III
(2006 -2007)

Nationwide pure IPv6 network completed
IPv6 embedded IA, 3G, WLAN products



National IPv6 D&D Program





Recent Government Initiatives

- 2004/7/29 ABIEN (Advanced Broadband Integrated e-service Network) Project announced by DGT
 - Major Targets to be accomplished by 2007
 - Broadband Penetration : 75%
 - Broadband Subscribers : 6 Millions
 - Fiber-to-the-home : 2.06 Millions Households
 - WLAN Users : 1.7 Millions
 - Mainstream access : 50-100M Fiber
 - Internet Protocol : IPv6 Enabled
 - DTV Penetration: 90%
- GSNv6 to be kicked off in 2005
 - GSN: Government Service Networks
 - Core Network to support IPv4/IPv6 Dual Stack by 2007



Industry Development

- **Local vendors' support on IPv6:**

- Home Gateway
- ADSL Wireless IAD
- Enterprise Security Multimedia Router
- Firewall Client Software
- IPv6 IPsec Router
- IPv6 SoC
- IPv6 Video Phone

- **National IPv6 Standard & Interop Testing Lab**

- Opened in July, 2003
- Official delegate of IPv6 Logo Committee, IPv6 Forum
- Provide local manufacturers international standardized services



- **Cooperation and Technology Transfer Between academia R&D and the Industry**

- VoIPv6





IPv6 Testing & Certification Service in Taiwan

IPv6 Testing
Service Phase

IPv6 Certification
Service Phase

**IPv6 Interoperability
testing Lab.
Establishment**

**IPv6 Certification
Lab. Establishment**

**IPv6 Standard Tracking
&
Develop Test Suites**

**IPv6 Standard Tracking
&
Develop Certification Suites**

Provide IPv6 Testing
Service

Provide
IPv6 Certification
Service

2003

2004

2005

2006

2007



IPv6 Ready Logo Phase I Approved List (Taiwan)

| ID | Company | Product | Version | date |
|-----------|-------------------------|--|------------------------------|------------|
| 01-000122 | CHTTL | IPv6 Service Gateway | R 1.0 | 2003/11/21 |
| 01-000128 | III | TTF TCPIP Protocol Stack(for host) | Ver.1.0 | 2003/12/02 |
| 01-000129 | III | TTF TCPIP Protocol Stack(for Router) | Ver. 1.0 | 2003/12/02 |
| 01-000130 | Intel Innovation Center | Intel IXDP425 Development Platform | IIC-IPv6READYLOGO-001 | 2003/12/05 |
| 01-000136 | Alpha Networks | Home Gateway | ver 1.0 | 2003/12/19 |
| 01-000139 | Draytek | Vigor3300 | ver 2.5.1 | 2004/01/15 |
| 01-000166 | Alpha Networks | xDSL Wireless IAD | 9.0.4.14.R20319 | 2004/04/09 |
| 01-000184 | Zyxel | ES-3026 | ZyNOS 3.53 | 2004/06/14 |
| 01-000196 | Intel Innovation Center | Intel IXDP425 Development Platform MLV 3.1 | MVL3.1 IIC-IPV6READYLOGO-002 | 2004/06/21 |



IPv6 Ready Logo Phase I Approved List (Taiwan) (Cont.)

| ID | Company | Product | Version | date |
|-----------|----------------|------------------------|----------|------------|
| 01-000215 | Alpha Networks | Wireless Router (Host) | V1.0H | 2004/09/01 |
| 01-000216 | Alpha Networks | Wireless Router | V1.0R | 2004/09/01 |
| 01-000217 | Draytek | DrayOS | V3.0 | 2004/09/02 |
| 01-000231 | Delta Networks | CG-WLBARAG | V1.00-6 | 2004/09/17 |
| 01-000232 | Delta Networks | CG-BARFX | V1.00-6 | 2004/09/17 |
| 01-000233 | Zyxel | ZyWall-200 | pre v1.0 | 2004/10/01 |
| 01-000234 | Zyxel | ZyWall-200 | pre v1.0 | 2004/10/01 |



Network Infrastructure

- **Moving steadily towards IPv6**
 - 16 production IPv6 address blocks allocated
 - Commercial Networks
 - Most major ISPs (HiNet, SeedNet, TTN, Taiwan NTT, TFN, Gigamedia) already got IPv6 addresses
 - 2 ISPs provide commercial trial services
 - 2 IPv6 exchange points available
 - Academic & Research Networks
 - TWAREN / TANet2
 - Support IPv6 since Mar. 2004
 - TANet
 - Enabling IPv6 in the Backbone
 - Government networks (GSN) to deploy IPv6 in 2005



IPv6 IX Construction

- **Academia Sinica Native IPv6 Networks**

- Domestic

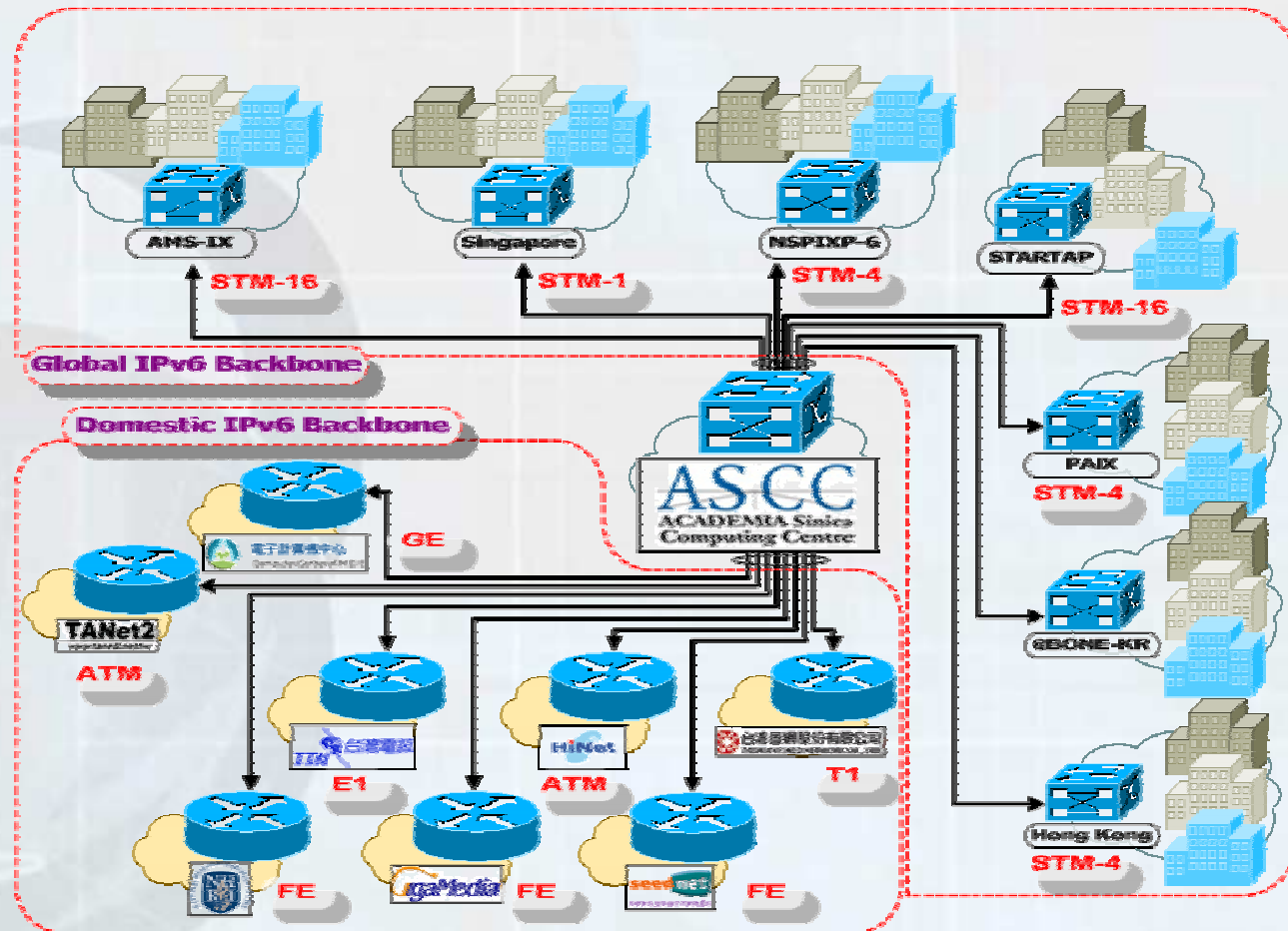
- 10 Networks
- Bandwidth
 - 4.26Gb/s

- Oversea

- 76 Networks
- Bandwidth
 - 5.98Gb/s

- Global Linked IPv6 IXs

- NSPIXP-6, StarLight, PAIX, 6TAP, AMS-IX

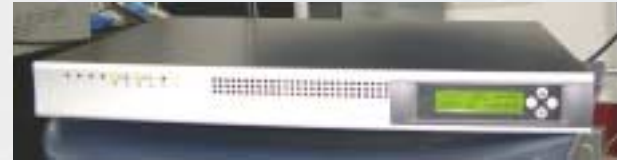




IPv6 R&D Prototypes



NAT-PT Single Chip Translator



6IDS (IPv6 Intrusion Detection System)



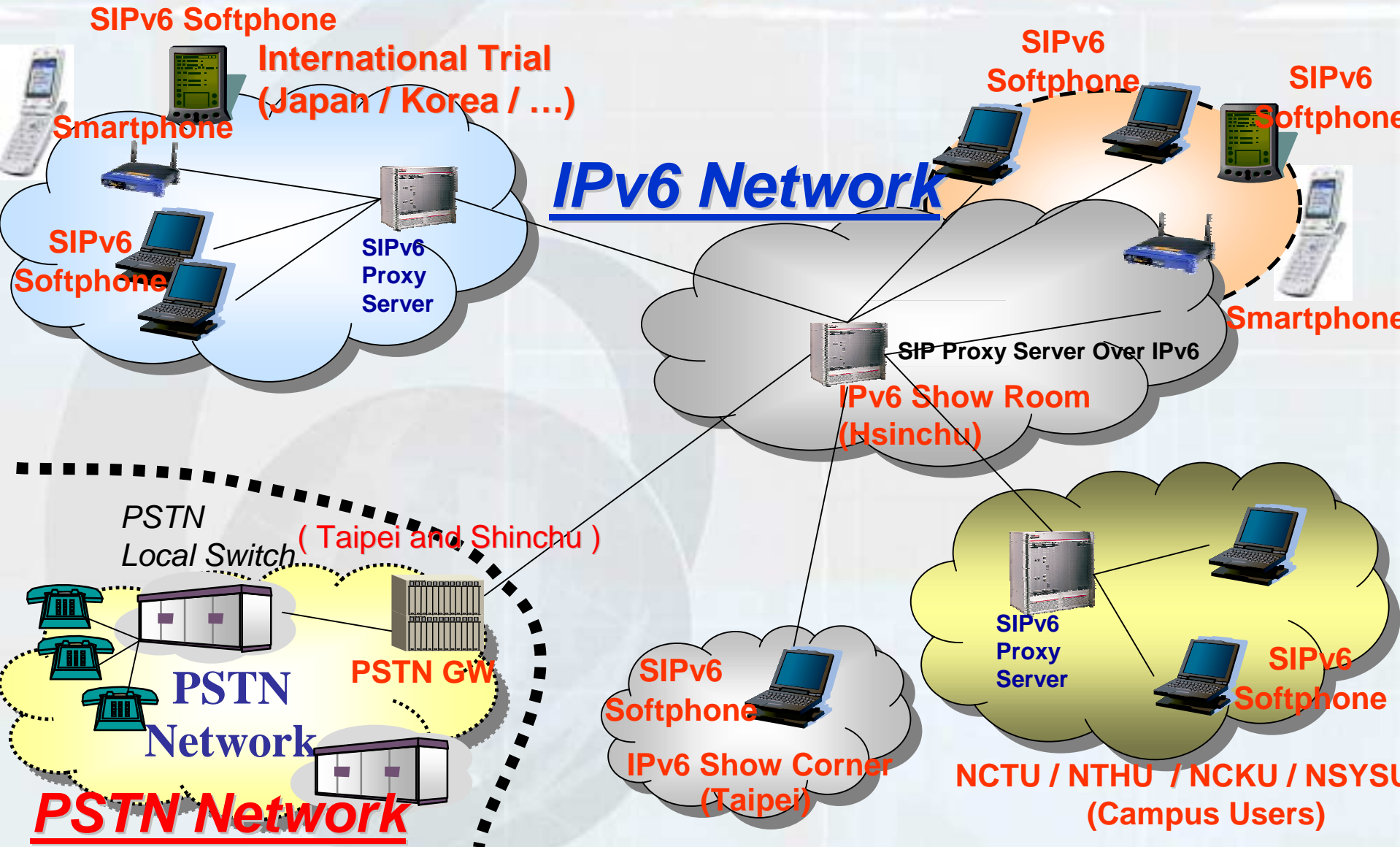
**IPv6 Multihoming
SOHO Router**



IPv6 Video Phone



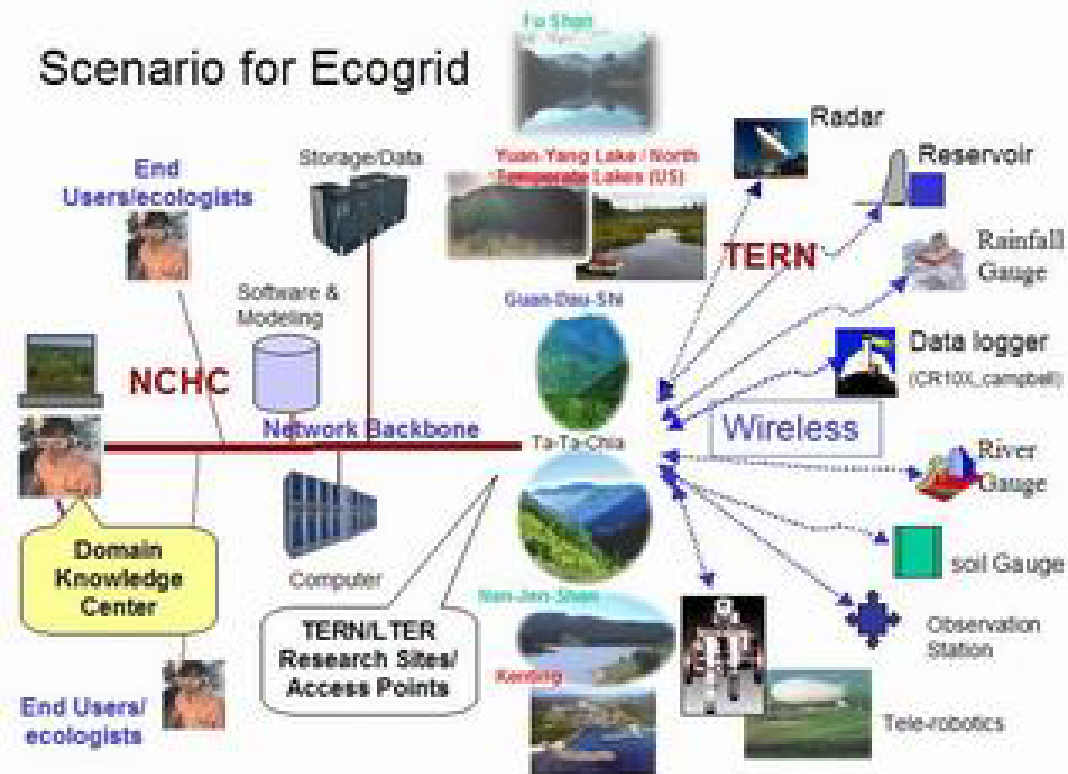
IPv6 Trial: SIP based VoIPv6





IPv6 Trial: Commercial VoD Service







IPv6 Trial: Public Multimedia Payphone



Handset

**CCD
Camera**

**Payphone
hot line
information**

**10.4" TFT-LCD
Touch Screen
SVGA 800x600
Color**

**Thermal
Printer**

**Multi-Card
Reader**

- IC Phone Card
- IC Banking Card
- Credit Card

IPv6 Promotion and Cooperation

Promotion Activities

- Semi-Annual magazine
- IPv6 Portal Website
 - <http://www.ipv6.org.tw/>
- Domestic Events
 - Trainings, Workshops, Seminars
- International Event
 - The 1st Global IPv6 Summit in AP
 - 2004 IPv6 Summit in Taiwan
- International Cooperation
 - Korea, Japan, EU
- IPv6 Showroom/Showcase
 - Opened Mar.2004



IPv6 Demonstration Sites

- IPv6 Demonstration Sites
 - Opened in March 2004
- Taipei (www.v6corner.org.tw)
 - Located in central Taipei
- Hsinchu
 - Located in ITRI headquarters, near Science-based Industrial Park
 - 100+Sqm divided into 3 areas:
 - Public
 - Home
 - Office



Cooperation MoUs

- **General Topic MoU**
 - IPv6 Promotion Council, Japan
 - Feb. 2003, Taipei
 - IPv6 Forum Korea
 - Aug. 2003, Seoul
- **Showcase Coop. MoU**
 - Eurov6
 - Feb. 2003, Taipei
 - IPv6 Promotion Council
 - Aug. 2003, Taipei
- **Interop. Testing Coop. MoU**
 - TAHI Project
 - Aug. 2003, Taipei
- **Research Coop. MoU**
 - University of Southampton, UK
 - Dec, 2004, Southampton
 - University College London, UK
 - Dec. 2004, London





Summary

- **Taiwan Internet is upgrading from IPv4 to IPv4/IPv6 coexist.**
- **Driven by the IPv6 DnD program, ISP, Telcoms, and the vendors are getting involved.**
- **IPv6 promotion is a global effort, we will continue to cooperate with the world.**



Upcoming Event: IPv6 Summit in Taiwan 2005



2005 IPv6 Summit in Taiwan

- 2nd IPv6 Summit event in Taiwan after the 1st successful one in Aug. 2004
 - 2004 Theme: Empowering IPv6 Industrialization
 - Has been recognized by IPv6 Forum as one of the Global IPv6 event series
- Held in conjunction with 20th APAN Taipei Meeting
 - Looking for collaborative effort with APAN community, especially with IPv6 Task Force



Tentative Program

| Date | 8/23 (TUE) | | 8/24 (WED) | | 8/25 (THUR) | |
|-----------|---------------|--------------------------------|---|--|----------------------|---------------|
| Morning | IPv6 Tutorial | 2nd APEET Annual Meeting (TBD) | IPv6 Summit Opening --2~3 Keynote --Panel | | APAN Plenary Session | |
| Lunch | | | Press Conference—IPv6 Day | | | |
| Afternoon | IPv6 Tutorial | 2nd APEET Annual Meeting (TBD) | Status Report from Taiwan IPv6 Project | Program Track --Joint Session w/ APAN IPv6 Task Force | Program Track | Program Track |
| Evening | BoF | | IPv6 Summit Social Event | | APAN Social Event | |

- Venue: Howard Plaza Taipei
- Sponsors: NICI, MOTC, Major Telcos, ISPs, Network Device Vendors
- Inviting well-known IPv6 figures as keynote speakers
- Expected # of Local & Worldwide Participants: 300 people
- Program will feature: IPv6 Mobility and Wireless Technology, SIP-based IPv6 Communication, IPv6 Deploying in Cable /xDSL Services, IPv6 Streaming and Multimedia Infrastructure, Commercialized IPv6 Application, QoS & Traffic Management, IPv6 Network Security, etc.

Thank you!