



**IPv6 in Action project:
*Promote IPv6 to general public
and SMEs in Hong Kong***

By Internet Society Hong Kong

1





IPv6 in Action project | 啟動IPv6計劃

Sponsored by

Office of the Government Chief Information Officer
Hong Kong SAR Government

Supported by

Over 30 partners and sponsors

Project Objectives

1. To provide the **general public and Small and Medium Enterprises (SMEs)** with a better understanding of the IPv4 address space exhaustion and the pre-requisites and potential issues for using IPv6;
2. To raise the awareness of the general public and SMEs on the new applications and services for IPv6; and;
3. To provide guidelines for the general public and SMEs to select and apply IPv6 services offered in the market.

Users can help push IPv6 to happen faster!

IPv6 in Action Project

The technological terms in IPv6 were translated into easy to understand messages to ensure effective delivery to the general public and SMEs. The project utilized various channel of promotions and activities which includes:

- a multilingual thematic website with **nearly 50,000 pageviews** and **over 12,000 visits** as of 10 Dec 12;

IPv6 Thematic Website (www.ipv6now.hk/ 啟動IPv6.香港)

- The thematic website was linked to by websites of various **government bureaux and departments**, which includes OGCIO, OFCA and Education Bureau;

The screenshot shows the IPv6 Thematic Website interface. At the top, it displays "Your IP Address is 203.125.169.226" and social media icons for Facebook, Twitter, and Google+. The main header features the IPv6 logo and the slogan "IPv6 keeps the Internet growing". Navigation links include HOME, ABOUT US, WHAT IS IPv6?, HOW DO I ENABLE IPv6?, WHAT'S NEW, MULTIMEDIA LIBRARY, and RESOURCES. A sidebar lists "Sponsored By" (Office of the Government Chief Information Officer, The Government of the HKSAR) and "Quick Links" (IPv6 Directory, IPv6 Testing Tools, FAQ, I am Home User, I am SME, Consumer Guide, Flash Memory Game). A photo shows a large group of teenagers at a seminar in Cyberport, with a caption stating: "Over 300 teenagers registered in a seminar on the topic of 'IPv6 keeps the internet running' in Cyberport. As seats were limited so only 120 were able to take part to understand the latest information of IPv6 and tour the Cyberport's facilities."

IPv6 in Action Project

- 3 episodes of each around 4 minutes radio programs were produced and broadcasted through digital radio and online media;
- 20,000 promotional pamphlets with Siuhak's design were distributed to nearly 250 locations/ events around the city;

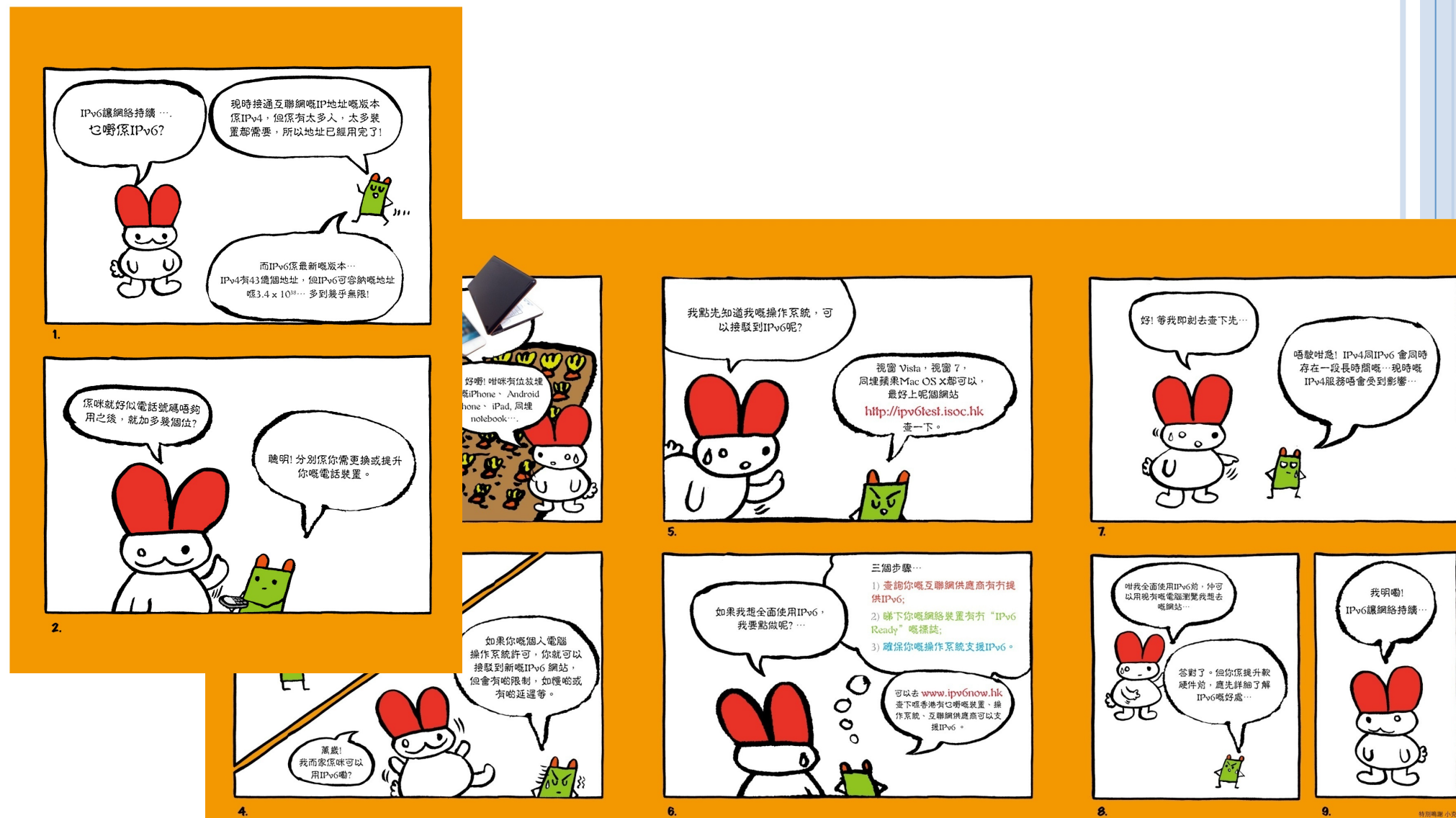
IPv6::



主辦機構：
Internet Society
Hong Kong 香港互聯網協會

贊助機構：
香港特別行政區政府
政府資訊科技總監辦公室
Office of the Government
Chief Information Officer
The Government of the HKSAR

合作伙伴機構：
APNIC AITL CAMK CERNET HK HKIX WIIA



IPv6 in Action Project

- 5 seminars targeted to youth, SMEs, teachers and the general public respectively and a conference on W6L were organised with totally around 800 participants;



- a booth at the International ICT Expo attracted an estimated no. of over 5,000 visitors;



IPv6 in Action Project

- o a multilingual consumer guide with detailed information that were deployed by at least 3 other Internet Society chapters around the world;


- **I. How the Internet works**
 - A. What is an IP address?
 - B. How are IP addresses assigned?
 - C. The "Supply Chain" of IP address
 - D. IPv4 Exhaustion
 - E. What are the benefits of IPv6?
 - F. IPv6 Security
- **II. Flowchart - What's your status and what do you need to do to transition to IPv6?**
- **III. Stage 1 - Checking: Check your network equipment and OS**
- **IV. Stage 2 - Configuration: Getting your hands dirty**
 - A. Configuration in your home network
 - B. Firewall set-up for SMEs
 - C. Operating system verification for home users and businesses
- **V. Stage 3 - IPv6 Connectivity Test: I am done. How can I ensure I am connecting via IPv6?**
- **VI. Miscellaneous information on IPv6 in Windows**
- **VII. Resource list**
 - A. Organisations
 - B. IPv6 Development in Hong Kong
 - C. IPv6 Development in Mainland China
 - D. IPv6 Information Portal
 - E. Glossary

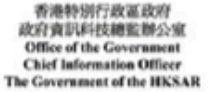


IPv6

Consumer Guide
All about IPv6

"IPv6 keeps the internet growing"

Host:  Internet Society
Hong Kong 香港互聯網協會

Sponsored By:  香港特別行政區政府
政府資訊科技總監辦公室
Office of the Government
Chief Information Officer
The Government of the HKSAR

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- 2,000 mouse pads, 10,000 stickers and 500 posters were produced for the promotion;
- Over 900 responses received in two IPv6 surveys to understand the public's awareness of IPv6;
- a video clip hosted by celebrity ambassador, Ryan Lau aired on Roadshow for 4 days with an approximately reach of 1.4 million passengers daily;



IPv6 in Action Project

- An animated video clip with cartoon characters was produced and distributed via different channels to allow easy understanding of IPv6;



IPv6 in Action Project





- An **online flash game** and an **online quiz** were created as parts of the thematic website and were promoted through various social media channels to match IPv6 key messages;
- **Mobile application** developed for iPhone and Android phones;



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- 9 IPv6 directories and the “Ask the expert” forum launched as a part of the thematic website;
- 1) **Hong Kong IPv6-enabled Website Directory**

[Disclaimer: The organisers of this website, along with all partners and sponsors, do not hold any responsibility for any incorrect information listed on the directory as it is a dynamic list compiled by end-users. Visitors may contact the web programmer here for any suggestions or comments on the information contained therein.]

Site	Category	Description	Address	Last Checked
啟動ipv6.香港	Non-Profit	IPv6Now.HK	2001:2e0:2001:2:218:213:249:21	2012-03-06 00:05:01
ipv6now.hk	Non-Profit	IPv6Now.HK	2001:2e0:2001:2:218:213:249:21	2012-03-06 00:04:18
www.wsyong.com	Personal	Sang Young Personal Web Site	2001:470:18:2b6::2	2012-02-27 12:00:14
www.enjoyipv6.com	Personal	Personal IPv6 testing web site	 2001:470:18:2b6::2	2012-02-27 10:15:10
ipv6.udomain.com.hk	Commercial	UDomain Web Hosting Company Limited	 2400:c300::d02	2012-02-27 08:15:05
ipv6.webhost.com.hk	Commercial	Web Host Limited	 2400:c300::d05	2012-02-27 08:15:05
ipv6.hk-pub.com	Commercial		 2401:7600:10ff:fff3::2	2012-02-27 08:15:01
www.hoimun-				2012-02-27

IPv6 in Action Project

2.) Directories for Home Users

- IPv6 Supported ISP
- IPv6 Supported Home Router
- IPv6 Supported Operating Systems

3.) Directories for SMEs

- IPv6 Supported Operating Systems
- IPv6 Supported ISP
- IPv6 Supported Data Center
- IPv6 Webhosting Provider
- IPv6 Supported Device List

IPv6 in Action Project

- total 38 media coverage generated with estimated circulation of **over 2 millions readership**

Coverage summary as of November 19, 2012

Row Labels	Count of Media Outlet
Blog	1
Broadcast	3
Dailies	8
Magazine	10
Online	16
Grand Total	38

Total Estimated Circulation: 2,385,162

Where are we now?

- As of Feb 2013, the following **7 ISPs** are currently providing native **IPv6 connection to corporate customers** in HK over Dedicated Internet Access or business broadband:
 1. *PCCW*
 2. *Wharf T&T*
 3. *NTT Com Asia Limited*
 4. *CITIC Telecom CPC*
 5. *Hutchison Global Communications*
 6. *PACNET*
 7. *Netfront Information Technology*
- **IPv6 for residential broadband service is still not available.**
- Mobile Operators: All are testing out IPv6
- Content / Data Center / Web Hosting Service Providers: They are starting to realize the importance of IPv6; At least 6 Data Centers and at least 2 Web Hosting companies support IPv6

Where are we now?

Government

- **Hong Kong Observatory** has rolled out IPv6 NTP service since March 2012.
- The next generation **GovWiFi** (covering 400 government premises) has been providing
- **IPv6 connection** since Dec 2012.
 1. Most of Government websites are now IPv6 accessible
 2. They even support IPv6 email transport

Universities: All have IPv6 transport enabled but still need to do a lot of work on servers, network infrastructure and other parts

IPv6 Certification – Hong Kong is 8th in the world



HURRICANE ELECTRIC
INTERNET SERVICES

IPv6 Sages by Region

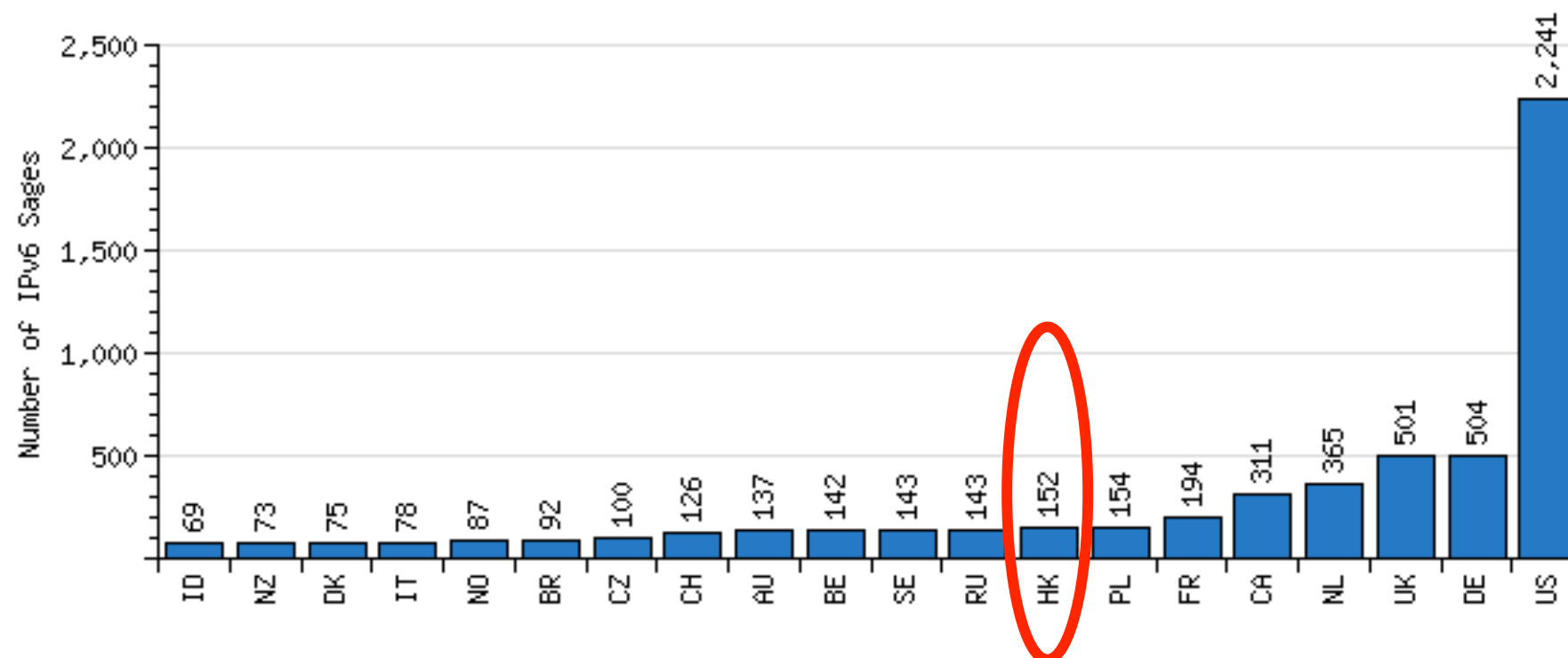
The Hurricane Electric IPv6 Certification service provides you a free means to test your IPv6 knowledge and skills. Every day new users sign up for the service. These are the stats showing where the users with the highest certification level are based.

IPv6 Sages are broken down by US state and country.

There are 6,698 IPv6 Sages in 113 countries

Sign up today at <http://ipv6.he.net/>































Top 20 IPv6 Sage Countries



IPv6 Certification in Asia



Hong Kong is the top one!

Asia

Country	IPv6 Sages	%	Country	IPv6 Sages	%
 Hong Kong	152	29.57%	 Lebanon	5	0.97%
 Indonesia	69	13.42%	 Nepal	5	0.97%
 China	44	8.56%	 Vietnam	4	0.78%
 Thailand	40	7.78%	 Armenia	4	0.78%
 India	36	7.00%	 Islamic Republic of Iran	3	0.58%
 Taiwan	28	5.45%	 United Arab Emirates	3	0.58%
 Japan	25	4.86%	 Kazakhstan	3	0.58%
 Malaysia	20	3.89%	 Qatar	2	0.39%
 Singapore	14	2.72%	 Pakistan	2	0.39%
 Philippines	11	2.14%	 Sri Lanka	2	0.39%
 Turkey	8	1.56%	 Georgia	2	0.39%
 Israel	8	1.56%	 Bhutan	1	0.19%
 Bangladesh	7	1.36%	 Bahrain	1	0.19%
 Cambodia	7	1.36%	 Azerbaijan	1	0.19%
 Saudi Arabia	6	1.17%	 Macao	1	0.19%

Total IPv6 Sages: 514

Topic: [Networking](#)


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Hong Kong, South Korea lag in IPv6 adoption

Summary: Both technologically-advanced nations are slower in migrating to the new Web protocol than countries such as Thailand, Malaysia and Sri Lanka, and this might impact their competitiveness.



By [Liao Yun Qing](#) | October 17, 2012 -- 10:15 GMT (18:15 SGT)

 Follow @YQLiauZDNetAsia

Comments 0 Votes 0  Like 15  Tweet 49  Share [more +](#)

Asia's emerging markets are leading mature markets such as Hong Kong and South Korea in IPv6 adoption as these countries have faster growing mobile broadband populations and a smaller pool of IPv4 resources. The mature markets' slow uptake could hamper competitiveness in the long run, according to the Asia-Pacific Network Information Centre (APNIC).

According to a recent study by APNIC, the estimated IPv6 users in Hong Kong and South Korea as a percentage of the overall Internet population are 0.02 percent and 0.01 percent, respectively.

Comparatively, the study showed Thailand, Malaysia, Sri Lanka and Indonesia had higher IPv6 penetration than the two developed markets. Thailand had 0.16 percent of IPv6 users, Malaysia and Sri Lanka both had 0.13 percent, while Indonesia had 0.10 percent, the study revealed.

The top 5 Asian markets in IPv6 adoption were Japan, which came in tops at 2.4 percent, followed by [China](#) at 0.67 percent. Australia had 0.42 percent, while Taiwan had 0.19 percent and Singapore 0.17 percent.

In a phone interview with ZDNet Asia Wednesday, Paul Wilson, the director general of APNIC, explained the number of Internet users is growing faster in emerging markets than mature ones such as Hong Kong and South Korea.

This growth, driven by [rising mobile broadband subscribers](#), means more new IP addresses are needed and increases the adoption of IPv6 address, Wilson said, adding this need to adopt IPv6 is not so pronounced in established markets.

- HK started IPv6 deployment later than the neighboring economies
- But we are catching up
- **We have been progressing faster than before ever since IPv6World.Asia Conference held in Nov 2009**
- More and more people are aware of the IPv4 address space exhaustion issue

Looking Forward

- The government should continue its support for the promotion of IPv6 deployment
- Roll-out of the IPv6 service by local ISPs should be faster
- IPv6 Forum Certified Courses in Hong Kong
- Still a lot of areas that Hong Kong should work on in the promotion of IPv6 and there is still **a long way to go!**

We need support !!



Thank you!

Ping Wong
Secretary-General
Internet Society Hong Kong
(www.isoc.hk)