Taiwan IPv6 Directory

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Outline

- Background
- IPv4 address exhaustion website
- Taiwan IPv6 Directory
  - IPv6 Products Directory
  - IPv6 Websites Directory
- Conclusion & Future Work

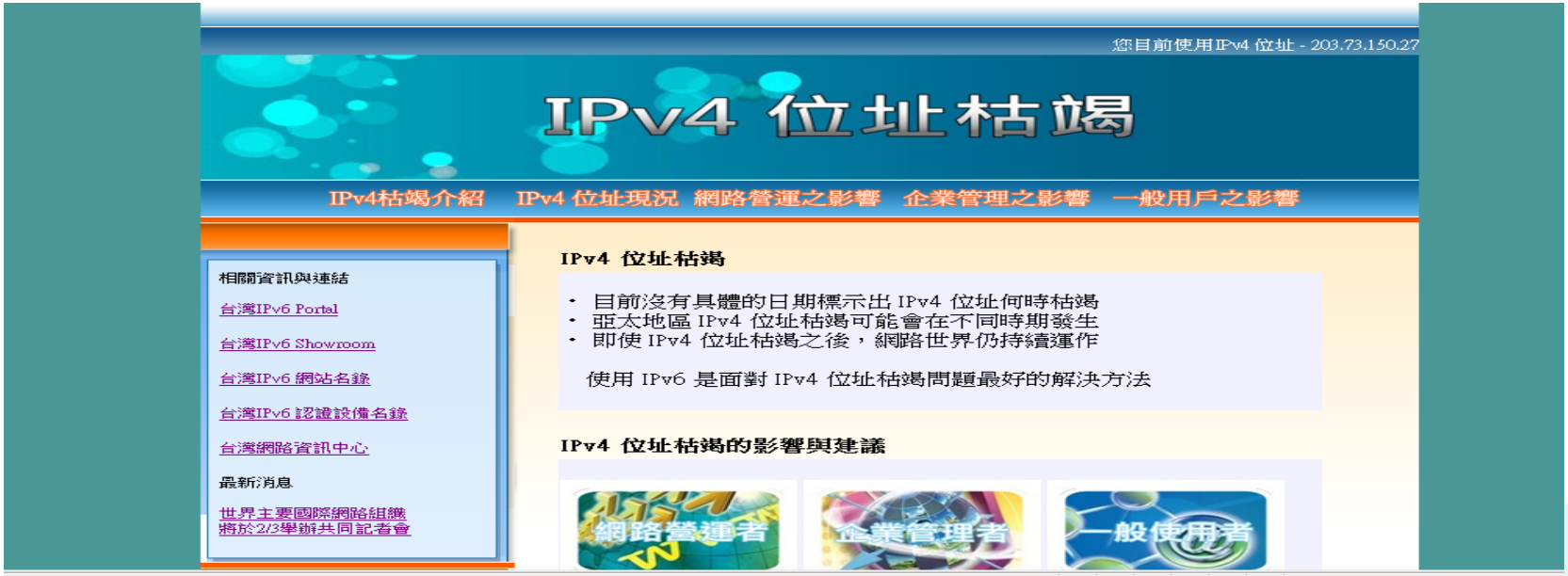
Background

- The IANA IPv4 address exhaustion happened on 3, Feb.
- IPv6 adoption at critical phase
  - In this phase, it is important to understand how to face IPv4 address exhaustion and adopt IPv6 for internet stakeholders.
- But now, the information is not enough about
  - How to face IPv4 address exhaustion?
  - How many IPv6 products can I choice to deploy?
  - How many IPv6 websites can I access?

Background

- IPv4 address exhaustion website
  - Let everyone knows how to face IPv4 address exhaustion
  - Let everyone knows how to transition from IPv4 to IPv6 and prepare for it.
- Taiwan IPv6 Directory
  - Taiwan IPv6 Products Directory
    - Provide Chinese version document
    - Easy to know and choice IPv6 products when everyone wish to deploy IPv6 network.
  - Taiwan IPv6 Websites Directory
    - When end users have IPv6 connectivity, they wish to connect IPv6 websites
    - Collect Taiwan IPv6 websites and provide the interface to let them register it

IPv4 address exhaustion website



- IPv4 address exhaustion website
  - The website contains important IPv4 address exhaustion information and suggestions for the internet stakeholders such as ISPs/ICPs/Government/Enterprises /Equipment Vendors/End Users
  - URL: http://v6directory.twnic.net.tw/ipv4_exhaustion/

IPv4 address exhaustion website & IPv6 promotion

- The website also provides information
  - IPv4 address policy after IPv4 address exhaustion.
  - IPv4 address statistics.
- IPv6 development and transition guideline
  - IPv6 Product Requirement suggestion for government/enterprises/ISPs
    - http://www.ipv6.org.tw/docu/IPv6_Product_Requirement_%20Documents_V3.0.pdf
  - The development and transition guideline of IPv6 Server and Application for enterprises/ICPs
    - http://www.ipv6.org.tw/docu/IPv6_Server&AP.pdf

IPv4 address exhaustion website & IPv6 promotion

- IPv6 promotion and providing FAQ for end user
  - We use an animated cartoon to introduce
    - IPv4 address exhaustion and impact,
    - What is IPv6?
    - How to setup IPv6?
  - URL http://ipv6faq.ipv6.org.tw/

IPv6 Products Directory

- Motivation
  - As IPv4 addresses are running out, it is time that we take action on the deployment and transition to IPv6.
  - The first step is how to know and choice IPv6 products
  - We can find many products supporting IPv6 function in IPv6 ready logo website. But many products only special/test version
- Purpose and Benefits
  - We established the Taiwan IPv6 Products Directory, let everyone knows that the product supports function and find it easily .

IPv6 Product Directory

認證號碼	廠商名稱	產地國家	產品名稱	產品型號	標章種類	原廠連結	認證日期	產品類別
02-C-000481	4ipnet®	TW	無線網路安全控制器	WHG401	Phase-2	Link	2010-08-05	Router,
02-C-000481	4ipnet®	TW	無線網路安全控制器	WHG505	Phase-2	Link	2010-08-05	Router,
02-C-000481	4ipnet®	TW	無線網路安全控制器	WHG707	Phase-2	Link	2010-08-05	Router,
02-CD-000481	4ipnet®	TW	無線網路安全控制器	WHG401	Phase-2	Link	2010-08-25	Server,

- URL
  - It is in trial and testing phase
  - 120 products had registried in this website.
  - http://v6product.ipv6.org.tw/

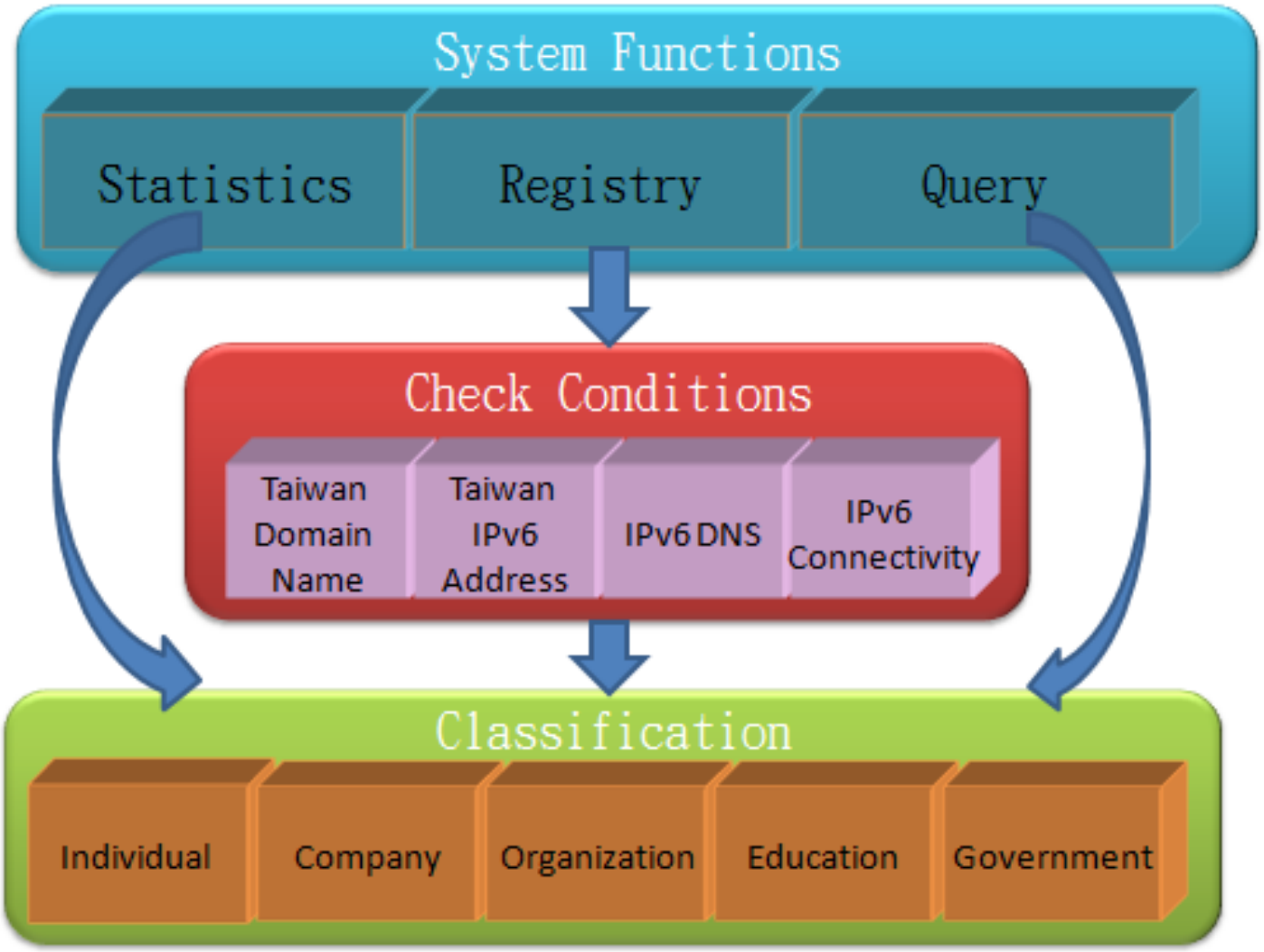
IPv6 Products Directory

- Category
  - Vendor Name
  - Ready Logo Type
  - Product Type
    - Host, Router, Switch, Wireless LAN, Server, Broadband CPE, …etc.
- Easy to know product specification

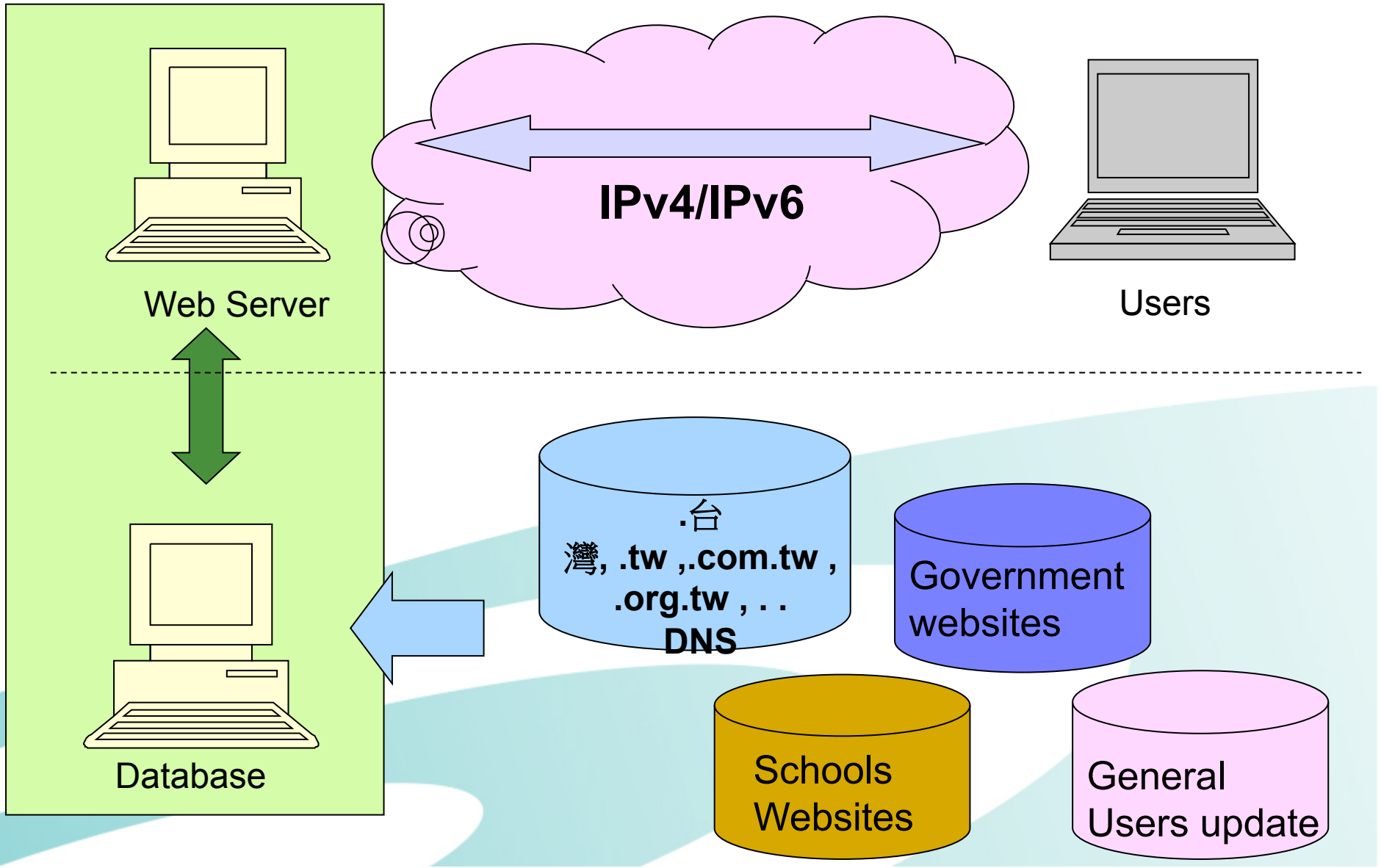
IPv6 Websites Directory

- Motivation
  - When end users had IPv6 connectivity, they wish to connect IPv6 websites.
  - Many persons don't know where can find IPv6 enabled websites in Taiwan.
- Purpose and Benefits
  - This website lists IPv6 enabled websites in Taiwan
  - General users may register their IPv6 enabled websites to IPv6 Websites directory

The model of IPv6 Websites Directory



IPv6 Websites Directory Architecture



IPv6 Websites Directory

序號	類別	所屬單位	網站名稱[點選可查詢網站]	IPv6位址	登錄時間	IPv6連線狀態
1	組織	中華電信研究所	http://interop6.ipv6.org.tw	2001:ca0:1:110::2	2010-07-27	正常運作
2	教育	台北市教育網路中心	http://web.tp.edu.tw	2001:288:1200::178	2010-07-12	正常運作
3	教育	樹德科技大學	http://ftp.stu.edu.tw	2001:e10:c41:eeee::1	2010-07-10	正常運作
4	教育	彰化縣教育網路中心	http://www.chc.edu.tw	2001:288:5600::103	2010-07-10	斷線狀態
5	教育	嘉義縣教育網路中心	http://www.cyc.edu.tw	2001:288:6600:70::31	2010-07-10	正常運作
6	教育	宜蘭縣教育網路中心	http://www.ilc.edu.tw	2001:288:a201::66:73	2010-07-10	正常運作
7	教育	高雄市教育網路中心	http://www.kh.edu.tw	2001:288:8201:2::11	2010-07-10	正常運作
8	教育	金門縣教育網路中心	http://www.km.edu.tw	2001:288:3400::4	2010-07-10	正常運作
9	教育	高雄縣教育網路中心	http://www.ks.edu.tw	2001:288:8401::163:16:1:21	2010-07-10	正常運作
10	教育	屏東縣教育網路中心	http://www.ptc.edu.tw	2001:288:8600:9::1001	2010-07-10	正常運作
11	教育	台南市教育網路中心	http://www.tn.edu.tw	2001:288:7200:1::2	2010-07-10	正常運作

- URL
  - http://v6directory.twnic.net.tw/
- 1,085 IPv6 enabled websites registered in database, and the IPv6 enabled websites still growth every month.

Conclusion & Future Work

- Conclusion
  - Facing to IPv4 address exhaustion, the information of IPv6 websites and products will assist everyone to transition and use IPv6.
- Future Work
  - We will plan to hold “Taiwan IPv6 Day” on June. It will be to motivate ISPs/ICPs to prepare their services for IPv6, and end users can test their IPv6 connectivity.
  - TWNIC will coordinate government/ISPs/ICPs to do strategy study about IPv6 transition and deployment, and will output IPv6 transition and deployment strategy in this year.

Q&A