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Chinese Taipei's Regulatory Update

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Catalog

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Regulatory and Policy Update

Chinese Taipei

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I. Status of Communications Market

1. Mobile Internet Subscriptions Watch[1]

In the second quarter of 2011, 70.8% of the 28.29 million (i.e. 122.1 numbers per 100 residents) mobile phone subscriptions have activated mobile data service functionality . During this period, 5.73 million mobile broadband subscribers (wireless broadband subscriptions by ITU's definition[2]**) have used mobile data service, rising 15.4% (0.77 million) compared to the previous quarter, showing significant growth. The number of mobile broadband Internet users continues to increase.**

Of the 28.29 million mobile phone subscriptions, 20.03 million are capable of accessing mobile data (mobile Internet) service[3], of which 17.17 million 3G subscriptions have activated mobile Internet capability. The total subscriptions using mobile Internet service in Chinese Taipei reached 20.1 million, including 70,000 Wireless Broadband Access (WBA) (WiMAX) subscriptions. Overall, 17.23 million mobile broadband subscriptions[4] accounted for 85.7% of the total. This indicates that mobile broadband has generally become ubiquitous in people's lives and that mobile Internet has become a significant trend. Nevertheless, it should be noted that 3G is still the mainstream among mobile broadband subscriptions, with 99.65% of

1 FIND, Institute for Information Industry

2 According to ITU's definition of world telecommunications/ICT indicators in March, 2010, wireless broadband subscriptions include PWLAN and WiMAX subscriptions, 3G numbers actually using data transmissions, and 3G data card, excluding subscriptions occasionally surfing the net through hotspots.

3 Number open for mobile data service means the number's data service is available on the telecom carrier side; it does not mean users actually utilize mobile data service. Numbers open for mobile data service include subscriptions of WAP, GPRS, 3G and PHS.

4 Mobile broadband subscriptions include 3G numbers and WiMAX subscriptions open for data service.

the total, with WBA less than 1%.

2. Fixed Line Subscriptions Watch[5]

The Fiber optic broadband market in Chinese Taipei is growing rapidly. FTTx (including FTTH, FTTB, and so on) subscriptions rose from 2 million to 2.11 million from January to June 2011, whereas ADSL subscriptions dropped from 2.34 million to 2.22 million. Fiber optic is expected to replace ADSL to become the primary means of fixed line broadband access technology and drive the development of high speed broadband Internet market.

As of the end of June 2011, the total subscriptions of wire-line broadband network[6] reached 5.38 million, up by 70 thousand compared with 2010. In comparison, there were 2.23 million xDSL subscriptions, down by 130 thousand, and accounting for 41% of total wire-line broadband subscriptions. Cable Modem and FTTx[7] subscriptions still increased steadily. Cable Modem subscriptions rose to 980 thousand, rising by 50 thousand compared with 2010, taking 18% of total wire-line broadband subscriptions. There were FTTx 2.11 million subscriptions, up by 150 thousand compared with 2010, with 39% of the total. In addition, FTTx has gradually been absorbing xDSL subscriptions and has becomes the mainstream of fixed line broadband technology.

Service of nearly 80% of fixed line broadband subscriptions is provided by Chunghwa Telecom (CHT). To accelerate the higher speed broadband development in Chinese Taipei's fixed line broadband market; the National Communications Commission (NCC) passed the latest ADSL and Light-Era service (FTTx network with over 20Mbps transmission speed) tariff of CHT in June to attract consumers with higher transmission speeds and reduced fees. The

5 Institute for Information Industry FIND

6 Number of wire-line broadband subscriptions is subscriptions who utilize the Internet through xDSL, Cable Modem, leased line or fiber optic Internet.

7 To adopt general definition of international research, fiber optic subscriptions in this survey include FTTH and FTTB subscriptions and exclude those of FTTN and FTTC.

minimum speed of ADSL rose from 512Kbps to 1Mbps, and high-speed Internet tariff of Light-Era using FTTx were reduced significantly, cut by more than 30%, in order to accelerate popularity of high speed broadband Internet. Chunghwa Telecom estimates that the number of Light-Era 50Mbps subscriptions will grow to 300 thousand by the end of 2011.

II. Communications Regulatory Policy

1. White Paper on Communications Rights of children and Juveniles

NCC Chinese Taipei published the White Paper on Communications Rights of children and Juveniles in August 2011. Its contents cover the protection of children and juvenile's rights on audiovisual media, mobile phone, and the Internet.

The White Paper on Communications Rights of children and Juveniles is the first concrete policy and plan with the aim of the protection of children and youth communications and multimedia rights since the establishment of the NCC in 2006. Its objective is to structure a high quality communications environment of "Educational and Entertaining", "Health and Safe", and "Equal and Accessible" for children and juveniles. Referring to the spirit of "Convention on the Rights of the Child", it integrates collaboration from parents, teachers, schools, related government departments, and the communications industry through four policy schemes: (1) Protection and Regulation, (2) Supply and Encouragement, (3) Development and **Collaboration**, and (4) Education and Participation.

It is expected to accelerate the advancement of numerous measures, including "Excellent Children's Programs and Qualified Seals for the websites", "Dedicated Classifications for Programs", "Raising the Percentage of Programs Broadcast for Children", "Notifications for Programs Contents", "Enhancing Protection for Children and Establish Defense Mechanism", "Place importance to Mass Media Education and Respect Children's Viewpoints and Expressions", and "Legal Rights on Children's Communications", with goals in short-term (1-2 years), medium-term (2-3 years), and long-term (3-5 years).

2. Establishment of Fair Competition and Promotion of Reasonable Telecom Service Tariffs

Since its establishment, the NCC has consistently suggested that the telecom industry gradually lower tariffs according to the price cap method [8] stipulated by the Telecommunications Act. Rentals for broadband Internet Access circuits in various speeds have been generally lowered by approximately 29% since 2007, and about three million subscriptions have benefited by a saving of approximately US$372 million.

The NCC passed the broadband Internet service tariff in June 2011. The greatest reductions were with the 50Mbps/5Mbps service, falling by 41.2%, from US$57.63 to US$33.86. In addition, 20M/4M and 100M/10M were lowered by 32.4% and 36.4%, respectively. With price cuts or speeds increasing at the same price, the minimum speeds were also increased from 512Kbps to 1 Mbps, which means the speeds in Chinese Taipei have advanced from the Kilo era (minimum speeds is 512Kbps) to the Mega era (minimum speeds is 1Mbps), and are proceeding rapidly to the Giga era (minimum speeds is 1Gbps) with its aim to achieve the goals of national broadband development.

Moreover, the NCC passed Chunghwa Telecom's newly added Light-Era and HiNet telecom service tariff for "Low Income Households" and "Physically and Mentally Disabled Citizens" in August 2011. The tariff offers 50% discount for low income households, and 5% discount for physically and mentally disabled citizens. It provides 4Mbps/768Kbps, 12Mbps/3Mbps, and 50Mbps/5Mbps at 50% discount for low income households, and 5% discount for physically and mentally disabled citizens. More than 10,000 subscriptions who have already used the related programs will benefit from options of higher broadband speeds. To shorten the digital divide and allow the disadvantaged minority favorable tariffs

[8] Price cap method means the percentage of adjustment of controlled tariffs of the regulated telecommunications enterprises shall not exceed the annual increase rate of consumers' price index of Chinese Taipei area

and convenience, the NCC expects telecom industry to assume its social responsibility and offer more favorable service tariffs and higher quality.

In addition to promote more reasonable service tariff, the NCC has requested telecom operators to actively invest and build next generation broadband internet infrastructure. According to data of the telecom industry, over US$6.78 billion is estimated to be invested in fixed line telecom networks (Chunghwa Telecom) to build broadband Internet infrastructure in ten years. Moreover, the mobile telecom network operators (Chunghwa Telecom and Taiwan Mobile) is estimated to invest more than US$908.4 million to build mobile broadband infrastructure over the next four years.

To structure an environment of fair competition, the NCC also ratifies ADSL circuit, data circuit, and peering wholesale prices of fixed line telecom market dominators to direct other telecom businesses to lower prices and offer consumers reasonable service tariffs.

3. Digital Convergence Policy Initiative (2010-2015)

In July 2010, Chinese Taipei announced the "Digital Convergence Policy Initiative (2010-2015)." With the completion of the Initiative, by 2015 an estimated 80% of all households in Chinese Taipei will have 100Mbps fixed-line broadband access, with 7.2 million fiber optic subscriptions and 21 million Wireless broadband subscriptions. By that time the penetration of digital cable TV is expected to reach 75% and emerging video services is expected to reach 50%.

The Initiative outlines six major directions designed to establish an environment for the development of the digital convergence industry in Chinese Taipei: preparation of a high-speed broadband network, promotion of telecommunications convergence services, acceleration of digital TV switchover, developing innovative video/new media services, upgrading of communications industry, and harmonization of the regulations for convergence.

Even though the penetration rate of broadband network is high in Chinese Taipei, the increasing of the wireless broadband and digital convergence services make the existing bandwidth insufficient. Therefore, it is necessary for Chinese Taipei to improve high-speed broadband network and integrate fixed network and wireless network for the further enhancement of the broadband network infrastructure.

By June 2011, the related achievements are as follows:

(1) 7.36% of households are provided with a broadband network of 100Mbps.
(2) 3. 8 million household's subscriptions to optical fiber network.
(3) Wireless broadband subscriptions reach 17 million.

4. Promotion of Digital Terrestrial television (DTV) Transition

The NCC passed the Digital Terrestrial television (DTV) Transition Plan in June 2011 to respond to the trend of digital convergence and the closure of analog switch-off at the end of June 2012. NCC is actively implementing measures including the establishment of digital gap-fillers, the installment of digital set-top boxes, and related guidance tasks. The NCC has established a technology service center to answer people's questions regarding the digital TV switchover.

With regards to the buildup of **digital gap-fillers**, the NCC is expected to set up 34 stations in 2011 and 9 stations in 2012; analog channels will be gradually closed after completion of these stations. Meanwhile, to protect rights of low income households and lighten the burden of the disadvantaged people, the government plans to subsidize 120,000 low income households nationwide considering fiscal factors. Every household can install one unit of HD digital set-top box to ensure broadcast rights of disadvantaged people. The NCC plans to install 84,000 units of set-top box in 2011, and a further 35,000 units by the end of April 2012.

Moreover, to increase better understanding of the digital switchover and relevant plans, such as subsidy of set-top box, installment, and complaints, the NCC meanwhile plans to establish a

technology service center to answer people's questions about related policies and reduce concerns.

Chinese Taipei has been broadcasting digital TV since April 2003. Currently analog and digital broadcasting TV signals are both provided. Closure of analog TV channels can not only avoid wasting spectrum resources, lower operational burdens of TV stations and local governments, but also reduce carbon emissions. Reclaimed analog broadcasting channels can be reused to offer more diversified services.

III. E-Government

Chinese Taipei passed "E-Government Plan for Next Stage (2012-2016)" in June 2011; the government actively strives to provide services the public requires.

The next stage of E-Government, with the vision of "Services without Borders, Good Life of People", integrates the service resources of central and local governments. From the people's perspectives, the government actively provides required services through the self-determined channels (including diversified channels such as websites, smart phones, and instant message) of the general public.

The core theme of "DNA" has become a focus of planning: D (Device) develops services on handheld device, N (Network) responds to applications of wireless broadband network and develops convenient services, and A (Application) utilizes web 2.0 social networks to develop innovative services and satisfy expectations. It manifests into three public values: Civil Equality, Operation Efficiency, and Policy Equity. The focus is to offer E-Government's active and segmented service of which there are three core aspects: (1) enhancing operation efficiency internally, (2) improving service quality externally, and (3) looking after both social concerns and fair participation.

IV. Government Information Sharing and Analysis Center (G-ISAC)

Chinese Taipei fulfils the goals of Government Information Sharing and Analysis Center (G-ISAC) to integrate the power of the Government and private sectors, and establishes the cyber security information sharing and analyzing capabilities of the Government agencies and key information security organizations of Chinese Taipei.

Chinese Taipei Research, Development and Evaluation Commission (RDEC), has started the operation of G-ISAC from November 2009. RDEC has invited the Government established ISACs and private industry SOCs such as Government Service Network (GSN), Ministry of Education (A-ISAC), National Communications Commission (NCC), Chunghwa Telecom (SOC Division) to join G-ISAC, and thus far has held six G-ISAC Member conferences to enhance and improve the G-ISAC operation.

The members of G-ISAC have covered over 3,000 government sectors, over 3,000 schools and almost 95% IASPs which use about 90% network IPs in Chinese Taipei. Through the established trustworthiness among members, the G-ISAC uses Incident Object Description Exchange Format (IODEF) as the standard exchanges data format, constructs over 20 information security incident type formats and system automation for members to better exchange, analyze, and handle the information. As of July 31, 2011, G-ISAC members has exchanged the total of 16,281 information incidents, including 9,632 network attack incidents, 2,668 Botnet incidents, and 170 Command and Control(C&C) incidents. REDC wishes to have the opportunities in the future using G-ISAC platform to share cyber security information with other international cyber security organizations.

V. IPv6 Development

In order to deal with the depletion of IPv4 addresses and provide seamless transition environment for dual stack use of IPv4 and IPv6, Chinese Taipei has a transition plan to promote IPv6 that will not affect current network service, gradually transiting from IPv4 to IPv6. Up till now, IPv4 and IPv6 are forging ahead to dual stack capability in order to reach the policy objectives and coexistence of IPv4 and IPv6.

On 8 June 2011, Chinese Taipei held “the Chinese Taipei Ipv6 Day” to show support for the World IPv6 Day, which was organized by ISOC. In this activity, the global Internet Service Providers (ISPs) such as Google, Facebook, and Yahoo! simultaneously took part in a global IPv6 commercial testing. It was a huge success with good results, strongly supported by many organizations across many industries.

The major achievements for the first half of 2011 are as follows:

1. Participating in international technical activities and sharing IPv6 technical knowledge with other economies’ experts;
2. Collect and survey up to date worldwide dual stack technology, completing the IPv6 transition technical report to share with ISPs;
3. Completing the IPv6 access trial over FTTx network combining a fixed line provider’s last mile access service and an ISP’s Internet service. It is also finished the draft outline of a commercial FTTx network and laboratory environment testing report；
4. Assist the VoIPv6 service trial in a real enterprise network and finish the configuration of voice communication with Chinese Taipei Academic Network（TANet）;
5. Completing dual stack transition of the MOTC’s homepage；
6. Help domestic Information and Communication Technology (ICT) product providers pass international IPv6 Ready logo certification. By the end of the first half of 2011, 74 products have passed phase I certification and 96 have passed phase II certification, ranking Chinese Taipei third in the world.

VI. Industry Perceptive

1. Next Generation Fiber Network Construction

Under the policy of “Digital Convergence Policy Initiative”, an estimated 80% of all households in Chinese Taipei will have 100Mbps fixed-line broadband access by 2015. It is a costly project to reach the goal of fiber coverage, so government and telecom operators will work together.

In line with government targets of 7.2 million fiber users by 2015, the dominate telecom operator in Chinese Taipei, Chunghwa Telecom(CHT)

plans to provide higher access speed to the users accompanied with the development of high-quality digital content to accelerate the realization of digital life, which will also introduce home users to enjoy more varieties of value added services.

Chunghwa Telecom promotes the 50Mbps tariff as the main access services for home users in 2011, which provides the bandwidth for a family to watch 2~3 HDTV channels and use the high-quality-high-speed broadband Internet services. To respond to the trend of digital convergence and the development of HDTV and 3D TV, CHT planned to promote 100Mbps high-speed broadband services as the main broadband service in year 2012.

2. Cloud Computing

The dominate telecom operator in Chinese Taipei, Chunghwa Telecom's (CHT) cloud services platform has been constructed in line with international specifications of the "Compute as a Service (CaaS)." By utilizing the virtualization technology, CHT provides users the virtual machine services of IT systems and database.

There are ten options including basic, mini-computing, high-computing-based, service-oriented database tariffs prepared for the users. In the cloud storage service, CHT provide "Elastic Block Storage (EBS)" where the users can rent large storage space in flexibility. CHT will provide online storage services "Storage on Demand" with which the users can use storage space through Application Programming Interface (API).

The "Software as a Service (SaaS)" has introduced the customer relationship management (CRM), Cloudbox (like Dropbox) and other services to the customers. Further, the "Platform as a Service (PaaS)" is also under construction and it is expected to provide full-featured and future-oriented service in local service library. The implementation of the overall information security including system management, development, maintenance and operation will comply with the international standards of information security management system ISO27001. In the mean time, CHT also provides cloud security services to customers.

To provide comprehensive cloud computing services, Chunghwa Telecom has launched “four cloud centers and one cloud platform” project including "cloud computing research and development center", "cloud operations center / data center", "cloud product testing and certification center", "cloud services Exhibition Center", and "cloud service creation platform." Developers will be able to use these services to develop, test, deploy innovative applications environment, which will help the development of domestic cloud applications to create prosperity in this industry.

3. Green ICT

To respond to the trend of development of technologies for intelligent living constructions, the Architecture and Building Research Institute (ABRI) under Chinese Taipei government’s Ministry of the Interior actively promotes certification of intelligent building and green building.

Through the promotion of ecological, energy saving, waste reducing, and healthy green buildings, ABRI leverages Chinese Taipei’s strengths in information and communication technologies to meet citizens’ expectation for a comfortable, healthy indoor living environment. These efforts bring cities, communities, and households benefits of intelligent-enabled life and a safe, healthy, convenient, and sustainable living environment. To realize the government’s vision, Chunghwa Telecom offers to clients in Construction and Land Development Businesses a holistic ICT services. Services and solutions include communication automation (CA), building automation (BA), security automation (SA), and home automation (HA), which utilize telecommunication technologies to redefine the business environment and create a nice balance between intelligent living and energy-savings.