



2017 NCC PERFORMANCE REPORT

NATIONAL
COMMUNICATIONS
COMMISSION



2017 NATIONAL
COMMUNICATIONS
COMMISSION

PERFORMANCE
REPORT

NCC

TABLE OF CONTENT

List of Figures	3
List of Tables	4
Chairperson's Foreword	5
Highlights	8
Who We Are and What We Do	11
Overview of General Performance	15
Broadband Infrastructure	15
Development of the Broadcasting Industry	17
Digital Inclusion	20
Consumer Rights	22
Legal Framework for Digital Convergence	23
International Participation	25
Outlook of Vision	28
Improve the Broadband Environment and Seize Opportunities of the Digital World	28
Improve the Environment of Communications and Promote the Development of New Media Content	29
Protect the Rights of People in Remote Areas and Establish a Digitally Inclusive Society	30
Reform the Legal Framework for Digital Convergence and Promote the Development of the Digital Economy	31

LIST OF FIGURES

Figure 1	4G Subscribers and the Penetration Rate	8
Figure 2	Mobile Broadband Speeds	9
Figure 3	Digitization of Cable TV	9
Figure 4	IPv6	9
Figure 5	Policy of Mobile Communications Environment for the Disabled	10
Figure 6	NCC Organization Chart	13
Figure 7	4G Subscribers and the Penetration Rate	15
Figure 8	Mobile Broadband Consumer-End Speed Results	15
Figure 9	Digital Cable TV Coverage	16
Figure 10	NCC Chairperson Ting-I Chan and Colleagues Inspect the Digitization of Cable TV at Dafeng	16
Figure 11	NCC Chairperson Ting-I Chan Visits Kinmen to Observe the Status of Cable TV Digitization	16
Figure 12	IPv6	17
Figure 13	Growth of Domestically Produced Programs	18
Figure 14	NCC Chairperson Ting-I Chan Participates at the Television Content Broadcasting and Operation Development Exchange	19
Figure 15	NCC Holds the New Media Trends in Digital Economy Forum in Taipei	19
Figure 16	Broadband in Remote Townships, Villages and Neighborhoods	20
Figure 17	Broadband in Remote Townships/Accumulated Fiber-Optical Cable	21
Figure 18	NCC Chairperson Ting-I Chan is Interviewed during a Web Accessibility Promotion Video	21
Figure 19	NCC Coordinates with 4G Mobile Broadband Operators to Complete the Off-site Backup for the Cell Broadcast Center	22
Figure 20	Promotion of the Public Warning System by NCC at the Dongshi Township Office, Chiayi County	22
Figure 21	NCC Members Display Achievements in Promoting Information Security Protection	22
Figure 22	NCC Chairperson Outlines Achievements in Promoting Information Security Protection	23
Figure 23	Draft Telecommunications Management Act – Control Paradigm Shift	23

LIST OF FIGURES

Figure 24	Efficiency of the Draft of the Digital Communications Act	24
Figure 25	NCC Chairperson Ting-I Chan Delivers a Speech at the 48th Annual Meeting, at Brussels, Belgium	25
Figure 26	NCC Chairperson Ting-I Chan Attends 2017 International Regulators' Forum of IIC and the 48th Annual Meeting at Belgium	25
Figure 27	NCC Undertakes Bilateral Exchange with the Communications Regulatory Commission in Ulaanbaatar, Mongolia	26
Figure 28	NCC Chairperson Ting-I Chan Visits Facebook Headquarters in Silicon Valley US	26
Figure 29	Under the Guidance of NCC, the Telecommunications Technology Center Holds the Beyond the Digital Forum	27

LIST OF TABLES

Table 1	Commissioners	12
---------	---------------	----



Chairperson's Foreword

Globally, whether in technology, applications, regulations or policy, we see nations one after the other committing to the digital transformation and intelligent connectivity, paving the way for an active network community and prosperous digital economy. Similarly, adhering to the principles of openness, connectivity, and innovation, the National Communications Commission (NCC) endeavors to improve the digital infrastructure of Taiwan, enhance internet governance, strengthen the communications environment, promote digital inclusion, bridge the digital divide, and facilitate convergence in the legal framework.

One of the commission's statutory duties as stipulated in Article 13 of the Fundamental Communications Act is to publish annual performance reports along with specific recommendations for improvements concerning our core duties: the sound development of communications; protection of citizens' rights and consumer interests; promotion of a culturally diverse environment; protection of minority' rights and interests; and the provision of universal services.

In 2017, the NCC published the first version of *the Communications Market Report*, which replaced the section of communications statistics in the former *NCC Performance Report*. The report offers a comprehensive in-depth insight and analysis of the communications market based on statistics from past performance and consumer behavior surveys, with analysis and views from various perspectives.

This report begins with the **Highlights** section, summarizing progress made in key areas during 2017. In the **Who We Are and What We Do** section of the report, the role of the NCC is explained in terms of our objectives, functions, and authority as established by legislation. To provide greater transparency and accountability, the governance structure of the commission has also been included, highlighting our effective and impartial policy-making process.

In **Section 1, Overview of General Performance**, our performance over the past year has been outlined. Turning to **Broadband Infrastructure**, the NCC has been actively promoting mobile broadband infrastructure, issuing licenses, improving 4G broadband services, and facilitating the comprehensive digitization of cable TV, all of which ushers in the spirit of internet governance, and creates an environment conducive to the development of digital economy and the communications industry.

As for the **Development of the Broadcasting Industry**, the NCC has issued broadcasting licenses, assertively encouraged locally-made programs, promoted the development of new media services, such as Over The Top (OTT), and has facilitated the self-regulation mechanism of broadcasting enterprises in a bid to improve the balanced development of the industry and protection of audiovisual rights.

Turning next to **Digital Inclusion**, through the utilization of the with the Universal Service Fund, NCC has boosted fixed broadband at 12Mbps, reaching a 96.7% penetration rate, strengthened broadband infrastructure in remote areas, and



enhanced the environment for broadband services through the Forward-looking Infrastructure Development Program. The commission will continue to promote cable TV digitization in remote areas, and to enhance the accessibility of websites for the disabled.

With regards to **Consumer Rights**, the NCC actively pays attention to and safeguards the rights and interests of the public and consumers. The commission has assertively promoted the Public Warning System (PWS), the information security testing of devices for the Internet of Things (IoT), as well as the establishment of an information and communications intelligence management platform so as to strengthen Taiwan's information security protection capacity. The NCC is steadfastly committed to providing people with a communications environment that is reliable and an accurate source of information.

Turning to the **Legal Framework for Digital Convergence**, in order to ensure the legal framework is up-to-date, the NCC continues to actively promote the legislative process of two draft bills — the Telecommunications Management Act and Digital Communications Act. The former puts forward a hierarchical regulatory framework for convergence to stimulate industrial upgrading and transformation so as to lay a foundation for the digital economy, while the latter introduces internet governance, a mechanism under which the internet community's multiple stakeholders can make decisions about the development and use of the internet, responding to current needs.

As for **International Participation**, the NCC has actively participated in key international conferences and bilateral exchanges so as to share Taiwan's regulatory experience while learning from other countries; the commission also strives to publish our experiences gained from such participation and strengthen exchanges between the Taiwanese government and industry so that a basis for cross-boundary governance can be established. In the meantime, the NCC also hosts international conferences to learn from international experiences, as well as enhance its international image.

Section 2, Outlook and Vision describes how the NCC, faced with challenges brought about by emerging technologies and services, has solicited resources and opinions from various parties and introduced internet governance to create a sound communications environment with the vision of constructing and maintaining a high-quality universal communications environment with fair competition, sound development, and diversification, so that people can enjoy diverse high quality communication services.

The section entitled, **Improve the Environment of Communications and Promote the Development of New Media Content** outlines our core mission to provide a safe and reliable broadband infrastructure and enable society to actively seize opportunities presented by the digital transformation. In that light, NCC has been actively planning and preparing for 5G spectrum. Meanwhile, it also endeavors to stay abreast of global trends of communications and ushers in internet governance with stakeholders so as to create an environment conducive to digital innovation.



Meanwhile, the section entitled, **Improve the Environment of Communications and Promote the Development of New Media Content** describes our work to enhance the strength of the audiovisual industry and deliver higher-quality content to consumers, by strengthening inter-agency and cross-industry cooperation and exchange mechanisms, encouraging broadcasters to produce high-quality programs, and assisting the industry to transform while maintaining balanced development and the protection of audiovisual rights; the commission has also played a key role in urging broadcast enterprises to adopt self-discipline mechanisms to regulate themselves and create a sound industrial environment.

The **Protect the Rights of People in Remote Areas and the Underprivileged; Establish a Digitally Inclusive Society** section describes our efforts to bridge the digital divide between urban and remote areas by enhancing broadband internet access and service coverage through the Forward-looking Infrastructure Development Program alongside the existing telecommunications and cable TV Universal Service Fund. It also outlines our efforts to improve the access rights of the disabled.

Finally, **Reform the Legal Framework for Digital Convergence and Promote the Development of the Digital Economy** outlines the two draft bills proposed by NCC at the end of 2016: the Telecommunications Management Act and the Digital Communications Act. NCC expects them to be passed in the near future so that the vision for a broadband society and prompt digital transformation can be realized. Looking forward, the NCC shall continue to stay abreast of international trends, propose forward-looking regulatory policies, and plan and develop legal systems for convergence in the communications industry, creating an environment conducive to the sustainable development of the digital economy and innovation.

The advance of digital technology is undoubtedly creating a paradigm shift. In response to the various market conditions in the post-convergence era, the NCC is committed to establishing a digital environment that is effective, one which inspires ideas and brings impetus to startups, to give rise to and create prosperity and offer opportunities for all in the digital economy. A new page is turning for Taiwan, one that requires closer interaction between related agencies, industries, and stakeholders and a forward-looking approach to digital governance.



Highlights

Broadband Infrastructure

Since a quality broadband network is the key to the development of a diverse range of communications services, the NCC aims to continuously strengthen the digital infrastructure and communication resources in Taiwan, and has adopted a model of internet governance to facilitate the transition of the digital transformation.

- Issuing Mobile Broadband Licenses
- Construction of a Mobile Broadband Network

Development of the Broadcasting Industry

With the objective of strengthening the communications environment in Taiwan, the NCC regularly issues broadcasting licenses, encourages the diversified development and self-regulation of the television broadcasting industry, boosts the production of locally-produced programs, and facilitates the development of new media, such as OTT.

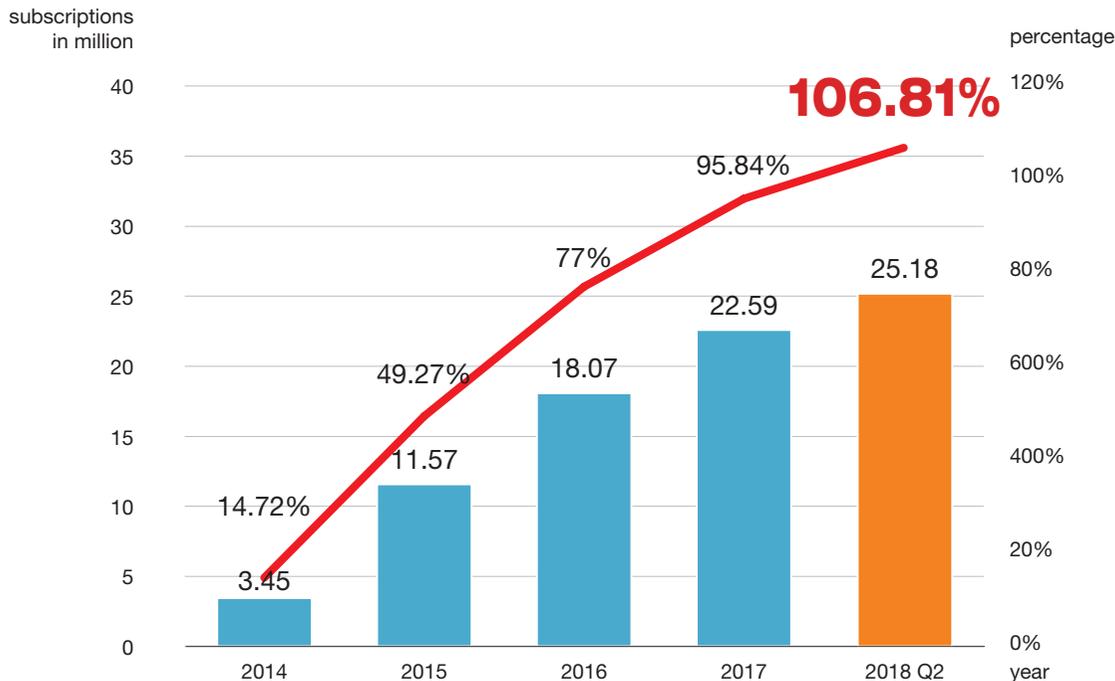


Figure 1 4G Subscribers and the Penetration Rate

Source: NCC

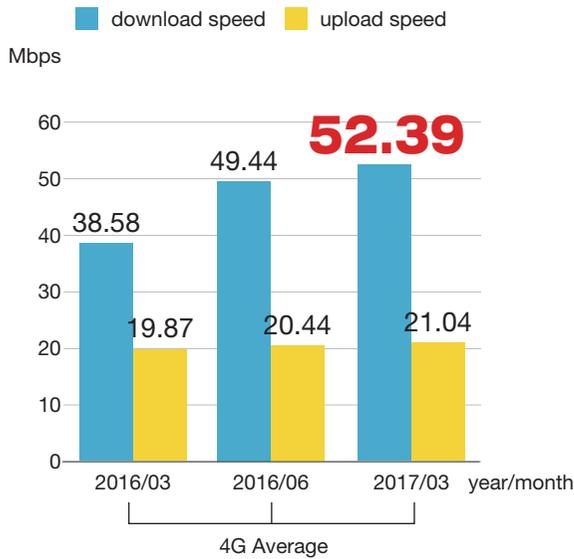


Figure 2 Mobile Broadband Speeds

Source: NCC

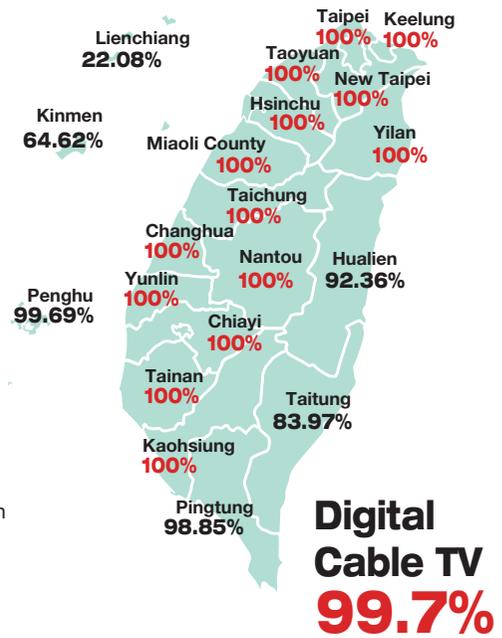


Figure 3 Digitization of Cable TV

Source: NCC

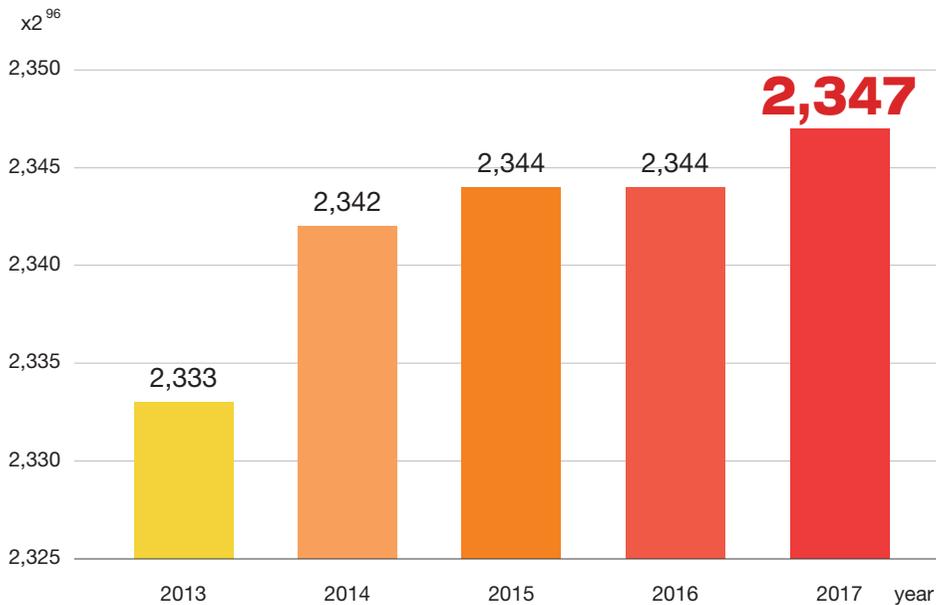


Figure 4 IPv6

Source: NCC

Note: From 2016, the NCC IPv6 Addresses Refer to the Number of Addresses Issued by TWNIC.

Digital Inclusion

In order to achieve digital inclusion, the NCC continues to promote various universal measures to strengthen the digital infrastructure in remote areas, while promoting the web accessibility conformance level and enhancing the access rights of the disabled.

Consumer Rights

The NCC continuously pays attention to and actively protects the rights of the public and consumers by negotiating with and regulating operators' tariffs, establishing information and communications security measures to strengthen Taiwan's information security protection, and continually promoting the Public Warning System to strengthen disaster preparedness.

Legal Framework for Digital Convergence

In the era of digital transformation, existing regulations are in need of regular review to ensure

they keep up with the times to meet the needs of industrial innovation and convergence services brought about by technological advances. In that light, NCC consistently pays particularly close attention to the trend of internet governance in advanced nations, and in response has already proposed the drafts of Telecommunications Management Act and Digital Communications Act; the commission has also endeavored to facilitate the legislative process to improve Taiwan's legal framework for digital convergence.

International Participation

The NCC has actively participated in important international conferences, not only to stay abreast of trends of communications policies and regulations worldwide and the development of the industry, but also to offer our insights and experiences so as to enhance Taiwan's participation in the international community.



Figure 5 Policy of Mobile Communications Environment for the Disabled

Source: NCC



Who We Are and What We Do

Functions and Responsibilities

Legal Duties

Prior to the establishment of the NCC, responsibility for overseeing telecommunications and broadcasting was separated between the Government Information Office and Directorate General of Telecommunications. However, due to the telecommunications and broadcasting sectors continual convergence, the Executive Yuan determined that an independent regulatory agency would be a more appropriate way to govern the communications sector with a broader and more accurate strategic insight, as well as a more open and efficient administration.

Proceeding the promulgation of the Fundamental Communications Act (Jan. 2004) and the National Communications Commission Organization Act (Nov. 2005), the National Communications Commission was officially established on Feb. 22, 2006 which marked a major turning point in the management of communications in Taiwan.

According to Article 1 of the National Communications Commission Organization Act, the purpose of the NCC is to ensure people's freedom of speech, end the state control of the media in order to protect its neutrality, enhance broadcasting standards, ensure fair and effective competition, protect the interests of consumers, respect the rights of minorities and disadvantaged, promote cultural diversity, and enhance national competitiveness.

Regulatory Functions and Principles

According to Article 3 of the same act, the NCC is charged with the purview of the following duties:

- Formulate communications supervisory policy, and formulate, draft, amend, abolish and implement communications laws and regulations;
- Manage the supervision of operations of communications enterprises and approve and issue licenses;
- Review and inspect communications systems and equipment;
- Formulate technical standards of communications engineering;
- Regulate the rating system on the content of communications transmission and other legally designated matters;
- Manage communications resources;
- Maintain the order of competitive practices in communications;
- Standardize and manage communications transmission security technology;
- Preside over major disputes between communications operators and consumer protection matters;
- Spearhead international affairs and international exchange and cooperation;
- Manage communications enterprise-related funds;
- Monitor, investigate, and establish rulings on communications operations;
- Penalize and discipline those that violate communications-related laws and regulations;
- Oversee other communications-related matters.



Governance Structure

Commission Meeting

The Commission Meeting is the highest policy-making body of the NCC, in which the formation, affirmation, and publication of the minutes of the Commission Meeting are conducted according to the NCC Organization Act and Meeting Rules.

According to Article 9 of the NCC Organization Act, the following items shall be authorized by the commission at the Commission Meeting before proceeding:

- Formulation and review of regulatory policy and systems;
- Review and evaluation of critical communications plans and proposals;
- Review and distribution of communications resources;
- Review of formulation, drafting, amendment, and abolition of communications-related laws and regulations;
- Review of public announcements of the communications industry, concession cases and ruling cases involving the acquisition, modification, or cessation of communications enterprise management rights;
- Review of the organizational chart, meeting rules, and administrative procedures;
- Review of the detailed chart of responsibility among internal units;
- Review and approval of the budget and final accounts;
- Other pertinent matters to be determined and ruled by the commissioners as required by law;

- Declaration of the recruitment and dismissal of unit heads other than that of the Human Resources Office, Accounting Office and Civil Service Ethics Office shall be conducted by the chairperson;

Commission Meetings are held on a weekly basis and additional meetings may be held when deemed necessary. The Commission Meeting is chaired by the NCC chairperson; should the chairperson is unable to attend the meeting, the vice chairperson acts on the chairperson’s behalf.

All final resolutions shall be voted on, and shall be valid at the consent of over half of the total seats on the Commission Meeting. Commissioners may present concurring opinions or dissenting opinions on particular resolutions, which are announced alongside the minutes of the meeting.

Table 1 Commissioners

Chairperson	Vice Chairperson	Commissioner
Chan, Ting-I (2016/08/01~)	Po-Tsong Wong (2016/08/01~)	Chen-Ling Hung (2016/08/01~)
		Yea-Li Sun (2018/08/01~)
		Wen-Chung Guo (2016/08/01~)
		Yaw-Shyang Chen (2016/08/01~)
		Wei-Chung Teng (2018/08/01~)
		Jason C.S. Ho (2016/08/01 - 2018/07/31)
		Yi-Ning Chen (2014/08/01 - 2018/07/31)



Departments and Offices

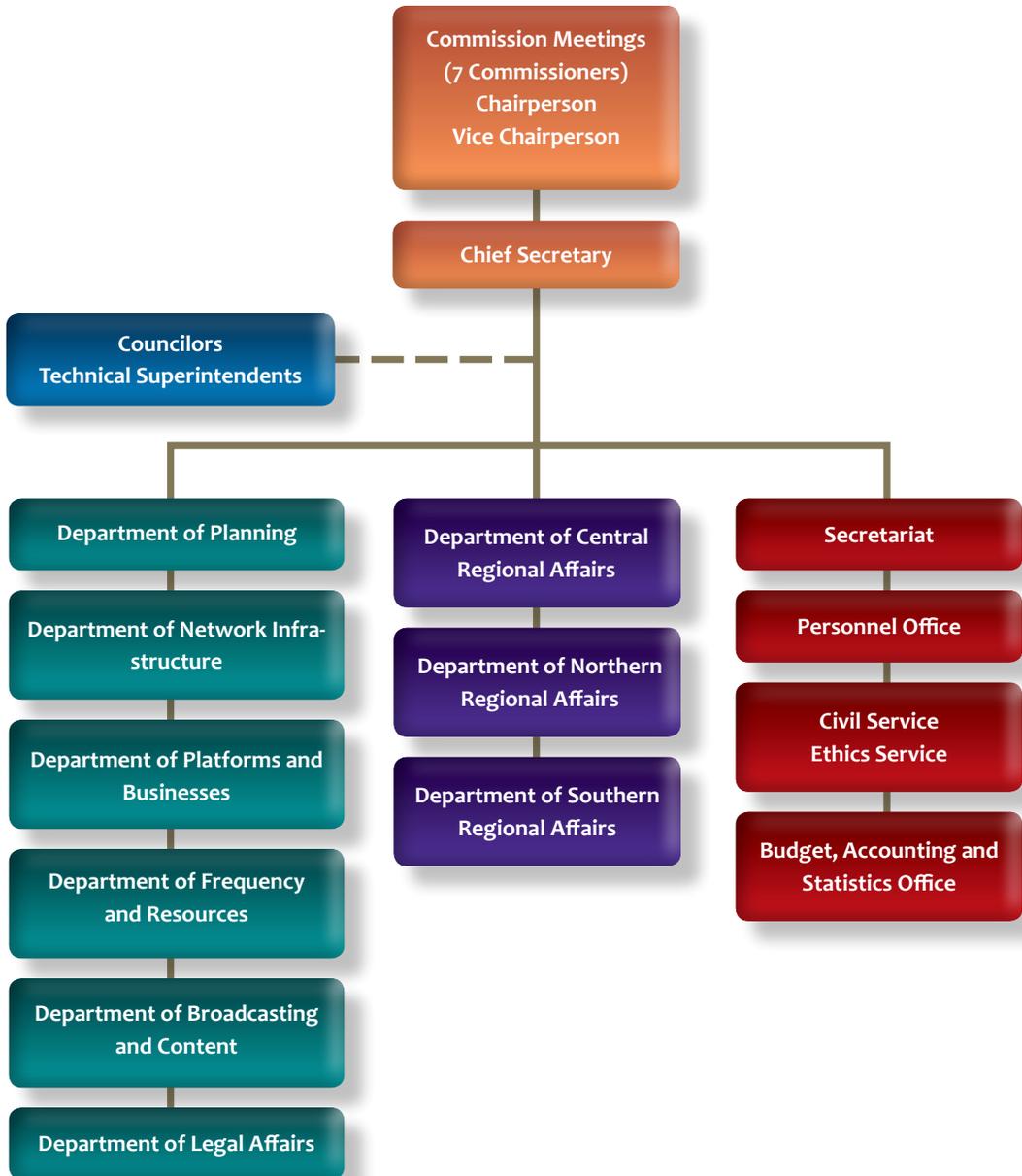


Figure 6 NCC Organization Chart

Source: NCC



Accountability

Ethics Code

Commissioners are to perform their duties independently, and stringently abide by the conflict of interest recusal principle; they may not participate in the activities of political parties or serve in government agencies or state enterprise positions as consultants; they are also forbidden to serve in a communications enterprise or organization in either a full or part-time capacity.

At the 503rd Commission Meeting, the commissioners' self-regulation codes of practice were amended. This amendment introduced two main points: firstly, commissioners shall consult and listen to the opinions of the public and relevant organizations during the policy making process. However, all final decisions are to be voted on during Commission Meetings. Secondly, if a commissioner considers that the case to be reviewed involves a conflict of interests, he/she shall report it at the Commission Meeting to determine whether recusal is necessary.

Internal Audit

In order to improve administration efficiency, the NCC established an internal audit panel, in which the vice chairperson serves as the chair and top senior civil servants of each department serve as auditors. The panel routinely carries out cross departmental audits in an objective manner and provides suggestions for improvements to achieve more effective operations so as to reach administrative goals.

An inspection report is released within two months after inspection and its approval by the vice chairperson. It includes both merits and deficiencies and provides suggestions for improvements. After receiving the report, the inspected department is required to begin eliminating deficiencies. Every six months, a regular follow up and progress report of corrections is made until the deficiencies have been completely removed.

Risk Management

To enhance the oversight of risk, the NCC set up risk management frameworks consistent with governance visions. Risk assessment is carefully developed through the process of risk identification, analysis and evaluation. Risk standards and levels are also ascertained; risk assessment and monitoring for any change in the organization's risk profile are continually undertaken.

Stakeholder Engagement

As particular policy initiatives may affect potential stakeholders, prior to passing resolutions, the NCC uses various methods to engage with the public and relevant industry stakeholders, by means of public consultations, holding public meetings, or publishing relevant information online. Reasons behind possible policy options are explained in a way that ensures even the more complicated issues can be understood fairly easily by those who are interested.



Overview of General Performance

Broadband Infrastructure

Issuing Mobile Broadband Licenses

On November 15, 2017, the NCC placed mobile broadband frequency bands out for tender, with the amount of successful bids reaching NT\$28.26 billion. The existing 3G operators all obtained the required frequency and it is thereby expected that these operators can effectively improve the efficiency of spectrum and strengthen 4G services.

Construction of a Mobile Broadband Network

Since the launch of the 4G service in Taiwan, people have been enjoying more convenient and high-speed mobile internet services. By the end of second quarter 2017, the number of 4G subscribers had increased to 25.18 million and the penetration rate had exceeded 100% to 106.81%. According to the mobile internet speeds measured by the Telecom Technology Center (TTC), between November 2016 and March 2017, the national average download rate for 4G increased from 49.44 Mbps in the previous survey (April to June, 2016) to 52.39 Mbps, whereas the upload rate increased from 20.44 Mbps to 21.04 Mbps.

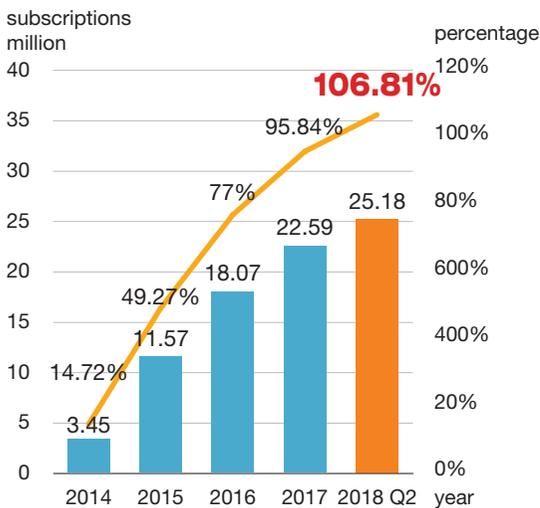


Figure 7 4G Subscribers and the Penetration Rate

Source: NCC

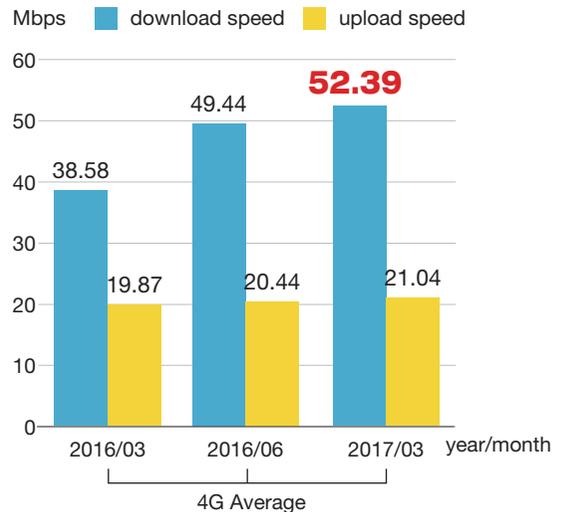


Figure 8 Mobile Broadband Consumer-End Speed Results

Source: NCC

Cable TV Digitization

As of the end of June 2018, the digitization of the cable TV network in Taiwan reached 100%, with the household penetration rate reaching 99.7%. In all, 57 companies achieved full digitization. In order

to promote digitization in the outlying islands as soon as possible, the NCC has approved operating licenses for cable TV service providers, including Mingcheng in Kinmen, Xiangtong in Lianjiang and Dongtai in Taitung, in 2016 and 2017 respectively.

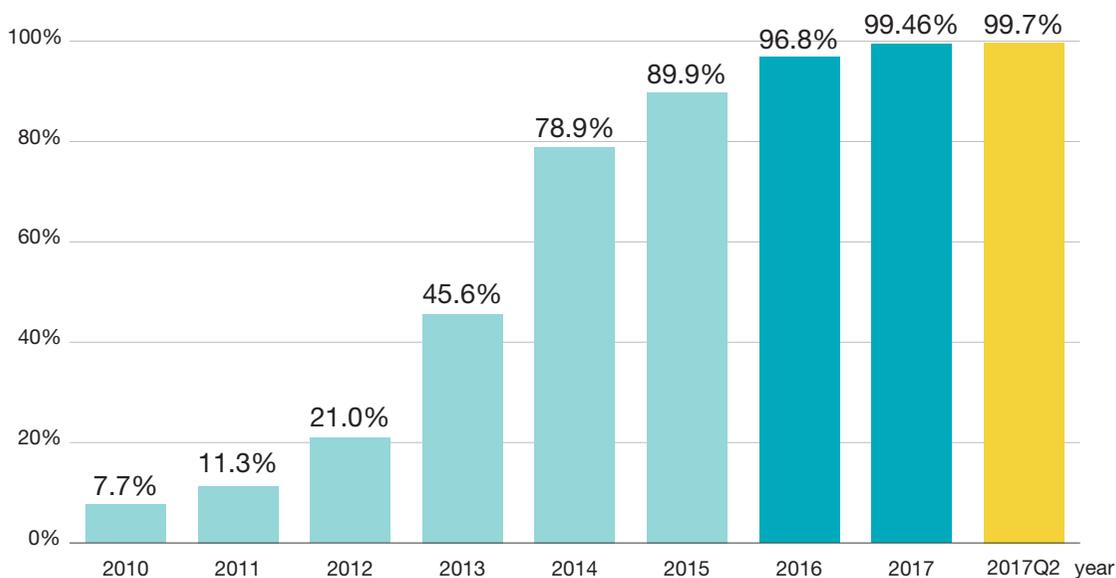


Figure 9 Digital Cable TV Coverage

Source: NCC



Figure 10 NCC Chairperson Ting-I Chan and Colleagues Inspect the Digitization of Cable TV at Dafeng (May 18, 2017)

Source: NCC



Figure 11 NCC Chairperson Ting-I Chan Visits Kinmen to Observe the Status of Cable TV Digitization

Source: NCC



Strengthening Domain Name Server (DNS) Management

Subsequent to the Executive Yuan placing the Taiwan Network Information Center (TWNIC) under the jurisdiction of the NCC on September 22, 2017, TWNIC has assisted the NCC's Communication Sector-Network Operation Monitoring Center (NOMC) to plan and establish a DNS monitoring subsystem, in addition to promoting internet governance and strengthening DNS security protection on an ongoing basis.

The NCC shall continue to improve the penetration of IPv6 addresses in partnership with telecom operators, with the help of TWNIC for its long-term experience in promoting IPv6. To year-end 2017, a total of 2,347x296 addresses had been issued, which was the 19th highest globally, and the 5th in the Asia Pacific area.

Development of the Broadcasting Industry

Balanced Development of Diverse Cultures

In order to balance the development of diverse cultures and enhance the right of access to the media for indigenous minorities, the NCC approved broadcast licenses for Hakka Radio and Alian radio in June and August 2017 respectively. Hakka Radio was in operation immediately after the license was issued in June, while Alian radio was licensed and officially in operation shortly after.

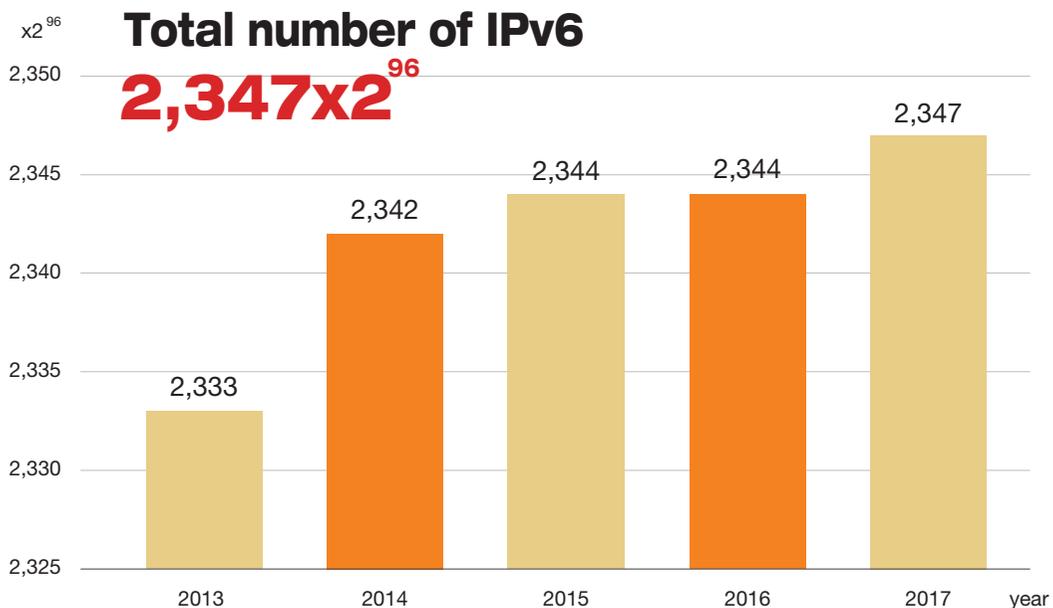


Figure 12 IPv6

Source: NCC

Note: From 2016, the NCC IPv6 Addresses Refer to the Number of Addresses Issued by TWNIC.



In order to revitalize Taiwan’s audiovisual industry and improve the quality of domestically produced programs, the NCC has put forward “Regulations on Terrestrial Television Business Broadcasting Domestically-Produced Programs” and “Regulations on Satellite Broadcasting Program Supplier Broadcasting Domestically-Produced Programs.” As a consequence of this, the number of shows and hours of new domestically-produced programs have significantly increased.

Urging the Diversified Development of the Broadcast TV Industry with Self-Regulation

In order to promote the sound development of the communications industry, ensure the professional autonomy of media, protect consumers, respect the rights and interests of the underprivileged, and promote the balanced development of multiple cultures, in October 2017, the NCC held a seminar the Television Content Broadcasting and Operation Development Exchange seminar with the aim of promoting self-regulation among media companies through sharing case studies, and strengthening the internal control mechanism to protect consumer audiovisual rights.



Figure 13 Growth of Domestically Produced Programs
Source: NCC



Figure 14 NCC Chairperson Ting-I Chan Participates at the Television Content Broadcasting and Operation Development Exchange (Oct, 2017)

Source: NCC

Development of New Media Content

To assist new media players, the NCC held a forum entitled, New Media Trends in Digital Economy in Taipei and Kaohsiung on October 1 and 24, 2017, respectively. In addition, in order to facilitate the upgrading of Taiwan's communications industry and the development of OTT audiovisual services, the NCC and the Ministry of Culture have jointly promoted the establishment of the Taiwan OTT Exchange Platform. Eight meetings had been held during 2017 up to the end of August 2018.



Figure 15 NCC Holds the New Media Trends in Digital Economy Forum in Taipei (Oct 01, 2017)

Source: NCC



Digital Inclusion

Improving the Broadband Application Environment in Remote Areas

Since the beginning of 2012, NCC has been promoting the increase of broadband speeds to 12Mbps in remote areas. By the end of 2017, the coverage of broadband services up to 12Mbps increased to 96.7%, reaching 709 remote villages and indigenous neighborhoods. Over 3,830 kilometers of fiber optic cable was deployed.

In order to meet consumer needs for broadband application services and maximize the network coverage in remote areas, the NCC has implemented the Forward-looking Infrastructure Development Program and the Universal Broadband Access in Remote Areas Program, with the government offering NT\$800 million and the private sector offering another NT\$800 million, bridging the rural-urban divide with funds partly from the government and partly from the telecommunications Universal Service Fund. As of the end of 2017, thirty-six subsidies had been approved, and by September 2018, the total number of subsidies had reached 396.

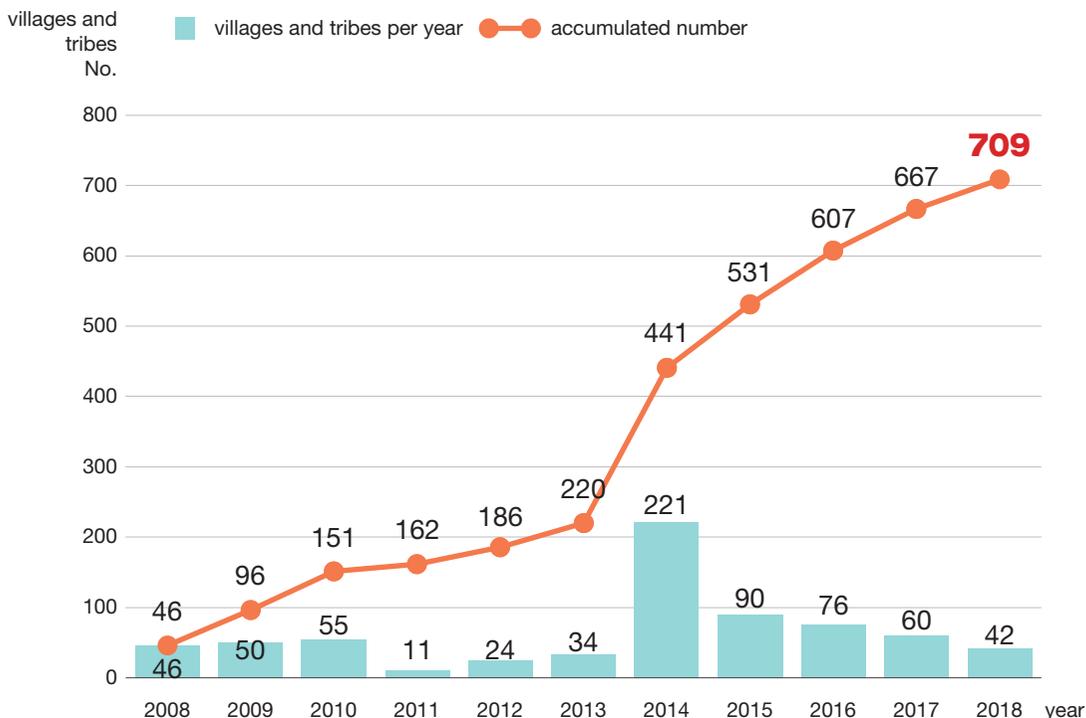


Figure 16 Broadband in Remote Townships, Villages and Neighborhoods

Source: NCC



Figure 18 NCC Chairperson Ting-I Chan is Interviewed during a Web Accessibility Promotion Video

Source: NCC

Right of Access to the Media of the Disabled

In February 2017, the NCC revised the “Regulations for Issuing Web Accessibility Accreditation Badges for Websites of Governmental Agencies and Schools” and amended Guidelines on Web Accessibility Version 2.0 so as to establish a more user-friendly and accessible web environment for the disabled. In addition, the NCC also held four expert consultation meetings on expanding the Web Accessibility Testing Software. As of June 2018, a total of about 4,000 accessibility certifications had been issued by the NCC.

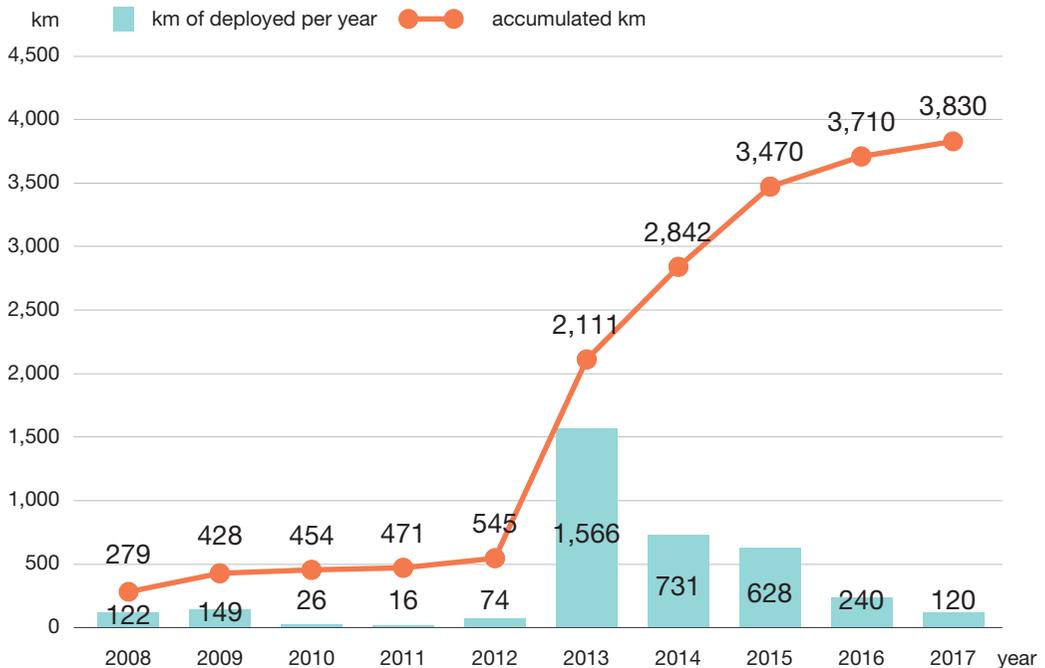


Figure 17 Broadband in Remote Townships/Accumulated Fiber-Optical Cable

Source: NCC

Consumer Rights

4G Public Warning System

In order to allow more instant disaster prevention operations, the NCC has actively promoted the establishment of the Public Warning System (PWS). In October 2017, the NCC coordinated with 4G mobile broadband operators to complete the off-site backup for the Cell Broadcast Center (CBC), with relevant tests performed by telecom operators under the active supervision of the NCC.



Figure 19 NCC Coordinates with 4G Mobile Broadband Operators to Complete the Off-site Backup for the Cell Broadcast Center (CBC) (May 17, 2017)

Source: NCC



Figure 20 Promotion of the Public Warning System by NCC at the Dongshi Township Office, Chiayi County

Source: NCC



Figure 21 NCC Members Display Achievements in Promoting Information Security Protection (Dec 13, 2017)

Source: NCC

Information Security Protection System

Actively implementing information and communications security measures, the NCC began to promote the establishment of a communications network operation management platform in 2017 so as to strengthen information security protection and contingency measures on communication networks. During the Information Security Week held by the Presidential Office, for the first time, from December 11 to 15, 2017, the aim of which was to enhance the public awareness of information security protection in Taiwan and implement the policy “Cyber Security as National Security,” the NCC also actively participated and displayed achievements in promoting information security protection.



Figure 22 NCC Chairperson Outlines Achievements in Promoting Information Security Protection (Dec 13, 2017)

Source: NCC

Legal Framework for Digital Convergence

Draft Telecommunications Management Act

In response to the vertical control framework in the existing telecommunication law, which classifies the telecommunication business into traditional telecommunication categories, no longer being in line with the current trend of communication convergence, revolutionary regulations on the telecommunications business management system have been proposed in form of the draft Telecommunications Management Act. They include changing the chartering and licensing system to a registration system; obligations for various telecommunications businesses being clearly regulated based on their business practices or patterns; changes to regulatory objects from

market leaders to operators with significant market power; bridging the rural-urban divide through market competition and new technology; and the compliance of public telecommunications networks with consistent information security standards.

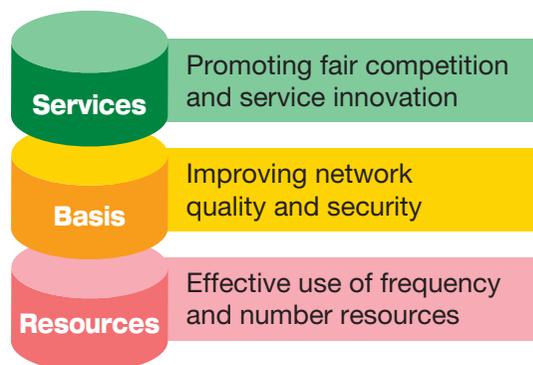


Figure 23 Draft Telecommunications Management Act – Control Paradigm Shift

Source: NCC

After the draft Telecommunications Management Act was submitted to the Executive Yuan for review on April 18, 2017, a total of four review meetings were held during May and July. The draft was passed by the Executive Yuan with a resolution on November 16, 2017 and submitted to the Legislative Yuan for review on April 12, 2018.

Draft Digital Communications Act

The draft Digital Communications Act shapes internet governance, which in itself is defining policies and mechanisms under which the internet community’s many stakeholders determine future action and development, as well as use of the internet, enabling participation of the government,

the private sector and the community at large. It emphasizes diversity, freedom and equality of stakeholders, and prioritizes self-regulation so as to safeguard digital rights, promote the spread of digital communications, facilitate universal and accessible services, and ultimately develop the digital economy.

The drafts of the Telecommunications Management Act and Digital Communications Act were submitted to the Executive Yuan on April 18, 2017 for review, and a review meeting was held on May 5. The two draft laws were approved by the Executive Yuan simultaneously and submitted to the Legislative Yuan for review and deliberation.

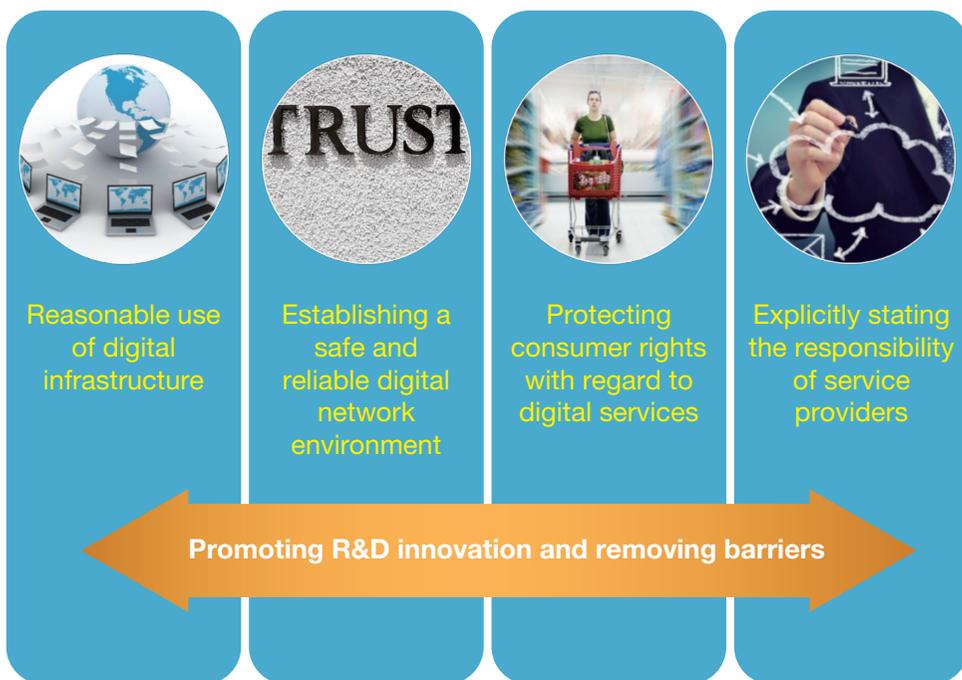


Figure 24 Efficiency of the Draft of the Digital Communications Act
Source: NCC



International Participation

Participation in Important International Conferences

With an objective of acquiring a clear understanding of international trends in communications and enhancing Taiwan's participation in the international community, NCC regularly attends international conferences on communications, and actively joins discussions with view to establishing channels for exchanges, giving impetus to Taiwan's communications industry and digital economic development.

From February 25 to March 5, 2017, Chairperson Ting-I Chan and colleagues attended the ministerial meeting of the GSMA Mobile World Congress (MWC), which was an encouraging opportunity to exchange ideas with communications authorities from other countries and learn how certain issues are being addressed.

Chairperson Ting-I Chan was also invited to join the 2017 International Regulators' Forum of the



Figure 25 NCC Chairperson Ting-I Chan Delivers a Speech at the 48th Annual Meeting, at Brussels, Belgium (Oct 9-11, 2017)

Source: NCC

International Institute of Communications (IIC) and delivered a speech at the 48th Annual Meeting, held from October 9 to 11, 2017 at Brussels, Belgium. During the trip to Brussels, she also visited the Belgian Institute for Postal Services and Telecommunications (BIPT) and exchanged views on communications issues with the President of the Board, Michel Van Bellinghen.



Figure 26 NCC Chairperson Ting-I Chan (center) Attends 2017 International Regulators' Forum of IIC and the 48th Annual Meeting at Belgium (Oct, 2017)

Source: NCC



Strengthening Friendships Worldwide

In addition to actively attending various key international conferences, the NCC continues to maintain contact with communications authorities and associations from a wide range of countries to establish better relations and explore opportunities for cooperation. On June 26, 2017, Chairperson Ting-I Chan attended the international conference “Broadband for all — A trusted base for the digitization of our society” in Stockholm, Sweden. On June 28, 2017, she visited the British House of Commons in the UK to exchange opinions on topics such as the digital economy, broadband infrastructure, universal service, media policy, cross-border transmission, OTT service management, and the impact of Brexit on the communications-related industries. Also, Chairperson Chan and her colleagues paid an official visit for bilateral exchanges with the Communications Regulatory Commission Mongolia in Ulaanbaatar, Mongolia, from July 29 to August 3, 2017.

In order to improve internet security, promote cooperation in internet governance, and strengthen cross-border governance, NCC Chairperson Ting-I Chan, Minister without Portfolio Audrey Tang, as well as colleagues, visited Facebook’s headquarters in Silicon Valley, US on September 5, 2017 and discussed how to maintain a safe and quality network and digital economy, expressing the importance our government attaches to the digital economy, and paving the way for further in-depth discussions and exchanges with Facebook on multiple issues.



Figure 27 NCC Undertakes Bilateral Exchange with the Communications Regulatory Commission in Ulaanbaatar, Mongolia (July 31, 2017)

Source: NCC



Figure 28 NCC Chairperson Ting-I Chan Visits Facebook Headquarters in Silicon Valley US (Sep 25, 2017)

Source: NCC



Figure 29 Under the Guidance of NCC, the Telecommunications Technology Center Holds the Beyond the Digital Forum (Nov 17, 2017)

Source: NCC

Hosting and Attending International Forums in Taiwan

In addition to attending important international conferences and communicating with relevant agencies and operators from other countries, the NCC also actively organizes and attends international forums and conferences held in Taiwan to share our experience in communications. For example, our colleagues participated in the 44th APNIC annual meeting held in Taichung from September 7 to 14, 2017, including workshops on network security, IPv6, and Software Defined Networking (SDN), with the aim of exchanging ideas with stakeholders, discussing governance policies, and enhancing exchanges of technology and training on promoting the internet.

On November 3, 2017, the NCC hosted the first APAC Online Safety Summit in partnership with Facebook and iWIN. Attended by experts and scholars from Japan, South Korea, Singapore, Hong

Kong, and elsewhere, the summit addressed issues such as the protection of children and youths online and the development of cross-border network security; participants also exchanged insights on how various countries deal with these issues and the latest trends.

On November 17, 2017, the Beyond the Digital forum was held by the Telecommunications Technology Center, under the guidance of the NCC. The speakers included Skype co-founder Geoffrey Prentice, Netflix Strategic Relationship Development Director Michael Wang, Ericsson Hong Kong and Macau Regional General Manager Petra Schirren, and Qualcomm Technology Senior Director Chen Junyu, as well as representatives from Taiwan's industry, government, research institutes and academia, all of whom explored opportunities for Taiwan's digital transformation in terms of the global digital economic paradigm shift and from different perspectives at home and abroad.



Outlook and Vision

Improve the Broadband Environment and Seize Opportunities of the Digital World

The core of our mission is to provide a safe and reliable broadband infrastructure to enable everyone to seize the opportunities presented by the digital landscape. To welcome the era of 5G, the NCC has been actively engaging in spectrum planning and preparations, conducting 5G spectrum (mainly 3.4-3.6GHz) measurement experiments, and researching plans to release medium/high frequency bands in the 5G spectrum. NCC shall continue to pay close attention to the allocation of spectrum resources and trends in the international communications industry, monitor the usage of the candidate 5G frequency bands in Taiwan, undertake 5G spectrum empirical measurements, evaluate technology, and research the possibility of high frequency bands (26.5-29.5GHz) to be used in 5G.

In order to enhance security, the NCC actively takes stock of and adjusts the management of the current communications and network and security regulations, while promoting security in the communications industry. With regards to the protection of personal data, NCC continues to guide the industry in setting up personal data protection and management mechanisms, in addition to urging its affiliated agencies to implement personal data protection measures. We shall continue to assist the industry to establish various hierarchical management strategies for personal data, data

processing, auditing mechanisms, and instructions for privacy audit inspection, and assist industry with personal data protection and the analysis of mechanisms for compliance with applicable international laws.

Since the world economic system has gradually shifted from a traditional economy to an internet-based digital economy, through the model of "internet governance, the government shall establish a public consultation and participation mechanism to build an open government. The draft Digital Communications Act proposed by the NCC is in line with international trends. NCC shall continue to stay abreast of trends of issues related to emerging internet governance to further aid development, placing equal emphasis on consumer rights and enhancing people's ability to deal with public affairs online.

As for broadband universal service, NCC shall continue to actively develop infrastructure, improve the broadband environment, and enable society to actively seize digital opportunities, in the hope of bringing all stakeholders to an agreement, and further drive Taiwan's economic transformation and growth through the joint efforts of the government and its people.



Improve the Environment of Communications and Promote the Development of New Media Content

With the continual development of digital technologies, the global broadcasting industry is facing significant challenges. Shifts in people's viewing habits have caused the revenues of the traditional broadcasting industry to decline year on year. According to the forecast by PwC Taiwan, Taiwan's OTT market will account for 60.2% of total household audiovisual revenue in 2022, an increase from 24.4%. Therefore, it is an urgent task for the industry to adjust to the environment, control the digital communication platforms, tap into other sources of revenue besides the traditional business, and win back lost audiences.

The NCC and the Ministry of Culture jointly established the Taiwan OTT Exchange Platform to bring all parties to a consensus on the development of the OTT audiovisual industry in Taiwan working through the internet governance mechanism, and assist development of new media players. We shall continue to invite relevant government agencies and industries to meetings to build an open platform to exchange opinions and create a sound industrial environment.

Since the development of information technology facilitates information to be transmitted instantly, guiding broadcasting media enterprises to adopt self-regulation, implementing fact-checking mechanisms, and enhancing the education and media literacy of the people forms has become a key part of our plan. NCC shall actively urge broadcasting enterprises to implement self-regulation, strengthen internal control and accountability, and enhance the interaction between the NCC, industry and the public. Also, in order to assist the people to correctly interpret and use information, the NCC continues to enhance the media literacy of the public by means of regular subsidies.

Communications convergence has greatly affected the development of traditional media and new media alike. The NCC shall stay aligned with the international trends, inject funds into the broadcasting industry and assist operators in adapting their business strategies to the new media era to pursue sustainability, develop the media literacy of a civil society, and improve the environment of the communications industry by means of various administrative measures and easing of regulations.



Protect the Rights of People in Remote Areas and Establish a Digitally Inclusive Society

The NCC has long been committed to constructing digital infrastructure and developing universal service in non-economic areas such as remote areas. The Universal Service Fund has been used to increase the fixed broadband speeds and coverage rate in such areas year by year. As of the end of 2017, the broadband coverage at 12 Mbps or more had exceeded 96.7%. In order to meet consumers' demands for broadband application services, the NCC promotes the Forward-looking Infrastructure Development Program, the "Universal Broadband Access in Remote Areas Program." As a result, communications quality and broadband speeds in remote areas have greatly improved, and the digital literacy of residents and disadvantaged groups have also been enhanced.

At present, the cable television head-end systems and transmission networks of cable TV system operators are 100% digitized, and household penetration has reached 99.7%, except for a small number of remote and outlying areas in Taiwan. Hence, we shall continue to facilitate the development of the digital TV infrastructure in these areas through administrative measures and incentives such as the universal service fund. It is estimated that by the end of 2018, digitization shall reach 100% in Hualien, Taitung, and the outlying islands such as Kinmen and Ryukyu, and can surpass 50% in Lianjiang.

In order to safeguard the rights of the disabled, the NCC has required government agencies and schools at all levels to set up an information service website to provide an accessible environment for the disabled, taking into account the provisions of international conventions and the Person with Disabilities Rights Protection Act. In addition, the NCC published *the 2017 Report on Promotion of Accessible Communications and Environment*, which offers an overview of accessible facilities and measures for all government agencies to protect the access rights of the disabled. In the future, the NCC shall continue to work together with relevant agencies to ensure that digital services remain universal and accessible.



Reform the Legal Framework for Digital Convergence and Promote the Development of the Digital Economy

As a result of new service models and the impact of digital technology, cross-industry and cross-border transfer creates ambiguity and thus requires more authorities and regulations. It is an issue of concern for countries and international organizations around the world to create a friendly legal environment for convergence to encourage the development of a digital economy.

At the end of 2016, the NCC proposed the drafts of the Telecommunications Management Act and the Digital Communications Act. The latter was reviewed by the Transportation Committee in the Legislative Yuan on May 24, 2018, and is expected to pass by the end of the year. In addition, on August 31, 2018, the NCC published *the Green Paper on Communication Policy*, hoping to bring critical issues in the communications field into public focus and to revitalize the audiovisual industry as a whole, creating digital economic opportunities.

The NCC remains steadfast and committed to creating an environment conducive to industrial development that links the future and encourages innovation with a corresponding legal system based on international trends, as well as the situation in Taiwan. The commission also aims to continually strengthen transparency in decision-making for cross-boundary governance and intelligent management, and promote the sustainable development of a diverse digital economy and industry.

NCC Performance Report 2017

PUBLISHED BY :  National Communications Commission

ADDRESS : No.50, Sec. 1, Renai Rd., Zhongzheng Dist, Taipei City 100, Taiwan (R.O.C.)

WEBSITE : <http://www.ncc.gov.tw/>

TEL : +886-800-177177

RESEARCH CONDUCTED JOINTLY WITH : Taiwan Institute of Economic Research, Research Division IV

ADDRESS : 7F., No.16-8, Dehwei St., Jhongshan Dist., Taipei City 104, Taiwan (R.O.C.)

TEL : +886-2-2586-5000

DESIGN & EDITING : www.proeditor.com.tw

PRINTER : Qiwei Color Arts Company

SALES :

1. Government Publications Bookstore-1F, No.209, Songjiang Rd., Zhongshan Dist., Taipei City 104, Taiwan (R.O.C.)
2. Wunan Book Co., Ltd. No.600, Junfu 7th Rd., Beitun Dist., Taichung City 406, Taiwan (R.O.C.)

DATE OF PUBLICATION : December 2018

PRICE : NTD 200

GPN : 1010702007

ISBN : 978-986-05-7428-9

ALL COPYRIGHTS RESERVED BY PUBLISHER



National Communications Commission

ISBN 978-986-05-7428-9



9 789860 574289 00200