



National Broadcasting and Telecommunications Commission (NBTC)

NBTC

annual report

2017





The Royal Proclamation

Communication is an essential factor for national development, prosperity, stability and security, especially in the rapid change situations in the world. The prompt and up-to-date of the communications is highly important and all parties and agencies related to national communications should therefore provide cooperation to one another and share their achievements closely and harmoniously. Above of all, they should take a deep and wide study and research of the technical matter and modern technologies, and select a good and effective parts for being applied to their work wisely and proactively in the way that suits the country status and environment so that the national communications are fully developed and able to facilitate the economic and social development and truly support the stability of the nation.

Chitralada Villa

15 July 1983

(The Royal Proclamation was bestowed on the Occasion of the Centennial of the Post and Telegraph Department and the National Communications Day on 4 August 1983)

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Preface

The National Broadcasting and Telecommunications Commission or NBTC had performed the mission in the previous year, under its power and responsibilities as stipulated by laws, by focusing on spectrum management which is considered a scarce resource for the utmost utilization to both nation and the people, the regulation on the broadcasting and telecommunications businesses to be free and fair competition, promoting and supporting the access to basic telecommunications services, and supporting the people in the transition to the viewing of digital terrestrial television in order to drive the economy to Thailand 4.0 as well as be in accordance with the government policy.

The NBTC has prepared the NBTC Annual Report 2017 with the view to disclosing the performances of the NBTC and the Office of the NBTC in the previous year to the public and supporting the government's policy to perform duties with transparency and accountability. The report, which elaborates the performances on the management of radio frequency, and broadcasting and telecommunications business operations, as well as work plans and results, and future work plans, shall be submitted to the Cabinet and the Parliament within one hundred and twenty days starting from the ending date of each calendar year according to Article 76 of the Act on Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services B.E. 2553 (2010) and its additional amendment (No. 2) B.E. 2560 (2017).

This report consists of important contents such as major performances of the NBTC and the Office of the NBTC throughout the year, report on market environment and competition in broadcasting, television and telecommunications businesses, trend on broadcasting, television and telecommunications industries in 2018, and work plan and budget plan in 2018, as well as problems and obstacles arising from the operation of broadcasting, television and telecommunications businesses which are important to the people. Details are as shown in the report.

The NBTC expects that this NBTC Annual Report 2017 will be useful for all stakeholders, sectors and interested people, and fulfill the purposes of the laws, as well as be beneficial to related parties and the general public.

The National Broadcasting and
Telecommunications Commission
February 2018



สมเด็จพระเจ้าอยู่หัว



สำนักงานคณะกรรมการการอุดมศึกษา
กระทรวงศึกษาธิการ กรุงเทพมหานคร



Message from the Chairman of the NBTC

Air Chief Marshal **Thares Punsri**
Chairman of the NBTC

Term of Office (7 October 2012 – 5 October 2017)

The National Broadcasting and Telecommunications Commission (NBTC) has performed its duties in the year 2017 and the previous year at full capacity to ensure the advancement and the development of national broadcasting, television and telecommunications services. Their major concrete performances are as follows:

In the spectrum management, which it is the heart of communications management and regulation in all aspects, the NBTC had set up the Spectrum Management Master Plan and National Frequency Allocation Table so that the frequency management could be done efficiently, supported the growth of communications services and country development, and in line with international radio regulations.

In broadcasting and television services, the NBTC had pushed forward the transition to the viewing of digital terrestrial television service which is a reform of the Thai communications industry that supporting people to access to a variety of information including better quality and high definition of picture and sound. This directly results in the improvement of quality of life, society and national economy.

For telecommunications services, the NBTC had focused on promoting free and fair competition, communications technology access and utilization of people, including protection of consumers' rights and freedom in various dimensions. Also, the NBTC had pushed forward the implementation of projects to bridge the divide in society and promote national development. Those projects are important to the country in driving the Thailand 4.0 policy. Besides, the replacement of overhead lines with underground cables for becoming the metropolis of ASEAN as planned.

In the Broadcasting and Telecommunications Research and Development Fund for the Public Interest, the NBTC had managed and allocates funds through projects in order to promote and support research and development of technology, human resources development, and consumer protection in communications services, including supporting the operation under the law on Safe and Creative Media Development Fund. The 6th consecutive year of fund management has brought into the public the concrete benefits in broader areas.

In the organization management and development, the NBTC had encouraged the improvement of the work system of the Office of the NBTC to be in accordance with good governance to become the organization of transparency. The NBTC also emphasizes on the development of "personnel" which is a valuable resource and needs to be developed systematically and continuously on the basis of professional knowledge management.

In conclusion, I would like to thank the NBTC Commissioners, executives and employees for always providing cooperation and support to the work of the NBTC and I also hope that all of you will continue to work together with happiness, being unity, and having committed to create the Office of the NBTC to be recognized as a leading regulatory body in national or global level as well as keeping the honor of our organization to be sustainable and stable forever.



Air Chief Marshal

Chairman of the NBTC

Message from the Chairman of the NBTC

General **Sukit Khamasundara**

NBTC Commissioner Acting Chairman of the NBTC

Term of Office (6 October 2017 – Present)

The year 2017 was the year that the National Broadcasting and Telecommunications Commission has completed its 6-year-term of office and it shall be a transition period to the new NBTC Commission. I would say that the current NBTC has performed its duties to develop the communication services of the country to be stable and progressive. Major performances in this year are such as the implementation of the project on the provision of mobile phone service and a broadband internet service to 3,920 border villages (Zone C+) in order to improve the telecommunications infrastructure to cover all areas and bridge the divide of information access as well as provide opportunities for people in remote areas, along with building the NBTC Volunteers continuously.

In addition, the NBTC has adjusted license fees of the broadcasting, television and telecommunications businesses to be proper with current economic situation as well as to encourage small and medium enterprises to be able to compete in the market efficiently and equitably which helps support consumers to use quality services at fair price. Moreover, the NBTC has promoted and supported personnel in radiocommunications service by hosting Thailand Amateur Radio Day, which provided an opportunity for amateur radio operators to develop their innovation and invention and exhibit their creations as well as exchange body of knowledge among each other.

The NBTC also participated in the Royal Cremation Ceremony of His Majesty the Late King Bhumibol Adulyadej by having monitored the use of radio frequency and resolving the radio frequency interference problems among communications networks.

In the year 2018, the NBTC has immersed itself to continue performing its mission to meet the challenges and future changes, especially the preparation for spectrum allocation and the regulation on the communications technology services in a rapid change and convergence era for the utmost benefits to the nation and people.

All the achievements of the NBTC in the year 2017 and the past years arise from the cooperation and sacrifice of those who involved. I would like to thank the executives, staff and employees of the Office of the NBTC as well as all related parties for their fully cooperation and support to the work of the NBTC. Please be assured that the NBTC and the Office of the NBTC will carry out their mission and duties in good faith and the Royal Wish of His Majesty King Maha Vajiralongkorn Bodindradebayavarangkun will be induced for doing good for the henceforth stability and prosperity of the country.



General

(Sukit Khamasundara)
NBTC Commissioner Acting
Chairman of the NBTC



Message from Secretary-General of the NBTC

Mr. Takorn Tantasith

Secretary-General of the NBTC

The Office of the NBTC had carried out important activities and projects in the year 2017 in order to drive the organization's mission as planned including to support the government's policy in driving the digital economy for economic and social advancement, by focusing on the collaboration with all relevant sectors both domestic and foreign agencies for the concrete achievement. The outstanding performances in the previous year are as follows:

1. Having expedited the signing of contracts to provide a broadband internet service as well as a cellular service to 3,920 border villages, which will have to be launched by September 2018.

2. Having provided the mobile SIM card users registration with a new digital identity platform at the service centers of all service providers effective from December 2017, and the registration shall cover all sales channels throughout the country since 1 February 2018 onwards.

3. Having drafted the criteria and carried out the public hearings for the spectrum auctions in the frequency bands of 900 MHz and 1800 MHz whose concession terms will both end in September 2018.

4. Having announced the use of spectrum in the frequency band of 900 MHz to support the Internet of Things (IoT) technology effective from November 2017. This will also promote technology innovation and stimulate the economy.

5. Having provided three public auctions of the 'beautiful' mobile phone numbers in 2017 and earned about 195 million baht for delivery as the state revenue.

6. Having supported the digital TV industry to be able to provide continuous service and meet the requirements of the NBTC to broadcast the Must-Carry services in satellite broadcasting services.

While the current situation and environment are constantly changing, especially in technology that results in the rapid changes of people's lifestyle and business operations and even more in the future, this will also create opportunities and challenges in various aspects.

The Office of the NBTC has realized of the need for organization development to be equipped with high performance and readiness to perform tasks in spectrum management and broadcasting, television and telecommunications services regulation in the convergence era effectively, with the aim of enhancing the environment conducive to fair competition. The Office also creates an environment which is conducive to fair competition, encourages the creative use of digital technology in the development, and provides opportunities to people with universal access to a quality communications infrastructure as well as protects the national interests with the view to improving the quality of life and moving forward the society and the country to the digital economy era under Thailand 4.0 policy rapidly.

On behalf of Secretary-General of the NBTC, I wish to convey my sincere thanks to the NBTC Commissioners for always supporting the operation of the Office, and my thanks also extend to all executives, employees and staff of the Office of the NBTC for your excellent work at full capacity. I would expect to receive your great contribution continuously in order to drive Thailand to become a developed country with stability, prosperity and sustainability.



(Mr. Takorn Tantasith)
Secretary-General of the NBTC



The National Broadcasting,
Television and Telecommunications
Commission (NBTC)



General Sukit Khamasundara

NBTC Commissioner Acting Chairman of the NBTC

Education

- Bachelor of Science, Chulachomklao Royal Military Academy, Class 20
- M.A. in Political Science (Security Resources Management), Burapha University
- Joint Staff Course, Command and General Staff College
- Certificate, National Defence College of Thailand, Class 44
- Professional Engineer (Civil Engineering), Board of Control of the Professional Engineering
- Certificate, Top Executive Program, Capital Market Academy, Class 15

Work Experience

- Chief of Army Engineering Battalion 1, Royal Guards
- Commander of the 1st Development Division
- Deputy Commander-in-Chief of the First Army Area
- Special Consultant to the Royal Thai Armed Forces Headquarters
- Special Royal Guard
- Judge to the Supreme Military Court
- Member of the Committee to Formulate the Policy for the Provision of Universal Basic Telecommunications Services and Social Services, National Telecommunications Commission
- Advisory Board of the Management of Doctoral Philosophy Program in Political Science, Burapha University
- Responsible Person for “the Project of the Construction of Entrance and Services Pathways in Suvarnabhumi Airport”
- Director of the Royal Project Don Khun Huay, Phetchaburi Province
- Director of the Royal Initiative Project Huay Mae Prieng, Phetchaburi Province
- Director of the Queen Sirikit Forest Park Project, Ratchaburi Province
- Director of the Construction Project of Benjakiti Park, Bangkok
- Chief of the Secretariat on Psychological Operations and Public Relations, Royal Thai Army
- Chief of the Secretariat Office of the Internal Security Operations Command



Colonel Natee Sukonrat, Ph.D.

Vice-Chairman of the NBTC

Education

- Bachelor of Science in Electrical Engineering, Chulachomklao Royal Military Academy (Gold Medal Award)
- Master of Science in Electrical and Telecommunication Engineering, University of South Florida, USA
- Ph.D. in Electrical and Telecommunication Engineering, University of South Florida, USA

Work Experience

- Senior Engineering Officer, Project on Globalstar Low Earth Orbit Satellite, San Diego, California, USA
- Consultant to the iPSTAR Satellite Project
- Chairman of the CDMA Project Steering Committee, CAT Telecom Public Company Limited
- Board of Directors, TOT Public Company Limited
- Acting CEO, TOT Public Company Limited
- Senior Engineering Officer, Armed Forces Telecommunications Office, Royal Thai Armed Forces Headquarters
- Chairman of the Working Group on Community Radio Service
- Sub-committee on Broadcasting and Television Services
- Chairman of the Committee for Drafting Spectrum Management Master Plan and National Table of Frequency Allocation
- Chairman of the Committee for Drafting Telecommunications Services Master Plan
- Chairman of the Committee for the Licensing of Broadband Wireless Access Service (BWA)
- Chairman of the Committee for the Licensing of International Mobile Telephony or 3G and Beyond
- Commissioner, the National Telecommunications Commission (NTC)



Colonel Settapong Malisuwan, Ph.D.

Vice-Chairman of the NBTC

Education

- Bachelor of Science in Electrical Engineering (First Class Honors, Gold Medal Award), Chulachomklao Royal Military Academy (Armed Forces Academies Preparatory Pre-Cadet Class 26, Chulachomklao Royal Military Academy Class 37)
- Master of Science in Electrical Engineering (MSEE), Georgia Institute of Technology, USA
- Master of Science in Electrical Engineering (Telecommunications), George Washington University, USA
- Ph.D. in Electrical Engineering (Telecommunications), Awarded for Excellence by National Engineering Honor Society (Beta Pi), Florida Atlantic University, USA

Work Experience

- Platoon Leader, 1st Signal Battalion, King's Guard
- Lecturer, Department of Electrical and Computer Engineering, Chulachomklao Royal Military Academy
- Associate Judge of Intellectual Property and International Trade Court, Class 3
- Officer in the Chief of Staff Attached to Deputy Supreme Commander, Royal Thai Army
- Performing Duties in CAT Telecom Public Company Limited as follows:
 - 1) Secretary to the President of CAT Telecom Public Company Limited
 - 2) Committee for Supervising the Operation and Projects of CAT Telecom Public Company Limited
- Associate Professor, Business School, Trident University International, USA (Accredited Internet Distance Learning University)



Lt. Gen. Perapong Manakit, Ph.D.

NBTC Commissioner

Education

- B.Sc. Chulachomkhalo Royal Military Academy, 1978
- M.A. in Social Development (School of Social Development), National Institute of Development Administration (NIDA), 1986
- Ph.D. Sociology of Development, Bielefeld University, Germany (Awarded by German Government, Thailand-German Student Exchange Program, 1992)

Work Experience

- Rifle Platoon Leader, Rifle Company, the 3rd Infantry Battalion, the 1st Infantry Regiment Chamberlain Guard, 1978
- Officer, Strategic Research and Development Administration, Institute of Higher Army Studies, 1993
- Performing Duties of Special Advisor Group, Internal Security Operations Command, 1997 - 2001
- Director of Psychological Operation Division, Military Civil Affairs Department, 1999
- Secretary Attached to the Standing Committee on the Military Affairs, the Senate, 2000 - 2005
- Director of Information Division, Directorate of Civil Affairs, 2001
- Performing Official Duties to Support the Counselor to the Minister of Defence, 2001 - 2002
- Assistant Chief of Staff Officer to Deputy Supreme Commander, 2004
- Manager of Satellite Television Division, TV5, 2004
- Expert, the Supreme Command Headquarters, 2005
- Deputy Director, Center for Psychological Operations and Public Relations in the Southern Provinces, National Security Council, 2005 - 2006

- Producer of the Radio Program on “Ruk Mueng Thai” (Love Thailand), 2006 - 2007
- Consultant to the Office of National Security Council, 2006 - 2010
- Spokesman, Ministry of Defence, 2008
- Sub-committee on Inspection and Investigation in the Committee on Inspection and Investigation for National Reconciliation and Study Research Sub-committee in the Committee on Inspection and Investigation for National Reconciliation, 2008 - 2009
- Secretary Attached to the Committee for Study and Consideration of Capacity Building and Management of the Army Under the Committee on the Military Affairs, House of Representatives, 2009 - 2011



Assoc. Prof. Prasert Silphiphat

NBTC Commissioner

Education

- Bachelor of Arts (Economics), Chiang Mai University
- M.A. (Economics) Middle Tennessee State University, USA
- Certificate, National Defence College of Thailand, Class 45
- Certificate, Advanced Course for Executives, Class 33
- Certificate, Advance Justice Administration Course for Executives, Class 3

Work Experience

- Professor, Faculty of Economics, Chulalongkorn University, 1975 – 2001
- Vice-Chancellor, Chulalongkorn University, 1997 – 2000
- Deputy Secretary-General of King Prajadhipok's Institute, 2000 – 2006
- Special Expert in Economics, the Office of National Telecommunications Commission 2007 – 2008
- Executive Manager, the Telecommunications Development Fund for the Public Benefit, Office of the NTC, 2008 – 2010



Asst. Prof. Thawatchai Jittrapanun, Ph.D.

NBTC Commissioner

Education

- Bachelor of Engineering (Mechanical Engineering), Chulalongkorn University
- Master of Business Administration (Finance), Georgia State University, USA
- Doctor of Philosophy in Business Administration (Ph.D.) (Finance), the University of Alabama, USA

Work Experience

- Professor, Faculty of Economics, Chulalongkorn University
- Special Professor of Doctoral Program of Finance (Finance Economics), NIDA
- Special Professor of Doctoral Program of Finance (Finance Economics) for the Joint Doctoral Program in Business Administration (JDBA), Chulalongkorn University, Thammasat University and National Institute of Development Administration (NIDA)
- Chairman of the B.A. Program in Economics (International Program), Faculty of Economics, Chulalongkorn University
- Chairman of Labor and Management Development Center, Faculty of Economics, Chulalongkorn University
- Chairman of the Computer Centre, Faculty of Economics, Chulalongkorn University
- Scholarship Selection Committee of the NBTC
- Special Lecturer in Finance, Business Administration Course in Public/Private Universities
- Advisor to the Committee on Finance, Treasury, Banking and Financial Institution, the Senate
- Advisor to the Committee on Budget Administration Follow-Up, House of Representatives
- Project Leader, the Index of Exports of the Thai National Shippers' Council



Ms. Supinya Klangnarong

NBTC Commissioner

Term of Office (7 October 2011 – 14 March 2017)

Education

- B.A. in Communication Arts, School of Communication Arts, Chulalongkorn University, 1994, in Mass Communications (Radio and Television)
- M.A. in Journalism and Mass Communications, Faculty of Journalism and Mass Communication, Thammasat University, 2000
- M.A. in Communications Policy and Regulation (Merit), University of Westminster, London, 2002

Work Experience

- Sub-committee on the Public Hearing of the Draft Act on Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services
- Deputy Secretary-General, Secretary-General of Campaign of Popular Media Reform
- Lecturer, Center for Human Rights Studies and Social Development. Graduate School, Mahidol University
- Legislative Committee on the Draft Act on Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services B.E.
- Sub-committee on the Formulation of Broadcasting Master Plan Under the NTC Acting the NBTC
- Sub-committee on the Formulation of Telecommunications Master Plan Under the NTC Acting the NBTC
- Sub-committee on Broadcasting, and the Working Group for Non-Frequency Services, National Telecommunications Commission
- Vice-Chairman of the Campaign Committee for Media Reform
- A Broad Member of Film Archive (Public Organization)
- Committee for the Promotion of Rights, Liberties and Responsibility of Mass Media
- Advisory Committee to the Project on Consumers Protection Mechanism for Citizen Media, Foundation for Consumers
- Special Lecturer on Media Reform, New Media and Politics and Human Right



Mr. Prawit Leesatapornwongsa

NBTC Commissioner

Education

- Bachelor of Medicine, Chulalongkorn University, 1987
- Bachelor of Political Sciences, Sukhothai Thammathirat Open University, 1992
- Diploma, Preventive Medicine (Public Health), the Medical Council of Thailand, 1992
- Master of Public Health, Institute of Tropical Medicine, Belgium, 1999
- Diploma, Family Medicine, the Medical Council of Thailand, 2004

Work Experience

- Director of Huay Tap Tan Community Hospital, Si Sa Ket Province
- Director of Sri Rattana Community Hospital, Si Sa Ket Province
- Director of Lad Bua Luang Community Hospital, Phra Nakhon Si Ayutthaya Province
- Director of Uthai Community Hospital, Phra Nakhon Si Ayutthaya Province
- Chairman of Rural Doctors Society
- Secretary-General of the Coordinating Committee of Thai NGOs for Primary Health Care
- Secretary-General of Foundation for Consumer
- Member of the 2nd National Economics and Social Advisory Council
- Chairman of Working Group Consumer Protection, National Economics and Social Advisory Council
- Executive Director of the Telecommunications Consumer Protection Institute (TCI)
- Sub-committee of the Human Rights, the National Human Rights Commission of Thailand





Executive Summary



Due to the rapid change of communication technology, accompanying with the amendment of organization laws to be in line with the national policies and development plans, the NBTC has thus committed to the mission implementation and the development to become a leading organization in regulating and developing communications service to be efficient and transparent, as well as being acceptable to all relevant sectors. The NBTC also places the importance on the improvement for an efficient operation according to the observations of the Parliament and State Audit Office of the Kingdom of Thailand, including pushing forward the operation to be in line with the changing circumstances and important policies of the government. Major performance of the Office of the NBTC in 2017 is as follows:

(1) **Managing the organization to be transparent and accountable**, the NBTC had focused on building a transparent and standardized organization that is acceptable to all relevant parties in continuation to the operation on 2016 which requiring that all executives submit a declaration listing of all owned assets and liabilities to the Office of the NBTC and carry out activities under the MOU with the Office of the National Anti-Corruption Commission (NACC) in order to enhance the collaboration and establish the network of participation in the sustainable prevention and anti-corruption. **Procurement**, the NBTC had applied the action framework in the same standard as other government agencies to the procurement process of the Office of the NBTC in accordance with the relevant laws regarding procurement and the public management. In the year 2017, the number of procurement done by special arrangement was reduced from the previous year for 55 items. Besides, the NBTC has participated in the Integrity Pact agreement under the cooperation project for preventing corruption in public procurement by selecting **the project on the provision of mobile signal and broadband service in the border areas** which is the mega project and interested by the people to encourage the participation of the public and private sector in the observation and monitoring of the project in all process until the end of the project.

(2) **Managing spectrum to be efficient and in line with the technology advancement**, the NBTC had approved the use of spectrum in the frequency bands of 800/900 MHz and 400 MHz for the rail transport system of Ministry of Transport in order to support the urgent policy of the government. In addition, it has formulated the frequency management plan and revised criteria relating to the use of frequency to be in line with the rapid advancement of technology and to prevent the frequency interference that may occur.

(3) **Supporting the Royal Cremation Ceremony of His Majesty King Bhumibol Adulyadej in the communication during the Royal Ceremony**, by participating in the preparation meeting and regulating telecommunications operators on the organization of relocation of telecommunications lines in the areas of Sanam Luang, in the route starting from Ratchadamnoen Klang Road to Phra Sumen Road and the reserved route on Dinso Road, in order to support the royal ceremony. It also regulated the use of radio frequencies for the communication during the royal ceremonies by the set up of integrated frequency allocation plan to be used in the communication of 18 agencies for 87 frequencies, having set the standards and rehearsal of the action plan. In addition, it had set up an adhoc unit to monitor the use of frequency to prevent the frequency interference in the use of communication network by arranging the frequency monitoring vehicles and staff to be on duty 24 hours a day, as well as having coordinated with the mobile service providers to expand the installation of base stations to enhance the efficiency for supporting the use of mobile service of people attending the royal ceremony. The NBTC had also supported

the installation of radiocommunications stations at the Ministry of Defence to be used for the coordination between communications networks of relevant agencies, and supported the Air Force in the preparation of the plan for preventing radiocommunications devices used in the aircraft without the pilot or the unmanned aerial vehicle (Drone) for maintaining the order in the ceremonial areas and to honor His Majesty King Bhumibol Adulyadej.

(4) **Having suppressed the dissemination of improper information via internet**, the NBTC has cooperated and collaborated with the Ministry of Digital Economy and Society (MDES), Agencies relevant to security, internet service providers, and international internet gateway service providers to carry out activities concerning the suppression of the dissemination of information that would cause the disorder in the Kingdom or affect the security of the state or the good moral of the people.

(5) **Having replacement of overhead lines with underground cables**, the NBTC has supported the government's policy on the conversion of overhead lines into underground cables to support the development and the increasing demand of use in the digital economy and society. The Office of the NBTC had signed the MOU for the Overhead to Underground Cable System Project to support Bangkok as an ASEAN metropolis, which is the collaboration between the Metropolitan Electricity Authority of Bangkok, the Royal Thai Police, and TOT Public Company Limited with the view to improve the Bangkok's landscape in creating a beautiful and safe city for becoming the metropolis of ASEAN in continuation to the previous year.

(6) **Having expedited the implementation of the project on the provision of mobile signal and broadband service in 3,920 villages in the border areas** to support the government's urgent policy on the development of digital infrastructure within the budget framework of 13,819.64 million baht for the operation. In addition, the NBTC has complied with Section 24 (4) of the Act on Digital Economy and Society B.E. 2560 (2017) which requiring the NBTC to allocate 15 percent of the revenue receiving from the frequency assignment and revenues of the Office of the NBTC to the Digital Economy and Society Fund **by submitting the revenues in Q1 - Q3 of the year 2017 to the Digital Economy and Society Fund, the Office of the National Digital Economy and Society Commission for totally 1,373.44 million baht.**

(7) **Protecting consumers' benefits**, the NBTC has focused on monitoring and resolving complaints about spectrum use and business operation by setting the working process to empower people on media literacy and the change of technology, establishing the network of collaboration, and encouraging the people with disabilities, the elderly and the underprivileged to access information in the digital age continuously in every year such as organizing trainings in 5 regions in order to enhance knowledge on **the installation of mobile base stations, application for the use of base stations, the strength of the frequency that radiated by the base stations and having affected on human health**, including the dissemination of useful information through television movies advertising on **"the spectrum is not as harmful as thought"**, broadcasting on television from 1 February – 31 March 2017, as well as organizing the training on **"the awareness raising on the rights to communicate of the people with disabilities (hearing) for the access to the digital television system"** in cooperation with the National Association of the Deaf in Thailand, during 24 – 26 November 2017.

(8) **Improving the regulation and ensuring people of the use of PromptPay**, the NBTC has collaborated with the Bank of Thailand (BOT) to enhance the security of the use of mobile services and support the provision of new model of money transfer and receipt service or "PromptPay" under the MOU for mutual study on guidelines for regulating mobile payment services in order to support the government's policy on national e-Payment and to ensure the public and business sector of the mobile financial transactions.



(9) **Developing the system for receiving notifications of assisting Thai people in foreign countries and human trafficking via one telephone number worldwide**, the NBTC has cooperated with the Ministry of Social Development and Human Security to develop the system for receiving notifications of assisting Thai people in foreign countries and human trafficking via SMS and via one telephone number worldwide +66 9 9130 1300 to enhance the assistance of Thai people in foreign countries who faced social problems quickly and on the situation with the most effective.

(10) **Developing the system for registration of mobile SIM cards for ensuring the safety of the use**, the NBTC has its policy to support the new system for mobile SIM cards registration with a new digital identity platform which the system will verify their face recognition or finger prints with a view to protecting mobile users from unauthorized access, preventing from being referred stealthily or false identity. People who buy new prepaid SIM cards are able to register by new digital identity system at any service centers of mobile service providers nationwide effective from 15 December 2017. For the people who buy new mobile SIM cards either prepaid or postpaid system, they are able to register by new digital identity system at all points of service nationwide such as Modern Trade, distributors and mobile shops, from 1 February 2018 onwards.

In addition, a 3-tiered application (check, notify, lock) has been developed to provide people with tools for checking and protecting themselves from being stolen of identity card to register for mobile service activation. The operation has been done in cooperation with all mobile service providers in order to comply with the regulatory guidelines and service provision to the public in the digital age.

(11) **Having provided a special rate of mobile service for people with disabilities**, the NBTC has regulated the telecommunications licensees who obtain the license to use the spectrum for telecommunications service in the frequency band of 1800 MHz and 900 MHz to comply with the license conditions which prescribed a special rate of mobile service for people with disabilities by signing an MOU with the Ministry of Social Development and Human Security on information linkage and exchange of people with disabilities in order to access to telecommunications services for the improvement of the quality of life of the people with disabilities. The right to receive information consists of 1) discount of mobile phone service rates at a minimum 10 percent off the regular package rates, and 2) the internet usage speed of at least 1 Mbps throughout the use of every package.

(12) **Having allocated money of the Broadcasting and Telecommunications Research and Development Fund for the Public Interest (BTFP)**, by approving the allocation of the Fund in accordance with the objectives of the Fund as proposed by the Fund Management Committee. In the year 2017, the NBTC had approved the Fund allocation to the type 2 grantees (project under the policy of the Fund Management Committee) at the amount of 103.360 million baht and approved the Fund allocation framework to the type 1 applicants (project emerging from the request for financial support of the eligible applicants) for the year 2018, at the amount of 1,500.00 million baht. In addition, it has supported the allocation of funds in the amount of 474.627 million baht to the Fund for Development of Safe and Creative Media according to Section 52 (5) of the Act on Organization B.E. 2553 (2010) and its amendment, including the fund allocation for assisting television operators according to the government's policy, and the projects under the Plan for the Provision of Universal Basic Telecommunications Service and the support on the public in the transition to the viewing of digital terrestrial television.

(13) **Promoting television business operation to build confidence for both public and private operators**, the NBTC has operated under the measures to promote the broadcasting, television and telecommunications services for public benefit to be in line with the Order of the Head of National Council for Peace and Order No. 76/2016 dated 20 December 2016 by **supporting the expense for the transmission of satellite public television service** to the standard-definition licensees for 16 television channels, and the high-definition licensees for 10 television channels in the budget framework of not exceed 616,464,000 baht/year.

However, the support in the rest of the 1st year, (1 September – 19 December 2017 within the budget of 185,783,671.23 baht. **It also supported the expense of only satellite rental** for Royal Thai Army Radio and Television, program channel of satellite television station, Thai TV Global Network, within the budget framework of 216 million baht for 3 years starting from 10 January 2017 to 9 January 2020. This included the approval of **the extension of payment period of the license fee to use the spectrum for the provision of digital terrestrial television service** (auction money) for 14 companies (17 licensees) for the rest starting from the 4th installment onwards to help ease the burden of digital TV operators. Furthermore, the license fee for broadcasting and television services were revised with due regard to market development such as convergence. These were done by setting up the draft NBTC Notification on license fees for broadcasting or television services (No. 3) including the consideration for criteria and procedures for granting a deduction of the revenue of the broadcasting or television operators which has to be delivered to the BTFP, and the deduction of the annual license fees by the TV program on royal ceremonies or programs relating to the passing of His Majesty King Bhumibol Adulyadej in order to help the digital terrestrial television operators.

(14) Supporting people in the transition to the viewing of digital terrestrial television continuously, the NBTC has been approved by the Head of the National Council for Peace and Order to distribute digital TV coupons for 22.9 million coupons within the budget framework of 15,801 million baht so that the people can use for redeeming of 3 types of television equipment in digital system as follows: 1) Set Top Box 2) Set Top Box that can receive digital television signal of both DVB-T2 terrestrial system and DVB-S2 satellite system in the same box; and 3) television set with a built-in digital tuner (iDTVs). From October 2014 to May 2015, **the NBTC had distributed coupons in phase 1 for totally 13,571,296 coupons**; and later on, in the year 2017, **the NBTC had distributed coupons in phase 2 to totally 3,984,662 households**. The pattern of distributing coupons has been adjusted to facilitate people by using Smart card to verify the eligibility. At present, there are totally 1,143,186 households who exercised their eligibility¹. **However, the NBTC will deliver the balance of the disbursement of the project implementation in both phases, in cases that people have not redeemed the coupons, which is expected to be approximately 2,000 million baht, as the state revenue.**

(15) Regulating the expansion of digital terrestrial television network, the NBTC has followed up the problems resolution on the use of frequency in the transition to digital television system by setting up the timeframe for the expansion of digital terrestrial television network to cover households throughout the country at least 95 percent of the number of households within 4 years, and the licensees must install the radiocommunications stations for totally 168 stations as set in the conditions attached to the license of broadcasting or television service for providing digital terrestrial television network service at national level. Currently, there is only one licensee who has yet installed radiocommunications stations as required by the timeframe of network expansion.

¹ Data as of 25 December 2017



Workplan in 2018



The NBTC has its workplan for promoting and supporting important policies that shall benefit the nation and the people as follows:

1. Organizing spectrum auction in the frequency band of 900 MHz and 1800 MHz whose concession terms will both end in September 2018. The auction shall be divided into one license for the 900 MHz Spectrum of 2 x 5 MHz and 3 licenses for the 1800 MHz Spectrum of 2 x 15 MHz per licence.
2. Launching the broadband internet service to 3,920 border villages by September 2018 and encouraging the low-income people of 520,000 households to register for using broadband internet access free of charge.
3. Having drafted the criteria for refarming the unused or underutilized spectrum so that the spectrum can be utilized efficiently and the remedies for agencies whose frequencies have been refarmed shall be done completely.
4. Resolving more current problems of digital TV business operation in addition to the resolution on the extension of the spectrum auction payment period and providing support for the provision of digital TV services as required by Must-Carry rule.
5. Having provided the mobile SIM card users registration with a new digital identity platform to be covered all sales channels throughout the country since 1 February 2018 onwards.
6. Providing support to the Bank of Thailand, Thai Bankers' Association, and the Telecommunications Association of Thailand under the Royal Patronage, for the operation and co-regulation of PromptPay service, in order to ensure the people of the security of the service.
7. Encouraging the people to use new services via the Internet of Things (IoT) technology in the frequency band of 900 MHz for facilitating their daily lives and promoting economic development.



PART 1

General Information





The NBTC

and the Office of the NBTC

The National Broadcasting and Telecommunications Commission or “NBTC” has been appointed by the Royal Proclamation on 7 October 2011, consisting of 11 persons to be the Chairman of the NBTC, the Vice-Chairman of the NBTC, and the NBTC Commissioners. The mission, power and responsibilities of the NBTC stipulating in the Act on Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services (the Act on the Organization) B.E. 2553 (2010) and its amendment (No. 2) B.E. 2560 (2017) have included assigning the frequencies to be used in the broadcasting, radiocommunications and telecommunications services and regulating the broadcasting and telecommunications business with regard to utmost public benefits at national and local levels in education, culture, state security and other public interests as well as free and fair competition, formulating policy and criteria for broadcasting, television and telecommunications business operation, and protecting the consumers’ rights and freedom to access and utilize the frequencies in broadcasting, television and telecommunications as well as promoting the participation of the public in the public media process. The NBTC also performs other tasks in accordance with the provisions of relevant laws such as Telecommunications Business Act B.E. 2544 (2001) and No. 2 B.E. 2549 (2006), Broadcasting Business Act B.E. 2551 (2008), Radiocommunications Act B.E. 2498 (1955) and its amendment, and other related laws.

The NBTC has performed its mission under the powers and duties prescribing by laws since the year 2011 onwards. Until 2017, the Act on Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services B.E. 2560 (2017) (No. 2) stipulates that the NBTC shall be composed of 7 commissioners by having abolished Section 35, Section 37, Section 39 and Section 40 of the Act on the Organization B.E. 2553 (2010) combine with the Transitional Provisions under Section 42 Paragraph Two of the Act on the Organization B.E. 2553 (2010). The Act on the Organization B.E. 2560 (2017) (No. 2) prescribed that the commissioners who still hold the office on the effective date of this Act shall remain in office to continue perform their duties until the expiration of the term or vacation of office upon other causes. In the case where there is a vacation of office, no matter of what causes, it shall be deemed that the NBTC consists of the existing commissioners unless the remaining commissioners consist of less than four persons where all the commissioners shall vacate office upon the cause of expiration of term. While the new NBTC commissioners have not yet been appointed, the existing NBTC commissioners shall continue perform duties until the new commissioners appointing by the Act on the Organization B.E. 2560 (2017) (No. 2) take office. In the case where the Chairman vacates office, the existing commissioners shall elect one among themselves to be the Chairman to continue perform the duties.

On 5 October 2017, the Chairman of the NBTC (Air Chief Marshal Thares Punsri) had vacated from the post due to having attained the age of 70 years, and the NBTC Meeting (Special Meeting) No. 4/2017 on 6 October 2017 had approved of the selection of General Sukit Khamasundara to be responsible for acting Chairman of the NBTC, which is in accordance with the transitional provisions.

At present, the NBTC Commissioners are composed of the following members.

1. General Sukit Khamasundara	Commissioner Acting Chairman of the NBTC
2. Colonel Natee Sukonrat	Vice-Chairman
3. Colonel Settapong Malisuwan	Vice-Chairman
4. Lt. General Perapong Manakit	Commissioner
5. Mr. Prasert Silhipat	Commissioner
6. Mr. Thawatchai Jittrapanun	Commissioner
7. Mr. Prawit Leesatapornwongsa	Commissioner

The Office of the National Broadcasting and Telecommunications Commission, called in short “the Office of the NBTC” is a juristic person having a status of state agency and shall not be subject to the government agency under the law on public administration, or state enterprise under the law on budgetary procedure or other laws, shall not be subject to the law on labor protection, the law on labor relations, the law on social security and the law on workers’ compensation. The Office of the NBTC shall have a Secretary-General of the NBTC who shall be responsible for the work performance of the Office and directly answerable to the Chairperson and shall be the superior of officials and employees of the Office.

The Office of the NBTC shall be responsible for all affairs of the NBTC with its power and responsibilities² for the Office of the NBTC’s revenues and expenditures, the preparation of the Office of the NBTC’s annual budget, spectrum utilization monitoring and Follow-Up, receiving and considering complaints with regard to the use of spectrum, the operation of broadcasting and telecommunications business in order to examine and solve the problems or propose recommendations to the NBTC for consideration in accordance with the criteria prescribed by the NBTC, as well as performing other acts as entrusted by the NBTC.

The revenues³ of the Office of the NBTC shall comprise of spectrum license fees and business license fees under Section 42 paragraph two and Section 45 paragraph three of the Act on the Organization to Assign the Frequency B.E. 2553 (2010), revenues or benefits accrued from the conduct of duties of NBTC and the Office of the NBTC, revenues derived from the Office of the NBTC’s property, money and property donated to the Office of the NBTC in accordance with the regulation set forth by the NBTC for the work of the Office of the NBTC, and subsidies from the government. The revenues of the Office derived from spectrum license fees or benefits accrued from the conduct of duties of the Office of the NBTC after deducting by expenditures for efficient conduct of the Office, necessary burden costs, and money allocated for the Fund under Section 52 and the Technology Development for Education Fund under the law on national education and Digital Economic and Social Development Fund under the Act on Digital Development for Economic and Social Development, shall be remitted to the state treasury. In the case where the Office’s revenues are not sufficient for efficient conduct of the Office, including necessary burden costs, and other sources are not available, the government shall allocate the national budget to the Office as necessary.

² and other powers and responsibilities related to Section 57 of the Act on Organization B.E. 2553 (2010) and its amendment (No. 2) B.E. 2560 (2017)

³ Section 65 of the Act on Organization B.E. 2553 (2010) and its amendment (No. 2) B.E. 2560 (2017)



The Office of the NBTC has established the Broadcasting and Telecommunications Research and Development Fund for the Public Interest under Section 52 of the Act on the Organization to Assign the Frequency B.E. 2553 (2010) and its amendment (No. 2) B.E. 2560 (2017) with the objectives to providing the people with the universal broadcasting, television and telecommunications services, promoting and supporting communication resources development, research and development in the broadcasting and telecommunications sectors, promoting and supporting human resource development in the broadcasting, telecommunications, information technology, including the implementation of the organizations which are responsible for setting ethical standards of the occupations or professions under the law on broadcasting and television businesses, supporting the implementation under the Act on Safe and Creative Media Development Fund by allocating money to the Safe and Creative Media Development Fund as well as supporting the utilization of spectrum and spectrum rearming for re-assignment, and supporting the repayment, reimbursement, or compensation on spectrum rearming for the utmost efficiency of the spectrum use.





Vision

“The Office of the NBTC is a leading enterprise in the ASEAN level of regulating and developing communications business for national sustainable development”

Mission

“To support the NBTC in spectrum assignment, licensing and regulating the broadcasting, television, radiocommunications, and telecommunications business operation efficiently, transparently and be recognized in ASEAN level”

Core Value

- N Navigating to International
- B Building Innovation
- T Teamwork & Transparency
- C Consistent Professionalism

Strategic Issues of the Office of the NBTC

The Office of the NBTC has set up 4 strategic issues as follows:

Strategy 1

To Strengthen Administration in Line with Good Corporate Governance

Strategy 2

To Manage Spectrum Allocation Efficiently, Consumer Protection, Create Equality in Communication Infrastructure Access and Digital Opportunity

Strategy 3

To Develop Competition, Fairness and Efficiency in Communication Resource Management toward Thailand’s Digital Community

Strategy 4

To Support and Promote Innovation and Networking



The High-Level Executives of the Office of the NBTC



- | | |
|------------------------------------------|-------------------------------------------------------------------|
| 1. Mr. Takorn Tantasith | Secretary-General of the NBTC |
| 2. Mr. Trairat Viriyasirikul | Deputy Secretary-General Strategic and Internal Affairs |
| 3. Air Vice-Marshal Thanapant Raicharoen | Deputy Secretary-General Spectrum Management and Regional Affairs |
| 4. Mr. Korkij Danchaivichit | Deputy Secretary-General Telecommunications Affairs |
| 5. Asst. Prof. Pakdee Manaves | Deputy Secretary-General Broadcasting Affairs |
| 6. Mr. Pakpien Soontornsud | Principal Expert |

Manpower of the Office of the NBTC



In 2017, the manpower of the Office of the NBTC was 1,279 persons, as shown below:

No. (Person)

149

8

1,056

66



Management
Position

Technical
Position

Operational
Position

Staff to NBTC
Commissioners

Remarks : Data as of 31 December 2017

Management Position

Senior Executive (Deputy Secretary-General)	4	Persons
Middle-level Executive (Executive Director)	35	Persons
Junior Executive (Division Director)	110	Persons

Technical Position

Principal Expert/Senior Expert/Expert	8	Persons
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Operational Position

Senior Officers	466	Persons
Middle-level Officers	393	Persons
Officers	149	Persons
Staff	48	Persons

Staff to NBTC Commissioners

Advisors	17	Persons
Secretaries	7	Persons
Secretary Assistants	10	Persons
Employees	27	Persons
Drivers	5	Persons



Organization Structure of the Office of the NBTC





Spectrum Management and Regional Affairs

- 📶 Spectrum Corporate and Regional Affairs Bureau
- 📶 Spectrum Management Bureau
- 📶 Radio Monitoring and Planning Bureau
- 📶 Data Operation Center Bureau
- 📶 Information Technology Bureau
- 📶 Office of the NBTC, Region 1 (Central)
- 📶 Office of the NBTC, Region 2 (Northeast)
- 📶 Office of the NBTC, Region 3 (North)
- 📶 Office of the NBTC, Region 4 (South)

Telecommunications Affairs

- 📶 Telecommunications and Corporate Affairs Bureau
- 📶 Service-based Telecommunications Business Licensing Bureau
- 📶 Telecommunications Policy and Resources Management Bureau
- 📶 Facilities-based Telecommunications Business Licensing Bureau
- 📶 Telecommunications Tariffs Bureau
- 📶 Legal Telecommunications Bureau
- 📶 Telecommunications Standard and Technology Bureau
- 📶 Telecommunications Enforcement Bureau
- 📶 Numbering Management Bureau
- 📶 Radio Communication Licensing Bureau
- 📶 Advanced Technologies Management Bureau
- 📶 Universal Services Bureau
- 📶 Telecommunications Consumers Protection Bureau
- 📶 Telecommunications Access Bureau
- 📶 Secretariat Office of Telecommunications Commission and Proceedings Bureau
- 📶 Telecommunications Competency Development Bureau



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PART 2



Major Performance of
the **NBTC** in 2017



Major Performance of the NBTC in 2017

The NBTC has committed to achieve its mission within statutory duties under a rapid change of contextual environment, particularly in terms of technology that impacts on consumption behavior/lifestyles of people and business operation, including the expectations of those who involved in the role of the NBTC to maximize the benefits to the country continuously.

The NBTC has improved its efficiency of operation according to the observations of the Parliament and State Audit Office of the Kingdom of Thailand in order to become a transparent organization and to build public confidence for all relevant sectors. It has also pushed forward and prepared for the development of the country in line with the changes and important policies of the government, such as having approved the frequency use for high speed rail project for the Ministry of Transport; having expedited the implementation of the project for mobile signal provision and broadband services in the border areas to reduce disparities in the access to digital infrastructure and improve the quality of life of people in remote areas; having suppressed the dissemination of information that would cause the disorder in the Kingdom or affect the security of the state or the good moral of the people; having supported and assisted digital television broadcasters; having coordinated and cooperated with relevant agencies to promote the development of digital ecosystems and consumer protection such as cooperating with the Bank of Thailand to enhance the assurance of people to use the PromptPay service system, cooperating with the Ministry of Social Development and Human Security to develop a system for receiving notification to assist Thai people in foreign countries who face with social problems, collaborating with the Food and Drug Administration to resolve the problems of exaggerated or illegal advertising of health products. It has also expedited the replacement of overhead lines with underground cables and relocation of telecommunications lines in order to support the demand of use in the digital economy and society, as well as to prepare for becoming the metropolis of ASEAN as planned. In 2017, major performance is as follows:

Strategic and Organization Management Affairs

Having operated by taking into account the good governance and building a transparent organization, the NBTC has pushed forward and encouraged the executives, staff and employees of the Office of the NBTC to perform duties based on ethics, morality and good governance. The NBTC has also appointed the Sub-committee on Morals to draft the Master Plan on the Morals Promotion of the Office of the NBTC and the Working Group on Good Governance Promotion. Besides, the NBTC has set policies for internal organization to operate with a transparent and accountable working process. In addition, the NBTC has operated in continuation to the year 2016 in which the Office of the NBTC signed the MOU with the Office of the National Anti-Corruption Commission (NACC) according to the intention for being the Organization of Transparency and the good model of action by setting the policy requiring that all executives submit a declaration listing of all owned assets and liabilities to the Office of the NBTC. For the year 2017, the NBTC had organized the seminar, in cooperation with the NACC, on “the Communication Network for Anti-Corruption” aiming to develop cooperation and establish a network of participation in the prevention and suppression of corruption sustainably in 4 regions across the country.



The procurement had been done based on the action framework in the same standard as other government agencies to enhance the transparency and encourage the fair competition. Besides, the procurement process of the Office of the NBTC has to be in accordance with the relevant laws regarding procurement and the public management.

In the year 2017, the Office of the NBTC had carried out the procurement process by special arrangement only for the urgency and necessity cases which was reduced from the previous year for 55 items. Besides, the NBTC has participated in the Integrity Pact agreement under the cooperation project for preventing corruption in public contracting by selecting the project on the provision of mobile signal and broadband service in the border areas which is the mega project and interested by the people to encourage the participation of the public and private sector in the observation and monitoring of the project in all process until the end of the project.

Budget management in 2017, the Office of the NBTC had prepared the surplus budget which consisted of a total collected revenue of 10,391.750 million baht and the expenditure budget in 2017 for totally 5,485.303 million baht. From those amount, the budget expenditure resulting from the operation of the Office of the NBTC was 4,325.141 million baht, having already delivered to the Digital Economy and Society Fund, Office of the National Digital Economy and Society Commission, according to Section 24 (4) of the Digital Development for Economic and Society Act B.E. 2560 (2017), for 1,558.763 million baht. It is expected that the Office of the NBTC would submit more money of totally 4,507.847 million baht as the state revenue.

The Broadcasting and Telecommunications Research and Development Fund for the Public Interest (BTFFP) Allocation, the NBTC had approved the Fund allocation which is in accordance with the Fund's objectives as proposed by the Fund Management Committee. In 2017, the NBTC had approved the fund allocation to the type 2 grantees (projects according to the Fund Management Committee's policy) at the amount of 103.360 million baht, and approved the budget framework of the Fund allocation to the type 1 applicants (projects initiating by the eligible applicants) in the year 2018 for the amount of 1,500.00 million baht. In addition, the NBTC had supported the fund allocation of 474.627 million baht to the Safe and Creative Media Development Fund under Section 52 (5) of the Act on the Organization B.E. 2553 (2010) and its amendment, including the fund allocation to assist the television operators according to the government's policy as follows: 1) supporting the expense for satellite television transmission in general service for licensees in the budget framework of 616,464,000 baht/year; however, the support in the remaining period of the 1st year (1 September – 19 December 2017) was within the budget of 185,783,671.23 baht 2) supporting the expense of satellite rental within the budget framework of 216 million baht, for Royal Thai Army Radio and Television, Thai TV Global Network Channel, from 10 January 2017 to 9 January 2020. In addition, the NBTC had allocated money for supporting the implementation of the project for the provision of mobile signal and broadband services in border areas (Zone C+) under the Plan for the Provision of Universal Basic Telecommunications Service and Social Service within the budget framework of 13,989.69 million baht, as well as the implementation of the project to support the people in the transition to digital terrestrial television viewing (extra).

Social activities, having supported the Office of the NBTC to take part in the social responsibility such as in the early year of 2017 when Thailand faced with the flood disasters in the South region, the Office of the NBTC had coordinated with the Amateur Radio Association and the Provincial Office of Disaster Prevention and Mitigation located in the flood areas and nearby areas to help the disaster victims by monitoring and resolving the network problems or communication failure, supporting communication devices for operating officers, arranging emergency communication vehicle to provide WiFi signals in the areas with low connectivity to facilitate the officers to be able to communicate and operate quickly and on top of situation. It also coordinated with all telecommunications operators to have the communication system repaired so that people in the affected area can communicate continuously and efficiently. In addition, the Office of the NBTC Sub-region located in the areas of Nakhon Si Thammarat, Songkhla, Ranong, Chumphon and Phuket provinces had been used as a shelter for the disaster victims in case of receiving requests from the provinces.

Spectrum Management

The important spectrum management done by the NBTC in 2017 is summarized as follows:

1. **Having approved the use of spectrum in the frequency bands of 800/900 MHz and 400 MHz for the rail transport system of Ministry of Transport in order to support the urgent policy of the government.** In addition, it has formulated the frequency management plan and revised criteria relating to the use of frequency to be in line with the rapid advancement of technology and to prevent the frequency interference that may occur. The NBTC has committed to the spectrum management to be efficient by taking into account the utilization universally and supporting the country development according to the long-term goal of the development of the government, and thus approved the guideline for the spectrum use for International Mobile Telecommunication (IMT) and the rail transport system in the frequency bands of 800/900 MHz and 400 MHz for the Ministry of Transport at no cost of spectrum value due to being a government agency under the licensing conditions requiring that if the contract for the implementation of the rail transport signaling system which the frequency shall be used cannot be signed by 2020, the above-mentioned spectrum reserve shall be terminated.

2. **Setting policies and developing the plans for spectrum management to be in line with the advancement of technology and preventing the frequency interference which may occur.** In 2017, the NBTC has formulated the NBTC Notification on Master Plan for Spectrum Management No. 3 (2017) which was published in the Royal Gazette on 6 September 2017 and has been effective on 1 January 2017 in order to be in accordance with the Radio Regulations, and the Appendix and details of the use of spectrum set for being used in the broadcasting, television, telecommunications and other services, attached to the National Table of Frequency Allocation (2017) which is a part of the Master Plan for Spectrum Management No. 3 (2017), have been added of the frequency in the band of 1500 MHz for International Mobile Telecommunication (IMT). Also, having realized of the importance of assigning frequency to be adequately for the demand of the frequency use in the future and to support the Strategy on the frequency assignment to be adequately for the demands and in accordance with the frequency use in international level, the NBTC has therefore implemented the project to study demands of the frequency usage for Thailand so that there shall be an adequate frequency for the use in broadcasting, television, telecommunications, radiocommunications and other services, by taking into account the change of technology and the accordance with the frequency use in international level which is a part of the action plan to develop the 10-year spectrum management guideline for the utmost benefit of the spectrum utilization to people and the state.

3. **Setting up the criteria for the efficient use of frequency without frequency interference to each other**

In 2017, the NBTC had formulated the Notifications, criteria and improved the radio frequency plan to ensure that the frequencies have been used efficiently, appropriately and in line with the frequency used currently as follows:

- (1) The NBTC Notification on Criteria and Procedure for Frequency Assignment for Radiocommunications Service
- (2) The NBTC Notification on Criteria for Spectrum Sharing between Fixed Satellite Service and Fixed Service and Fixed Satellite Service and Mobile Service
- (3) The NBTC Notification on Criteria and Condition on the Licensing to Use Frequency for the Unmanned Aerial Vehicle for the State Security
- (4) The NBTC Notification on Criteria for the Spectrum Use to Support the Mission of Prevention and Disaster Relief and in case of Emergencies and Disasters
- (5) The NBTC Notification on Radio Frequency Plan for Maritime Mobile Service in the Frequency Band of 27 MHz
- (6) The NBTC Notification on Criteria for the Licensing to Use Radiocommunications Device for Maritime Mobile Service in the Frequency Band of 27 MHz



- (7) The NBTC Notification on Radio Frequency Plan for Fixed Service in the Frequency Band of 2 KHz
- (8) The NBTC Notification on Radio Frequency Plan for the Use of Programme Making and Special Events (PMSE) in the Frequency Band of 2 KHz
- (9) The NBTC Notification on Radio Frequency Plan for the Use of Programme Making and Special Events (PMSE) in the Frequency Band of 8 KHz
- (10) The NBTC Notification on Criteria for the Licensing to Use Spectrum for Programme Making and Special Events (PMSE)
- (11) The NBTC Notification on Criteria for the Spectrum Use in the Frequency Band of 5 KHz
- (12) The NBTC Notification on Criteria for the Spectrum Use in the Frequency Band of 920 – 925 MHz
- (13) The NBTC Notification on the Licensing to Use Radiocommunications Device on Vehicle Radar
- (14) The NBTC Notification on Criteria for the Spectrum Use for Radiocommunications Device on Wireless Microphone
- (15) The NBTC Notification on Radio Frequency Plan for Broadcasting Service in F.M. System
- (16) The NBTC Notification on Technical Standard for Digital Terrestrial Television Receiver
- (17) The NBTC Notification on Technical Standard for Broadcasting Transmitters in F.M. System

In addition, more (draft) Notifications relating to the spectrum management have been in the consideration such as the (draft) Radio Frequency Plan for Citizen Band in the Frequency Band of 245 – 247 MHz and 78 – 79 MHz, the (draft) Radio Frequency Plan for Mobile Service in the Frequency Band of 885 – 895/930 – 940 MHz, the (draft) Criteria and Condition on the Licensing to Use Frequency for the Unmanned Aerial Vehicle for General Use.

4. Having prepared for the administration of the right to use satellite orbit in order to support the government's affairs for having a satellite or acquiring the right to use a satellite orbit, the NBTC has prepared the implementation of a project to study the demand for the use of satellites in Thailand with a view to studying the suitability, necessity, value and market environment of the satellite service in Thailand to support the demand for the use of satellite in Thailand in the future.

5. Supporting the Royal Cremation Ceremony of His Majesty King Bhumibol Adulyadej in the communication during the Royal Ceremony, by participating in the preparation meeting and regulating telecommunications operators on the relocation of telecommunications lines in the areas of Sanam Luang, in the route starting from Ratchadamnoen Klang Road to Phra Sumen Road and the reserved route on Dinso Road, in order to support the royal ceremony. It also regulated the use of radio frequencies for the communication during the royal ceremonies by the set up of integrated frequency allocation plan to be used in the communication of 18 agencies for 87 frequencies, having set the standards and rehearsal of the action plan. In addition, it had set up an ad hoc unit to monitor the use of frequency to prevent the frequency interference in the use of communication network by arranging the frequency monitoring vehicles and staff to be on duty 24 hours a day, as well as having coordinated with the mobile service providers to expand the installation of base stations to enhance the efficiency for supporting the use of mobile service of people attending the royal ceremony. The NBTC had also supported the installation of radiocommunications stations at the Ministry of Defence to be used for the coordination between communications networks of relevant agencies, and supported the Air Force in the preparation of the plan for preventing radiocommunications devices used in the aircraft without the pilot or the unmanned aerial vehicle (Drone) for maintaining the order in the ceremonial areas and to honor His Majesty King Bhumibol Adulyadej.

**การกิจการสนับสนุน พระราชพิธีถวายพระเพลิงพระบรมศพ
พระบาทสมเด็จพระปรมินทรมหาภูมิพลอดุลยเดช**

ศูนย์วิทยุสายลม

ตรวจสอบฟ้าผ่า

รถยนต์ตรวจสอบความถี่ ๒๕ ชั่วโมง บริเวณมณฑลพิธีท้องสนามหลวง และบริเวณโดยรอบ จำนวน ๕ คัน เพื่อป้องกันและแก้ไขปัญหาการแทรกแซง การรบกวน และ ปัญหาที่เกิดขึ้น



ขยายสถานีฐานโทรศัพท์เคลื่อนที่เพื่อรองรับพระราชพิธี

สำนักงาน กสทช. ประสานให้ผู้ให้บริการโทรศัพท์เคลื่อนที่ขยายสถานีฐานโทรศัพท์เคลื่อนที่ เพื่อเพิ่มประสิทธิภาพในการรองรับพระราชพิธีร่วมกัน



สนับสนุนชุดต่อต้านอากาศยานไร้คนขับ (UAV Jammer)

สนับสนุนความพร้อมอากาศยานในการต่อต้านอากาศยานไร้คนขับปลอมแปลง





ผู้ให้บริการ

nabn. | โทรคมนาคม
 กำกับดูแลเพื่อประชาชน
 Call Center 1599 (ฟรีค่าโทร)

สำนักงานกองทุนและกำกับวิทยุคมนาคม (กท.)
 เมษายน ๒๕ ๖๑

Supporting the Royal Cremation Ceremony of His Majesty King Bhumibol Adulyadej in the communication during the Royal Ceremony

Regulation on Telecommunications Service

In 2017, the NBTC had implemented the important policies in telecommunications service which can be summarized as follows:

1. **Supporting the government’s policy concerning with the dissemination of information through website or online media**, the NBTC has supported the cooperation with Ministry of Digital Economy and Society (MDES), security agencies, internet service providers, international gateway service providers to suppress the dissemination of information that would cause the disorder in the Kingdom or impact on the security of the state or the good moral of people. The cooperation includes monitoring, investigating, and suspending the dissemination of false information, particularly the dissemination of lese-majesty information and destruction of the royal institution which is the crime of violating majesty according to Section 112 of the Criminal Code, as well as having coordinated and consulted with the internet service providers and Internet Gateway service providers on the improvement and development of mechanisms to efficiently and promptly suspend the dissemination of inappropriate information through internet channel. If any website is found to have published inappropriate content after the MDES, who is responsible for the enforcement of the Computer Crimes Act B.E. 2550 (2007) and its amendment, has received the order by the court to suspend the dissemination of the inappropriate information, the MDES will then forward the court’s order to the Office of the NBTC for passing the order to the Internet Gateway service providers for further suspension of the dissemination of such appropriate information, and each service provider shall submit a weekly report of the proceedings to the court’s order to the Office of the NBTC. In case of international online media content providers, such as Facebook and YouTube, the MDES will directly send the court’s order to those online media content providers.



2. **Having replacement of overhead lines with underground cables**, the NBTC has supported the government's policy on the conversion of overhead lines into underground cables to support the development and the increasing demand of use in the digital economy and society. The Office of the NBTC had signed the MOU for the Overhead to Underground Cable System Project to support Bangkok as an ASEAN metropolis, which is the collaboration between the Metropolitan Electricity Authority of Bangkok, the Royal Thai Police, and TOT Public Company Limited with the view to improve the Bangkok's landscape in creating a beautiful and safe city for becoming the metropolis of ASEAN. In 2017, the telecommunication cables have already been installed underground in 9 routes in Bangkok areas, and the Office of the NBTC has planned to install the telecommunication cables to underground in addition 7 routes in 2018 as follows:

The replacement of overhead lines with underground cables

Outcome in the year 2017

Yothi Road (from Soi Senarak to Rama VI)

Yothi Road (from Phayathai Road to Soi Senarak)

Phetchaburi Road (from Banthat Thong Intersection to Uruphong Intersection)

Sri Ayutthaya Road (from the Office of the Higher Education Commission to Phayathai Police Station)

Pradipat Road (from Pradipat Intersection to Saphan Khwai Intersection)

Phahonyothin Road (from Lat Phrao Intersection to Victory Monument)

Phayathai Road (from Victory Monument to Pathumwan Intersection)

Phetchaburi Road (from Phayathai Road to Banthat Thong Road)

Sukhumvit Road (from the Railway to Soi Sukhumvit 71)



Action Plan in the year 2018

Ratchaprarop Road (from Ayutthaya Road to Pratu Nam Intersection)

Rama I Road (from Phayathai Road to Kasat Suck Bridge)

Chitralada Project (from Commercial Phra Nakhon Intersection to Yommarat Intersection)

Sri Ayutthaya Road (from Phayathai Road to Ratchaprarop Road)

Soi Sukhumvit 3 (Soi Nana)

Sathu Pradit Road

Soi Sawang Arom

In addition, the NBTC has issued the Notification on Practical Guideline for the Use, Investment and Construction of Underground Communication Lines Conduits to or with the infrastructure of public agencies for the provision of telecommunication services in order to encourage the operators to share the underground communication conduits for the efficient and worth use of telecommunication resources without redundancy of investment.

3. Having supported and expedited the implementation of internet in villages under the mission on universal basic telecommunication service and social service (USO):

The NBTC recognizes the urgent need to develop digital infrastructure in line with government policies and has committed to providing USO services under the responsibility of the NBTC to help driving the economy at the households, community, society and provincial levels which will further lead to the macro economy impact according to the government's target. Therefore, it has taken the operation according to the laws and the relevant resolutions of the Cabinet by expediting the implementation of the project on the provision of mobile signal and broadband service in 3,920 villages in the border areas, with the budget framework of 13,819.64 million baht, which can be divided into 5 groups as follows: 1) the group of 1,013 villages in the upper part of border areas of 8 provinces in the Northern region 2) the group of 1,014 villages in the lower part of border areas of 9 provinces in the Northern region 3) the group of 1,085 villages in border areas of 18 provinces in the Northeastern region 4) the group of 752 villages in border areas of 24 provinces in the Central and Southern regions, and 5) the group of 56 villages in the 3 Southern border provinces and 4 districts in Songkhla province (Ja Na, Thapa, Na Thawi, and Saba Yoi districts). If the project implementation has been completed and available for service, the people in those areas will be able to use mobile phone service, which will be installed of 4,916 points of signal distribution for providing broadband service with a speed of not less than 30 Mbps. Moreover, the cheaper internet rates will be offered for people living in the areas, as well as a special package for the low-income people wishing to use internet service with a speed below 30 Mbps. However, the project implementation of the Office of the NBTC is under the Integrity Pact agreement under the cooperation project for preventing corruption in public procurement therefore it has operated with transparency and accountability without redundancy of investment with the operation of MDES as the project has been done in the collaboration and integration of information of relevant organizations such as TOT Public Company Limited, CAT Telecom Public Company Limited, etc., for the determination of target areas and dimension of the internet network expansion.

In addition, the Office of the NBTC has complied with Section 24 (4) of the Act on Digital Development for Economy and Society B.E. 2560 (2017), which requires the Office of the NBTC to allocate 15 percent of the spectrum assignment fees and revenues of the Office of the NBTC to the Fund of Digital Economy and Society by delivering the revenues in Q1 – Q3 of the year 2017 to the Fund of Digital Economy and Society, Office of the National Digital Economy and Society Commission at the amount of 1,373.44 million baht.

4. Having raised the awareness of people about the impact of electromagnetic radiation from the mobile base stations on the safety of human health

The NBTC always focuses on monitoring and resolving complaints of people. In 2017, the Office of the NBTC had received more than 118 complaints about the installation of mobile base stations from people as they have been concerned about the impact of electromagnetic radiation from mobile base stations installing in the residential areas and community areas. To reduce the concerns, the Office of the NBTC, therefore, has enhanced knowledge and understanding of people about the impact of electromagnetic radiation continuously, and in the year 2017 it had organized trainings in 5 regions in order to enhance knowledge on the installation of mobile base stations, application for the use of base stations, the strength of the frequency that radiated by the base stations and having affected on human health, including the publication of television movies advertising on “the spectrum is not as harmful as thought”, broadcasting on television from 1 February – 31 March 2017 that can reach 60 percent of the target group (people nationwide in the age of 15 and over, of approximately 33.9 million persons have watched the television spots at least 1 time). It also published videos media, radio spots, and printed media about the impact of electromagnetic radiation from mobile base stations on the safety of human health through the website of the Office of the NBTC.

In addition, the NBTC has required telecommunication licensees to comply with the guidelines for making understanding of the public regarding the installation of radiocommunications stations, in accordance with the NTC Notification on the Criteria and Measures to Regulate the Safety of Human Health from the Use of Radiocommunications Devices which prescribing that the telecommunication licensees must arrange a meeting to enhance the understanding of people living in the areas that radiocommunications stations will be installed or the nearby areas by coordinating with community leaders such as the Village Headman, Sub-district Headman, Chairman of Community, Chairman of the Juristic Person of Developed Housing, District Chief, Mayor of Sub-district Administration Organization, and Mayor, to invite people to the meeting for clarifying and making people understand in order to reduce the concerns.

5. Having regulated radiocommunications devices to be used in the unmanned aerial vehicles which are remotely controlled (Drone)

The NBTC had supported the government policy in the regulation of radiocommunications devices to be used in the unmanned aerial vehicles which are remotely controlled (Drone) by issuing the NBTC's Order on the registration of drones which prohibits the use of Drones unless having been registered. For the registration of drone possessor, it can be made at the Office of the NBTC, the Office of the NBTC Region and the Office of the NBTC Sub-region, police stations, or the Civil Aviation Authority of Thailand; while the registration of drone controller, it can be made at the Civil Aviation Authority of Thailand. The registration is to maintain of public order and to protect the kingdom.

6. Improving the regulation and ensuring people of the use of PromptPay

The NBTC has collaborated with the Bank of Thailand (BOT) to enhance the regulation of telecommunication industry sector and financial industry sector to promote the development of digital ecosystems and support the development of innovative services. In 2017, the Office of the NBTC and BOT have collaborated for the operation of a new model of money transfer and receipt service or "PromptPay" between Thai Bankers' Association and the Telecommunications Association of Thailand under the Royal Patronage in order to push forward and support the data link of mobile subscribers and PromptPay users including the cooperation encouragement between mobile service providers and commercial banks to support the government's policy under the National e-Payment Project of the government.

7. Having organized the auction of beautiful mobile numbers

The NBTC had operated under the NBTC Notification on Criteria for Mobile Number Allocation in terms of Beautiful Numbers to provide the opportunity to people to access beautiful numbers equally and thoroughly and bringing the utmost benefits to the state. The NBTC had organized an auction of beautiful numbers in the year 2016, and later on, in the year 2017, three auctions of beautiful numbers were held, and the revenues from the auctions were totally 253,663,873 baht. The Office of the NBTC will deliver the revenues of the auction, after deducting expenses, as state revenue. Besides, it had managed telecommunication numbers by launching a new system of Mobile Number Portability service (MNP) to reduce the porting duration from 3 working days to 2 working days, as well as supporting the implementation of mobile subscriber registration system or "3 Grab" application of the Ministry of Post and Telecommunications, Lao People's Democratic Republic.

8. Supporting and regulating the provision of broadcasting or television service through any other network beyond broadcasting or television network (Over the Top : OTT)

The NBTC has promoted and prepared the guidelines for regulating the OTT service which is an audio, video, and other media services providing on an application over the internet. During 12 - 13 September 2017, the Office of the NBTC



had hosted the ATRC Dialogue between the OTT operators and telecommunication operators of 10 ASEAN countries in Bangkok and the outcome of the meeting had been concluded in principle of promoting and regulating OTT service that Thailand shall focus on 4 major issues as follows: 1) tax policy 2) consumer protection on personal information 3) sensitive content such as religion, culture, politics, and 4) promotion of equal competition, by taking into account the variety of services available to the public.

9. Setting the maximum credit limit of accumulation balance for charging prepaid services in telecommunications service for mobile service

At present, mobile top up of prepaid service can be used for purchasing services in a wide range which could be a legal channel for money transfer such as money laundering, etc. The NBTC who is responsible for regulating the charge of prepaid mobile services in telecommunications service, therefore, has considered the measures for setting the maximum credit limit of accumulation balance for prepaid mobile services to reduce the risk and impact that may occur which is in line with the government policies in the operation for raising the trust on using the service for financial transaction of people and preventing the risk of financial frauds. In 2017, the NBTC has drafted the NBTC Notification on Setting the Maximum Credit Limit of Accumulation Balance for Charging Prepaid Services in Telecommunications Service for Mobile Service which requiring the mobile service licensees to set the maximum credit limit of accumulation balance for charging of prepaid services in telecommunications service for mobile service of not exceed 10,000 baht. In the case that the user has the maximum credit limit of accumulation balance of more than 10,000 baht prior to the effective date of this Notification, the licensee must not allow the user to top up the service until the maximum credit limit of accumulation balance of the user will be less than 10,000 baht. In addition, the licensee must require the user to be able to exchange the maximum credit limit of accumulation balance which exceeds 10,000 baht to number of the active dates with the maximum rate of up to 2 baht and the user must receive an additional usage period of not less than 30 days per one exchange, as well as the user must be informed of the exchange rate of the excess maximum credit limit of accumulation balance by the licensee through any channel.

10. Preparation for spectrum auction for telecommunications service

The NBTC has prepared for the licensing to use spectrum to support the termination of the concession in the year 2018 by establishing a working group to set up the criteria and procedure for the licensing to use spectrum in the frequency band of 885 – 895/930 – 940 MHz and 1740 – 1785/1835 – 1880 MHz, and formulating 4 Notifications consisting of the (draft) NBTC Notification on Criteria and Procedure for the Licensing to Use Spectrum for Telecommunications Service in the frequency band of 890 – 895/935 – 940 MHz, the (draft) NBTC Notification on Criteria and Procedure for the Licensing to Use Spectrum for Telecommunications Service in the frequency band of 1740 – 1785/1835 – 1880 MHz, the (draft) NBTC Notification on Radio Frequency Plan for International Mobile Telecommunications (IMT) in the frequency band of 824 – 839/869 – 884 MHz, and the (draft) NBTC Notification on Radio Frequency Plan for Mobile Service in the frequency band of 885 – 895/930 – 940 MHz. Moreover, the NBTC has been in the process of drafting the NBTC Notification on Criteria, Procedure and Conditions for Spectrum Refarming in order to improve the spectrum assignment and encourage the efficient use of the spectrum.

11. Consumer protection in telecommunications service

The NBTC has encouraged and supported the people to use telecommunications service knowingly and be able to protect their rights through meetings, trainings, and dissemination of relevant information and media. In 2017, the Office of the NBTC has issued the Declaration of Rights of mobile phone users No. 2 and publicized to the users so that they shall be aware of the consumers' right concerning the use of prepaid mobile service, postpaid mobile service, selection of using mobile service, mobile number portability, cancellation of SMS spam by dialing *137 (free of charge), termination of international roaming service by dialing *106# (free of charge), filing complaints arising from the use of mobile service as well as promoting the development of digital technologies to increase the efficiency in consumer protection. Also, a 3-tiered application (check, notify, lock) has been developed to provide people with tools for checking mobile numbers having been registered under their names from database of all networks; notifying the strange number registering under their names or their numbers which are not shown in the database, and locking the activation of new number in order to prevent themselves from being stolen of identity card by other persons to register for new mobile number activation. In addition, the Application to Prevent the Disturbance

has been developed to help protect the right of privacy of mobile phone users in case of being disturbed by a phone call. The application users can report the telephone number which causing nuisance to the Office of the NBTC through the system and the phone number will be blocked after being verified by the inspection unit. The NBTC has also been in the process of developing the **Net Care Application** to take care of the internet access for family so that parents or interested people are able to use for taking care of their children or family's members on the internet access, and the **Mocheck Application** to facilitate people and interested parties to access to information of certified telecommunications equipment.



12. Developing the system for receiving notifications of assisting Thai people in foreign countries and human trafficking via one telephone number worldwide, in cooperation with the Ministry of Social Development and Human Security

The NBTC has cooperated with the Ministry of Social Development and Human Security for developing the system for receiving notifications of assisting Thai people in foreign countries and human trafficking via SMS and one telephone number worldwide +66 9 9130 1300 to enhance the assistance of Thai people in foreign countries who faced social problems quickly, effectively and on the situation.

13. Ensuring the confidence and security of the use of mobile service by having SIM cards registered with a new digital identity platform

The NBTC has its policy to support the new system for mobile SIM cards registration with a new digital identity platform which the system will verify their face recognition or finger prints with a view to protecting mobile users from unauthorized use, preventing from being referred stealthily or false identity. People who buy new prepaid SIM cards are able to register by new digital identity system at any service centers of mobile service providers nationwide effective from 15 December 2017. For the people who buy new mobile SIM cards either prepaid or postpaid system, they are able to register by new digital identity system at all points of service nationwide such as Modern Trade, distributors and mobile shops, from 1 February 2018 onwards.



14. Having regulated the provision of a special rate of mobile service for people with disabilities

The NBTC has regulated the telecommunications licensees who obtain the 1800 MHz and 900 MHz spectrum license to comply with the license conditions which prescribed a special rate of mobile service for people with disabilities. Under an MOU with Department of Empowerment of Persons with Disabilities, the Ministry of Social Development and Human Security on information linkage and exchange of people with disabilities in order to access to telecommunications services. The right to be received consists of 1) discount of mobile phone service rates at a minimum 10 percent off the regular package rates, and 2) the internet usage speed of at least 1 Mbps throughout the use of every package.

Regulation on the Broadcasting and Television Services

In 2017, the NBTC had implemented the policies in broadcasting and television services as follows:

1. Supporting the television business operation to build confidence of operators both public and private sectors

under the measure for supporting the broadcasting, television and telecommunications business operation for public benefit to be in line with the Order of the Head of National Council for Peace and Order No. 76/2016 dated 20 December 2016 as follows:

- Having approved the support on the expense of satellite television transmission in general service to the licensees according to the type of definition granted but the people must be able to watch television in general service universally. The NBTC has supported the expense for the transmission of satellite public television service to the regular-definition licensees for 16 television channels, and the high-definition licensees for 10 television channels in the budget framework of not exceed 616,464,000 baht/year. However, the support in the rest of the 1st year, (1 September – 19 December 2017) within the budget of 185,783,671.23 baht shall be disbursed according to the evidence of original receipts.

- Having approved the support on the expense of satellite rental only for Royal Thai Army Radio and Television, program channel of satellite television station, Thai TV Global Network, within the budget framework of 216 million baht for 3 years starting from 10 January 2017 to 9 January 2020. The disbursement shall be done quarterly according to the evidence of original receipts.

- Having approved the extension of payment period of the license fee to use the spectrum for the provision of digital terrestrial television service (auction money) for 14 companies (17 licensees) starting from the 4th installment. For the 10 percent payment of the fee of the rest of the minimum price shall be divided into 2 installments, while the 60 percent payment of the fee of the exceed of the minimum price shall be divided into 6 installments in order to help ease the burden of digital TV operators, the NBTC has regulated the digital terrestrial television business under its power and duties prescribed by the laws and strictly in line with the relevant notifications and criteria by taking into account the public benefit in accessing an accurate, complete, comprehensive and variety of information, as well as maintaining the free and fair competition. However, the digital television business operation has been continuously suffering from the change of technology and consumer behavior, the Digital TV Association has thus requested the Office of the NBTC for considering the problem resolution, and the Office of the NBTC has proposed the solution to the NCPO for resolving the problems as follows:

- Having seen as appropriate that the digital TV operators may request for suspending or discontinuing the payment of license fees to use spectrum for the digital terrestrial television business operation, in category of national commercial service, (auction payment) for a temporary period of 3 years (suspend repayment) for the payment installment of the year 2018 – 2020 in order to ease the burden of the digital TV operators for the spectrum auction payment of the remaining amount. However, those operators wishing to suspend repayment shall pay interest to the Office of the NBTC at the same rate of the interest rate policy set by the Financial Policy Committee, Bank of Thailand. The implementation of these guidelines will not create damages to the state and, at the same time, be beneficial to the digital TV operators. Nevertheless, the Office of the NBTC shall not exclude or require the operator to terminate the spectrum auction payment for the total remaining amount as it will have an effect on other spectrum auctioneers and lead to the disadvantage of the state.

- Having seen as appropriate that the balance from the implementation of the project to support people in transition to the viewing of digital terrestrial television through the distribution of digital TV coupons to the people for redeeming the (set-top-box or digital television set) which is expected to be 2,000 million baht approximately should be delivered as the state revenue. In this regards, the Office of the NBTC has considered that if the government or the NCPO considers that a support or promotion should be provided to the digital television industry and related business to ease of burden of the digital television operators from the network rental fee for frequency-used digital terrestrial television (MUX), then the balance from the implementation of the project to support people in transition to the viewing of digital terrestrial television can be used. Initially, it was deemed appropriate to provide a financial support at the amount of not exceed 50 percent of the monthly network rental fee for a 2-year period or according to the consideration of the government or NCPO.



2. Supporting people in the transition to the viewing of digital terrestrial television continuously

The NBTC has been approved by the Head of the National Council for Peace and Order to distribute digital TV coupons for 22.9 million coupons within the budget framework of 15,801 million baht so that the people can use for redeeming of 3 types of television equipment in digital system as follows: 1) Set Top Box 2) Set Top Box that can receive digital television signal of both DVB-T2 terrestrial system and DVB-S2 satellite system in the same box; and 3) television set with a built-in digital tuner (iDTVs). The coupons were redeemed by people for 8,722,768 coupons, or accounting for 64 percent. From October 2014 to May 2015, the NBTC had distributed coupons in phase 1 for totally 13,571,296 coupons; and later on, in the year 2017, the NBTC had distributed coupons in phase 2 to totally 3,984,662 households. The pattern of distributing coupons has been adjusted to facilitate people by using Smart card to verify the eligibility. At present, there are totally 1,143,186 households who exercised their eligibility⁴ consisting of 1) the households who are eligible for receiving digital TV coupons in the 1st phase, but have not received the coupons (only the coupons that Thai Post Company Limited had returned to the Office of the NBTC) 2) the households having house registration and house owners after 16 September 2014 3) the households having house registration and residents but no house owners, and 4) the households having temporary house registration and house owners. The eligibility had been started from 2 March 2017 to 31 March 2018, and the total number of people who exercised the eligibility⁵ was currently 1,143,186 households. However, the Office of the NBTC sees as appropriate to deliver the balance of the project implementation disbursement, which is the money paid by the digital TV operators for the payment of winning auction to the Office of the NBTC, to the BTFP for the implementation of the project in the 1st installment at the amount of 11,943.5 million baht. If people have not exercised their eligibility, there will be a balance from the project implementation to be further delivered as state revenue by the Office of the NBTC which is expected to be approximately 2,000 million baht.

In addition, the NBTC has focused on the working collaboration and publicizing useful information concerning the television viewing of people to all sectors in order to enhance better understanding on the Analog television switch-off and the transition to digital television system. In the year 2017, the NBTC has enhanced the understanding of people for a good attitude and satisfaction in watching digital television through a variety of communication tools and channels, such as the distribution of TV Guide journals, the dissemination of program guide, useful content and other movement of digital TV, the information publication via internet channel under the concept “Switch over to Digital TV, Watching the High-Definition Free TV throughout Thailand”, and the publication to enhance knowledge and understanding about the mobile towers installation, eligibility verification for redeeming the set-top-box, etc.

3. Improvement of license fee and support on the reduction or exclusion of the fee to be appropriate

- **Reviewing the rate of license fee** of broadcasting or television service to be the same rate with the annual license fee for telecommunications service, in accordance with the technology convergence and regulatory convergence of broadcasting, television and telecommunications services which will promote the efficiency of industry and build stability for the overall economy of the country. The Office of the NBTC had held a public hearing on the draft NBTC Notification on License Fees of Broadcasting or Television Business (No. 3) and prepared the conclusion of the public hearing to the NBTC meeting for consideration on 27 December 2017.

⁴ The National Council for Peace and Order has ordered the NBTC to survey a certain number before proceeding to the next step for the group of “the official residence of government agencies, state enterprises or other state agencies” and Group 6 “the public service point of government agencies, state enterprises or other state agencies”. The NBTC has thus carried out the operation as follows: 1) sending letters to 376 government agencies, state enterprises or other state agencies to survey of needs of the set-top-box and requesting the return of the answer by filling in the e-form available on the NBTC website by 31 March 2018. At present, (data as of 25 December 2017) there are requests of government agencies, state enterprises or other state agencies for 295,641 set-top-box, and 2) having contacted the Information and Communication Technology Center, Office of the Permanent Secretary of the Ministry of Finance requesting for information related to the Registration for State Welfare Project for being used as data for distributing the set-top-box to the above groups of people prior to the analogue switch-off.

⁵ Data as of 25 December 2017

- **Setting measures for revenue deductions of the licensees which will be delivered to the BTFP**

In 2016, the NBTC has issued the Notification on Criteria and Procedures of the Delivery of Annual Payment to the BTFP of the Broadcasting or Television Operators which requiring that the licensee, who provides the general television service according to the NBTC Notification on Criteria for Broadcasting the General Television Services or as prescribed by the NBTC, shall be deducted of the annual payment by the cost of operation before delivery to the BTFP. In 2017, the NBTC has therefore set up the guidelines for the cost deduction as follows:

1) The submission of the cost of operation according to the Notification on Criteria for Broadcasting General Television Services to be deducted for the annual payment according to the Notification Criteria and Procedures of the Delivery of Annual Payment to the BTFP of the Broadcasting or Television Operators, is the deduction of the revenue (before the expense deduction). The licensee who requests for the deduction must be the person who complies with the Notification Criteria for Broadcasting General Television Services.

2) The licensee for the provision of satellite television network service who has completely applied to the Notification on Criteria for Broadcasting General Television Services and the Notification on Criteria regarding the Order Arrangement of Television Service is able to apply the actual expenses for the revenue deduction according to the prescribed items such as the group of digital terrestrial television service providers who have already been supported of the cost of operation by the BTFP according to the Notification on Criteria for Broadcasting General Television Services, will not be able to request for deduction, and the group of satellite television network service providers can request for the deduction by applying the necessary cost incurred from the operation in line with the Notification on Criteria for Broadcasting General Television Services and the Notification on Criteria regarding the Order Arrangement of Television Service but the cost must show the evidence of the operation and expenses in supplement to the delivery of annual payment.

3) The licensee for the provision of wire television network service who has completely applied to the Notification on Criteria for Broadcasting General Television Services and the Notification on Criteria regarding the Order Arrangement of Television Service is able to choose the method for revenue deduction by the cost of equipment in two ways: the actual cost or the rates prescribed. However, the revenue deduction shall be not exceeded the revenue from the operation of broadcasting business and television business and the deduction practice shall be enforced within 3 mandatory fiscal years or the enforcement to comply with the Notification on Criteria for Broadcasting General Television Services unless other measures will be prescribed by the NBTC.

- **The deduction of annual license fees for royal ceremonies programs or programs in continuation to the passing of His Majesty King Bhumibol Adulyadej:** The NBTC has supported on the deduction of annual license fees for royal ceremonies programs or programs in continuation to the passing of His Majesty King Bhumibol Adulyadej in the year 2017 by considering the measures to assist the digital terrestrial television operators and having approved the deduction or exclusion of annual license fees as follows:

1) Programs having broadcasted on digital terrestrial television from 13 October 2016 onwards for 24 hours a day in a 30-day period, are considered as news or documentary program which is useful for the public, being used as the supplement for the request or deduction or exclusion of annual license fees.

2) Broadcasting of special programs is considered as news or documentary program which is useful for the public which can be additional counted on the number of broadcasting hours, being used as the supplement for the request or deduction or exclusion of annual license fees, such as

– Program on “Thailand Moving Forward”, Program on “Returning Happiness to Thai People”, and programs concerning with the National Council for Peace and Order, shall be counted for 1.5 times of the number of broadcasting hours being used as the supplement for the request or deduction or exclusion of annual license fees.



- Program on “The King’s Philosophy and Sustainable Development”, Programs relating to the Royal Duties, Concepts and Philosophy of His Majesty King Bhumibol Adulyadej and the Documentary Programs to Honor the Mercy of His Majesty King Maha Vajiralongkorn Bodindradebayavarangkun, shall be counted for 2 times of the number of broadcasting hours being used as the supplement for the request or deduction or exclusion of annual license fees.

4. Regulation on the expansion of digital terrestrial television network

The NBTC had followed up the problem resolution of the use of frequency in the transition to the digital television transmission by setting the roadmap the expansion of digital terrestrial television network to cover 95 percent of households nationwide within 4 years in which the licensee must install totally 168 radiocommunications stations as prescribed in the conditions attached to the broadcasting or television license for the provision of the frequency-used digital terrestrial television network, national level. At present, there is only one licensee who has yet installed the radiocommunications stations to be in accordance with the Roadmap.

Diagram : Roadmap for the expansion of digital terrestrial television network (1st year – 4th year)

1 st Year (Apr 2013 – Jun 2014)			
Installed stations	Targets coverage	1 Apr 14	● Bangkok, Nakhon Ratchasima, Chiang Mai, Songkhla
11 high power stations	50% of households	1 May 14	● Ubon Ratchathani, Surat Thani, Rayong
1 low power station		1 Jun 14	● Singburi, Sukhothai, Khon Kaen, Udon Thani, Hua Hin

2 nd Year (Jun 2014 – Jun 2015)			
Installed stations	Targets coverage	1 Aug 14	● Roi Et, Chiang Rai, Srakaew, Nakhon Sawan
28 high power stations	80% of households	1 Oct 14	● Nakhon Si Thammarat, Phuket, Trang, Surin
7 low power stations		1 Dec 14	● Sakon Nakhon, Lampang, Nan, Phetchabun, Prachuap Khiri Khan

		1 Feb 15	● Kanchanaburi, Chumphon, Trat, Mukdahan, Tak
		1 Apr 15	● Mae Hong Son, Ranong, Loei, Chaiyaphum, Phrae
		1 Jun 15	● Satun, Uttaradit, Bueng Kan, Si Sa ket, Yala
		15 Jun 15	● Chum Phuang, Khao Yai Tieng, Buriram, Chum Phae, Phayao (Mueang)

3 rd Year (Jun 2015 – Jun 2016)			
Installed stations	Targets coverage	1 Dec 15	● Khao Pom Koh Samui, Chai Prakan, Thern, Tub Sakae
0 high power station	90% of households	1 Feb 16	● Khao Chalak, Takua Pa, Betong, Pattaya, Phu Hin Khan (Mukdahan)
37 low power stations		1 Jun 16	● Krabi, Kamphaeng Phet, Chiang Klang (Doi Hin Kaeo)/Pua, Tha Sae

4 th Year (Jun 2016 – Jun 2017)			
Installed stations	Targets coverage	1 Feb 17	● Samut Songkram, Kantharalak, Phrao, Li, Wiang Haeng, Chiang Khong, Kok Charoen, Phanom (Thap Christ), Khiri Rat Nikhom,
0 high power station	95% of households	1 Apr 17	● Jom Bueng, Sai Yok (Khao Pa Ham), Ta Phraya
84 low power stations		1 Jun 17	● Bo Thong, Phong Nam Ron, Nong Bua Daeng 2, Buntharik, Nam Yuen, Kaeng Khro (Phu Pha Daeng), Wang Nuea, Wang Chin, Khlong Lan,

		15 Jun 17	● Thong Pha Phum, Plai Phraya, Thepha, Na Thawi, Thatakiap, Sangklaburi, Nong Prue, Dan Chang, Chai Badan, Chanthaburi, Kaeng Hang Maew, Pak Nam Pran, Khao Salat Dai Wang Nam Khiao, Phuk Dee Chumphon, Thep Sathit, Nang Rong, Pathum Ratchawongsa, Pho Sai, Dong Luang, Khao Wong, Nong Hin, Chiang Klom, Ban Phaeng, Mae Jam, Samoeng, Mae Ai, Ngao, Mae Fah Luang, Wiang Kaen, Phu Sang, Phong, Chiang Muan, Nam Pat, Tha Song Yang, Khao Kho, Chon Daen, Sawe, Kra Buri, Wiang Sra, Koh Phangan, Patong, Thung Maphrao, Khao Dat Fah, Khao Khuha, Mueang Yala, Panareh, Phato, Kapoe, Khao Laem Hin Chang, Khura Buri, Palian, Karon, Ban Kamala, Phu Wiang

Data as of 5 January 2017,
Broadcasting Technology and
Engineering Bureau,
Office of the NBTC

In 2017, the NBTC has followed up and regulated the network expansion of digital terrestrial television through key mechanisms such as requiring licensees to submit a monthly report of the result of the installation of radiocommunications stations and quality of network service provision to the Office of the NBTC, setting up a working group to monitor and supervise the network expansion, having applied the administrative measures in cases of the delay of installation of radiocommunications stations for the provision of network service which failed to comply with the conditions attached to the license or the criteria set by the NBTC. In the past, the administrative measures had been applied to the network operators on the above case by issuing orders to accelerate the installation of radiocommunications stations for totally 7 times.

5. Consumer Protection in Broadcasting and Television Services

The NBTC has carried out activities on consumer protection in the broadcasting and television services in order to protect the consumers' right to receive useful information completely and correctly. Consumers are also protected against the access to inappropriate media, personal information, and the right to access and utilize media through a standardized and effective regulatory mechanism. The important performance in 2017 is as follows:

5.1 Promotion and protection of the rights of people with disabilities to access, receive and utilize contents of television service

In order to promote and protect the rights of people with disabilities to access media and information completely, the NBTC has carried out important activities as follows:

- Setting up criteria according to the NBTC Notification on Promotion and protection of the rights of people with disabilities to access, receive and utilize contents of television service such as the NBTC Notification on guideline for conducting sign language interpreter, caption service, audio description for television service provision and regulating business operation according to the Notification, as well as organizing trainings for operators of broadcasting and digital television services in order to enhance body of knowledge for conducting caption service and audio description for the access to information of people with disabilities.
- Promoting the rights of the people with disabilities by organizing meetings with each type of disability and relevant professional organizations in order to gathering views and information for the operators so that they can provide appropriate services in accordance with the demands of people with disabilities.
- Enhancing knowledge and understanding about the rights to receive and utilize information of the people with disabilities by organizing trainings for raising awareness of the right to communicate of people with disabilities (hearing).
- Building a prototype of the provision of appropriate services for the benefit of the people with disabilities by producing a prototype of a television program with sign language interpreter, caption service, audio description to be used as the program prototype that everyone can access.

5.2 Strengthening consumers and enhancing knowledge and understanding on consumers' right and media literacy

(1) Strengthening consumers' network in broadcasting and television services

- Organizing a forum for promoting the establishment of consumer networks and implementing projects for strengthening consumers' network in regional level, as well as promoting and supporting the organization of campaign activities to raise awareness of consumers' right in the radio and television media for consumers groups in 4 regions.
- Providing a variety of channels for communication to enhance knowledge and understanding, filing complaints, inquiries, and collecting necessary information concerning consumer protection continuously.



(2) Enhancing media literacy of people

- To promote the application of knowledge on radio and television media literacy in higher education, in cooperation with 13 educational institutions covering 4 regions, through organizing workshops to enhance knowledge and understanding of personnel in education in the higher education in areas of Mass Communication and Science of Education and be equipped with a variety of techniques or methods so that they will be able to apply the contents or text on media literacy to the teaching and learning efficiently. Also, the 13 educational institutions in higher education/universities have been supported to provide teaching and learning in integrated media literacy in Mass Communication and Science of Education, appropriately.

- To promote media literacy in the 36 non-formal education institutions through organizing workshops to exchange knowledge and encourage the participation in the promotion of radio-television media literacy of domestic educational institutions, as well as to drive the work on promoting and supporting the potential enhancement of the people on media literacy in broadcasting and television services continuously under the name "Association for Media Literacy".

International Affairs in Broadcasting, Television and Telecommunications Services

The NBTC has supported and encouraged the collaboration among relevant organizations whether public sector, private sector or international organization in order to exchange views, enhance body of knowledge, including academic cooperation between agencies for the development of broadcasting, television and telecommunications services of the country. The important activities in the year 2017 are as follows:

1. Having signed the MOU on Broadcasting Content between the Office of the NBTC and Korea Communications Commission (KCC) on 20 February 2017 at the Office of the NBTC, Bangkok, to strengthen cooperation between the two regulatory bodies of both countries and encourage the cooperation among television operators on program content production, as well as to exchange information on television service regulation and policies related to program content between the two countries.

2. Having organized the Asia Pacific Regional Internet Governance Forum 2017, in cooperation with Chulalongkorn University, during 26 – 27 July 2017 in Bangkok, with a view to exchanging views on problems and solutions for managing the use of internet.

3. Having arranged the signing ceremony of the Letter of Intent (LOI) with Malaysian Communications and Multimedia Commission (MCMC) on 3 August 2017 at the Office of the NBTC, Bangkok, in order to set up a cooperation framework between regulators for the operation and the development of regulatory approaches of both countries, including the exchange of information on telecommunications service, broadcasting service, personnel exchange, and organizing trainings, seminars or other activities under the APEC, APT, ITU and ASEAN framework.

4. Having organized the "International Satellite Symposium 2017", in cooperation with International Telecommunication Union (ITU), during 31 August – 1 September 2017 in Bangkok, to exchange views among relevant organizations, such as the policies-making and planning organizations, regulators, and communications operators, and to enhance knowledge on the use of frequency and satellite orbit.

5. Having organized the "Digital Financial Inclusion Symposium 2017" on 11 September 2017 in Bangkok to enhance the public and private sectors, financial institution, and representatives of ASEAN members countries of the policies on Digital Financial Inclusion including the development of technology to facilitate the e-Transaction via mobile phone to be more secured as well as help building confidence of customers.

6. Having organized the meeting on “Over the Top (OTT)” in cooperation with the ASEAN regulators during 12 – 13 September 2017 in Bangkok in order to support the cooperation framework in setting the operating guidelines for OTT services in ASEAN region.

7. Having organized the 56th APEC Working Group on Telecommunications and Information Meeting on 11 December 2017 in Bangkok to discuss the concept of regulating OTT services in APEC economies.

8. Having organized the “NBTC International Conference on Policy for Cyber Sustainability – A Global View” during 14 – 15 December 2017 in Bangkok to exchange views and experiences on e-Transactions, and to discuss ways to prevent damages on cyber-theft as well as being a platform for exchanging technical information in telecommunications service.

9. Having organized activities under the MOU between the Office of the NBTC and Ministry of Post and Telecommunications of Lao PDR, to resolve frequency interference in border areas and telecommunications regulation. One of activities under the MOU, the Office of the NBTC has developed the mobile subscriber registration system or “3 Grab” application for the Ministry of Post and Telecommunication of Lao PDR in which the Lao PDR has planned for trial operation as follows:

- 1 October 2017: Having launched the “3 Grab” application system, SIM card registration will be applied to either existing activated SIM cards or new SIM cards activation.
- 1 January 2018: Non-registered SIM cards shall be suspended (duration for SIM cards registration in case of existing activated SIM cards is 3 months).



PART 3

Major Performances of
the Office of the **NBTC**

in 2017



The background of the top section features a light blue world map on the left and a network diagram with nodes and connecting lines on the right. The title text is positioned on the right side of the map.

Major Performances

of the Office of the
NBTC in 2017

The Office of the NBTC has committed itself to push forward the mission of the organization according to its powers and duties stipulated by the Act on Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services B.E. 2553 (2010) and its amendment (No. 2) B.E. 2560 (2017) and collaborated with related agencies in all sectors in order to drive the development of broadcasting, television and telecommunications businesses including carrying out important activities to support the government's policies and national plan on the sustainable digital development for economic and society to meet the country's goal. Major performance of the Office of the NBTC in 2017 is as follows:

Organization Management

The Office of the NBTC focused on developing organization to be efficient, transparent and acceptable, both in national and international levels, by taking into account the significance and necessity of the development of a potential organization in order to operate effectively under the good governance, international standard, and a dynamic environment. In addition, the Office of the NBTC had improved the internal working system in order to support the good governance and enhance the potential of personnel to keep up with change. Besides, with the realization of the provision of service to the people in all regions, the Office of the NBTC has pushed forward its operation as planned as well as prepared for the future missions and challenges. In 2017, major operation is as follows:

- Having appointed the Sub-committee and working group to support the good governance of the Office of the NBTC in which experts from relevant organizations were invited to participate for setting up the policy on Organizational Governance (OG).
- Having carried out activities under the cooperation between the Office of the NBTC and Office of the National Anti-Corruption Commission (NACC) according to the intention for being the Organization of Transparency and the good model of action.
- Having developed the quality management system towards international standard ISO 9001: 2015 continuously since the year 2013 to ensure that the quality management system of the Office of the NBTC has met international standard ISO 9001: 2015.
 - Having improved 6 regulations relating to internal organization administration to be more efficient.
 - Having improved the performance (5S) of the Office of the NBTC in 2017 in order to encourage self development, work development, working place development and promoting the unity of the personnel.
- Having carried out the Knowledge Management (KM) project of the Office of the NBTC and the NBTC KM DAY in 2017 in order to promote innovation and learning culture for building communication of practice.



- Having carried out the project on knowledge sharing to the brothers and sisters of the Office of the NBTC in 2017 which consisted of interesting topics such as “Knowing and Understanding the Facts of OTT”, “Adaptation to Digital Economy Policy under the Digital Development Act for Economy and Society B.E. 2560 (2017)”, “ICT Trends and DX strategies and hot topics from MWC 2017”, etc.

- Having published the NBTC Journal 2017 to be used as a source of body of knowledge and researches related to spectrum management, regulation on the broadcasting, television, and telecommunications service, and a significant starting point for developing academic cooperation with public, private or academic sector. All parties were invited to submit journals and researches for being selected and published in the Annual NBTC Journal.

- Having established additional 4 Offices of the NBTC Sub-region which are located in Ang Thong, Ratchaburi, Nakhon Phanom and Nakhon Sawan, in order to facilitate the people and provide services to be covered all regions.

Follow-Up and Monitoring of the Spectrum Broadcasting, Television and Telecommunications Services



In order to ensure of the appropriateness and utilization of the national spectrum for the utmost benefit and without frequency interference, the Regional Offices of the NBTC have monitored and measured radio frequency propagation, and regulated the use of frequency so as to be in line with related criteria and technical standards under the cooperation with both domestic and international agencies, in which the operation was under the ISO 9001: 2008. Also, in 2017, the Office of the NBTC had cooperated with military and police officers in searching and arresting the radio frequency offenders with the results as follows:

1. Monitoring radio frequency occupancy

Having monitored the use of frequency or frequency occupancy in the entire band of 30 – 3000 MHz in order to control the use of frequency to be in line with criteria, provisions and conditions prescribed by the Office of the NBTC and set up database of the occupancy of radio frequency channels to be used for the efficient frequencies allocation, both in case of new frequency allocation channel, sharing frequency channels, refarming of unused frequency, and being a preliminary data for monitoring the unauthorized frequency, in which the results of the monitor and suspension of the acts of violators will be magnified in due course.

The results of radio frequency occupancy monitoring in the frequency band of 30 – 3000 MHz

Frequency (MHz)	Frequency channels	Monitoring the use of frequency		Volume of frequency (percent)
		Used	Non-used	
30 – 245	989,617	18,976	970,641	1.92
245 – 470	807,801	47,437	760,364	0.06
470 – 1427	1,172,314	31,575	1,140,739	2.69
1427 – 3000	261,714	5,196	256,518	1.99

Remarks : Data as of January – November 2017

2. Monitoring radio frequency diffusion standard

To prevent the frequency interference between radiocommunications stations which may be caused by technical defects or others and to examine the quality of service provision of broadcasting and telecommunications operators, the Office of the NBTC had conducted the parameters for technical measurement of the diffusion of radio frequency as follows:

Type of stations	Parameters to be examined
1. Mobile phone/radiocommunications base stations	<ul style="list-style-type: none"> - Frequency Tolerance - Bandwidth - Unwanted Emission - Antenna Height
2. Radio broadcasting stations/high power TV stations	<ul style="list-style-type: none"> - Frequency Deviation Limits
3. Radio broadcasting stations (trial operation)	<ul style="list-style-type: none"> - Frequency Tolerance
4. Digital TV stations (trail operation)	<ul style="list-style-type: none"> - Bandwidth - Unwanted Emission - Field Strength - Antenna Height

In 2017, the monitoring results of radio broadcasting stations/TV stations (analog), radio broadcasting stations (trial operation), analog/digital TV stations, mobile phone base stations for 4,342 stations had shown that 4,306 stations have met the standards prescribed while 36 stations of radio broadcasting stations (trial operation) have failed to meet the standards.

The results of monitoring categorized by type can be summarized as follows:

Type	Office of the NBTC Region 1		Office of the NBTC Region 2		Office of the NBTC Region 3		Office of the NBTC Region 4		Total	
	Standardized	Non Standardized	Standardized	Non Standardized	Standardized	Non Standardized	Standardized	Non Standardized	Standardized	Non Standardized
Mobile phone base stations	315	-	456	-	490	-	667	-	1,928	-
High power radio broadcasting stations	85	-	120	-	403	-	139	-	747	-
Radio broadcasting stations (trial operation)	251	13	347	2	589	21	72	-	1,259	36
Analog/digital TV stations	76	-	26	-	64	-	242	-	408	-

Remarks : Data as of January – November 2017



3. Monitoring and resolving radio frequency interference

In 2017, it is found that the statistics of the total number of radio frequency interference notification received by the Office of the NBTC was 313 issues and most of them were in the aeronautical radio service. Therefore, the Office of the NBTC has given the priority to the resolution of the aeronautical radio interference problems speedily to prevent communication problem which may cause an aviation insecurity by having monitored and applied relevant measures including suspended the use of frequency interfered.

The statistics of radio frequency interference in services provided in 2017

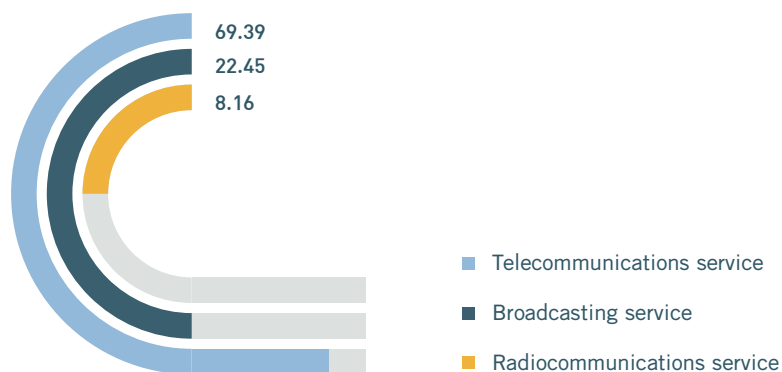
Organizations	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
Aeronautical Radio of Thailand Ltd.	21	22	25	12	12	4	11	6	9	29	16	167
Radio broadcasting stations	21	4	8	2	4	6	3	3	8	6	1	66
Government agencies/ State-enterprises	7	0	2	0	0	0	0	2	2	0	3	16
Companies/department stores/shops	0	1	0	1	3	0	0	0	0	0	0	5
General public	1	0	1	0	3	1	2	1	1	0	0	10
Mobile phone operators	11	4	2	2	4	5	3	11	5	1	1	49
Total	61	31	38	17	26	16	19	23	25	36	21	313

Remarks : Data as of January – November 2017

4. Monitoring the unauthorized frequency

To suspend the use of unauthorized radio frequencies, reduce the number of illegal radio frequency use violators, and prevent the interference between different radiocommunications networks for the utmost efficient use, the Office of the NBTC had monitored the use of frequency in broadcasting, television, telecommunications and radiocommunications services and the results can be categorized by the type of services as follows:

The monitoring result of unauthorized use of frequency in 2017



Remarks : Data as of January – November 2017

5. Searching and arresting according to the laws

The Office of the NBTC had taken field operation, in cooperation with military and police officers, to search and monitor the radio broadcasting stations that violate the laws concerned, or operating without relevant licenses granted by the NBTC, or having broadcasted without being complied with the conditions prescribed in the Announcement of the NCPO No. 79/2014 on Conditions for the Broadcast of Radio Broadcasting Stations (Trial Operation) dated 9 July 2014 and the Office of the NBTC's Notification on Prohibition on broadcasting of the unlicensed radio broadcasting stations (trial operation), dated 2 February 2015. In case that the Office of the NBTC had found the act of violation of the radio broadcasting stations, criminal and administrative proceedings shall be applied. The result of operation from 21 April 2015 to 30 November 2017 is summarized as follows:

*Result of the monitor on the compliance with the MOU on broadcasting and the Announcement of NCPO
of the radio stations requesting for broadcasting in trial operation*

Office of the NBTC	No. of stations registered				No. of stations that are able to broadcast				No. of stations that are unable to broadcast				21 Apr. 2015 – 31 Dec. 2016			Total stations that were deprived of right according to BC Meeting's Resolution	Total	Balance		
	Commercial service	Public service	Community Affairs	Total	Commercial service	Public service	Community Affairs	Total	Commercial service	Public service	Community Affairs	Total	Jan. – Oct. 2017	Nov. 2017	Stations			Percent		
Subregion 1 Bangkok	440	126	63	629	277	64	18	359	163	62	45	270	214	39	2	255	55	310	319	50.72
Subregion 2 Ubon Ratchathani	385	112	34	531	303	76	15	394	82	36	19	137	397	33	4	434	32	466	65	12.24
Subregion 3 Lampang	198	58	30	286	169	42	12	223	29	16	18	63	224	21	0	245	17	262	24	8.39
Subregion 4 Songkhla	120	62	28	210	93	40	7	140	27	22	21	70	124	29	0	153	20	173	37	17.62
Subregion 5 Chanthaburi	265	79	31	375	165	40	12	217	100	39	19	158	258	21	0	279	25	304	71	18.93
Subregion 6 Khon Kaen	456	77	52	585	357	60	27	444	99	17	25	141	335	53	1	389	27	416	169	28.89
Subregion 7 Nakhon Ratchasima	332	106	43	481	241	70	17	328	91	36	26	153	355	35	0	390	35	425	56	11.64
Subregion 8 Udon Thani	362	78	36	476	287	59	17	363	75	19	19	113	320	69	3	392	18	410	66	13.87
Subregion 9 Chiang Mai	191	58	50	299	151	48	16	215	40	10	34	84	197	32	5	234	21	255	44	14.72
Subregion 10 Phitsanulok	422	100	31	553	346	68	15	429	76	32	16	124	375	28	3	406	32	438	115	20.80
Subregion 11 Phuket	96	17	8	121	74	14	4	92	22	3	4	29	101	0	0	101	14	115	6	4.96
Subregion 12 Nakhon Si Thammarat	153	34	19	206	103	23	6	132	50	11	13	74	140	8	0	148	24	172	34	16.50
Subregion 13 Surat Thani	89	12	11	112	59	7	3	69	30	5	8	43	82	0	0	82	12	94	18	16.07
Subregion 14 Chumphon	115	34	14	163	87	19	3	109	28	15	11	54	100	17	6	123	9	132	31	19.02
Subregion 15 Suphan Buri	183	71	24	278	136	51	8	195	47	20	16	83	128	48	20	196	14	210	68	24.46
Subregion 16 Prachinburi	118	47	11	176	90	31	4	125	28	16	7	51	127	16	2	145	16	161	15	8.52
Subregion 17 Chiang Rai	197	38	27	262	150	26	9	185	47	12	18	77	148	43	5	196	17	213	49	18.70
Total	4,122	1,109	512	5,743	3,088	738	193	4,019	1,034	371	319	1,724	3,625	492	51	4,168	388	4,556	1,187	20.67
Percent	100.00				69.98				30.02				72.58			6.76	79.33	20.67		

Remarks : Data as of November 2017



6. Monitoring illegal radio and television contents

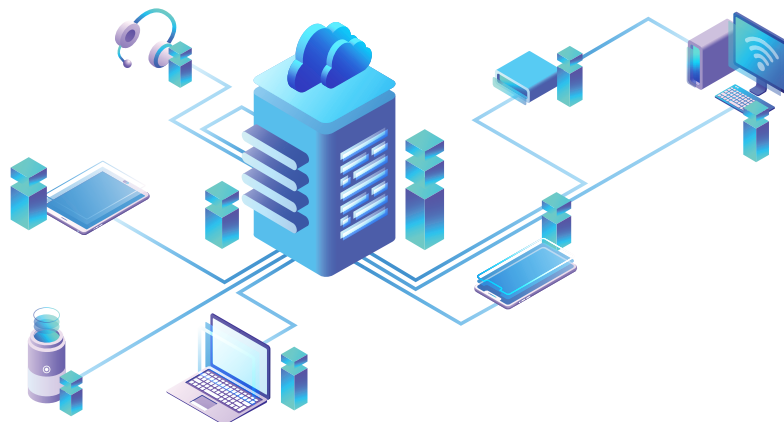
In the era where radio and television media are growing and reaching more people in wider areas as well as playing an important role in society, economy and national security, the NBTC has committed to protecting consumers by conducting the monitoring of illegal content broadcasting on radio and television including social media through the Content Monitoring Center. The center has started operating since the year 2014 in 3 main missions as follows:

(1) **Monitoring of radio and television contents** which consists of 272 channels of satellite stations that are able to record contents up to 90 days. The Follow-Up and monitoring focused on the issues which committed lese Majesty or implicated the institution, the presentation of news which may be the provocation, the agitation for disharmony, and the political issues that caused the disorder. When the center found these issues, it will deliver the issues to the relevant bureaus of the Office of the NBTC such as the Content Regulation and Announcer Development Bureau, in order to present the issues to the Subcommittee on Broadcasting Services for consideration and further submit to the working group on the online media of the NCPO.

In 2017, the Office of the NBTC had monitored 10 channels of satellite stations such as Bright TV, Suvarnabhumi, People TV (1TV), New Sky, News 1, Voice TV, 13 Siam Thai, 24 TV, Peace TV, and Spring News, and 5 radio broadcasting stations such as FM 96.5, JS 100, FM 100.5, FM 101, and FM 105, in which the monitoring was conducted three times a day. The Content Monitoring Center had presented 323 reports on television content monitoring and 664 radio content monitoring reports to the Content Regulation and Announcer Development Bureau for proposing to the Sub-committee on Broadcasting Service respectively, including having coordinated and provided support for the supply and delivery of video files to the requested internal bureaus of the Office of the NBTC for their additional monitoring for 27 reports.

(2) **Monitoring advertisement on TV and radio** by using the system designed for monitoring advertising conducting in exaggerated way or unauthorized products advertisings, and excessive advertising time on 40 satellite station channels and 40 radio channels, which can be recorded up to 60 days backwards. The Content Monitoring Center had delivered advertising monitoring reports to the Broadcasting Consumer Protection Bureau for reviewing and further legal action. In 2017, the number of advertising database on radio stations was 12,953 advertisements from totally 144,008 advertisements, and the number of advertising database on TV stations was 5,721 advertisements from totally 132,125 advertisements.

(3) **Monitoring online media**, the NBTC has joined the operation with the Technology Crime Suppression Division and Department of Special Investigation (DSI) to monitor and analyze online data. In 2017, the Office of the NBTC had found 65 reports of the target committing offenses or related to the violation of Article 112, and found people who are related to the webpage and the offending users for more than 700 persons.



Efficiency and Effectiveness of the Complaints Handling of Consumers in Broadcasting, Television and Telecommunications Services

The Office of the NBTC has focused on performing its duties in investigating and resolving problems related to the complaints on the use of spectrum, broadcasting and telecommunications business operation effectively in order to protect the people from being exploited by the action which is considered to be the exploitation of consumers. The operation had been done through the working process to strengthen people to media literacy, conglomeration, and network establishment as well as the operation on dispute resolution which will help maintain a good relationship between the parties, and the support on people with disabilities, the elderly and the underprivileged to access information in the digital era.

The major performance on complaints handling and resolution of consumers in broadcasting, television and telecommunications services in the year 2017 is as follows:

1. Complaints receipt

The Office of the NBTC has always improved the efficiency of service provision of the Call Center 1200. Not only the Call Center shall receive complaints, but also provide information service to the number of people through various channels such as e-mail, social contact system and mobile application (Mobile NBTC1200), etc. In 2017, the number of complaints through the Call Center was 3,500 issues, and the top three complaints were composed of Mobile Number Portability service, mobile service charge on unsubscribed SMS and SMS Spam for 2,146 issues, complaints relating to internet service such as the cancellation of the internet service before the termination of contract for 549 issues, and complaints relating to the out of order of fixed-line service for 361 issues. The number of inquiries from the people received by the Call Center was totally 136,064 issues and the top three inquiries were composed of digital terrestrial television service such as digital TV coupons, area coverage of digital terrestrial TV, etc., for 98,684 issues, calculation of mobile phone service charge on unsubscribed SMS and SMS Spam for 12,797 issues, and inquiries on channels for contacting telecommunications operators for 6,554 issues.

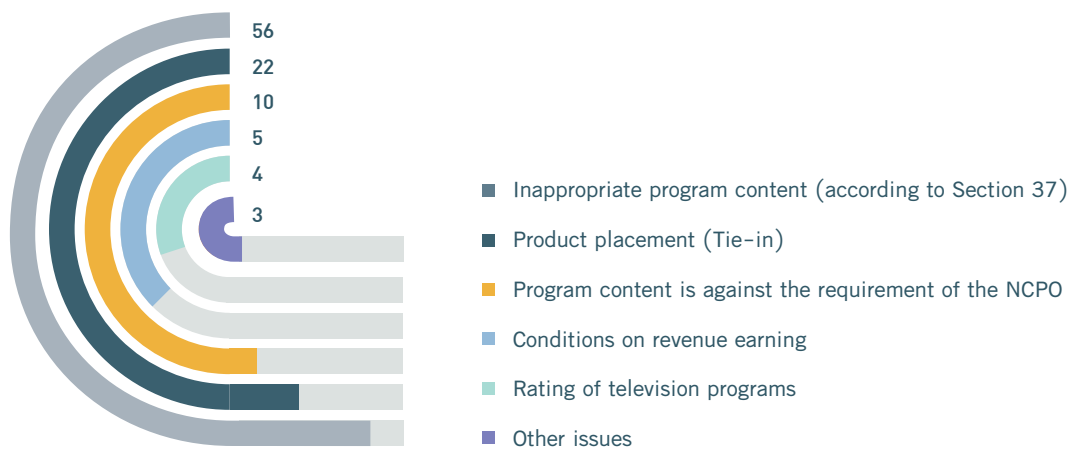
2. Complaints handling in broadcasting, television and telecommunication service

2.1 Having resolved problems on the complaints in broadcasting and television service as follows:

(1) The Office of the NBTC had carried out the complaints handling on program schedule and content in broadcasting and television services in 2017 for totally 78 complaints which can be divided to 55 complaints on digital TV service, 6 complaints on radio broadcasting in trial operation, 14 complaints on Cable TV and Satellite TV systems, 2 complaints on radio (existing operators) and 1 complaint on other issues. All complaints had already been done according to the NBTC Notification on Determination of Procedure and Duration for the Consideration of Request or Complaint in Broadcasting and Television Services, or accounting for 100 percent. Those complaints received can be categorized into 6 main issues: 1) complaints related to inappropriate program content which have been considered according to the legal framework of Section 37 of the Broadcasting Business Act B.E. 2551 (2008) 2) program contents which failed to meet the requirement of the Announcement of the National Council for Peace and Order No.97/2014 and No. 103/2014 regarding the provision of cooperation to support the operation of the NCPO and the dissemination of information to the public 3) failure to comply with the conditions for revenue generation according to the NBTC Notification on Licensing Criteria and Procedures for Radio or Television Broadcasting Services B.E. 2555 (2012) 4) ratings of appropriateness level of TV programs 5) inappropriate content of advertising media, and 6) other issues such as programs proportion, presentation of content had not been in accordance with the practical guideline in case of the passing of His Majesty King Bhumibol Adulyadej. However, the most complaints received were about inappropriate content which is accounted for 56 percent.

(2) The Office of the NBTC had carried out the complaints on the action which is considered as consumers' exploitation in broadcasting and television services in 2017 for totally 209 complaints in which 207 complaints were made on television services such as the cancellation of services, changes on terms of service provision without notifying consumers in advance of not less than 30 days, non-refund of payment to consumers within 30 days as required by law (such as satellite equipment costs, advance payment for monthly package); meanwhile the other 2 complaints were made on broadcasting service. However, 180 complaints had already been resolved according to the procedure under the provisions of relevant Notifications which is accounted for 86.12 percent.

Complaint issues on program schedule and content in 2017



Remarks : Data as of 21 December 2017

Statistic of complaints relating to the action which is considered as consumers' exploitation in broadcasting and television services

Type of service	No. of complaints	Resolved/process completed		In process	
		No. of complaints	Percent	No. of complaints	Percent
Television service					
1. Digital TV					
1.1 Program channel	3	3	100.00	-	-
1.2 Devices/Signal receipt	1	1	100.00	-	-
2. Subscription service					
2.1 Network					
2.1.1 Satellite box	203	174	85.71	29	14.29
2.1.2 Cable TV	-	-	-	-	-
2.2 Program channel	-	-	-	-	-
Total	207	178	85.99	29	14.01

*Statistic of complaints relating to the action which is considered as consumers' exploitation
in broadcasting and television services (continued)*

Type of service	No. of complaints	Resolved/process completed		In process	
		No. of complaints	Percent	No. of complaints	Percent
Broadcasting service					
1. High power radio broadcasting stations (existing operators)	-	-	-	-	-
2. Radio broadcasting stations (trial operation)					
2.1 public service	-	-	-	-	-
2.2 community service	-	-	-	-	-
2.3 commercial service	2	2	100.00	-	-
Total	2	2	100.00	-	-
Grand total	209	180	86.12	29	13.88

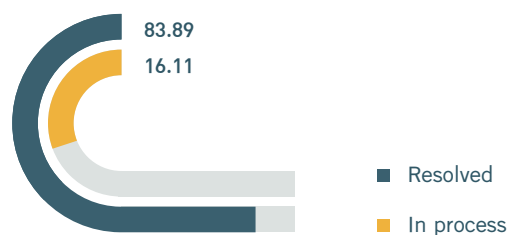
Remarks : 1) Data as of 1 October 2016 – 30 September 2017. Since the procedure for the complaints consideration were in accordance with the NBTC Notification on Determination of Procedure and Duration for the Consideration of Request or Complaint in Broadcasting and Television Services, therefore the duration for operation will be more than 2 – 3 months.

2) Data shown above is the operation data as of 15 December 2017

2.2. Complaints handling in telecommunications service

(1) Having resolved complaints in telecommunications service or those who were suffered from the provision of telecommunications service such as standard and quality of services provision, add-on service, billing inaccuracy, and cancellation of service, etc. In 2017, the Office of the NBTC had received 3,196 complaints in which 2,681 complaints were resolved or accounting for 83.89 percent, and the rest of 515 complaints have been in process, or accounting for 16.11 percent. The type of services in top-three ranking consists of the mobile phone service, internet service and fixed-line service respectively which are accounted for 67.15, 17.18 and 11.30 percent, respectively. However, the top-three major problems received on the complaints were the standard and quality of services provision, add-on service, and billing inaccuracy which are accounted for 47.40, 26.25 and 10.89 percent, respectively.

Status of complaints resolving process in telecommunications service



*Status of complaints resolving process categorized by type of service in 2017*

Type of service	No. of complaints	Status of complaints	
		Resolved	In process
Mobile phone	2,146	1,812	334
Internet	549	497	52
Fixed-line	361	314	47
Radiocommunications	118	45	73
Others	22	13	9
Total	3,196	2,681	515

Remarks : Data as of 31 December 2017

All complaints can be categorized into 10 issues, and the result of the operation in each issue is shown below.

Status of complaints resolving process categorized by problem issues in 2017

Major issues	No. of complaints	Status of complaints	
		Resolved	In process
Standards and quality of service	1,515	1,204	311
Add-on service	839	756	83
Billing inaccuracy	348	294	54
Cancellation of services	330	303	27
Right of privacy and personal information	43	33	10
Other complaints	42	29	13
Validity of duration service	37	27	10
Incorrect/incomplete information provision	26	20	6
Access to services	14	13	1
Service charging not based on the maximum rates	1	1	0
Mobile phone top up	1	1	0
Total	3,196	2,681	515

Remarks : Data as of 31 December 2017

(2) Having carried out the disputes mediation between telecommunications licensees and complainants by focusing on the carrying out the disputes mediation as required by the complainant, and the Office of the NBTC had coordinated and facilitated both parties for the arrangement of the disputes mediation (during 1 January – 31 December 2017), and there were 152 complaints that both parties preferred to take the process of mediation which can be divided into 4 cases as follows:

- The complaints that were taken into the mediation process for 7 cases and 6 of those cases were successfully mediated and the complaints were resolved (or accounted for 86 percent). Those cases consist of service charging on unsubscribed SMS, quality of internet signal, change of mobile phone registration name without permission, incomplete calling eligibility under the add-on service subscription conditions/billing error, incorrect information provision (Call Center), problem with the use of fixed-line, and the complaint that was mediated but having not been ended (accounting for 14 percent) which is the mobile phone signal was suspended for unknown reasons.
- The complaints that both parties agreed to end the dispute before conducting the mediation for 53 complaints.
- The complaints that any party refused to take the mediation process but preferred to take the complaints procedure according to the NTC Notification on the Procedure for Receipt and Consideration Complaints of Service Users for 87 complaints.
- The complaints that have been waiting for the declaration of another party's intent to take the mediation process for 5 complaints.

It is found that the top 5 of complaint issues that the parties declared their intent to enter the mediation process consisted of the impact of cellular tower on human health, billing inaccuracy, service charging on unsubscribed SMS, quality of internet signal, and problem with the use of fixed-line.

In the age of rapid change of technology and communication, the Office of the NBTC has given the importance on promoting media literacy and empowering consumers in broadcasting, television and telecommunications services to ensure that the people have a better understanding of consumer rights, be able to use the service knowingly, and can access channels for filing complaints and getting information from the use of service effectively. As a result, consumers and the general public will be able to protect their rights and get benefit from the service. The important operation is as follows:

- Having organized the seminar workshop on dispute mediation in telecommunications service “for telecommunications licensees and relevant parties.”
- Having organized the seminar workshop on dispute mediation in telecommunications service “for those who have been in the registered list of mediators and relevant persons.”
- Having produced documents relating to dispute mediation in telecommunications service to be published to consumers, telecommunications licensees, complainants and interested people.
- Having carried out “the project for enhancing the understanding of consumers on the impacts of electromagnetic radiation from mobile phone base stations on the human health safety” in 5 regions.
- Having organized the training workshop on “knowledge on the regulation of telecommunications service and telecommunications service tariff” in regional areas.
- Having organized the meeting on “Thai telecommunications move forward together” for supporting the youth network mechanism for consumer protection in telecommunications service.
- Having organized the exhibition booth and activities to promote awareness of consumer rights in telecommunications service.
- Having organized the training workshop for enhancing capabilities of citizen network leaders from 77 provinces for consumer protection in telecommunications service.



- Having organized activities to promote and develop the student network on the awareness raising of consumer rights in telecommunications service.
- Having carried out the NBTC Public Forum in 2017 No. 3/2017 on “Digital and Thai Children/the Youth”
- Having organized seminar and activities to promote awareness of consumer rights in broadcasting and telecommunications services for the local administration officers, citizen network, amateur radio operators and the general public.
- Having organized the workshop of coordinators of agencies relevant to consumer protection in broadcasting and telecommunications services to promote and support the exchange of knowledge, experiences and resolution guidelines for consumer protection on the broadcasting and telecommunications services.
- Having organized meetings with relevant agencies to build understanding and promote the participation in the broadcasting and telecommunications service regulation and integrated consumer protection.
- Having produced documents on “knowing media, knowing rights” to be published for consumers of radio–television media.
- Having organized workshops for promoting knowledge exchange and participation in media literacy on radio–television of 36 local academic institutions throughout the country.
- Having carried out the project under the cooperation among the agencies for a good quality of Thai children in the 4.0 era, so that Thai children have a good development and growth on the campaign “Do not let the screen raise the baby” through various media both in short and long term.
- Having organized trainings for raising awareness on of the communication rights of people with disabilities (hearing) to access digital TV.

Management of the Broadcasting and Telecommunications Research and Development Fund for the Public Interest (BTFP)

1. Performance in 2017

1) **Strategic Driven:** the BTFP has prepared the Master Plan of the Broadcasting and Telecommunications Research and Development Fund in 5 years (2017 - 2021) by setting up the research and development roadmap that has led to the broadcasting, television and telecommunications innovation and the direction of research and development that support the future of the country. This is consistent with government policies on Thailand 4.0 basis.

2) **The Fund Allocation:** the BTFP has allocated fund, according to the Fund’s objectives for the public benefit and people, to support important projects such as the project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+) within the budget framework of 13,819.64 million baht in order to expand the universal basic telecommunication services to cover the area of border villages so that the villagers in all border villages are able to use broadband internet, and to upgrade the telecommunication infrastructure for driving the national economy with the goal of expanding the broadband network to cover every village in Thailand according to the Government’s Policy and Digital Economy Plan for Economy and Social Development, the expenditure support on the satellite public broadcasting television services under the Order of the NCPO No. 76/2016 regarding Measures for Promoting Broadcasting, Television and Telecommunications Business Operation for the Public to ensure that people are able to watch the public television service within 3 years, the project to support people in the transition to the viewing of digital terrestrial television system in order to support the access to terrestrial television service of people in 3.98 million households in the amount of 2,749.42 million baht, the fund allocated to promote and support the implementation of the projects type 2 (the achievement based projects in accordance with the

Fund Committee's policy) in 2015 for 13 projects at the amount of 103.36 million baht for the development of broadcasting, television and telecommunications services including research and development of relevant innovation, and the fund allocated to the Safe and Creative Media Development Fund in 2017 which is the operation under Section 52 (5) of the Act on the Organization B.E. 2553 (2010) and its amendment within the budget framework of 474.31 million baht, as well as setting aside the fund allocation calendar in 2018 and budget allocation framework of the fund in 2018 at the amount of 1,500.00 million baht.

3) The BTFP Fund management: the total revenue of the Fund in 2017 was 9,064.12 million baht, while the total disbursement was 2,482.20 million baht, and a total cash balance was 6,581.92 million baht. On 31 December 2017, the remaining balance was 38,399.13 million baht, accounting for 20.69 percent increase from the year 2016.

In 2017, the BTFP had deposited all cash in commercial banks and specialized financial institutions in the country according to the Fund's Regulation regarding the collection, expenditure, accounting and accounting system B.E. 2555 (2012) with an average return of 1.64 percent per year, decreasing from the year 2016 due to the reduction of the interest rates of the commercial banks and specialized financial institutions amid weak global economic situation although the Monetary Policy Committee (MPC) still maintains the interest rates of 1.50 percent which is the same as the year 2016.

4) Follow-Up and evaluation: the Fund has established a mechanism for following-up the implementation of projects granted by the BTFP, with the approval of the NBTC, to ensure that the projects were operated in accordance with the Action Plan and any problems or obstacles arising during the operation were resolved so that the projects can be done successfully under the purpose of the projects, as well as the fund's expenditure was properly done according to the contract. The mechanisms are such as the appointment of a Subcommittee to Follow-Up and evaluate the fund expenditure to be in accordance with the BTFP's objectives, the invitation of experts in the relevant fields to consider the outcome of the project implementation.

5) Promoting the image of the BTFP: having published and disseminated information such as major performance, information on the Fund's allocation, information on the expenditure of the Fund on the promoted and supported projects to the public, notifications and criteria of the funding, and other activities such as seminars, trainings, or public hearings, etc., through social network channel by means of Facebook Fanpage and electronic media of the Research and Development Bureau, the Office of the NBTC, or <https://btfp.nbtc.go.th>, so that the fund grantees and the general public can access to the information. As a result, the BTFP shall be well-known. In the past years, there were a number of people interested in applying for being promoted and granted of the fund and participated in the BTFP activities.

2. Efficiency and effectiveness evaluation of the BTFP

The efficiency and effectiveness of the BTFP's operation in 2017 is as follows:

2.1 Efficiency Evaluation

(1) The Fund allocation for supporting the efficient projects implementation under Section 52 and the number of the projects implemented had met the target set and helped reducing the expenditure. In the year 2017, the BTFP had announced its policy to promote and grant financial support to the projects type 2 (in the year 2015) for 8 TORs at the total amount of 170.30 million baht. The Fund Management Committee had selected the appropriate organizations which deserved to be promoted and supported, reduced the budget to be suitable for the workload by taking into account the maximum benefit on the budget expenditure, and proposed the result of consideration in the Fund.

In 2017, (data as of 31 December 2017) there were 13 eligible applicants with the budget approval of 170.30 million baht, and 44 ineligible applicants. Those projects have the same workloads but less spending than the budget approved. The NBTC had approved the fund allocation to the eligible applicants at the amount of 103.36 million baht which can save the budget up to 69.94 million baht of the budget approved according to the proposal of the Fund Management Committee. The Fund allocation for supporting projects implementation under Section 52 is considered efficient as the number of the projects implemented had met the target set and helped reducing the expenditure for 60.92 percent as details shown below.



Summary of budget approved by the NBTC shown projects

Unit : Baht

No.	TORs	Budget framework	Budget approved	Details
1	Credit Scoring Based on Behavioral Mobile Phone Usage Organization: Chula Unisearch, Chulalongkorn University	4,800,000.00	3,237,627.40	Study and research on Mobile Big Data in terms of technical development of credit scoring that can provide opportunities for the people with low income and small business operators to access the funding sources in the system.
2	Project on the communication development of radio broadcasting in tribal languages of 7 tribes in the Northern region of Thailand Organization: Department of Public Relations	26,500,000.00	25,229,970.00	Develop contents of radio program and human resources in tribal languages of 7 tribes in Thailand including promote and protect the socially disadvantaged people living in the highlands to be able to receive right information and useful for the improvement of quality of life.
3	The research and development project on testing equipment for broadcasting radio signals quality along the borders Organization: King Mongkut's Institute of Technology Ladkrabang	10,000,000.00	8,100,000.00	Research and develop the prototype of portable testing equipment for broadcasting radio signals quality, and apply the data receiving from the testing to the creation of information to the people living along the borders and the telecommunications industry.
4	Project on the development of E-learning system for the Central Dharma Testing Service Headquarters of Thailand Organization: The Association of Thai Internet Industry	20,000,000.00	19,399,100.00	Develop the E-learning system for the Central Dharma Testing Service Headquarters of Thailand to use as a medium to disseminate Buddhism.
5	Project on the development of Mobile Internet QoS Tool (MIQT) for consumers Organization: King Mongkut's University of Technology North Bangkok	4,000,000.00	3,087,000.00	Develop an application for 3G and 4G mobile phone users to download for the use of monitoring the quality of internet services. Besides, the operators shall be alerted by the survey data which leads to the improvement of better quality of service.
6	Project for promoting and supporting consumers' network for strengthening the power of consumers in telecommunications service	25,000,000.00	12,263,100.00	Strengthen the power of consumers, establish consumer protection network in telecommunications service in national, regional and provincial levels, and prepare a synthesized policy proposal to be presented to the public for the development of service and regulation.

Summary of budget approved by the NBTC shown projects (Continued)

Unit : Baht

No.	TORs	Budget framework	Budget approved	Details
6.1	Project for promoting and supporting consumers' network for strengthening the power of consumers in telecommunications service in North region Organization: Goodlife Association		3,820,680.00	Form the group and train the staff leaders of the Rights Protection Center in 14 provinces of Northern region, improve their skills in receiving complaints, understanding of the laws relating to the resolution of complaints.
6.2	Project for promoting and supporting consumers' network for strengthening the power of consumers in telecommunications service in North-Eastern region Organization: Roi Et Consumer Association		3,901,120.00	Form the group and train the youth leaders in 16 provinces of the North-Eastern region, build the rights protectionists, organize a cooperative forum of the government, operator/regulator, and consumer network organizations in regional level.
6.3	Project for promoting and supporting consumers' network for strengthening the power of consumers in telecommunications service in the case study of Udon Thani province Organization: Thai Consumer Development Association (TCDA)		1,854,900.00	Form the group and train the consumer leaders of every district in Udon Thani province, publish a report of the outcome of the project implementation for disseminating to the public, hold a press conference to present findings of the study and policy recommendations to the public, and disseminate the report in electronic form via the Association's website.
6.4	Project for promoting and supporting consumers' network for strengthening the power of consumers in telecommunications service in Central region Organization: Krungkao Ayutthaya Association for Development		2,686,400.00	Form the group and train the volunteer leaders in 16 provinces of the Central region, take field operation to monitor and evaluate the performance, develop format and communication channel to be in accordance with the context of each area.
7	Project on promoting the production and broadcast of program contents which are useful to the public	70,000,000.00	21,155,017.78	The requirement of TOR is to produce the program contents for the development of the quality of life of people in various areas. However, the fund granted can be allocated for the production of television programs of 25 minute length for not less than 70 episodes.



Summary of budget approved by the NBTC shown projects (Continued)

Unit : Baht

No.	TORs	Budget framework	Budget approved	Details
	7.1 Project on promoting the production and broadcast of program contents which are useful to the public Organization: Kidzone Plus Company Limited		8,400,000.00	Semi-documentary program, traveling throughout Thailand to present the Thai way of life. 25 minute length for 30 episodes
	7.2 Project on promoting the production and broadcast of program contents which are useful to the public Organization: National Defence College Think Tank		5,299,200.00	Documentary program on the interview with leaders in various areas relating to Sufficiency Economy. 25 minute length for 16 episodes
	7.3 Program on Creating a job – creating a career Organization: People Media TV Company Limited		7,455,817.78	Reality semi-documentary program, traveling to each village nationwide, talking about successful careers and livelihood, and sum up as a pattern for other communities. 25 minute length for 24 episodes
8	Project on “White TV Award” Organization: Jumnon Rangsikul Foundation	10,000,000.00	7,888,361.00	Promote and support the production of digital television programs, as well as personnel in the broadcasting services
	Total	170,300,000.00	100,360,176.18	

Remarks : Data as of 31 December 2017

The granted contracts have been signed for the above-8 projects and started the operation in the year 2017.

(2) Enhancing management efficiency of the BTFP

In 2017, the BTFP has improved the rules, regulations and criteria relating to the operation in various areas so that the Fund is able to analyze and screen projects clearly and quickly, and the project management, Follow-Up and evaluation have been done more efficiently. The improvement is included the Fund Management Committee’s Announcement on Rules, Procedures and Conditions for the Broadcasting and Telecommunications Research and Development Fund for the Public Interest Allocation, the Fund Management Committee’s Announcement on Receipt of Proposal, Activity or Operation of Project Type 1 for the year 2018, Standard Contract for Research and Development Grant, and the Fund’s Regulation regarding the Collection, Expenditure, Accounting and Accounting System No. 2 B.E. 2560 (2017).

(3) Disbursement in 2017

The disbursement was made at the amount of 1,948.13 million baht or accounting for 83.44 percent of the total target of disbursement budget of 2,334.87 million baht. The projects which could be disbursed consisted of the on-going projects being granted in the year 2013 – 2015 and already approved but the projects have still been in the process of implementation and thus committed to the year 2017. These projects could be disbursed at the amount of 351.40 million

baht or accounting for 63.39 percent, the project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+) was disbursed at the total amount of 624.26 million baht or accounting for 96.12 percent, the expense support on the public television transmission on satellite which was disbursed at the total amount of 265.46 million baht or accounting for 80.18 percent, and the project to support people in the transition to the viewing of digital terrestrial television to encourage people to access to terrestrial television service (addition) which was disbursed at the total amount of 707.11 million baht or accounting for 88.38 percent.

Result of the Fund's expenditure compared to the target

Unit : Million baht

Details	Target	Disbursement	Percent
Projects being granted in the year 2013 – 2015	554.31	351.40	63.39
Project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+)	649.48	624.26	96.12
Expense support on the public television transmission on satellite	331.08	265.46	80.18
Project for supporting people in the transition to digital terrestrial television to encourage people to access to terrestrial television service (addition)	800.00	707.11	88.38
Total	2,334.87	1,948.23	83.44

(4) Efficient Monetary Management

The BTFP had conducted the cash flow forecasting, according to the advance payment plan and the committed expenditure plan of the Fund, as necessary in the savings account, and invested the cash balance in commercial banks and specialized financial institutions in the country, in which the Fund's consideration was based on the credit risk and liquidity risk, and indicators were used to assess the performance of the banks as a selection criteria for each investment to get the best return with low risk and effective management. In 2017, the Fund received an average rate of return at 1.64 percent of all deposit accounts, which is higher than an average interest rate of deposit account of 5 large commercial banks at 0.88 percent.

2.2 Effectiveness Evaluation

(1) In 2017, the financial status of the BTFP has been constantly secured and fulfilled the objectives under Section 55 of the Act on the Organization B.E. 2553 (2010) and its amendment (No. 2) B.E. 2560 (2017). The financial status of the Fund in 2017 consisted of the total assets at the amount of 59,530.45 million baht, increasing 8,715.71 million baht from the year 2016. The assets included current assets at the amount of 50,530.31 million baht in which most of the current assets was bank deposits at the amount of 38,399.13 million baht. Financial stability in the year 2017 was in a good basis with high level of liquidity due to the current ratio was 47.53 : 1 (higher than accounting base line which defining not more than 1.5 : 1), and the total debt ratio was 0.11 : 1 (lower than accounting base line which defining not exceed 1.5:1). Details are shown below.

Comparison of the financial statement of the Fund between the year 2017 and 2016

Details	Million baht		Increase (Decrease)	
	2017	2016	Percent	Million baht
Financial statement				
Bank deposit	38,399.13	31,817.21	20.69	6,581.92
Current assets	50,530.31	41,514.65	21.72	9,015.66
Total assets	59,530.45	50,814.74	17.15	8,715.71
Current liability	1,063.02	654.34	62.46	408.68
Total liability	6,301.39	6,989.82	(9.85)	(688.43)
Cash flow statement				
Cash receipts	9,064.12	16,761.73	(45.92)	(7,697.61)
Cash disbursement	(2,482.20)	(16,848.20)	(85.27)	14,366.00
Cash receipts over disbursement	6,581.92	(86.47)	-	-
Cash balance	38,399.13	31,817.21	20.68	6,579.21
Financial ratio				
Current ratio (:1)	47.53	63.45	-	-
Debt Ratio (:1)	0.11	0.14	-	-
Average return rate of the Fund (Percent)	1.64	1.74	-	-
Average interest rate of 5 large commercial banks (Percent)	0.88	0.92	-	-

(2) The implementation of the projects that were granted and spent in the year 2013 – 2016 have achieved the objectives under Section 55 of the Act on Organization B.E. 2553 (2010) and its amendment (No. 2) B.E. 2560 (2017) as it has brought in the good advantage on the development of broadcasting, television, and telecommunications services as well as the people will be able to receive good quality of services and access to such services thoroughly. The BTFP has played an important role in the development of Thailand in many dimensions such as economic, social, human resources development, security, and support on state operation.

3. Operational goals in 2018

For the year 2018, the BTFP has committed and focused on the operation for the public benefit to ensure that the people have been provided with the broadcasting, television and telecommunications services thoroughly, including pushing forward the research and development of the broadcasting, television and telecommunications services, building the ability of the disabled and the elderly on technology media literacy, frequency usage, information technology, technology facilities, personnel development in broadcasting, television and telecommunications service, consumer protection and supporting the operation according to the government's policies. It has thus set the operational goals for the year 2018 as follows:

3.1 Goals on driving policies and strategies

Having reviewed and improved the Master Plan on Research and Development in Broadcasting and Telecommunications Services in 5 years (2017 – 2021) to be in accordance with the new Master Plan of the NBTC consisting of Telecommunications Master Plan, Broadcasting Master Plan, and Spectrum Management Master Plan including the National

Research and Innovation Strategy in 20 years (2017 – 2036), and formulating the Master Plan for Personnel Promotion and Development in Broadcasting and Telecommunications Services and Information Technology in 5 years to be a direction framework for the promotion and support of personnel and to respond to the needs of the labor market in broadcasting, television and telecommunications and information technology truly and sustainably in line with the policy and direction of the country development.

3.2 Goal on the Fund management

The Fund monetary in the year 2018 will be allocated by the BTFP according to the budget framework approved by the NBTC for the amount of 1,500 million baht in order to achieve the vision prescribing that the BTFP shall promote and support the Fund to be beneficial for the broadcasting, television and telecommunications services and related industries and be progressive and prepared for the Industrial Revolution in the 4.0 era as follows:

Unit : Million baht

No.	The Fund's monetary allocation framework in 2018	Amount
1	Type 1 Project or activity originating from the eligible person requested to be promoted and supported	300.00
2	Type 2 Project focusing on the achievement-based according to the policies of the Fund Management Committee (by mean of competition and bidding)	700.00
	2.1 Project focusing on the achievement-based according to the policies of the Fund Management Committee (by mean of competition and bidding)	670.00
	- Broadcasting and television services	200.00
	- Telecommunications service	200.00
	- Spectrum management	70.00
	- Research and development	200.00
	2.2 Continual projects (by having agreement with the granted organizations)	30.00
3	Type 4 Safe and Creative Media Development Fund	500.00
	Total	1,500.00

3.3 Goal on the efficient and secure management of the BTFP

The BTFP will improve the management system continuously to be effective, manage the fund to be more secure, develop rules, regulations and criteria related to the operation such as the regulation regarding Follow-Up and evaluation, regulations or criteria regarding the operation or performance consideration, and request for amendment of the contract or extension of time on the grant agreement, and other working systems, etc., by developing an operating manual and applying information technology to facilitate the operation of the Research and Development Bureau and the Fund grantees. It will also enhance the potential of personnel of the Research and Development Bureau to be ready to work in accordance with the BTFP policies and plans towards the goals achievement. The personnel development includes skills and experiences in policy and plan analysis, project analysis and evaluation, finance and accounting, management of research, intellectual property and foreign languages, as well as promoting the public relations on the BTFP performance, the research granted by the Fund, and information which will be useful to the society and image of the BTFP to be more widely known.

3.4 Goal on intellectual property management

The BTFP shall complete the preparation of the Intellectual Property Management Plan, assess technology value, and manage intellectual property which has been promoted and supported by the Fund in line with the guidelines on intellectual property management and the allocation of benefits arising from intellectual property that has been promoted and supported by the Fund.

PART 4

Report on Market Situation
and Competition in
Broadcasting, Television
and Telecommunications
Services in 2017



Report on Market Situation and Competition in Broadcasting, Television and Telecommunications Services in 2017

Market Situation in Broadcasting and Television Services in 2017⁶

1. Television market situation in 2017

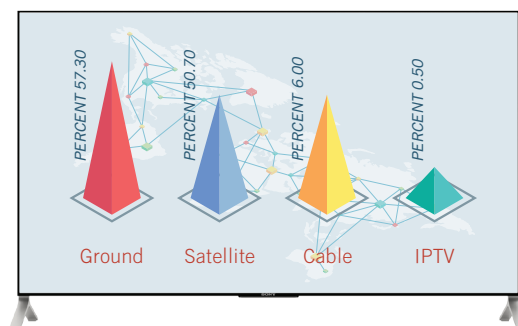
(1) Proportion of the access to Thai households of platforms for television viewing in 2017

According to the survey on platforms for television viewing of Thai households via terrestrial television network (analog and digital system), satellite network, cable network, and IPTV network conducted by the National Statistical Office⁷ in 2017, it is found that most households have viewed television programs through terrestrial television network (by using antenna in analog system and Set-Top-Box (STB) in digital system) or accounting for 57.30 percent, followed by satellite network which is accounted for 50.70 percent, and cable network and IPTV network which is accounted for 6.00 and 0.50 percent, respectively.

(2) Proportion of viewers on television channels 2017⁸

According to the survey data on television channel viewing of people throughout the country, it is found that in 2017 the proportion of viewers on terrestrial television to the proportion of viewers on cable and satellite television was 86.21 : 13.79 percent in average. However, having considered the proportion of viewers on television channel categorized by residential areas, it is found that the proportion of viewers who live in Bangkok and its vicinities on terrestrial television remains higher than the proportion of viewers living in provincial areas, or it can be accounted at the proportion of 89.20 : 85.58 percent.

Proportion of the access to Thai households of platforms for television viewing in 2017



Remarks : Households could answer more than 1 platform

Source : National Statistical Office

⁶ Database of Nielsen during January – November 2017

⁷ National Statistical Office A total of 83,880 households were surveyed in all provinces. Both in and outside the municipality. It is a collaboration between the National Bureau of Statistics and the NBTC to collect information on the use of equipment and networks for household television viewing.

⁸ Data collected from the population at the age of 4 and above.



Having compared the proportion of viewers on television channels throughout the country between the year 2017 and 2016, it is found that people across the country are more likely to watch terrestrial television channels, or increasing from 80.14 percent in 2016 to 86.21 percent in 2017, while the proportion of viewers on cable and satellite television channels is likely to decline, or decreasing from 19.86 percent in 2016 to 13.79 percent in 2017.

Proportion of viewers on television channels during 2016 – 2017

Year	Bangkok and its vicinities		Provincial areas		Nationwide	
	Terrestrial (percent)	Cable/Satellite (percent)	Terrestrial (percent)	Cable/Satellite (percent)	Terrestrial (percent)	Cable/Satellite (percent)
2016	83.86	16.14	79.35	20.65	80.14	19.86
2017	89.20	10.80	85.58	14.42	86.21	13.79

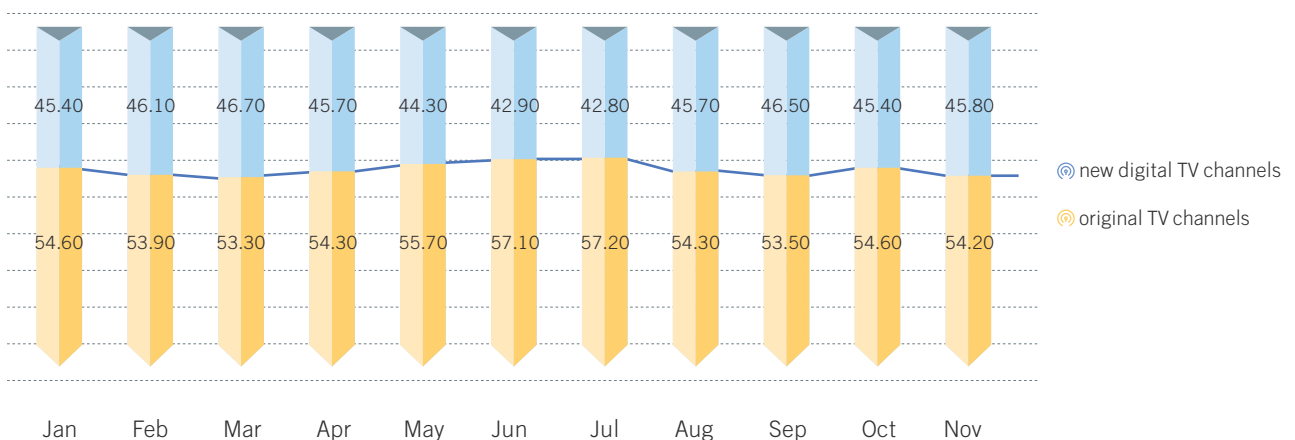
Remarks : is the data collected during January – November 2017

Source : Nielsen

(3) Percent share of viewers on terrestrial television channels (original channels and new digital channels) in 2017⁹

Having considered the percent share of the viewers on terrestrial television channels which is categorized into 2 groups consisting of 6 original television channels¹⁰ and 19 new digital television channels¹¹, it can be seen that through the entire year 2017 the percent share of the viewers on new digital television channels is higher than the percent share of the viewers on original television channels. The trend of viewers on new digital television channels has reflected that viewers across the country are increasingly choosing digital television channels which may be a result of the expansion of digital terrestrial television networks, covering 95 percent of the total households across the country, and the variety of interesting program contents.

Proportion of viewers on terrestrial television channels (Original TV channels and new digital TV channels) in 2017



Source : Nielson

⁹ Data collected from the population at the age of 4 and above.

¹⁰ consists of Channel 3, Channel 5, Channel 7, Channel 9, Channel 11 (NBT) and Thai PBS

¹¹ Exclusion of Thai Parliament Television

(4) Advertising value of terrestrial television service in 2017

The advertisement value of terrestrial television service in 2017 was totally 57,284 million baht which can be to the advertising of original television channels (6 channels) at the amount of 37,325 million baht and the new digital television channels (19 channels) at the amount of 19,959 million baht.

The comparison is made to the total advertising value of terrestrial television channels between the year 2017 and 2016 and found that the advertising value is likely to decline for approximately 4,378 million baht or accounting for 7.10 percent. However, when the comparison is made by type of channel, it is found that the advertising value of new digital channels is likely to increase from the previous year by 7.01 percent approximately, while the advertising value of original television channels is likely to decrease by 13.22 percent. The trend of the advertising value of digital television channels is in line with the trend of the percent share of viewers which is getting higher.

Advertising value of terrestrial television service during the year 2016 – 2017

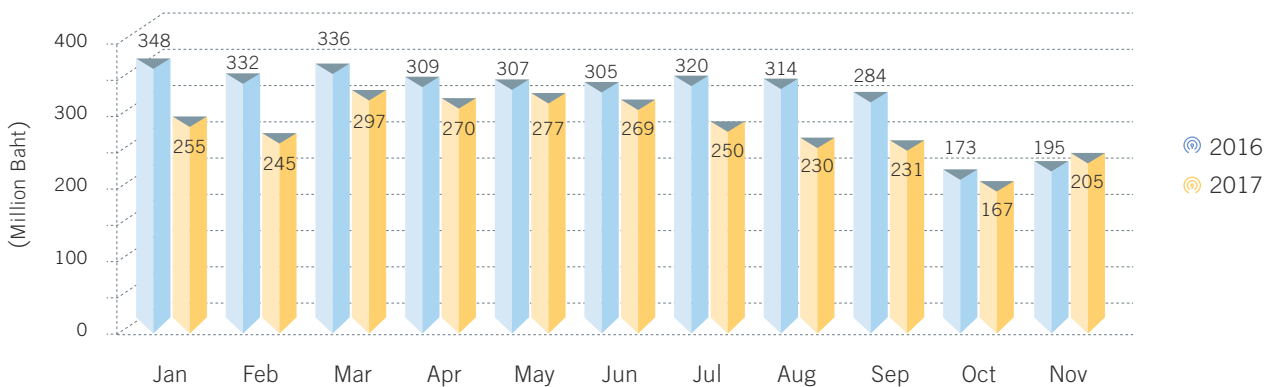
Type of TV channels	2016		2017		Percentage of change 2016 - 2017
	Million baht	Percent	Million baht	Percent	
Original TV channels	43,010	69.75	37,325	65.16	-13.22
New digital TV channels	18,652	30.25	19,959	34.84	7.01
Total	61,662	100.00	57,284	100.00	-7.10

Remarks : is the sum of the advertising value from January to November 2017 and rounded off
Source : Nielsen

(5) Advertising value on cable/satellite TV in 2017

The value of advertising on cable/satellite TV in 2017 was totally 2,696 million baht, decreasing from the previous year for 527 million baht or accounting for 16 percent from the year 2016. This has shown the trend of less money on advertising will be spread on cable/satellite TV channels, or may be a result from the decrease of advertising rate of the channels in the previous year.

Advertising value on cable/satellite TV during the year 2016 – 2017



Source : Nielsen

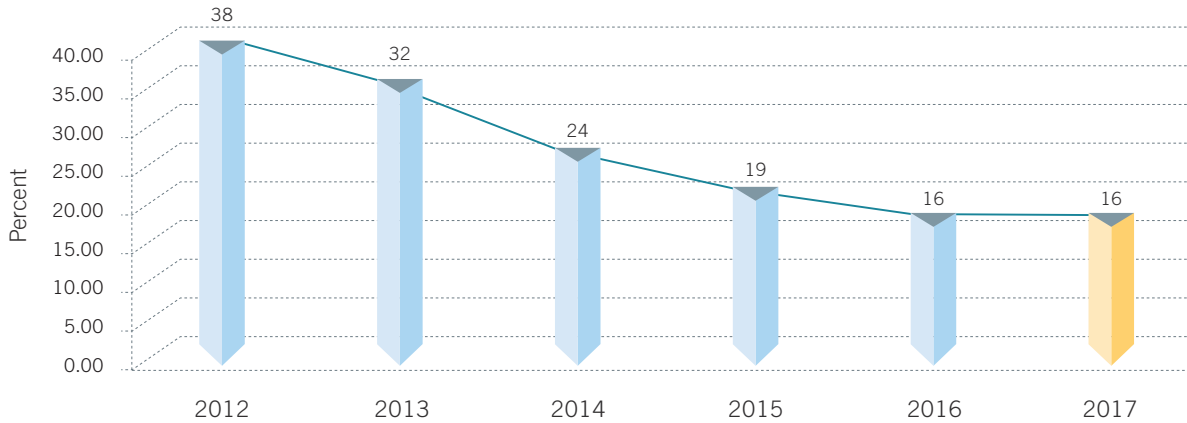


2. Market environment in broadcasting service in 2017

(1) Proportion of the access to radio broadcasting in all channels¹² in 2017¹³

In 2017, the access rate to radio broadcasting in all channels was 16 percent of the population across the country which is unchanged from the previous year. It was also found that the most frequent period of time having the highest number of people listening to radio broadcast was between 08.00 – 11.00 hrs. and 14.00 – 17.00 hrs.

Proportion of the access to radio broadcasting in all channels during 2012 – 2017



Source : Nielsen

However, considering from the proportion of the number of people listening to radio broadcasting (categorized by venue), it is found that most people like to listen to radio at home, followed by listening in cars and workplace. Besides, the most frequent device using for listening to radio is the radio receivers, followed by mobile phones and computers, respectively.

(2) Advertising value in the broadcasting service in 2017

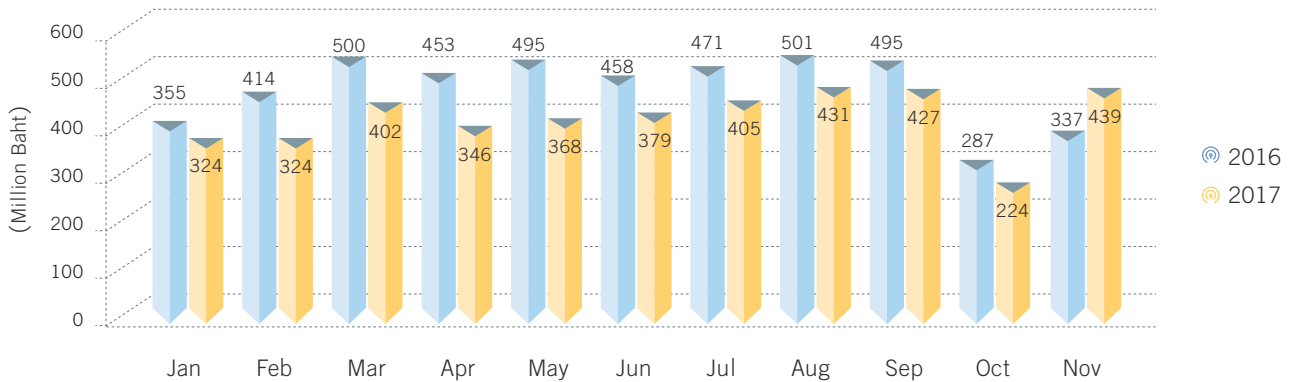
The advertising value via the 36 high power radio broadcasting stations in FM system in Bangkok and its vicinities (88.0 – 91.5 MHz, 93.0 – 103.5 MHz and 104.5 – 107.0 MHz) in 2017¹⁴ was 4,069 million baht. However, when the comparison was made to the year 2016, it is found that the advertising value in the year 2016 was approximately 4,766 million baht, higher than the advertising value in the year 2017 for 697 million baht or accounting for 15 percent.

¹²is the survey of Thai population at the age of 12 years and above who listened to 40 high power radio broadcasting stations in FM system (87.5 – 107.0 MHz) in all channels (such as radio receivers, mobile phones and computers) in areas of Bangkok and its vicinities

¹³is the data on proportion of the access to radio broadcasting in all channels from January to November 2017

¹⁴is the sum of the advertizing value from January to November 2017

Advertising expenses via the high power radio broadcasting stations in FM system
in Bangkok and its vicinities during 2016 – 2017



Source : Nielsen

Market Environment in Telecommunications Service in 2017

The World Economic Forum (WEF), Geneva, Switzerland, held on 27 September 2017 noted the report of global competitiveness ranking by Global Competitiveness Index (GCI) of 137 countries around the world during the year 2017 – 2018 by considering the country development factors to promote economic growth continuously and sustainably consisted of 114 indicators of assessment criteria which are divided into 12 pillars such as environment in infrastructure institution, environment in macroeconomic, public health and basic education, advanced education and training, efficiency of goods market, labor market, money market development, technology availability, market size, business expertise, and innovation. The result of this ranking found that Thailand has a better World ranked from 34th to 32nd rank, and ranked third in ASEAN countries, after Singapore that ranked third in the world and Malaysia that ranked 23rd in the world. For other countries in ASEAN such as Indonesia ranked 36th, Brunei Darussalam ranked 46th, Vietnam ranked 55th and the Philippines ranked 56th, etc.

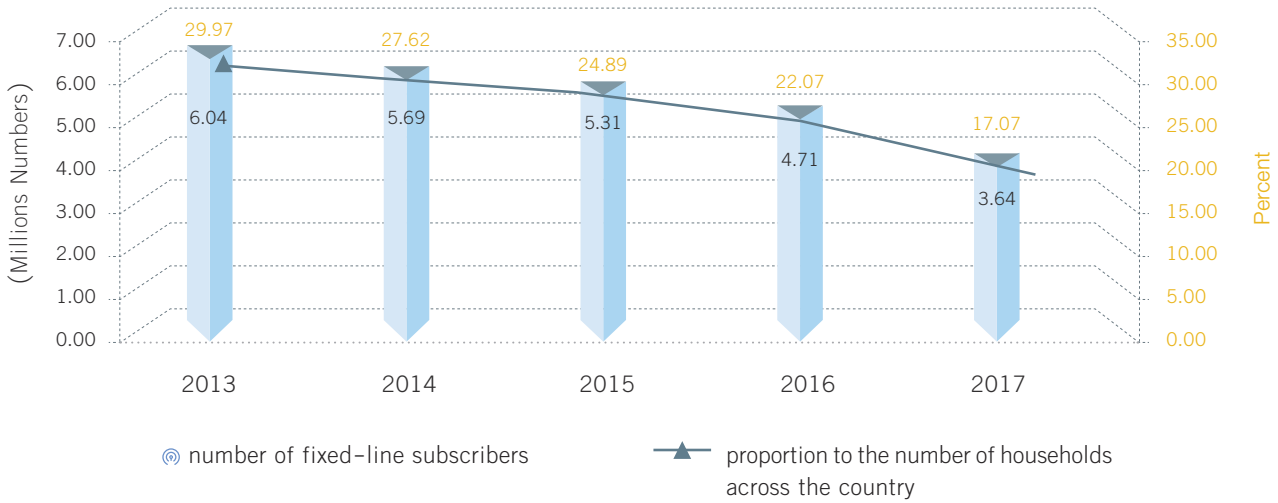
For the ICT Development Index (IDI) Report having released in November 2017 which is a standard tool used to measure the digital divide and compare ICT performance within and 176 countries worldwide, it is found that in the recent year Thailand ranked 76th in the world, with a better ranking from the previous rank of the 77th. However, the key indicators indicate that Thailand ranking is still above the world average and the countries in Asia-Pacific region. There was only the data of the number of fixed internet subscribers per 100 inhabitants and the usage amount of international internet bandwidth (bits/s) per user which remained lower than the world average. It is expected that the operation of the NBTC in the next phase will focus on the development of the wired internet infrastructure including the expansion of international internet bandwidth which will result in a better ICT competitiveness and a better rank of ICT development of the country.

The competitive situation in telecommunications market can be divided into 3 major markets consisting of market of fixed line service, market of mobile phone service and market of internet service.

1. Market of fixed-line service

Having considered the statistics of fixed-line subscribers during 2013 – 2017, it is found that the number of fixed-line subscribers in market of fixed-line service has been declined constantly. In 2017, there was 3.64 million numbers approximately, decreasing 22.65 percent when compared to the year 2016, and the proportion of fixed-line subscribers per the number of households was 17.07 percent.

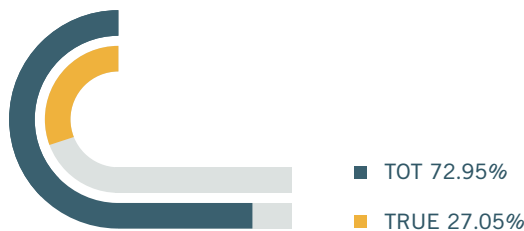
The number of fixed-line subscribers during 2013 – 2017



Remarks : Data as of Q3 of 2017

Having considered the market share of fixed-line service throughout the country in the year 2017, there are only two incumbents namely TOT Public Company Limited (TOT) and TRUE Group¹⁵ as TT&T Public Company Limited (TT&T) was ordered by the Central Bankruptcy Court an absolute frozen assets and a termination of all services after 28 February 2017. Also, the Court has ordered TOT, as the contractor with TT&T to provide all services instead of TT&T. This made TOT held the largest market share of 72.95 percent, followed by TRUE Group at 27.05 percent, and also resulted in an increase of HHI value of the fixed-line market from 4,939 in 2016 to 6,053 in 2017.

Market share of fixed-line service throughout the country in 2017



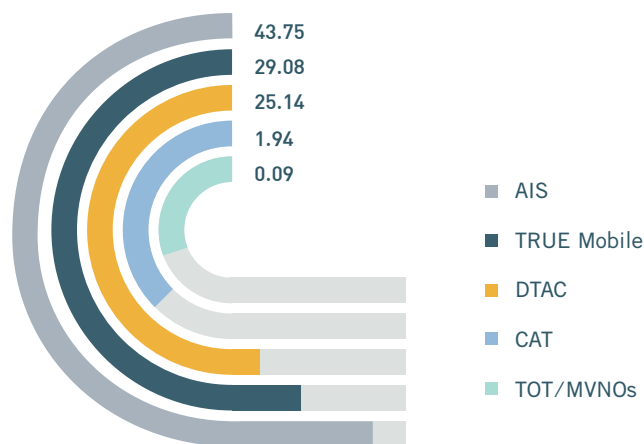
Remarks : Data as of Q3 of 2017

¹⁵True Group consists of True Corporation PLC (TRUE) and True Internet Corporation Co., Ltd. (TICC)

2. Market of mobile service

In 2017, the number of mobile service subscribers was approximately 119.82 million numbers, or increasing 0.12 percent. When compared the number of mobile service subscribers to 100 inhabitants, the mobile line penetration rate was 177.10 percent. Besides, having considered the market share of mobile service in 2017, it is found that the AIS Group held the largest market share of 43.75 percent, followed by True Mobile Group who held the market share of 29.08 percent (increasing from 26.69 percent in 2016). The HHI value of the market of mobile service in 2017 was 3,395, decreasing from 3,420 in the previous year.

Market share of mobile service providers in 2017



Remarks : Data as of Q3 of 2017

3. Market of internet services

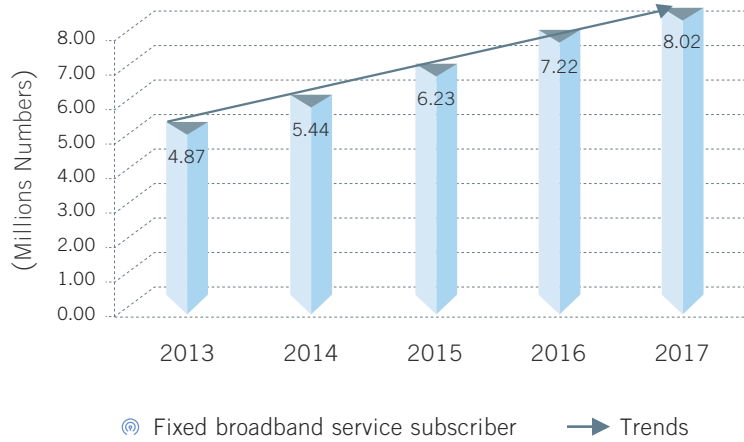
At present, the internet service of Thailand has been provided in various platforms and most users have used the service through the provision mobile broadband service platform and fixed broadband service platform as follows:

(1) Fixed broadband service

Nowadays, the market of narrowband internet service is about to disappear from the internet service market such as Dial-up technology, and the broadband service can be connected to several technologies by switching from technology in the group of xDSL (Digital Subscriber Line) to technology of FTTP (Fiber to the Premises). In 2017, the number of fixed broadband service subscribers was 8.02 million subscribers, increasing 11.09 percent when compared to the year 2016. When considering the proportion of the number of fixed broadband service subscribers, it was 11.85 subscribers per 100 inhabitants, or 37.60 households that have subscribed the service per 100 households throughout the country.



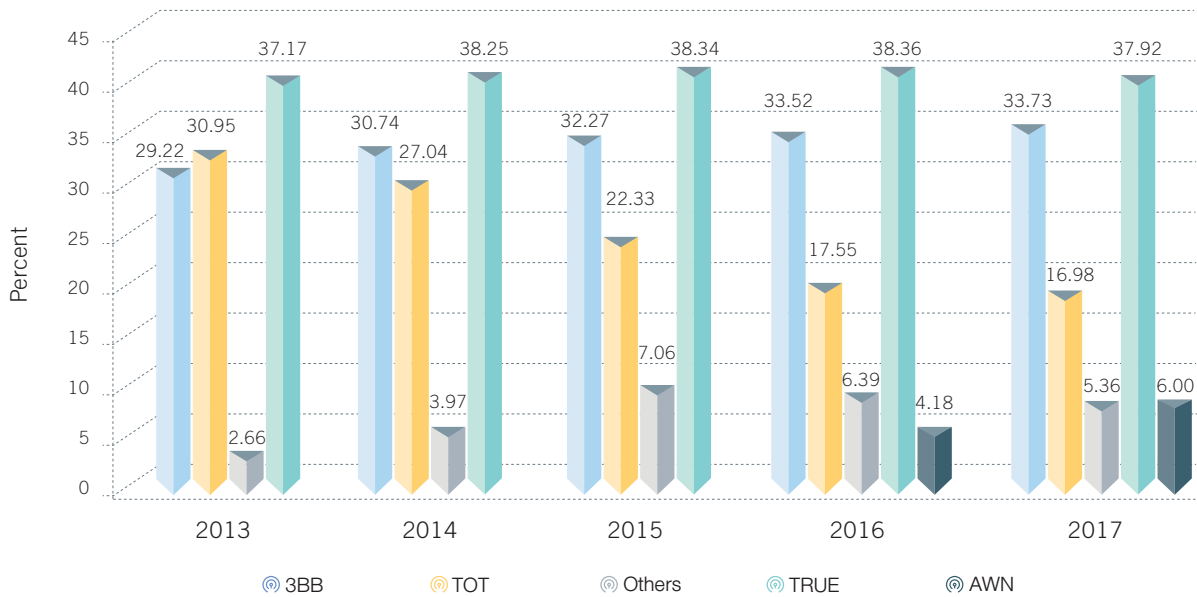
Number of fixed broadband service subscribers during 2013 - 2017



Remarks : Data as of Q3 of 2017

Having considered the market share of fixed broadband service during 2013 – 2017, it is found that TRUE held the largest market share of 37.92 percent, followed by 3BB who held the market share of 33.73 percent. The HHI value in 2017 was dropped to 2,929 when compared to the previous year which was 2,962.

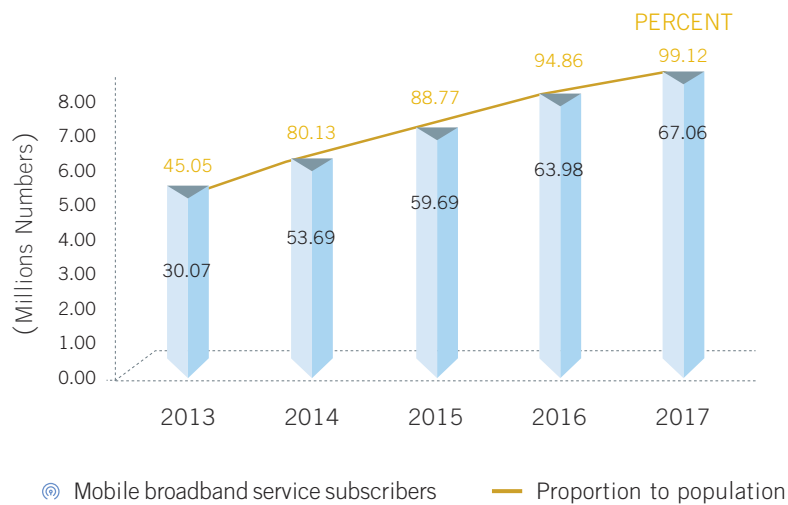
Market share of fixed broadband service during 2013 - 2017



Remarks : Data as of Q3 of 2017

(2) Mobile broadband service

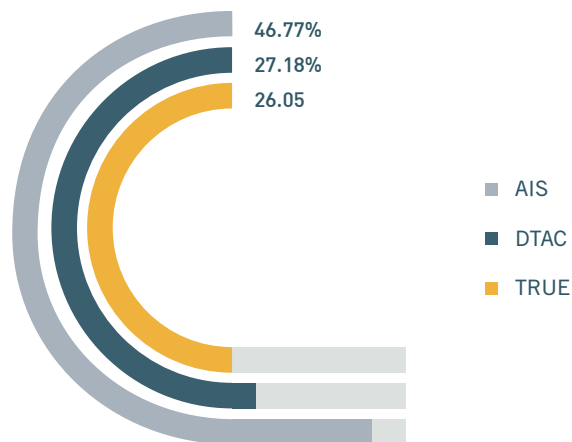
In 2017, the number of mobile broadband service subscribers was approximately 67.06 million numbers, or increasing 4.81 percent when compared to the year 2016 which the number of mobile broadband service subscribers was 63.98 percent, while the access rate of the population was 99.12 percent.



Remarks : Data as of Q3 of 2017

Having considered the revenue market share of non-voice service in 2017 (in 9-month period), it is found that the revenue market share of non-voice service of the three incumbents was totally 119,848 million baht, in which AIS Group held the largest revenue market share of 46.77 percent, followed by DTAC Group and True Group which the revenue market share was 27.18 percent and 26.05 percent, respectively, while the HHI value is likely to decline from 3,648 in 2016 to 3,605 in 2017.

Revenue market share of non-voice service in 2017



Remarks : Data as of Q3 of 2017



The observation on the action in the nature of dominance in broadcasting and telecommunications services

1. The observation on the action in the nature of dominance in broadcasting and television services which has impacted the benefits of the state and people

There was no fact in the year 2017 of any licensee who must apply for a license in advance, or conducting any prohibited action, either direct or indirect, in the nature of dominance in broadcasting and television services, which may lead to the monopoly, reduction, or limitation of competition, according to the NBTC Notification on Determination of Nature and Measures for the Regulation of Mergers and Cross-shareholdings, and Dominance in Broadcasting and Television Services.

2. The observation on the action in the nature of dominance in telecommunications service which has impacted the benefits of the state and people

In 2017, the Office of the NBTC had carried out activities concerning mergers according to the NTC Notification on Criteria and Procedures for Mergers and Cross-shareholdings in Telecommunications Service B.E. 2553 (2010) as follows:

1) Time dotCom International Company Limited (who has controlling power over Kirz Company Limited) had applied for merger with Symphony Communication Public Company Limited which is the merger under the Notification, No. 2 (5) (5.3) “the action of a licensee or the authority with a controlling power of the licensee on the purchase of all or part of the assets of another licensee in order to control the policies, corporate administration, or management, and the result of the acquisition of the following shares is considered a merger”. The merger was done only in the retail market of fixed internet service where Kirz Company Limited and Symphony Communication Public Company Limited held a market share. However, both companies held a very small proportion of market share, therefore, the service merger has not created a significant impact or led to the change of the market share or the existing market structure, and it seemed appropriate to be authorized to merge.

2) True Internet Corporation Company Limited had applied for merger with True Internet Company Limited which is the merger under the Notification, No. 2 (5) (5.1) “the action of a licensee or the authority with a controlling power of the licensee on merger with another licensee which be the cause of having the status of one licensee existed and the status of another licensee terminated, or become a new legal entity under the Civil and Commercial Code or Joint Venture Agreement”. The service merger was an internal business restructuring of the Group of True Corporation Public Company Limited which has not created a significant impact or led to the change of the market share or the existing market structure, such as the retail market of fixed internet service and the wholesale market of broadband access service, in any way, and it seemed appropriate to be authorized to merge.

3) Advanced Wireless Network Company Limited had applied for merger with CS Loxinfo Public Company Limited which is the merger under the Notification, No. 2 (5) (5.3) “the action of a licensee or the authority with a controlling power of the licensee on the purchase of all or part of the assets of another licensee in order to control the policies, corporate administration, or management, and the result of the acquisition of the following shares is considered a merger”. The service merger will involve the services in the relating markets such as 1) the retail market of fixed internet service 2) the wholesale market of international internet gateway service 3) the wholesale market of broadband access service, and 4) the wholesale market of leased line service. The consideration is made on the relevant telecommunications market dominance by calculating HHI value either before or after the service merger, it is found that the HHI value in each relevant market has been slightly increased after the merger. In addition, CS Loxinfo Public Company Limited holds the smallest proportion of market share in every market, therefore, the merger has not affected on the change of competitive environment in the market, or led to the dominance of relevant telecommunications market. It seemed appropriate to be authorized to merge.

Quality of Service and Telecommunications Service Rates that are Important to the People

The NBTC has focused on regulating the business operation fairly so that the users have been provided with the quality, efficient and fair telecommunications services including the disclosure of information on service fee rates to the public. This includes the test of quality of services provided by telecommunications operators, setting criteria and procedures regarding the licensing, condition of business licensing and structure of service fee rates to be fair to users and service providers by taking into account the public interest.

1. Regulation on quality of service

In 2017, the Office of the NBTC had tested the quality of telecommunications service provision in either voice service or data service to be in accordance with the prescribed standards attached to the NBTC Notification¹⁶ continuously in every year. The test process consists of requiring the operators to submit the quarterly report on the quality of service provision to the Office of the NBTC, and the field operation to measure the quality of service provision operating by the Office of the NBTC which the result is as follows:

1.1 From the report on the test of quality of services provided by the operators of fixed-line service, public payphone service, and long distance call via satellite communications service, it is found that in 2017 the quality of telecommunications services provided by most service providers¹⁷ has met the standards required.

Besides, from the consideration of quality of telecommunication service provision in data service for mobile phone network submitted by 6 service providers consisting of AWN, CAT, TOT, TUC, DTN, and DTAC, it is found that in 2017¹⁸ the quality of telecommunications services provided by every service provider has met the requirement of the standards. In overall, the standards and quality of services are relatively high and meet the minimum standards required by the provision.

1.2 From the random tests on the quality of mobile service provision in both voice and data service of 5 mobile service providers, consisting of AWN, TUC, DTN, CAT and TOT, in areas of Bangkok and its vicinities and 74 provinces on Call Setup Success Rate, FTP DL Average Throughput, and FTP UL Average Throughput, the result is found as follows:

¹⁶Quality of service parameters is shown in the Appendix attached to the NTC Notification on Notification on Standard and Quality of Telecommunication Service Provision (Voice Service) published in the Royal Gazette on 15 February 2008, No. 125, Special Section 34 D, and Appendix attached to the NBTC Notification on Notification on Standard and Quality of Telecommunication Service Provision (Data Service) for Mobile Network, published in the Royal Gazette on 5 October 2012, No. 129, Special Section 152 D.

¹⁷is the data of telecommunication service provision in voice service in Q1 and Q2 of 2017 that the Office of the NBTC received from the following service providers:

1. Fixed-line service: 1) True Corporation Public Company Limited (True Corp) 2) True Internet Corporation Company Limited (True Internet) and 3) CAT Telecom Public Company Limited (CAT)
2. Public payphone service: True Corporation Public Company Limited (True Corp)
3. Mobile phone service: 1) Advanced Wireless Network Company Limited (AWN) 2) True Move H Universal Communication Company Limited (TUC) 3) Real Move Company Limited (REAL MOVE) 4) DTAC TriNet Company Limited (DTN) 5) Total Access Communication Public Company Limited (DTAC) and 6) CAT Telecom Public Company Limited (CAT)
4. Satellite communication long distance call service: ACeS Regional Services Company Limited (ARS)

¹⁸is the data of telecommunication service provision in data service in Q1 of 2017



1) The test result of call setup success rate in 2017¹⁹ of the 5 operators found that the average is exceeded the required standard, or in other words, the average of the whole country was 99.60 percent. At present, the service providers are more competitive in quality of voice services. If any service provider has poor quality of voice service, it will result in the loss of customer base. As a result, each service provider improves the quality of voice services to maintain its customer base as much as possible including to attract customers from other service providers.

2) The test result of FTP average throughput in 2017²⁰ of the 5 operators found that the average is exceeded the required standard, or in other words, the FTP download average throughput was 10.09 Mbps and the FTP upload average throughput was 4.91 Mbps.

Test result of quality of mobile service provision (Q1 – Q3 of 2017)

Testing program/Office of the NBTC	Call Setup Success Rate (Percent)	FTP DL Average Throughput (Mbps)	FTP UL Average Throughput (Mbps)
Subregion 1 (Nonthaburi)	99.81	11.89	7.01
Subregion 2 (Ubon Ratchathani)	98.61	9.91	5.82
Subregion 3 (Lampang)	99.51	16.26	6.12
Subregion 4 (Songkhla)*	98.99	11.24	3.75
Subregion 5 (Chanthaburi)	99.38	8.93	4.15
Subregion 6 (Khon Kaen)	98.90	15.43	6.83
Subregion 7 (Nakhon Ratchasima)	98.07	10.43	4.64
Subregion 8 (Udon Thani)	98.76	11.86	6.16
Subregion 9 (Chiang Mai)	99.19	6.52	4.23
Subregion 10 (Phitsanulok)	99.34	6.24	3.45

Test result of quality of mobile service provision (Q1 – Q3 of 2017) (Continued)

Testing program/Office of the NBTC	Call Setup Success Rate (Percent)	FTP DL Average Throughput (Mbps)	FTP UL Average Throughput (Mbps)
Subregion 11 (Phuket)	99.45	8.22	4.65
Subregion 12 (Nakhon Si Thammarat)	99.27	5.36	2.56
Subregion 13 (Surat Thani)	99.14	12.13	4.91
Subregion 14 (Chumphon)**	98.71	2.42	1.03
Head Quarters	98.75	14.42	8.32
Average of the whole country	99.06	10.09	4.91

Remarks : * test was applied to only 4 service providers except CAT

** test was applied to only 4 service providers except TOT

¹⁹is the data as of Q1 – Q3 of 2017

²⁰is the data as of Q1 – Q3 of 2017

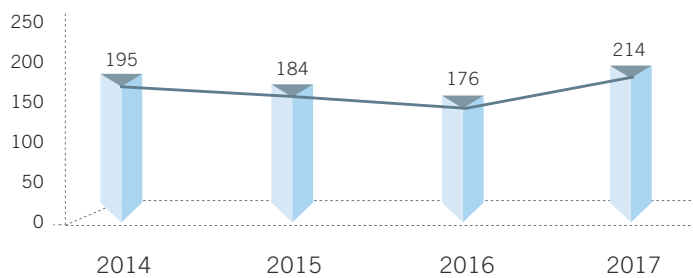
Moreover, in 2017 the Office of the NBTC had conducted the measurement of the quality of mobile service on voice and data services provided by service providers according to the users' complaints received and special tasks assigned as follows:

- (1) Having measured the quality of mobile service according to the 42 complaints received and consumer protection.
- (2) Having measured the quality of mobile service in “the NBTC Meets People Activity” for 3 times in Nakhon Si Thammarat, Chanthaburi and Udon Thani.
- (3) Having measured the quality of mobile service according to special tasks assigned such as measuring the signal quality of mobile service in the flood disaster areas of the Southern region such as Prachuap Khiri Khan, Chumphon, Nakhon Si Thammarat and neighboring provinces; measuring the signal quality of mobile service in the area of Tak special economic zone in Mae Sot District, Phop Phra District, and Mae Ramat District; measuring the signal quality of mobile service in the royal ceremony for paying respects to the body of His Majesty King Bhumibol Adulyadej and the royal cremation ceremony of His Majesty King Bhumibol Adulyadej at the royal crematorium from 18 October 2016 to 31 October 2017.
- (4) Having joined in the Cyber Lab Exhibition by showing the drive test vehicle and equipment for testing the mobile signal quality.
- (5) Having attended the 8th Meeting of Joint Technical Committee on Coordination and Assignment of Frequencies along the Bordering Area of Thailand–Lao PDR (JTC-8), and jointly measured the signal strength during 21 – 24 November 2017 in areas of Mukdahan province of Thailand and Savannakhet Province of Lao PDR.

2. Regulation on telecommunications service rate

2.1 Rate of fixed-line service²¹: There are 2 major fixed-line service providers currently; TOT Public Company Limited and the TRUE Group²² and due to a constant decrease of the number of fixed-line subscribers, the fixed-line service providers have therefore tried to stimulate the usage volume of the users in order to maintain their users base and level of the average revenue per user (ARPU) per month. However, it is found that the ARPU of fixed-line service providers in Q3 of 2017 was 214 baht which is a 21.42 percent increase from the year 2016.

Average revenue per user per month (ARPU) of fixed-line service



Remarks : Data as of Q3 of 2017

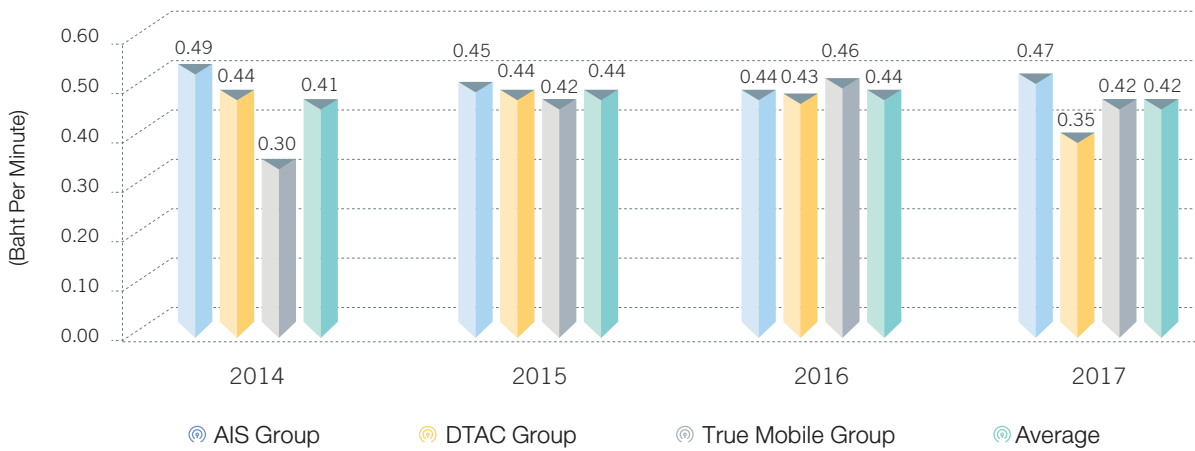
²¹is the data of fixed-line which excluded public payphone and PCT

²²consists of TRUE Corporation Public Company Limited (TRUE) and True Internet Corporation Company Limited (TICC)



2.2 Rate of mobile service: The mobile service providers in Thailand consist of 3 groups of private incumbents; namely AIS Group, DTAC Group, and TRUE Group. There are also other the state-enterprises service providers; CAT Telecom Public Company Limited (CAT) and TOT Public Company Limited (TOT), and small service providers without having own network. Having considered the rate of mobile service in both voice and non-voice services in 2017, it is found that each service provider of voice service provided the service with an average rate of 0.42 baht/minute in which the AIS Group had offered the highest average rate of service at 0.47 baht/minute, followed by TRUE Group and DTAC Group at 0.42 and 0.35 baht/minute, respectively. When the comparison is made on the rate of voice service between 2016 and 2017, it is found that the rate of voice service is likely to decline as service providers had focused on offering sales promotion of data usage and the behavior of users that emphasizing on calling via inexpensive price of sales promotion has been changed to use more data service through various applications such as Line, Facebook Messenger, Viber, Skype and BeeTalk, etc.

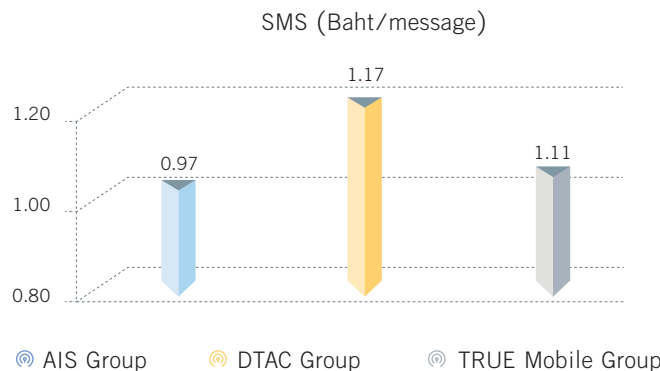
Average rate of mobile service (voice service) of each service provider in 2017



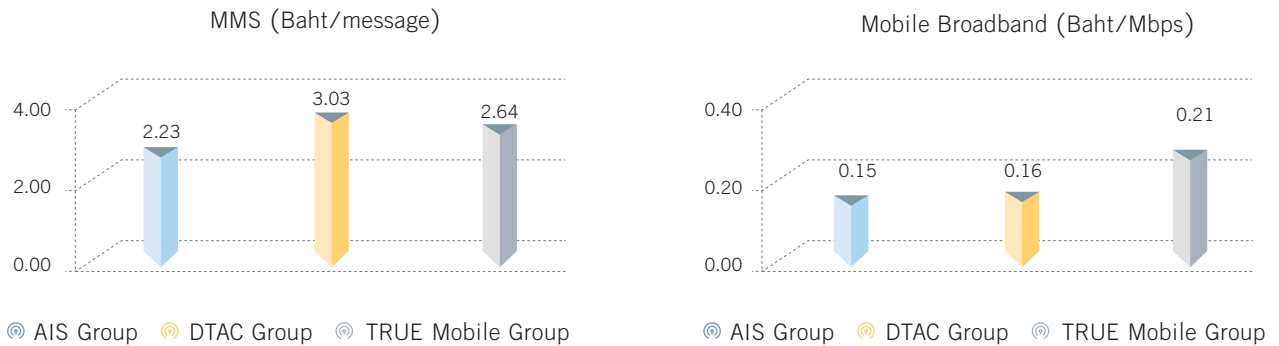
Remarks : Data as of Q3 of 2017

For the rate of non-voice service of mobile service such as short message service (SMS), multi media service (MMS) and mobile internet service (Mobile Internet) provided by each service provider, it is found that in 2017, the AIS Group was the service provider who had offered the lowest rate in all type of services with an average rate service for SMS at 0.97 baht/message and the average rate service of MMS and Mobile Internet was 2.23 baht/message and 0.15 baht/Mbps, respectively.

Average rate of non-voice mobile service in 2017



Average rate of non-voice mobile service in 2017 (continue)



Remarks : Data as of Q3 of 2017

However, according to the licensing conditions, the rate of mobile service in the frequency band of 2.1 GHz, 1800 MHz and 900 MHz has been set as follows: the rate of mobile service in the frequency band of 2.1 GHz must be lower than 15 percent of an average rate of service as of 7 December 2012, while the average rate of service in the frequency band of 1800 MHz and 900 MHz must be lower than the average rate of service in the frequency band of 2.1 GHz as of 25 August 2015. For the frequency band of 2.1 GHz, the 3 licensees to use spectrum in the frequency band of 2.1 GHz consisting of Advanced Wireless Network Company Limited (AWN)²³, True Move H Universal Communication Company Limited (TUC)²⁴, and DTAC TriNet Company Limited (DTN)²⁵ had offered sales promotion continuously by emphasizing on the sales promotion that supported on the users’ behavior in each group. However, in 2017 the rate of voice service was between 0.57 – 0.73 baht/minute, decreasing approximately 25 – 41 percent from an average rate of service as of 7 December 2012. For the rate of Mobile Internet service, the licensees had offered the service rate at approximately 0.16 – 0.18 baht/Mbps, decreasing approximately 45 – 52 percent from an average rate of service as of 7 December 2012.

Average rate of mobile service provided in the frequency band of 2.1 KHz

	Type of service			
	Voice service	SMS service	MMS service	Mobile Internet service
Average rate of service as of 7 Dec 2012	0.97 baht/minute	1.56 baht/message	3.90 baht/message	0.33 baht/MB
Rate of service of licensees	0.57 – 0.73 baht/minute	1.17 – 1.21 baht/message	2.52 – 3.03 baht/message	0.16 – 0.18 baht/MB

Remarks : Data as of Q3 of 2017

²³service launched on 7 May 2013

²⁴service launched on 8 May 2013

²⁵service launched on 23 July 2013



For the frequency band of 1800 MHz, there are 2 licensees to use spectrum in the frequency band of 1800 MHz consisting of Advanced Wireless Network Company Limited (AWN)²⁶ and True Move H Universal Communication Company Limited (TUC).²⁷ The average rate of voice service was 0.56 baht/minute, decreasing 17 percent from the average rate of service as of 25 August 2015, while the average rate of Mobile Internet service was 0.15 baht/Mbps, decreasing 31 percent from the average rate of service as of 25 August 2015.

Average rate of mobile service provided in the frequency band of 1800 MHz

	Type of service			
	Voice service	SMS service	MMS service	Mobile Internet service
Average rate of service as of 25 August 2015	0.69 baht/minute	1.15 baht/message	3.11 baht/message	0.26 baht/MB
Average rate of service of licensees	0.56 baht/minute	0.88 baht/message	2.22 baht/message	0.15 baht/MB

Remarks : Data as of Q3 of 2017

For the frequency band of 900 MHz, there are 2 licensees to use spectrum in the frequency band of 900 MHz consisting of Advanced Wireless Network Company Limited (AWN)²⁸ and True Move H Universal Communication Company Limited (TUC).²⁹ The average rate of voice service was 0.56 baht/minute, decreasing 19 percent from the average rate of service as of 25 August 2015, while the average rate of Mobile Internet service was 0.15 baht/Mbps, decreasing 41 percent from the average rate of service as of 25 August 2015.

Average rate of mobile service provided in the frequency band of 900 MHz

	Type of service			
	Voice service	SMS service	MMS service	Mobile Internet service
Average rate of service as of 25 August 2015	0.69 baht/minute	1.15 baht/message	3.11 baht/message	0.26 baht/MB
Average rate of service of licensees	0.56 baht/minute	0.88 baht/message	2.22 baht/message	0.15 baht/MB

Remarks : Data as of Q3 of 2017

²⁶service launched on 26 January 2016

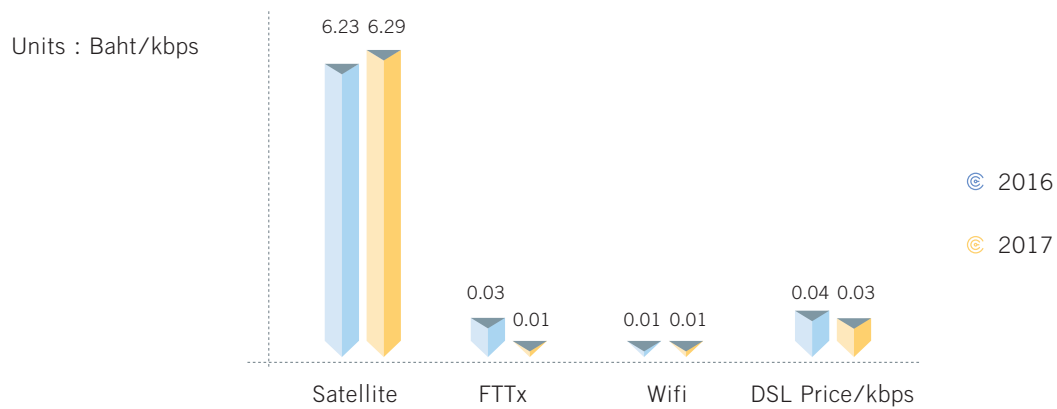
²⁷service launched on 25 March 2016

²⁸service launched on 1 July 2016

²⁹service launched on 25 March 2016

2.3 Rate of broadband service: The demand for broadband services continues to increase steadily and there are 4 incumbents of broadband service in the market consisting of TOT Public Company Limited (TOT), True Internet Corporation Company Limited (True Internet) and Triple T Broadband Public Company Limited (3BB) and Advanced Wireless Network Company Limited (AWN). As the broadband service connected via DSL has been more transformed into fiber-optic (FTTx) technology, the service providers have thus invested and expanded their networks for the provision of service via FTTx technology in order to support the increased demand for broadband usage. When considering the rates of broadband service classified by type of technology in 2017 with the comparison to 2016, it is found that the rate of broadband service via FTTx, broadband service via DSL, and broadband service through WiFi, have been decreased while the broadband service via satellite has the highest rate with a steady service of 6.29 baht per Kbps.

Average rate of broadband service



Remarks : Data as of Q3 of 2017





Trend of Broadcasting, Television and Telecommunications Industries in 2018

1. Trend of broadcasting and television market in 2018

The behavior of Thai people in watching television and listening to radio via the internet and online media platforms is likely to increase in the year 2017, resulting in the adjustment and planning of television channel operators (both terrestrial television and cable/satellite television operators) to be ready by having set strategies to link contents broadcasting on television with the digital platform (cross platform) so that the viewers are able to view contents anytime and anywhere. In addition, the viewing of content on radio broadcasting services or television services that are transmitted through other networks or over-the-top (OTT) services is likely to increase because of its strengths in the exotic and interesting content, especially the movie program and popular series from abroad. Therefore, the television channel operators have to focus and emphasize on developing the outstanding contents to enhance their competitiveness in the television industry in 2018.

In the past year, some digital terrestrial television channels operators have raised funds by having a major group of investors held shares in the program channels. The acquisition of the group of investors who are fully completed with good financial status and good relationships with other business groups will further stabilize the digital television industry in 2018 and the advertising direction of the industry in overall from the money spread of the investment group. However, the increasing trend of watching television through online media may lead to a decrease of the advertising value via television service and a more increase of advertising value in online media. Therefore, in the year 2018, the television channel operators need to focus on broadcasting contents through online media along with television media in order to expand their customer base and revenue base from advertising revenue spreading to online media.

For the radio broadcasting operators, they have to be adjusted in the same way as the television channel operators, that is, they need to increase more platforms for the listening online and through applications in order to respond to the changing behavior of Thai people in listening to radio, and to be consistent with the patterns of the advertising money spread which are more likely to advertise through online media or digital media.

2. Trend of telecommunications industry in 2018

As a consequence from the continued growth of the communication and telecommunications market due to more competition in the telecommunications industry, the business operators continue to develop their sales promotion programs to strengthen their own strong points, including the cooperation with alliance to provide a more variety of services to their customers such as points collection, discount points for products payment, etc. It is expected that in 2018, the service market will be the main factor that stimulates the growth of the communications and telecommunications market which mostly are from the market of mobile service and market of internet services, especially the use of internet services that the usage volume of data has been increasing steadily.

In the market of communications equipment in 2018, it is found that there is a slightly increase of investment in equipment when compared to the year 2017, such as the switch of FTTx technology of the fixed internet service, network investment or development of the network quality to be more stable, and expansion of 4G network to be covered in wider areas in order to support the constant growth of the use of service.

However, the trend of telecommunications industry in the future has pushed forward the business sector to improve the capabilities of the service usage through other platforms such as service use via cloud services. In addition, an increase of the use of smartphones of people in each year including the number of households using broadband service that held an increasing proportion, have influenced the business to improve the presentation or advertisement of products to be more online patterns in order to reach the demand of consumers efficiently. Besides, the services relevant to e-transaction is one of the services that people always use through applications such as Internet Banking and Mobile Banking, which is considered to be convenient, faster and more efficient, as the service provided by connecting the data of mobile service subscribers and the Promptpay service with the commercial banking data. For the Internet of Thing (IoT) service, there is a growth in this year, especially the business group on health insurance, car insurance, other insurance, including manufacturing industry and business services. Therefore, the operating model must be continuously improved by offering models that are more creative and connected to technology or else, their businesses will be affected by new business model innovations.



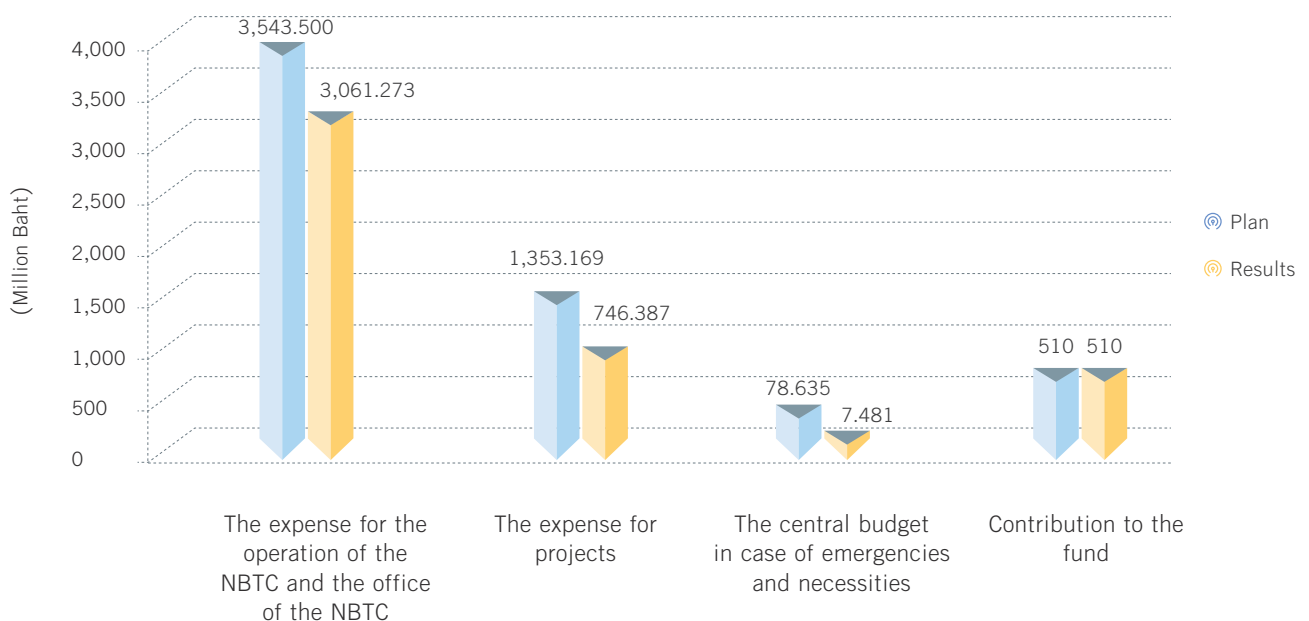
PART 5

Budget Management
in 2017

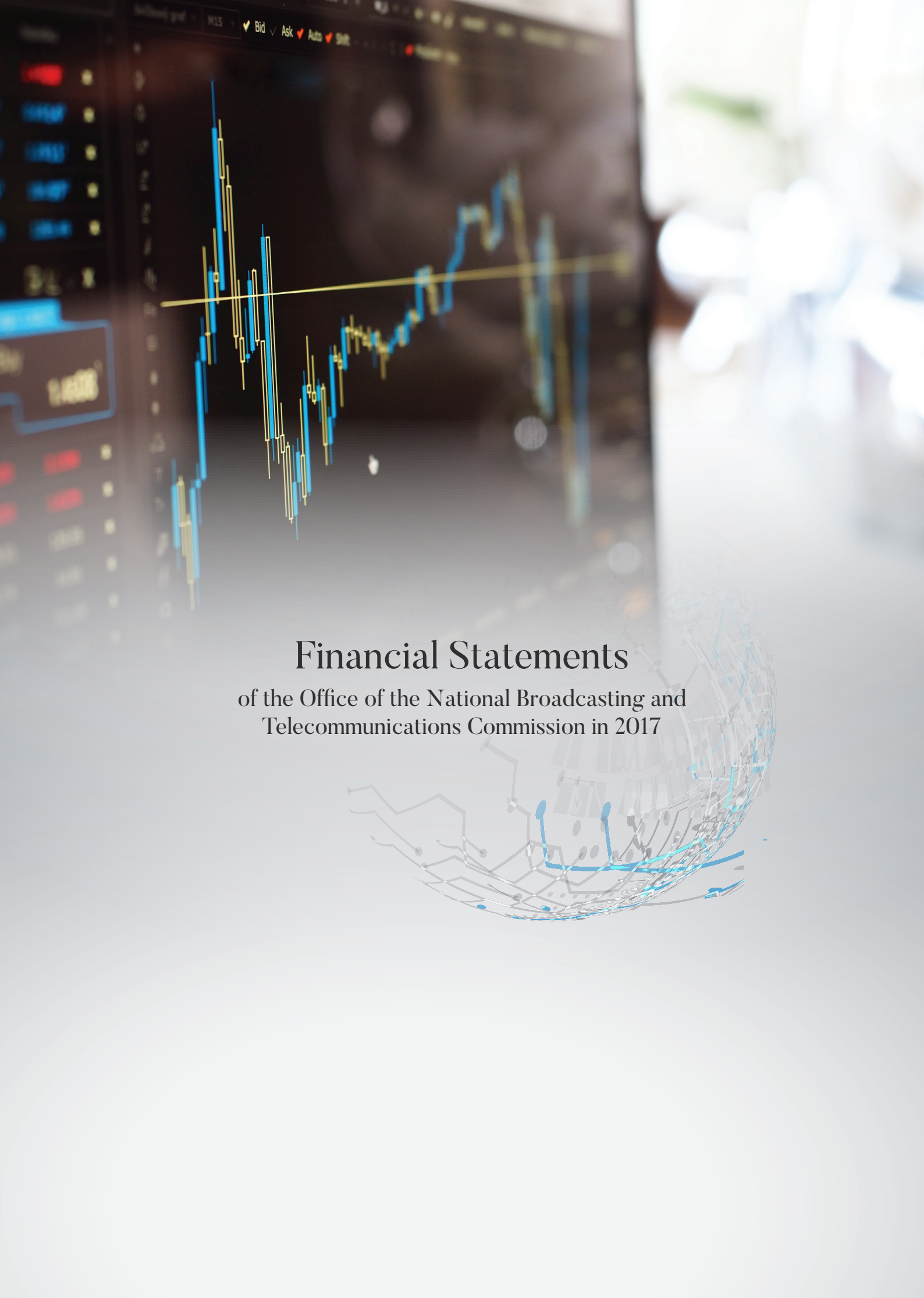
Budget Expenditure Report of the Office of the NBTC in 2017

The status of budget expenditure report of the Office of the NBTC in 2017 consisted of the expense for the operation of the NBTC and the Office of the NBTC, the expense for projects, the central budget in case of emergencies and necessities, and contribution to the Fund. In 2017, the annual budget expenditure plan of the Office of the NBTC was 5,485.303 million baht and the result of the budget disbursement as of 31 December 2017 was 4,325.141 million baht, or accounting for 78.85 percent.

The status of budget expenditure report in 2017



Remarks : Data as of 31 December 2017



Financial Statements

of the Office of the National Broadcasting and
Telecommunications Commission in 2017

The Office of the National Broadcasting and Telecommunications Commission
Financial Statement
As of 31 December 2017

	<u>Note</u>	<u>Unit : Baht</u>	
		2017	2016
<u>Assets</u>			
Current Assets			
Cash and cash equivalent	2.3,3	19,723,879,416.06	14,692,747,864.19
Short-term investment	2.4,4	35,504,423,078.78	26,680,031,666.72
Receivables from license fee	2.5,5	149,156,751.48	122,033,156.37
Accrued income – current portion of long-term loans	2.6,6	48,041,437,145.84	39,229,915,390.73
Prepaid expenses	7	6,824,432.45	7,095,737.16
Receivables from spectrum and radiocommunications rental	2.7	28,430,991.80	28,962,602.02
Other current assets	8	901,012,443.20	193,567,670.46
Total current assets		104,355,164,259.61	80,954,354,087.65
Non-current Assets			
Long-term investment	9	-	209,517,967.96
Accrued revenue	2.6,6	152,991,280,000.00	185,699,035,000.00
Plant and equipment	2.8,10	1,298,018,905.16	1,411,579,050.56
Financial lease assets	11	65,230,415.80	73,366,257.14
Intangible fixed asset	2.9,12	315,619,197.01	397,382,605.89
Other non-current assets		11,000,000,000.00	12,300,000,000.00
(Loans to Ministry of Finance)			
Total non-current assets		165,670,148,517.97	200,090,880,881.55
Total Assets		270,025,312,777.58	281,045,234,969.20

Notes to financial statements are an integral part of these financial statements

The financial statement as of 31 December 2017 and 2016 is to be certified by the Office of the Auditor General of Thailand



The Office of the National Broadcasting and Telecommunications Commission

Financial Statement

As of 31 December 2017

	<u>Note</u>	<u>Unit : Baht</u>	
		2017	2016
Liabilities and Equity			
Current Liabilities			
Creditors and notes payable	13	439,531,211.01	434,690,926.12
Accrued revenue	14	77,692,122.13	76,304,497.25
Estimated liabilities of projects		-	-
Estimated liabilities for employee benefit	2.14,15	608,193,401.49	551,121,000.42
State revenue in transit to the Treasury – current portion	2.11,16	43,555,282,966.18	31,814,087,459.67
Contribution in transit to the Digital Development for Economic and Society Fund		213,393,217.12	-
Output tax on spectrum auction in transit to the Treasury – current portion	17	2,702,662,235.00	2,197,789,408.78
Financial lease liabilities – current portion	18	37,797,693.74	45,312,758.29
Other current liabilities	19	3,757,475,496.66	2,141,590,866.92
Total current liabilities		51,392,028,343.33	37,260,896,917.45
Non-current Liabilities			
Accrued revenue	2.10,20	4,055,993,547.33	4,843,423,139.36
Spectrum and radiocommunications equipment rental held in trust	2.7	28,430,991.80	28,962,602.02
State revenue in transit to the Treasury	2.11,16	141,426,513,347.90	173,550,500,000.00
Output tax on spectrum auction in transit to the Treasury	17	9,838,080,000.00	12,148,535,000.00
Treasury Financial lease liabilities	18	26,126,018.41	30,771,376.16
Other non-current liabilities	21	176,402,786.11	261,211,534.48
Total non-current liabilities		155,551,546,691.55	190,863,403,652.02
Total Liabilities		206,943,575,034.88	228,124,300,569.47
Equity			
Capital		198,325,867.44	198,325,867.44
Retained earnings		92,597,235,430.87	79,057,478,918.24
Other components of equity		(29,713,823,555.61)	(26,334,870,385.95)
Total equity		63,081,737,742.70	52,920,934,399.73
Total Liabilities and Equity		270,025,312,777.58	281,045,234,969.20

Notes to financial statements are an integral part of these financial statements

The financial statement as of 31 December 2017 and 2016 is to be certified by the Office of the Auditor General of Thailand

The Office of the National Broadcasting and Telecommunications Commission
Comprehensive Profit and Loss Statement
For the year ended 31 December 2017

	<u>Note</u>	<u>Unit : Baht</u>	
		2017	2016
Operating Revenues			
Revenue from telecommunications service	2.12,22	15,128,733,972.67	162,397,634,271.83
Revenue from broadcasting and television service	23	567,657,942.26	873,251,243.44
Revenue from the fund	24	10,216,274,232.24	14,471,106,639.19
Other revenues	25	913,423,515.35	761,080,899.68
Total revenues		26,826,089,662.52	178,503,073,054.14
Operating Expense			
State revenue to be delivered to the Treasury – spectrum auction	2.12,26	5,811,406,841.25	153,282,528,241.28
Expense of the spectrum auction	2.12,27	15,787,002.24	24,683,340.29
Contribution to the Digital Development for Economic and Society Fund		1,586,845,496.81	-
Human resources expense	2.71,28	1,422,203,137.88	1,335,581,447.09
Operating expense	2.71,29	2,096,190,748.93	1,583,302,616.57
Public Utilities Expense	30	71,615,655.36	76,438,818.11
Depreciation and amortization	31	662,222,696.96	598,428,083.91
Interest expense from financial lease		3,507,262.69	4,236,403.43
Contributions to Education, Research and Development	2.16,32	104,097,425.98	366,344,806.72
Expense for promoting and supporting the Fund's objectives	33	1,502,456,881.79	2,504,109,009.01
Contributions to Technology Development Fund for Education		10,000,000.00	28,400,000.00
Total expenses		13,286,333,149.89	159,804,052,766.41
Net profit for the period		13,539,756,512.63	18,699,020,287.73
Other comprehensive profit and loss			
Revenue to be delivered for state revenue		(3,329,834,371.05)	(6,038,131,734.73)
Revenue to be delivered for state revenue – 1 Por Nor radio station		(49,118,798.61)	(33,305,326.10)
Total other comprehensive profit and loss		(3,378,953,169.66)	(6,071,437,060.83)
Total comprehensive profit and loss for the period		10,160,803,342.97	12,627,583,226.90

Notes to financial statements are an integral part of these financial statements

The financial statement as of 31 December 2017 and 2016 is to be certified by the Office of the Auditor General of Thailand

The Office of the National Broadcasting and Telecommunications Commission
Statement of Changes in Equity
For the year ended 31 December 2017

Unit : Baht

Notes	Equity	Retained earnings	Other components of equity		Total
			Revenue over expense to be delivered for state revenue		
Balance as of 31 December 2015	198,325,867.44	60,358,458,630.51	(20,263,433,325.12)		40,293,351,172.83
Net profit for the period	-	18,699,020,287.73	-		18,699,020,287.73
Other comprehensive profit (loss)	-	-	(6,071,437,060.83)		(6,071,437,060.83)
Balance as of 31 December 2016	198,325,867.44	79,057,478,918.24	(26,334,870,385.95)		52,920,934,399.73
Net profit for the period	-	13,539,756,512.63	-		13,539,756,512.63
Other comprehensive profit (loss)	-	-	(3,378,953,169.66)		(3,378,953,169.66)
Balance as of 31 December 2017	198,325,867.44	92,597,235,430.87	(29,713,823,555.61)		63,081,737,742.70

Notes to Financial Statements are an integral part of this Financial Statement

The Office of the National Broadcasting and Telecommunications Commission
Cash Flow Statement
For the year ended 31 December 2017

Unit : Baht

	<u>2017</u>	<u>2016</u>
Cash flow from operating activities		
Net profit for the period	13,539,756,512.63	18,699,020,287.73
Reconciled the revenue over net expense to net cash (expense) from operating activities		
Depreciation and amortization	662,222,696.96	598,428,083.91
Deferred revenue from donation	(10,786,469.08)	(11,619,522.66)
Doubtful accounts	56,635,131.40	2,634,803.00
Interest revenue	(758,854,154.29)	(676,639,367.81)
(Profit) Loss from the amortization of plant and equipment	-	0.00
Interest expense	3,507,262.69	4,236,403.43
Profit from operating activities before change in assets and liabilities from operating activities	13,492,480,980.31	18,616,060,687.60
Increase (decrease) of change of operating assets		
Fee receivable	(83,758,726.51)	287,593,505.52
Accrued revenue	23,896,233,244.89	(137,061,928,934.96)
Prepaid expenses	271,304.71	387,386.92
Spectrum and radiocommunications equipment rental debtor	531,610.22	362,096.98
Other current assets	(534,684,976.16)	117,353,580.52
Increase (decrease) of change of operating liabilities		
Creditors and note payables	4,840,284.89	(893,480,679.99)
Advance income	1,387,624.88	(1,192,323,783.31)
State revenue in transit to the Treasury	(20,382,791,145.59)	128,543,915,299.50
Contribution in transit to the Digital Development for Economic and Society Fund	213,393,217.12	-
Estimated liabilities for employee benefit	57,072,401.07	81,133,153.03
Other current assets	1,615,884,629.74	1,063,708,159.81
Deferred income	(776,643,122.95)	(897,637,486.54)
Spectrum and radiocommunications equipment rental held in trust	(531,610.22)	(362,096.98)
Sales tax on spectrum auction in transit	(1,805,582,173.78)	9,289,930,408.78
Financial lease liabilities	(15,667,684.99)	(64,795,520.40)
Other non-current liabilities	(84,808,748.37)	12,617,745.64
Net Cash from Operating Activities	15,597,627,109.26	17,902,533,522.12



The Office of the National Broadcasting and Telecommunications Commission
Cash Flow Statement
For the year ended 31 December 2017 (Continued)

Unit : Baht

	<u>2017</u>	<u>2016</u>
Net Cash for Investing Activities		
Cash expense for short-term investment	(8,824,391,412.06)	(16,913,280,446.64)
Cash receivable from long-term investment	209,517,967.96	(3,613,205.48)
Cash receivable from interest	586,094,357.71	531,337,342.57
Cash expense for long-term investment	1,300,000,000.00	(12,300,000,000.00)
Cash expense for plant and equipment	(254,149,373.30)	(475,043,528.21)
Cash expense for financial lease assets	(46,343,332.69)	(3,790,365.08)
Cash expense for intangible assets	(158,270,595.35)	(256,121,160.63)
Net Cash from (for) Investing Activities	(7,187,542,387.73)	(29,420,511,363.47)
Cash Flow from Monetary Acquiring Activities		
Surplus to be remitted as state revenue	(3,378,953,169.66)	(6,071,437,060.83)
Net cash expense for monetary acquiring activities	(3,378,953,169.66)	(6,071,437,060.83)
Increase in net cash and cash equivalents	5,031,131,551.87	(17,589,414,902.18)
Cash and cash equivalents at the beginning of accounting period	14,692,747,864.19	32,282,162,766.37
Cash and cash equivalents at the ending of accounting period	19,723,879,416.06	14,692,747,864.19

The Office of the National Broadcasting and Telecommunications Commission
Notes to Financial Statements
For the year ended 31 December 2017
(Unit : million baht, except being specified)

1. General Information

The Office of the National Broadcasting and Telecommunications Commission or “the Office of the NBTC” is a juristic person having a status of a State agency, established by virtue of the Act on the Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services B.E. 2553 (2010) and its amendment (the Act on the Organization 2010 and its amendment) to have powers and duties in regulating and developing the broadcasting, television and telecommunications services. The National Broadcasting and Telecommunications Commission, called in short “the NBTC”, has set up policies, criteria, procedures, conditions, fees, and other rules on matters related to Master Plans, licensing and frequency usage regulation, provision of broadcasting and telecommunication services, numbers usage, telecommunications network interconnection or access, prevention of monopoly or unfair competition, setting up technical standards, frequency refarming, consumer protection, and universal service, in accordance with national policies and plans regarding digital development for economic and society. Also, a fund shall be established under the Office of the NBTC, namely the “Broadcasting and Telecommunications Research and Development Fund for the Public Interest”, called in short “the Research and Development Fund”.

The Headquarter of the Office of NBTC is located at 87 Soi 8 (Sai Lom), Phahon Yothin Road, Samsen Nai, Phayathai, Bangkok 10400.

The revenue of the Office of the NBTC shall be under Section 65 of the Act on the Organization as follows:

- (1) Spectrum license fees and business license fees under Section 42 paragraph two and Section 45 paragraph three.
- (2) Revenues or benefits accrued from the conduct of duties of the NBTC and the Office of the NBTC.
- (3) Revenues derived from the Office of the NBTC’s property.
- (4) Money and property donated to the Office of the NBTC in accordance with the regulation set forth by the NBTC for the work of the Office.
- (5) Subsidies from the government.

Revenues of the Office of the NBTC under (1) and (2) after deducting by expenditures for efficient operation of the Office of the NBTC, necessary burden costs, and money allocated for the Fund under Section 52, the Technology Development Fund for Education under the law on national education and the law on digital development for economic and society, shall be remitted as the state revenue.

2. Accounting Policies

The major policies of accounting to be used in the preparation of financial statements of the Office of the NBTC are as follows:

2.1 Criteria for financial statement preparation

The financial statement of the Office of the NBTC have been prepared in accordance with the general accepted accounting principles including the accounting standards issued under the Accounting Professions Act B.E. 2547 (2004) including the interpretation and accounting practical guidelines promulgated by Federation of Professions.



The financial statements are recorded on the accrual basis and employed the historical cost basis to appraise the value of the elements included, except those specifically stated in other accounting policies.

Significant transactions occurred between the Office of the NBTC and the Funds under the Office of the NBTC were eliminated in the preparation of consolidated financial statements.

2.2 The standards of financial statement, the interpretation of accounting standards and the interpretation of financial statement have been effective in the current period and in the future. The details are as follows:

Having been effective in the accounting period starting from or after 1 January 2017.

Accounting standards No. 1 (amended in 2016)	on Financial Statement Presentation
Accounting standards No. 7 (amended in 2016)	on Cash Flow Statement
Accounting standards No. 8 (amended in 2016)	on Accounting policies, change of accounting forecast and errors
Accounting standards No. 10 (amended in 2016)	on Situation after reporting period
Accounting standards No. 16 (amended in 2016)	on Land, plant and equipment
Accounting standards No. 17 (amended in 2016)	on Lease agreement
Accounting standards No. 18 (amended in 2016)	on Revenue
Accounting standards No. 19 (amended in 2016)	on Employee Benefit
Accounting standards No. 36 (amended in 2016)	on Impairment of Assets
Accounting standards No. 37 (amended in 2016)	on Estimated liabilities, contingent liabilities, and contingent assets
Accounting standards No. 38 (amended in 2016)	on Intangible assets
Financial report standards No. 10 (amended in 2016)	on Consolidated financial statement
Interpretations of financial report standards No. 21 (amended in 2016)	on Money to be delivered to the State

Having been effective on or after the accounting period of 1 January 2018

Accounting standards No. 1 (amended in 2017)	on Financial Statement Presentation
Accounting standards No. 7 (amended in 2017)	on Cash Flow Statement
Accounting standards No. 8 (amended in 2017)	on Accounting policies, change of accounting forecast and errors
Accounting standards No. 10 (amended in 2017)	on Situation after reporting period
Accounting standards No. 16 (amended in 2017)	on Land, plant and equipment
Accounting standards No. 17 (amended in 2017)	on Lease agreement
Accounting standards No. 18 (amended in 2017)	on Revenue
Accounting standards No. 19 (amended in 2017)	on Employee Benefit
Accounting standards No. 36 (amended in 2017)	on Impairment of Assets
Accounting standards No. 37 (amended in 2017)	on Estimated liabilities, contingent liabilities, and contingent assets
Accounting standards No. 38 (amended in 2017)	on Intangible assets
Financial report standards No. 10 (amended in 2017)	on Consolidated financial statement
Interpretations of financial report standards No. 21 (amended in 2017)	on Money to be delivered to the State

The Federation of Accounting Professions under the Royal Patronage of His Majesty the King has issued Accounting Standards, Standards of Financial Report, new Interpretations of Standards of Financial Report and the amendments which have been effective on the accounting period beginning on or after 1 January 2017. The Management had assessed the impact of standards and interpretations of such standards and believed that most of them are unchanged in important principles, and will not have any significant impact on the financial statements.

2.3 Cash and Cash Equivalents

Cash and cash equivalents are stated at cost, comprising cash on hand, deposits held at call with banks and cash in bank accounts in classification of less than 3-month fixed-term account.

2.4 Short-term Investment

Short-term investment is the cash in bank accounts in classification of 3-month fixed-term account from the date of acquisition but no longer than 12 months.

2.5 Fee Receivables

Fee receivables are shown by estimated net value receivable after deducting the doubtful debts which is estimated from reviewing of outstanding balances at the end of accounting periods.

Allowance for doubtful accounts refers to the difference between the receivable book value comparing to receivable realizable value, doubtful account will be recognized in the statement of comprehensive income and will be considered as an integral part of the expenses.

2.6 Accrued income

Accrued income refers to the annual license fee revenue, calculating from the revenue from the business operation taken in the accounting period of the licensee. The payable will be made once a year, within one hundred and fifty days from the end of the accounting period according to the NBTC Notification on Broadcasting Business License Fee B.E. 2555 (2012) and the NBTC Notification on Telecommunications Business License Fee including the revenue from spectrum auction according to Section 45, Paragraph One, and the Announcement of the National Council for Peace and Order No. 80/2014.

2.7 Receivables of spectrum and radiocommunications equipment rental

The receivables of spectrum and radiocommunications equipment rental are the receivables that the Office of the NBTC collected from debtors on behalf of the Ministry of Finance. The entry will be recorded in double with the spectrum and radiocommunications equipment rental receivables account. When the amount is paid by the debtors, the recorded entry of spectrum and radiocommunications equipment rental receivables account will be transferred to the account of state revenues in transit to the Treasury – the radiocommunications equipment rental and violation fees.

2.8 Plant and equipment

2.8.1 Assets owned by the authority

Plant and equipment shown by cost price deducted by accumulated depreciation and losses result from accumulated impairment.

Cost price includes direct costs associated with acquisition of assets, the cost of construction, the property constructed by the authority itself. This includes the cost of materials, direct labor and other direct costs related to the supply of assets so that those assets are in the right place and ready to be used.

The components of each building and equipment which are varied and different in the use must be recorded separately from each other.

Profits or losses on disposals of plant and equipment are the difference between net returns receiving from the disposals and accounting value of plant and equipment. The net amount will be recognized as income or expense in profits or losses.



2.8.2 Leased assets

The leases that an authority may take the risks and remuneration of possessing the leased assets can be classified by financial lease, plant and equipment acquired through financial lease contracts are recorded as assets by current value of the minimum amount to be paid according to the lease contract, depending on less amount may be, deducted by the accumulated depreciation and losses from accumulated impairment.

The rentals to be paid will be classified into finance expenses and deduction from the liabilities under the lease contract to ensure that the rate of interest, when compared to the outstanding liabilities in each period, is a fixed rate. Finance expenses will be directly recorded on profits or losses.

Costs incurred afterward

The cost of replacing components is recognized as a part of the accounting value of the item of plant and equipment. If there is a possibility that the authority will get the future economy-based benefits from that item and be able to reliably measure the cost value of the item, the replaced component will be deleted from the account by the accounting cost value incurred in the regular maintenance of plant and equipment and will be recognized on profits or losses upon the occurrence.

Depreciation is calculated by using a straight line basis over the estimated useful lives as follows:

Type of Asset	Estimated Useful Lives (Year)
Plant and its addition	5 - 20
Electrical and radio equipment	5
Computer equipment	3
Vehicles and transportation	8
Office supplies and others	2 - 15

Guidelines for the Recognition of Plant and Equipment

- 1997 - 2002 - Equipments to be recognized as assets must have historical cost from purchasing or acquisition at price per unit, set, or group not less than 30,000 baht.
 - Equipments that purchased or acquired before the year 1997 shall not be estimated for the price but must be recorded in the Asset Control Registration.
- 2003 - 2007 - Equipments to be recognized as assets must have historical cost from purchasing or acquisition not less than 5,000 baht, and be classified according to the durable articles standard account of the Office of the NTC without having amended the existing criteria.
- 2008 - Present - Equipments to be recognized as assets must have historical cost from purchasing or acquisition not less than 10,000 baht, and be classified according to the durable articles standard account of the Office of the NTC without having amended the existing criteria.

2.9 Net Intangible Asset

Net intangible assets will be recorded by cost after deducting accumulated amortization and allowance for impairment losses.

The amortization is calculated by using the straight line method according to the estimated useful lives of the intangible assets.

The criteria for the recognition of intangible assets

2010 – 2013 Intangible assets of computer program to be recognized as assets must have its value of not less than 50,000 baht.

2014 – Present Intangible assets of computer program to be recognized as assets must have its value of not less than 30,000 baht.

2.10 Deferred income

- Assets receiving from donation will be recorded as assets together with deferred income, and will be recognized as revenue from donation together with deducting depreciation of the assets receiving from donation according to their useful lives.

- The revenue from spectrum auction for the provision of digital TV services will be recognized as deferred income based on the actual costs of each period in relation to the operation on supporting people to receive universal digital television service. The unrecognized income will be shown as liabilities in the deferred income account.

2.11 Surplus to be delivered as state revenue

Surplus or benefits accrued from the operation under powers and duties of the NBTC and the Office of the NBTC in any year which had been received in a year after deducting the operating expenses of the NBTC and the Office of the NBTC and other necessary burdens or obligation expenses including the reserved budget for overlapped disbursement between the fiscal years and contributions to the Funds as prescribed by law, the rest must be remitted as state revenue. Also, the residual money from necessary obligations expenses in the previous years in which the operation could not be completed within 2 years must be remitted as the state revenue.

2.12 The revenue from spectrum auction for the provision of IMT service in the frequency band of 900 MHz and 1800 MHz after deducting the cost of the auction preparation including interests must be submitted as state revenue according to the Act on the Organization 2010, Section 45 Paragraph 1.

2.13 License fees for the use of spectrum for the provision of digital television services, in category of national commercial services in the 1st installment, shall be submitted to the Research and Development Fund. However, the fee in part of minimum price will be used for supporting the public to access to the digital television services thoroughly to be in accordance with the NBTC Notification on Criteria, Procedures and Conditions for the Spectrum Auction for the Provision of Digital Television Services, in Category of National Commercial Services B.E. 2556 (2013) and Section 53 (2) of the Act on the Organization 2010.

However, the revenue from the license fees for the use of spectrum for the provision of digital television services, in category of national commercial services, after deducting the expenses, must be submitted as state revenue according to the Announcement of the National Council for Peace and Order No. 80/2014. Besides, prior to the effective date of the Notification, if the revenue from the license fees have not yet been submitted to the Research and Development Fund, after deducting the expenses, it must be submitted as state revenue within fifteen days starting from the effective date of this Notification. This includes the Order of the Head of National Council for Peace and Order No. 76/2016 regarding Measures for Promoting Broadcasting, Television and Telecommunications Business Operation for the Public Benefit concerning the change of payment term of license fees for the use of spectrum in the rest amount.

2.14 Employee Benefit

The Office of the NBTC is not subject to the Labour Protection Act, Labour Relations Act, Social Security Act, and Compensation Act. The Office of NBTC has its regulations regarding employee benefits as follows:

Welfare Fund: the Office of the NBTC has provided its staff and employees with the basic welfare and fringe benefits consisting of the support of children's education, healthcare, disaster victims, rescue, assistance in case of death, compensation, and other welfares such as welfare loan, housing welfare, sport and entertainment welfare, and other welfares which are to promote the quality of life, as well as other types of the support as appropriate and necessary, apart from being prescribed under the Regulation of the Office of the NBTC regarding Benefit and Welfare B.E. 2550 (2007) and No. 2 B.E. 2551 (2008).



The employees' pension is the pension according to the Regulation of the Office of the NBTC regarding the Employees' Pension and Welfare after Retirement B.E. 2555 (2012). The regular pension will be paid by calculating from the duration of being served the organization multiply by last salary, and extra pension will be paid in 24 times of the last salary by the time of being harm or sick or getting injured to disabled due to operating duties, and 30 times of the last salary when an officer died due to operating duties. The payment of the pension will be disbursed from the Pension Fund established by the Office of the NBTC in which the source of revenue is from the initial money and budget allocated from the Annual Expenditure Budget to be adequate for the burden of pension to be paid at the end of the accounting period, including the benefits of pension.

The provident fund money is the money that the Office of the NBTC has contributed to the Provident Fund at the amount of 10 percent of the employee's salary according to the Special Section of the Fund Regulation of the Office of the NTC under the Provident Fund of the Office of the NTC which has been established under the Regulation of the Office of the NTC regarding the Provident Fund of the Employees of the Office of the NTC B.E. 2549 (2006).

2.15 Revenue Recognition

The Office of the NBTC had recognized the revenue in each type as follows:

- Revenue from the spectrum auction, Section 41, Paragraph Two, and Section 45, Paragraph Two under the Organization Act B.E. 2553 (2010) has been recognized on an accrual basis according to the content of relevant agreements
- Revenue from the remuneration for spectrum usage for radiocommunications has been recognized on an accrual basis
- Revenue from license fees under the Radiocommunications Act has been recognized upon the receipt of forms and fees.
- Revenue from business license fee has been recognized on an accrual basis
- Revenue from numbering fee has been recognized monthly on an accrual basis
- Revenue from license fees for spectrum transfer has been recognized upon the receipt of forms and fees
- Revenue from application fee has been recognized according to revenue category of the application upon the receipt of the application and fees
- Revenue from the contributions to the Research and Development Fund (for the expense in USO projects) is the revenue to be delivered to the Fund according to the Broadcasting Business Act and Telecommunications Business Act which has been recognized on an accrual basis
- Revenue from Por Nor 1 Radio Broadcasting Station has been recognized monthly on an accrual basis
- Revenue from other fees has been recognized upon the receipt of forms and fees
- Revenue from interest receivables has been recognized on proportion of time basis
- Other revenues apart from the above-mentioned revenue have been recognized on an accrual basis

2.16 The contribution for education, research and development has been recognized as an expense when it is approved to be paid to the right holder. The unpaid money to be delivered back within the period will be deducted from the total expense of the contributions. If the money were delivered after the year of disbursement, it will be recorded as unpaid and return revenue of the contribution for education, research and development showing as other non-operating revenue. These guidelines include the expense with similar items.

2.17 The expenditure for the management of the Research and Development Fund, such as the asset for the Fund management, personnel expenses, meeting remuneration for the committees, expense of public relations activities, expense for organizing meetings, material cost for the Fund management, cost for public utilities, etc., shall be disbursed by the Office of the NBTC according to the Regulation of the Research and Development Fund.

3. Cash and Cash Equivalents

	31 Dec 17	31 Dec 16
Cash	0.22	0.06
Petty cash	0.35	0.49
Receivable cheque	134.05	0.68
Bank deposit		
Current account	67.56	38.37
Saving account	13,252.43	7,956.93
Fixed deposit account for 3-month term	6,269.27	6,696.22
Total	19,723.88	14,692.75
Cash and Cash Equivalents included		
Cash from the revenue gained under Section 65 (1 - 2)	13,388.94	8,665.17
Cash and cash equivalents from the revenue gained under Section 65 (3 - 5)	156.50	99.49
Cash and cash equivalents of the Fund	3,335.07	5,677.21
Cash and cash equivalents from trust money, guarantee deposits, and others	2,843.37	250.88
	19,723.88	14,692.75

The cash and cash equivalents as of 31 December 2017 and 2016 at the amount of 19,723.88 and 14,692.75 million baht, respectively had included the deposits from the Research and Development Fund (Old) of 21.03 and 20.84 million baht respectively (included the interests receivable) for the expense of the obligation of the old Fund.

4. Short-term Investments

	31 Dec 17	31 Dec 16
3 - 12 month fixed-deposit account	35,504.42	26,680.03
Total Short-term Investments	35,504.42	26,680.03
Short-term Investments included		
Short-term investment from the revenue gained under Section 65 (1 - 2)	-	0.02
Short-term investment of the Research and Development Fund	35,064.07	26,140.00
Short-term investment from the trust money	440.35	540.01
	35,504.42	26,680.03

Short-term investment as of 31 December 2017 and 2016 at the amount of 35,504.42 and 26,680.03 million baht had included a deposit in a commercial bank with the obligation to hold deposits of 204.96 million baht to maintain a deposit for employees' housing loans.



5. Fee Receivables

	31 Dec 17	31 Dec 16
Receivable from remuneration of radio frequency	0.09	0.06
Receivable from numbering fee	795.43	790.56
Receivable from business license fee	79.29	0.43
Receivable	29.02	29.89
<u>Less doubtful accounts</u>	<u>(754.67)</u>	<u>(698.91)</u>
Total	149.16	122.03

The Debtors of numbering fee as of 31 December 2017 and 2016 at the amount of 795.43 and 790.56 million baht respectively had included numbering fee of True Move Company Limited since 1 March 2014 to 31 December 2015 for 647.29 million baht and surcharge for 141.13 million baht and the total was 788.42 million baht. However, True Move has not yet paid for the numbering fee to the Office of the NBTC with the reason that the company must operate under the NBTC Notification on Measures for Protecting Users in Temporary Period in case of Termination of the Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013). The Notification has limited True Move's rights in taking benefits from the inactivate numbers which having the company resulted on the burden for bearing the telecommunications numbering fees. However, True Move is able to include the telecommunications numbering fees to the cost to be deducted from the operating revenue. Therefore, it has requested the Office of the NBTC to consider the exception of all telecommunications numbering fees since 16 September 2013 (starting from the date of the concession terminated) onwards. For the telecommunications numbering fees from 16 September 2013 to 28 February 2014 at the amount of 190.97 million baht that True Move had already paid to the Office of the NBTC, the company has submitted a letter to the Office of the NBTC requesting for the refundable fees.

Later on, the Telecommunications Commission had the Resolution in the Meeting No. 12/2014 dated 7 May 2014 disagreed to approve the request for the exception of telecommunications numbering fee of True Move and the Meeting No. 26/2014 dated 14 October 2014 agreed to assign the Office of the NBTC to proceed under legal processes. On 31 August 2015, the Office of the NBTC has already submitted the case to the attorney of the Office of Civil Litigation for further proceeding against True Move according to the Undecided Case No. 490/2016.

6. Accrued Incomes

	31 Dec 17	31 Dec 16
Current portion		
Accrued income of revenue from spectrum auction in the frequency band of 1800 MHz	21,608.12	21,608.12
Accrued income of revenue from spectrum auction of Digital TV	2,881.18	5,818.87
Accrued income of revenue from spectrum auction in the frequency band of 900 MHz	8,602.80	-
Accrued income of revenue from business license fee	5,610.82	6,167.79
Accrued income of revenue from the contributions to the USO Fund	9,338.52	5,635.14
Total current portion	48,041.44	39,229.92

6. Accrued Incomes (Continued)

	31 Dec 17	31 Dec 16
Current portion of long-term debts		
Accrued income of revenue from spectrum auction in the frequency band of 900 MHz	136,780.24	145,383.04
Accrued income of revenue from spectrum auction in the frequency band of 1800 MHz	-	21,608.11
Accrued income of revenue from spectrum auction of Digital TV	16,211.04	18,707.88
Total current portion of long-term debts	152,991.28	185,699.03
Total	201,032.72	224,928.95

The accrued income as of 31 December 2017 and 2016 at the amount of 201,032.72 and 224,928.95 million baht respectively, consisting of accrued income of revenue from spectrum auction in the frequency band of 900 MHz as of 31 December 2017 and 2016 at the amount of 145,383.04 and 145,383.04 million baht respectively, and the accrued income of revenue from spectrum auction in the frequency band of 1800 MHz as of 31 December 2017 and 2016 at the amount of 21,608.12 and 43,216.23 million baht, and the accrued income of revenue from spectrum auction of Digital TV as of 31 December 2017 and 2016 at the amount of 19,092.22 and 24,526.75 million baht respectively. However, the licensees have brought the letters of guarantee issued by the financial institution in type of commercial bank under the Financial Institutions Business Act B.E. 2551 (2008), to guarantee the payment for the remaining amount of an accrued income from the spectrum auction according to the NBTC Notification. However, the Head of National Council for Peace and Order has issued its Order No. 76/2016 on Measure for Promoting the Broadcasting, Television and Telecommunications Business Operation for the public benefit concerning the extension of payment period of license fee to use the spectrum in the remaining amount plus interest of the amount to be paid at the interest rate set by the Monetary Policy Committee of Bank of Thailand. However, the Supreme Administrative Court issued an order on 23 May 2017 affirming the order of the Administrative Court that the NBTC suspends any action on the execution under the letter of guarantee of commercial banks for the accrued income from the spectrum auction for digital TV service according to the conditions attached to the license to use the spectrum No. B1-S20031-0017-57 and No. B1-S20031-0024-57 dated 25 April 2014 of the remaining installments until the judgment has been made or otherwise provided by the order, in which the Office of the NBTC has filed an appeal to the Court against the injunction.

The Accrued income of revenue from business license fee as of 31 December 2017 and 2016 at the amount of 5,610.82 and 6,167.79 million baht respectively is the revenue that the Office of the NBTC charged from the operators in the progressive rate of revenue in which the operators have to pay those amount within 150 days starting from the end of the accounting period.

The accrued income of revenue from the contribution to the USO Fund as of 31 December 2017 and 2016 at the amount of 9,338.52 and 5,635.14 million baht respectively is the forecast of revenue that the Fund will receive from telecommunications business licensees for the 2nd round (July - December) by calculating from the value of revenue base of telecommunications business operation in each round of the revenue deliverance according to the practical guidelines prescribed by the Fund.

7. Prepaid Expenses

	31 Dec 17	31 Dec 16
Prepaid expense on land rental	6.44	6.44
Other prepaid expenses	0.38	0.66
Total	6.82	7.10



8. Other Current Assets

	31 Dec 17	31 Dec 16
Suspended input tax	60.35	25.06
Advance loans debtors	46.53	4.89
Accrued interest receivable	172.76	145.30
Advance deposit	602.42	6.16
Other current assets	18.95	12.16
Total	901.01	193.57

The accrued interest receivable as of 31 December 2017 and 2016 at the amount of 172.76 and 145.30 million baht respectively is mostly the accrued bank deposit interest receivable of the Research and Development Fund for 165.78 and 139.40 million baht respectively.

The advance deposit as of 31 December 2017 at the amount of 602.42 million baht is the advance deposit of the Research and Development Fund for the implementation of universal service project at the amount of 583.42 million baht.

9. Long-term Investment Fund

	31 Dec 17	31 Dec 16
Fixed-deposit account for more than 12 months	-	209.52
Total	-	209.52

The long-term investment fund as of 31 December 2016 at the amount of 209.52 million baht is included the deposit in a commercial bank with the obligation to hold deposits at the amount of 195.04 million baht for housing loans of employees.

10. Plant and equipment

Items	31 Dec 17					31 Dec 16	
	Buildings and its improvement	Electrical and Radio equipment	Computer equipment	Vehicles and transportation equipment	Office supplies and others	In process activities	Total
Cost value							
Bring forward at the beginning of period	862.66	1,570.18	859.82	183.74	336.19	155.12	3,967.71
Increase during the period	6.67	124.78	60.89	1.46	34.98	231.38	460.16
Decrease during the period	-	-	-	-	-	(228.77)	(228.77)
Balance at the end of period	869.33	1,694.96	920.71	185.20	371.17	157.73	4,199.10
Accumulated depreciation							
Bring forward at the beginning of period	512.80	938.56	730.19	153.93	220.65	-	2,556.13
Increase during the period	39.37	181.71	83.51	5.94	34.42	-	344.95
Decrease during the period	-	-	-	-	-	-	-
Balance at the end of period	552.17	1,120.27	813.70	159.87	255.07	-	2,901.08
Book value							
As of 31 December 2017	317.16	574.69	107.01	25.33	116.10	157.73	1,298.02
As of 31 December 2016	349.86	631.62	129.63	29.81	115.54	155.12	1,411.58

11. Assets under the financial lease contract

	Bring forward as of 31 Dec 16	During the period		Balance as of 31 Dec 17
		Increase	Decrease	
Capital cost				
Vehicle equipment and transportation	178.49	0.67	-	179.16
Computer software	101.75	42.96	-	144.71
Total	280.24	43.63	-	323.87
Less Accumulated amortization				
Vehicle equipment and transportation	137.47	21.68	-	159.15
Computer software	69.40	30.09	-	99.49
Total	206.87	51.77	-	258.64
Book value	73.37	(8.14)	-	65.23

12. Intangible Asset

	Bring forward as of 31 Dec 16	During the period		Balance as of 31 Dec 17
		Increase	Decrease	
Computer programs	894.33	154.74	-	1,049.07
<u>Less Accumulated amortization</u>	<u>(496.95)</u>	<u>(236.50)</u>	<u>-</u>	<u>(733.45)</u>
Total	397.38	(81.76)	-	315.62

13. Creditors and Notes Payable

	31 Dec 17	31 Dec 16
Creditors	417.77	430.60
Credit card payable	0.13	0.18
Cheques not yet cashed	21.63	3.91
Total	439.53	434.69

14. Advance Revenues

	31 Dec 17	31 Dec 16
Advance remuneration for radiocommunications	63.22	62.84
Advance numbering fee	4.94	4.58
Others	9.53	8.88
Total	77.69	76.30

15. Liabilities Estimation for Employee Benefits

	31 Dec 17	31 Dec 16
Bring forward	551.12	469.99
<u>Increase</u> Liabilities estimation for employee benefits during the period	78.34	98.13
<u>Less</u> payable of liabilities for employee benefits when resigning from the work	(21.27)	(17.00)
Balance	608.19	551.12

16. State Revenue in Transit to the Treasury

	Bring forward as of 31 Dec 16	During the period		Balance as of 31 Dec 17
		Deferred transit Increase/ Decrease	Being delivered	
Current portion				
Radiocommunications equipment rental and violation fees	0.36	0.37	-	0.73
Fines	5.35	4.78	-	10.13
Revenue from spectrum auction in frequency band of 900 MHz	12.81	8,027.41	-	8,040.22
Revenue from spectrum auction in frequency band of 1800 MHz	20,223.03	20,195.85	20,195.60	20,223.28
Revenue from Digital TV spectrum auction	5,444.05	3,916.72	4,215.15	5,145.62
Revenue from the beautiful numbers auction	57.05	0.78	57.05	0.78
Revenue from state-enterprises according to Section 84	-	5,349.64	572.50	4,777.14
Revenue from 1 Por Nor Radio Broadcasting Station	33.31	49.11	-	82.42
Surplus to be delivered as state revenue in 2016	6,038.13	-	4,093.00	1,945.13
Surplus to be delivered as state revenue in 2017	-	3,329.83	-	3,329.83
Total current portion	31,814.09	40,874.49	29,133.30	43,555.28
Current portion of long-term debts				
Revenue from spectrum auction in frequency band of 900 MHz	135,872.00	-	8,027.19	127,844.81
Revenue from spectrum auction in frequency band of 1800 MHz	20,194.50	-	20,194.50	-
Revenue from Digital TV spectrum auction	17,484.00	1,228.90	5,131.20	13,581.70
Total current portion of long-term debts	173,550.50	1,228.90	33,352.89	141,426.51
Total	205,364.59	42,103.39	62,486.19	184,981.79

**17. Spectrum Auction Input Tax in Transit**

	31 Dec 17	31 Dec 16
Current portion		
Spectrum auction in the frequency band of 900 MHz	562.80	-
Spectrum auction in the frequency band of 1800 MHz	1,413.62	1,413.62
Digital TV spectrum auction	359.18	380.67
Accrued income – Telecommunications service	340.04	373.36
Accrued income – Broadcasting service	27.02	30.14
Total current portion	2,702.66	2,197.79
Current portion of long-term debts		
Spectrum auction in the frequency band of 900 MHz	8,948.24	9,511.04
Spectrum auction in the frequency band of 1800 MHz	-	1,413.62
Digital TV spectrum auction	889.84	1,223.88
Total current portion of long-term debts	9,838.08	12,148.54
Total	12,540.74	14,346.33

18. Financial Lease Liabilities

	31 Dec 17	31 Dec 16
Current portion		
Value of liabilities	40.35	47.39
Interest	(2.55)	(2.08)
Total current portion (current value)	37.80	45.31
Current portion of long-term debts		
Value of liabilities	28.74	31.50
Interest	(2.62)	(0.73)
Total current portion of long-term debts	26.12	30.77
Total	63.92	76.08

19. Other Current Liabilities

	31 Dec 17	31 Dec 16
Accrued vouchers	-	0.06
Accrued expenses	2,254.72	2,084.74
Withholding tax payable	5.16	7.49
Creditors – the Revenue Department	1,444.40	0.90
Other current liabilities	53.20	48.40
Total	3,757.48	2,141.59

20. Deferred Income

	31 Dec 17	31 Dec 16
Deferred income from license fee to use spectrum for the provision of digital TV service	3,859.88	4,643.85
Deferred income from administrative fines	195.82	188.49
Deferred income from donation	0.29	11.08
Balance at the end of period	4,055.99	4,843.42

The movement of deferred income in the period of 2017 and 2016 is as follows:

	31 Dec 17	31 Dec 16
Bring forward at the beginning of period	4,843.42	5,752.68
<u>Increase</u> deferred income during the period	7.33	-
<u>Less</u> recognized as revenue during the period	(794.76)	(909.26)
Balance at the end of the period	4,055.99	4,843.42

The deferred income as of 31 December 2017 and 2016 at the amount of 4,055.99 and 4,843.42 million baht is mostly the deferred income of the spectrum auction for the provision of digital television service at the amount of 3,859.88 and 4,643.85 million baht respectively, according to the NBTC Notification on Criteria, Procedures and Condition for the Spectrum Auction for the Provision of Digital Television Service in Category of National Commercial Service B.E. 2556 (2013), Article 10.

The payment of license fee to use the spectrum at the amount of 50,862.00 million baht consisting of the minimum auction price at the amount of 15,190.00 million baht and the money in excess of the minimum price at the amount of 35,672.00 million baht in which the payment shall be paid in 6 installments, and for the 1st installment the licensee shall pay 50 percent of the minimum price and pay 10 percent of the money in excess of the minimum price for 11,162.20 million baht by remitting to the Research and Development Fund according to Section 53 (2) of the Act on the Organization B.E. 2553 (2010) on 11 February 2014 to be used for supporting the public for the universal access in digital television services. The Research and Development Fund has recorded those amounts of money as liabilities and will transfer recognition as revenue according to the actual expense of each installment relating to the support to people to be served with universal digital television service.

The deferred income from spectrum auction for the provision of digital TV as of 31 December 2017 and 2016 are as follows:

	31 Dec 17	31 Dec 16
Bring forward	4,643.85	5,623.79
<u>Increase</u> revenue received during the period		
Revenue from spectrum auction, in the 1 st installment	-	-
Total	4,643.85	5,623.79
<u>Less</u> recognized transfer as revenue for current period	(783.97)	(979.94)
Balance	3,859.88	4,643.85



21. Other Non-Current Liabilities

	31 Dec 17	31 Dec 16
Contract guarantee deposits	69.01	95.22
Performance guarantee	106.14	164.20
Security deposit	0.47	0.44
Trust money for the monument construction	0.37	0.37
Other trust money	0.41	0.98
Total	176.40	261.21

The most of contract guarantee deposits as of 31 December 2017 and 2016 at the amount of 106.14 and 164.20 million baht respectively is the guarantee deposits of the Research and Development Fund at the amount of 82.35 and 144.36 million baht respectively which charged from the operators participating in the project for supporting the public in the transition to digital terrestrial television switch-over for the guarantee of quality of goods and protection of consumers for using the set-top-box for not less than 2 years. The Research and Development Fund will collect the guarantee deposits at 5 percent of the amount of coupon value distributed to the participating operators.

22. Revenue from Telecommunications Business

	2017	2016
Revenue from spectrum auction in the frequency band of 900 MHz	-	151,952.00
Revenue from the payment for recovering auction damages	-	798.52
Revenue from the state-enterprises according to Section 84 Paragraph Three	5,349.64	-
Revenue from the beautiful numbers auction	182.71	57.97
Revenue from the radiocommunications frequency remuneration	134.93	140.10
Revenue from license fee under the Radiocommunications Act	240.65	195.99
Revenue from business license fees	4,894.82	5,344.53
Revenue from numbering fee	4,292.22	3,890.19
Revenue from other fees	33.76	18.33
Total	15,128.73	162,397.63

The revenue from spectrum auction in the frequency band of 900 MHz for the year ended as of 31 December 2016 at the amount of 151,952.00 million baht was the payment of license fees to use spectrum for telecommunications service in the frequency band of 900 MHz according to the spectrum auction to use spectrum for telecommunications service under the NBTC Notification on Criteria and Procedure for the Licensing of Spectrum for Mobile Phone Service in the Frequency Band of 900 MHz and the Order of the Head of National Council for Peace and Order No. 16/2016 on Spectrum Auction for Telecommunications Service.

23. Revenue from the Broadcasting and Television Services

	2017	2016
Revenue from spectrum auction for television service provision	-	290.81
Revenue from broadcasting service (trial operation)	37.51	68.29
Revenue from television business license fee	473.43	443.66
Revenue from license fees under Section 70	32.86	30.85
Revenue from other fees	23.86	39.64
Total	567.66	873.25

In 2016, the revenue from spectrum auction for television service provision of the Office of the NBTC was 290.81 million baht and it had been recognized from the spectrum auction for the provision of digital television service in the category of national commercial service, in the 1st installment of the Research and Development Fund (see Notes No. 20) plus interest revenue.

24. Revenue from the Research and Development Fund

In the year 2017 and 2016, the Office of the NBTC had the revenues from the contribution to the Fund - licensees (for the payment in USO projects) at the amount of 10,216.27 and 14,471.11 million baht, respectively. Those revenues were collected for being used in the provision of basic telecommunications and social services under Section 50 of the Act on the Organization B.E. 2553 (2010) which stipulated that the NBTC shall set forth a plan for universal basic telecommunications and social services. After the Office of the NBTC had completed the formulation of the plan, the plan was announced to the public as well as the criteria and procedures for the revenue collection for being used in the provision of basic telecommunications and social services on the same date which required that all telecommunications licensees shall have their duties to allocate revenue from the provision of telecommunications services to the Fund for the implementation of the plan.

25. Other revenues

	2017	2016
Revenue from 1 Por Nor radio broadcasting station	54.25	62.48
Interest receivable	758.85	676.64
Other revenue	100.32	21.96
Total	913.42	761.08

26. Revenue to be delivered to the Treasury – spectrum auction

	2017	2016
Revenue from the state-enterprises under Section 84 Paragraph 3	5,349.64	-
Revolving Funds Act	445.00	-
Spectrum auction in the frequency band of 900 MHz	0.22	151,871.29
Spectrum auction in the frequency band of 1800 MHz	1.36	20.67
Spectrum auction for digital TV service	14.41	535.00
Spectrum auction – damages recover	-	798.52
Beautiful numbers auction	0.78	57.05
Total	5,811.41	153,282.53

**27. Expense for spectrum auction**

	2017	2016
Expenses for the arrangement of spectrum auction in frequency band of 900 MHz	1.39	23.76
Expenses for the arrangement of beautiful numbers auction	14.40	0.92
Total	15.79	24.68

28. Human Resources Expenses

	2017	2016
Employees' salaries	912.83	768.62
Extra remuneration for the employees	126.00	126.32
Remuneration for the NBTC	26.33	31.86
Remuneration according to contract	0.19	53.40
Monthly remuneration	81.49	74.04
Fringe benefits	135.51	130.16
Provident Fund	73.38	65.36
Retirement pensions	66.47	85.82
Total	1,422.20	1,335.58

29. Operating Expenses

	2017	2016
Overtime expense	4.34	3.28
Meeting compensation	29.12	38.40
Other remuneration	1.71	1.16
Expenses for domestic travel	34.25	32.88
Repair cost	65.78	33.17
Rental cost	120.44	119.18
Maintenance cost	231.94	173.57
Payment for contracted services	292.60	235.44
Expenses paid for guests' reception	3.53	4.18
Expense for organizing ceremonious events	2.74	4.74
Taxes and fees	18.34	17.10
Expenses paid for trainings and seminars	99.79	154.47
Expenses for training registration	23.31	23.11
Expense for public relations activities	321.94	224.63
Expenses for meetings arrangement	114.18	69.32
Expenses for radiocommunications equipment calibration	3.18	2.40

29. Operating Expenses (Continued)

	2017	2016
Expenses for hiring consultants	318.68	252.80
Donation and charity	207.43	47.96
Other expenses	2.52	6.78
Substandard supplies	93.76	80.70
Doubtful accounts	56.64	2.63
Expenses for traveling abroad	49.93	55.36
miscellaneous expenses	0.04	0.04
Total	2,096.19	1,583.30

30. Public Utilities Expenses

	2017	2016
Electricity	33.49	26.20
Water	1.27	1.00
Office telephone usage	2.38	4.06
Mobile phone usage	16.09	14.10
DSTV service	0.32	0.32
Internet service	13.40	25.93
Postal service	4.67	4.83
Total	71.62	76.44

31. Depreciation and Amortization

	2017	2016
Depreciation – Building and its improvement	39.37	40.47
Depreciation – Electrical and radio equipment	183.24	127.79
Depreciation – Computer equipment	96.90	108.95
Depreciation – Vehicles and transportation	6.01	17.52
Depreciation – Office supplies and others	42.19	32.42
Depreciation – Financial lease contract	54.48	63.88
Total Depreciation	422.19	391.03
Amortization – Computer software	240.03	207.40
Total Amortization	240.03	207.40
Total Depreciation and Amortization	662.22	598.43

**32. Financial support for education, research and development in broadcasting, television and telecommunications services**

	2017	2016
Financial support for study, research and development	60.99	273.50
Expense for the provision of universal basic telecommunications services	11.95	-
Expense for supporting the organization of ITU events	2.17	79.32
Expense for supporting education scholarship	28.99	13.52
Total	104.10	366.34

33. Expenses for promoting and supporting the Fund's objectives

	2017	2016
Expense for the provision of universal service	899.97	2,330.19
Expense for research and development	70.79	44.06
Expense for human resource development	3.16	4.65
Expense for consumer protection	2.82	4.98
Expense for the Safe and Creative Media Development Fund	525.72	120.23
Total	1,502.46	2,504.11

The expenses for the provision of universal service obligation in 2016 at the amount of 2,330.19 million baht were mostly the expenses for supporting the Must-Carry project at the amount of 1,895.25 million baht which had been estimated according to the budget framework approved by the NBTC Resolution No. 10/2017 on 23 August 2017 approving to support the expenses for the provision of public television service that having broadcasted TV program through satellite from 1 January 2018 to 9 January 2020, and to support the licensees of the expenses for public television signal transmission through satellite from 1 January 2018 to 19 December 2019 so that the people are able to view the public television service thoroughly according to the NBTC Notification on Criteria of Broadcasting Public Television Service and the Order of the Head of National Council for Peace and Order No. 76/2016 on Measures for Supporting Broadcasting, Television and Telecommunications Business Operation for the Public Interest.

34. Other Appropriate Obligations Expenses

	<u>2017</u> <u>The Office</u> <u>Section 65 (1 - 2)</u>	<u>2016</u> <u>The Office</u> <u>Section 65 (1 - 2)</u>
Reserved fund for overlapped disbursement in 2016-period extension	-	26.45
Reserved fund for overlapped disbursement in 2017-period extension	47.48	993.65
Reserved fund for overlapped disbursement in 2017	582.58	-
Creditors and notes payables (excluded the reserved fund in 2017 and 2016)	335.20	317.52
Other current liabilities (excluded from the reserved fund in 2017 and 2016)	1,688.52	227.53
Trust money, contract guarantee deposits, security deposits of loss surplus of trusted money payables, and others	5,454.84	1,056.54
Total	8,108.62	2,621.69

35. Revenue from Service Provision on behalf of the State

The NBTC Notification on Measure for Protecting Users in Temporary Period in case of the Termination of Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013), Article 7 prescribing that during the protection period, the service providers shall have responsibility to receive payment of revenue from the provision of services on behalf of the state by having separated accounts of payment receipt specifically, and reporting the amount of revenue and its incurred interests which have already been deducted the cost of network usage and telecommunications numbering fees, the expense cost of management, and other necessary costs to service provision, the rest amount of revenue shall be audited by the Office of the NBTC before further delivering as state revenue. Those consist of the revenue of spectrum in the frequency band of 1800 MHz which the concession ended on 15 September 2013 was divided into 3 periods. The first period was during 16 September 2013 – 17 July 2014 at the amount of 1,697.00 million baht which the Telecommunications Commission (TC) had its resolution to approve that the revenue from the provision of service in the period of protecting users in the frequency band of 1800 MHz shall be delivered as state revenue. The second period was during 18 July 2014 – 17 July 2015, the same period of having the Announcement of the NCPO, which the TC had assigned a working group to audit the money to be delivered as state revenue from the provision of service in the period of protecting users in the frequency band of 1800 MHz, and the third period started from 18 July 2015 onwards until the new service provider has been chosen. Besides, the TC had considered in TC Meeting No. 30/2015 on 16 November 2015 Agenda 5.2 the termination date of mobile phone service provision in the period of protecting users and agreed that while the Office of the NBTC has not yet received the decision judgment from the Head of NCPO plus the mobile phone service provision in the frequency band of 1800 MHz will be ended on 18 November 2015, therefore, to avoid the contrary to the intention of the order of the Head of the NCPO, the TC had its resolution to postpone the termination date of the users protection from 18 November 2015 until the NCPO made its decision judgment or the TC has already granted a license to use spectrum in the frequency band of 1800 MHz to any winning bidder. However, the TC had granted licenses to the winning bidders to use spectrum in the frequency band of 1800 MHz on 25 November 2015 and 3 December 2015 and assigned the Office of the NBTC to inform the relevant parties of the result including operating guidelines in case of the provision of mobile phone service in the frequency band of 900 MHz. The Office of the NBTC has issued the licenses to use spectrum for telecommunications service in the frequency band of 1800 MHz which have been effective since 26 November 2015. For the frequency band of 900 MHz which the concession ended on 30 September 2015, it was in process of the auction fee payment by the winning bidders within 90 days as from the date of receiving the written document informing of being the winning bidder according to the NBTC Notification regarding Criteria and Procedure for the Licensing of Spectrum for Telecommunications Service in the Frequency Band of 895 – 915 MHz/940 – 960 MHz and the Order of the Head of National Council for Peace and Order No. 16/2016 on spectrum auction for telecommunications service assigning the NBTC to arrange the spectrum auction in the frequency band of 900 MHz, frequency range of 895 – 905 MHz pair with 940 – 950 MHz and protect users for temporary period to ensure that the users have received benefits and used the services continuously until 30 June 2016 or until the NBTC has already granted a license to use spectrum to the winning bidder as the case may be. Later on, the NBTC has already granted licenses to the winning bidders since 30 June 2016.

36. Contingent Liability

The provision of the Act on the Organization B.E. 2553 (2010) Section 27 (12) and Section 50 stipulates that the NBTC shall set forth a plan for universal basic telecommunications and social services. When the Office of the NBTC has already drafted the plan and issued on 29 May 2012 for the enforcement according to the NBTC Notification the Plan for Universal Basic Telecommunications and Social Services (2012 – 2016) as well as the issuance of Criteria and Procedure for Revenue Collection to be used for the provision of universal basic telecommunications service and social service dated 29 May 2012 but has become effective since 31 May 2012. The Notification contains containing timeframe for the implementation in the period of 2012 – 2016 with the operating budget of 20,468.30 million baht.



On 11 June 2013, the Fund Management Committee had its Resolution in the Meeting No. 8/2013 approved the project and the Fund allocation to support the projects under the USO Action Plan on telecommunications for the year 2013 consisting of 5 projects and a workplan in the total amount of 1,028.91 million baht.

On 19 June 2013, the NBTC has its Resolution in the NBTC Meeting No. 6/2013 on 19 June 2013 approved the consideration of the budget under the expenditure framework in 2013 for only 1,028.91 million baht. The MOUs had been made with the grantees from the year 2013 to 2015 for the amount of 547.29 million baht, which disbursed until 31 December 2016 at the amount of 376.08 million baht, and in 2016 the TC Meeting No. 21/2016 on 13 September 2016 had its Solution to reduce the contractual financial amount of 1 project at the amount of 13.50 million baht and the rest of 157.71 million baht had been committed over the year under the MOU.

On 5 June 2014 the Fund Management Committee had considered in the Meeting No. 6/2014 to support the project under the USO Action Plan on Telecommunications for the year 2014 consisting of 15 projects within the budget framework of 1,432.25 million baht and the Resolution was to allocate money from the Fund to support the project on network expansion for the provision of universal basic telecommunications service and social service in Phitsanulok and Nong Khai provinces (Technical Audit) for an urgent implementation within the total budget framework of 25.00 million baht. For the remaining 14 projects at the amount of totally 1,407.25 million baht, the Fund Management Committee Meeting, at the same time, had its Resolution to appoint a working group to scrutinize the projects to be completed by 2 weeks and presented to the Fund Management Committee Meeting for consideration before presenting to the NBTC Meeting for further consideration and approval. However, on 17 June 2014, the National Council for Peace and Order had its order that the NBTC postponed the implementation of all projects and the fund allocation for the support of the projects under the USO Action Plan on Telecommunications in 2014.

On 25 August 2016, the Head of National Council for Peace and Order had the command at the end of the confidential and the most urgent letter of the Secretariat Office of the National Council for Peace and Order (NCPO) No. 237 dated 22 August 2016 regarding the provision of universal basic telecommunications services and social services (USO) approving that the Office of the NBTC shall implement the USO mission in cooperation with Ministry of Technology and Communications to be in accordance with the plan as agreed. The budget for project implementation must be used worthily, efficiently, and utmost benefit to the people, and the project shall begin in 2016 and the timeframe of the plan implementation should be reduced so that the urgent plan can be implemented immediately.

On 7 December 2016, the Cabinet had its resolution to acknowledge the proposal proposed by Ministry of Digital Economy and Society (MDES) and assigned the MDES to implement the network expansion of broadband internet to cover 24,700 villages by using budget the expenditure for fiscal year 2016 as well as assigned the Office of the NBTC to implement the network expansion of broadband internet in the rest of 15,732 villages by using the budget of the project for the provision of basic telecommunication services and social services (USO), in accordance with the government policy and the draft(s) Constitution of the Kingdom of Thailand B.E. 2559 (2016), mandatory referendum version, Section 56 which stipulating that “In respect of the basic structure or network of basic public utility services of the State which are essential for the people’s subsistence or for security of the State, the State shall not conduct any act which renders the ownership to be under the private sector or the ownership of the State to be less than fifty-one percent”.

Later on, in 2017, the Office of the NBTC has carried out the project to improve telecommunication infrastructure in order to drive national economy in Zone C+ for 3,920 villages under the project on the provision of mobile phone service and a broadband internet service in border villages by using the budget from collecting fees from the service providers according to the USO Plan (2012 - 2016) in which 10 contracts had been signed on 9 September 2017 for the total amount of 12,989.69 million baht as follows:

1. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 1 (Northern Region 1), Part 1, provision of broadband internet service, True Internet Corporation Company Limited was the winning bidder through e-Auction, for the total amount of 2,812.01 million baht.

2. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 2 (Northern Region 2) Part 1, provision of broadband internet service, TOT Public Company Limited was the winning bidder through e-Auction, for the total amount of 2,103.80 million baht.

3. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 3 (North Eastern Region) Part 1, provision of broadband internet service, TOT Public Company Limited was the winning bidder through e-Auction, for the total amount of 2,492.60 million baht.

4. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 4 (Central-Southern Region) Part 1, provision of broadband internet service, Interlink Telecom Public Company Limited was the winning bidder through e-Auction, for the total amount of 1,707.35 million baht.

5. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 5 (3 Southern border provinces, including 4 Sub-districts in Songkhla province), Part 1, provision of broadband internet service, Interlink Telecom Public Company Limited was the winning bidder through e-Auction, for the total amount of 160.89 million baht.

6. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 1 (Northern Region 1), Part 2, provision of mobile service, TOT Public Company Limited was the winning bidder through e-Auction, for the total amount of 1,890.00 million baht.

7. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 2 (Northern Region 2), Part 2, provision of mobile service, True Move H Universal Communication Company Limited was the winning bidder through e-Auction, for the total amount of 786.55 million baht.

8. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 3 (North Eastern Region), Part 2, provision of mobile service, True Move H Universal Communication Company Limited was the winning bidder through e-Auction, for the total amount of 532.06 million baht.

9. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 4 (Central-Southern Region), Part 2, provision of mobile service, CAT Telecom Public Company Limited was the winning bidder through e-Auction, for the total amount of 443.94 million baht.

10. The project on the provision of mobile phone service and a broadband internet service in border villages (Zone C+), Group 5 (3 Southern border provinces, including 4 Sub-districts in Songkhla province), Part 2, provision of mobile service, CAT Telecom Public Company Limited was the winning bidder through e-Auction, for the total amount of 60.48 million baht.

For the expenses of the project on the provision of mobile phone service and a broadband internet service in border villages relating to the work control, monitoring, analysis and reporting of project implementation, supply of property control and telecommunication network management, supply of monitoring system and supervising the use of computer equipment and centralized peripherals, supply of quality of internet service provision regulating system from the head quarters, supply of internet hotspot authentication system, supply of log collection system, property insurance of public internet service centers for the amount of 829.96 million baht has been in process of procurement of the Office of the NBTC.

For the remaining 15,732 villages, the Office of the NBTC will carry out the operation under the Action Plan on the Provision of Universal Basic Telecommunications Service and Social Service (2017 - 2021) (USO 4) which includes the preparation of project expenditure under the USO Action Plan, which is subjected to facts and situation which may change in the future. In addition, the Office of the NBTC may improve plans and expenditures to be in accordance with the future facts. Therefore, the Fund is unable to prepare the certain budget expenditure at present.



37. Major Events, Disputes and Lawsuits

1. The Office of the NBTC was the plaintiff for the offence of breach of contract for the radio broadcasting station rental in the frequency of 98.5 MHz and demanded a payment for damages for 40.39 million baht according to the Case No. 9278/2015 (Undecided Case No. 4800/2010 and Decided Case No. 4067/2011) It is reliable that the Office of the NBTC will receive some payment of debts.

2. The Office of the NBTC was the plaintiff for the offence of breach of contract for 1 Por Nor radio broadcasting station rental, and demanded a payment for damages with a capital of 44.20 million baht according to the Case No. 17794/2014 (Undecided Case No. 6024/2009 and Decided Case No. 1935/2011). It is reliable that the Office of the NBTC will not receive the payment of debts as the debtor has no assets to be seized for an execution of debts payment.

3. The Office of the NBTC had requested for the settlement of the bankruptcy case for 9.20 million baht according to the Undecided Cases No. 811/2002 and the Decided Case No. 755/2002 in which the Office of the NBTC will not be distributed of the assets.

4. The Office of the NBTC was the defendant for the offence in relations to the disputes case on administrative contract according to the Undecided Cases No. 1370/2015 with a capital of 9.32 million baht. It is reliable that the Central Administrative Court will have the Office of the NBTC judged a prevailing party in some part.

5. The Office of the NBTC was the plaintiff for the offence of breach of contract for radiocommunications device rental according to the Undecided Case No. 2618/2006 and the Decided Case No. 646/2007 with a capital of 10.66 million baht, which is reliable that the Office of the NBTC will not receive the payment of debts as the debtor has no assets to be seized for an execution of debts payment, and according to the Undecided Case No. 2689/2002 and the Decided Case No. 4515/2002 with a capital of 24.42 million baht, which is reliable that the Office of the NBTC will not receive the payment of debts as the debtor has no assets to be seized for an execution of debts payment.

6. The Office of the NBTC was the defendant for the offence in relations to placing an order for setting the daily administrative fine at 80,000.00 baht due to the plaintiff failed to collect data and details of prepaid mobile phone users which is considered a violation of the NTC Notification on Criteria for Telecommunications Numbers Allocation and Management B.E. 2551 (2008), Articles 38 and 96 according to the Undecided Cases No. 1867/2011 with a capital of 34.96 million baht in which the case is in the process of determination of ending date of fact findings of the Supreme Administrative Court, and according to the Undecided Case No. 818/2013 with a capital of 21.20 million baht which is in the process of determination of the trial date of the Supreme Administrative Court, and according to the Undecided Case No. 3117/2012 with a capital of 94.56 million baht which is in the process of determination of ending date of fact findings of the Supreme Administrative Court.

7. The Office of the NBTC was the defendant for the offence in relations to the issuance of the order for setting the daily administrative fine at 100,000.00 baht due to the plaintiff has defined the usage duration for prepaid mobile phone services which is considered a violation of the NTC Notification on Standard of Contract for the Provision of Telecommunications Service B.E. 2549 (2006), Article 11, according to the Undecided Case No. 75/2013 with a capital of 24.40 million baht which is in the process of determination of ending date of fact finding of Supreme Administrative Court according to the Undecided Case No. 56/2013 with a capital of 24.00 million baht, which is in the process of determination of ending date of fact findings, and according to the Undecided Case No. 55/2013 with a capital of 23.30 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

8. The Office of the NBTC was the defendant for the offence in relations to the issuance of the Order of the Secretary-General of the NBTC for setting the daily administrative fine at 140,000.00 baht and according to the TC's Resolution in the Meeting No. 13/2015 on 30 June 2015 and the pronouncement on the Undecided Case No. 1927/2015 with a capital of 58.94 million baht which is in the process of determination of ending date of fact findings of the Administrative Court, and according to the Undecided Case No. 1933/2015 with a capital of 62.72 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

9. The Office of the NBTC was the defendant for the offence in relations to exercising power under the law on the rights to use spectrum in the frequency band of 1800 MHz and requesting for the withdrawal of the NBTC Notification on Measure for Protecting Users in Temporary Period in Case of the Termination of Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013), according to the Undecided Case No. 2128/2013 with a capital of 275,658.36 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

10. The Office of the NBTC was the defendant for the offence in relations to unlawful conduct by a state administrative agency or state officials in case of issuance of the NBTC Notification on Measure for Protecting Users in Temporary Period in Case of the Termination of Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013), and the NBTC Notification on Users Protection in Temporary Period in Case of the Termination of Concession or Contract for Mobile Phone Service Provision according to the Order of the NCPO No. 94/2014 regarding the Suspension of Operation under the Act on the Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services. The plaintiff has demanded the defendants to share liabilities or cover for a payment of 24,291.86 million baht with interest at the rate of 7.5 percent per year to the plaintiff according to the Undecided Case No. 1651/2015 which the defendant has already submitted additional testimony to the Central Administrative Court.

11. The Office of the NBTC was the defendant for the offence in relations to the request for damages payment caused by the operation of the plaintiff under the NBTC Notification on Measure for Protecting Users in Temporary Period in Case of the Termination of Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013), in which the cost of expenditure is higher than income and demanding for the reimbursement of telecommunications numbering fees that the plaintiff has already paid according to the Undecided Case No. 2013/2015 with a capital of 16,265.06 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

12. The Office of the NBTC was the defendant for the offence in relations to the issuance of the order to the plaintiff to deliver the revenue from the provision of service according to the Measure for Protecting Users in Temporary Period according to the Undecided Case No. 1997/2015 with a capital of 627.64 million baht, which is in the process of determination of ending date of fact findings of the Administrative Court.

13. The Office of the NBTC was the defendant for the offence in relations to the issuance of the order for setting the daily administrative fine at 210,000.00 baht on the plaintiff until the plaintiff has already submitted the completed report of accounting separation in telecommunications services in 2012 according to the NBTC Notification on Criteria and Methods for the Preparation of the Report of Accounting Separation in Telecommunications Services according to the Undecided Case No. 59/2016 with a capital of 22.89 million baht, which is in the process of determination of ending date of fact findings of the Administrative Court.

14. The Office of the NBTC was the defendant for the offence in relations to the disputes on revenue and expenditure in the temporary period for users Protection according to the NBTC Notification on Measure for Protecting Users in Temporary Period in Case of the Termination of Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013) and the Order of the National Council for Peace and Order No. 94/2014 regarding the Suspension of Operation under the Act on the Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services according to the Undecided Case No. 741/2016 with a capital of 5,778.00 million baht, which is in the process of determination of ending date of fact findings of the Administrative Court.

15. The Office of the NBTC was the defendant for the offence in relations to unlawful conduct by a state administrative agency or state officials in case that the TC Meeting No. 32/2015 on 2 December 2015 had its Resolution to assign the universal service obligation on the plaintiff based on the revenue from telecommunications business operation (after cost deduction) of telecommunications licensees at the rate of 4 percent per year according to the Undecided Case No. 1545/2016 with a capital of 86.96 million baht, which the defendant has already submitted additional testimony.



16. The Office of the NBTC was the plaintiff for the offence of the delivery of the revenue from the provision of service in the 1st period of the remedy according to the Undecided Case No. 1228/2016 with a capital of 1,150.66 million baht which is in the process of determination of ending date of fact findings of the Administrative Court, and according to the Undecided Case No. 1441/2016 with a capital of 633.31 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

17. The Office of the NBTC was the defendant for the offence in relations to placing an order for setting compulsory administrative measures due to the plaintiffs was unable to have the Mobile Number Portability service registered within the specified period according to the Undecided Case No. 792/2011 with a capital of 13.50 million baht which is in the process of determination of ending date of fact findings of the Administrative Court and according to the Undecided Case No. 793/2011 with a capital 13.50 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

18. The Office of the NBTC was the defendant for the offence in relations to the disputes of unlawful conduct by a state administrative agency or state officials (the order to pay unpaid telecommunications service fees with interest and surcharge) according to the Undecided Case No. 439/2008 with a capital of 747.42 million baht, which is in the process of determination of ending date of fact findings of the Administrative Court.

19. The Office of the NBTC was the defendant for the offence in relations to the disputes of unlawful conduct by a state administrative agency or state officials (the order to pay the special telecommunications number fees unlawfully) according to the Undecided Case No. 397/2011 with a capital of 656.51 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

20. The Office of the NBTC was the defendant for the offence in relations to unlawful conduct by a state administrative agency or state officials (requesting for the revoke of the NTC Notification on Criteria for Mobile Number Portability Service, the Order of the Secretary-General of the NTC prescribing that the plaintiff must provide the mobile number portability service, and the Order for setting the administrative fine in case that the plaintiff failed to carry out the provision of mobile number portability service) according to the Undecided Case No. 777/2011 with a capital of 13.50 million baht which is in the process of determination of ending date of fact findings of the Administrative Court, and according to Undecided Case No. 778/2011 with a capital of 13.50 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

21. The Office of the NBTC was the defendant for the offence in relations to the disputes of unlawful conduct by a state agency or state officials and the violation of the administrative authorities or government officials resulting from the execution of legal power (requesting for the revoke of the Resolution of the NBTC Meeting No. 8/2010 on 2 April 2010 revoking the order for setting daily compulsory administrative measures at 166,666.67 baht) according to the Undecided Case No. 894/2014 with a capital of 13.50 million baht which is in the process of determination of ending date of fact findings of the Administrative Court.

22. The Office of the NBTC was the defendant for the offence in relations to placing an order for setting the daily administrative fine at 20,000 baht due to the plaintiffs failed to sign the telecommunications network access contract which is considered a violation of the Telecommunications Business Act B.E. 2544 (2001) Section 26 and Section 64 according to the Undecided Case No. 1033/2010 with a capital of 43.60 million baht, which is in the process of determination of ending date of fact findings of the Supreme Administrative Court.

23. The Office of the NBTC was the defendant for the offence of the remuneration of use of telecommunications equipment and telecommunications network in the users protection temporary period under the NBTC Notification on Measure for Protecting Users in Temporary Period in Case of the Termination of Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013) according to the Undecided Case No. 918/2015 with a capital of 24,117.04 million baht, which is in the process of testimony preparation.

24. The Office of the NBTC was the defendant for the offence in relations to the TC Meeting No.32/2015 on 2 December 2015 that had its resolution to assign the universal service obligation (USO) on the telecommunications licensees type 2 with having own network, and type 3 according to the Undecided Case No.1524/2016, 1522/2016, 1523/2016, 1549/2016, 1540/2016, 1551/2016, 1459/2016, 1550/2016, 1484/2016 with a capital of 4 percent of the revenue from telecommunications business which the defendant has already submitted additional testimony.

25. The Office of the NBTC was the defendant for the offence in relations to the request for the delivery of the revenue from the provision of mobile phone service in the frequency band of 900 MHz in the users protection temporary period under the NBTC Notification on Measure for Protecting Users in Temporary Period in Case of the Termination of Concession or Contract for Mobile Phone Service Provision B.E. 2556 (2013) and its amendment according to the Undecided Case No. 661/2017 with a capital of 7,221.00 million baht, in which the defendant is in the process of testimony preparation.

26. The Office of the NBTC was the defendant for the offence in relations to placing a resolution and/or an order for setting the daily administrative fine at 1,239,538.88 baht due to the violation or failure to comply with the NTC Notification on Criteria of Mobile Number Portability and the practical guideline condition on the portability of mobile phone service providers according to the Undecided Case No. 1361/2017 with a capital of 21.07 million baht, in which the defendant is in the process of testimony preparation.

27. The Office of the NBTC was the defendant for the offence in relations to placing a resolution and/or an order for setting the daily administrative fine at 169,244.00 baht due to the violation or failure to comply with the NTC Notification on Criteria of Mobile Number Portability and the practical guideline condition on the portability of mobile phone service providers according to the Undecided Case No. 1370/2017 with a capital of 7.33 million baht, in which the defendant is in the process of testimony preparation.

28. The Office of the NBTC was the defendant for the offence in relations to placing a resolution and/or an order for setting the daily administrative fine at 5,400,591.64 baht due to the violation or failure to comply with the NTC Notification on Criteria of Mobile Number Portability and the practical guideline condition on the portability of mobile phone service providers according to the Undecided Case No. 1358/2017 with a capital of 221.42 million baht, in which the defendant is in the process of testimony preparation.

29. The Office of the NBTC was the defendant for the offence in relations to the breach of duty or delay on duty in the transition to digital TV according to the Undecided Case No. 574/2016 with a capital of 321.77 million baht, the Undecided Case No. 1290/2016 with a capital of 2,618.26 million baht, the Undecided Case No. 1539/2015 with a capital of 1,875.86 million baht, the Undecided Case No. 1291/2016 with a capital of 4,195.40 million baht, the Undecided Case No. 1961/2015 with a capital of 3,015.67 million baht, the Undecided Case No. 1962/2015 with a capital of 941.35 million baht, the Undecided Case No. 1963/2015 with a capital of 255.79 million baht, the Undecided Case No. 1960/2015 with a capital of 3,461.47 million baht, the Undecided Case No. 2041/2015 with a capital of 1,958.91 million baht, and the Undecided Case No. 2042/2015 with a capital of 1,003.89 million baht, which are in the consideration of the Court.

30. The Office of the NBTC was the defendant for the offence in relations to the request of supporting money for the broadcasting of the final round of 2014 World Cup according to the Undecided Case No. 1654/2016 with a capital of 57.14 million baht in which the Court had dismissed the action.

31. The Office of the NBTC was the defendant for the offence in relations to the request of supporting money for the broadcasting of the final round of 2014 World Cup according to the Undecided Case No. 1163/2015 with a capital of 15.00 million baht, which is in the consideration of the Court.



Internal Audit Report of the Office of the National Broadcasting and Telecommunications Commission (the Office of the NBTC) in the Fiscal Year 2017

According to the Order of the National Broadcasting and Telecommunications Commission (NBTC) No. 41/2015, dated 6 May 2015, appointing the Internal Audit Committee for 5 persons consisting of:

- | | |
|---------------------------------|-----------|
| (1) General Kamol Saenissara | Chairman |
| (2) Mr. Wallop Nitatkanchananon | Committee |
| (3) Mr. Somyos Sriwanich | Committee |
| (4) Mr. Atthawut Vikitsreth | Committee |
| (5) Mr. Weerapong Kriengsinyos | Committee |

Mr. Weerapong Kriengsinyos had resigned from the post on 27 May 2015 and it therefore made the committees remained of 4 members at present.

The Internal Audit Committee has operated under its powers and duties under Section 3 of the NBTC Regulation regarding the Internal Audit B.E. 2554 (2011) with its policy focusing on the operation based on the good governance principle, good internal auditing system, and independent operation under its powers and duties without intervention from the NBTC, the Office of the NBTC, or any other departments.

The operation under its powers and duties and responsibilities of the Internal Audit Committee in 2017 had been focused on the preventive audit and providing advice for the improvement of a systematic working under the good governance including giving the importance on the Follow-Up of issues found at risk and having impacts on the performance of the NBTC and the Office of the NBTC regularly. The Internal Audit had organized 12 meetings in which the executives, officials of the relevant bureaus, and the auditors were invited to attend the meetings as appropriate.

The main operation can be summarized as follows:

1. Having reviewed the risk management plan of the Office of the NBTC that might have some significant impacts on the Office of the NBTC and evaluated the adequacy and effectiveness of the risk management plan including having continuously followed up the appliance to the risk management plan, as well as proposing suggestions for the most efficient risk management.
2. Having evaluated the adequacy and effectiveness of the Internal Control System of the Office of the NBTC including the efficiency and effectiveness of the functional operation of each bureau of the Office of the NBTC, as well as proposing suggestions for the improvement constantly.
3. Having reviewed the operating system in all areas under the good governance to ensure of the compliance with the laws, regulations, rules, orders of the NBTC, and the operational standard that can make the operation achieve targets, objectives and be in line with the NBTC's policies.
4. Having reviewed the correctness and accountability of the financial report of the Office of the NBTC by reviewing accounting entry, financial statement, as well as the operation on accounting, finance, and procurement with the officers of the Office of the Auditor General of Thailand (auditor) and relevant officials.
5. Having reviewed and evaluated the performance of the Office of the NBTC in areas of accounting, finance and procurement, as well as proposing recommendations for the improvement on weaknesses and the development for the most efficient.

6. Analyzing and evaluating of the efficiency, cost savings, and worthiness of resources usage by verifying the implementation and evaluation of the projects expenditure of the Office of the NBTC.

7. Reviewing the strategic plan of the Internal Audit Bureau, annual audit plan and long-term audit, the compliance with the plan, and the inspection results, as well as proposing recommendations and following up the improvement according to the internal audit report in the significant issues in order to encourage the good governance and the sufficient internal controls.

The Internal Audit Committee is of the view that the overall operation of the Office of the NBTC in the year 2017 had been in line with the good governance, transparency, risk management and internal controls without any weakness or significant irregularities. In addition, the preparation process of financial reports had been complied with the generally accepted accounting standards with the appropriateness, reliability and sufficiency of the disclosure of adequate information on financial reports.

The performance of the committee has been focused on the oversight and proposed observations and recommendations to the Management and the operating units in a frank and fair manner, and the report of auditing and recommendations will be submitted to the NBTC in every 180 days for the improvement of the Office of the NBTC, as well as followed-up the result of the improvement upon the recommendations for the efficient of the performance of the Office of the NBTC.

Gen.



(Kamol Saenissara)

Chairman of Internal Audit Committee

PART 6

Workplan and Expenditure
Budget Plan in 2018





Workplan and Expenditure Budget Plan in 2018

Workplan in 2018

The policies of the NBTC and the Office of the NBTC on the operation and budget in the year 2018 shall be focused on creating a transparent organization and regulating broadcasting, television and telecommunications services for the utmost benefits of the nation and the people. The urgent and important workplan in 2018 are as follows:

1. Organizing spectrum auction in the frequency band of 900 MHz and 1800 MHz whose concession terms will both end in September 2018. The auction shall be divided into one license for the 900 MHz Spectrum of 2 x 5 MHz and 3 licenses for the 1800 MHz Spectrum of 2 x 15 MHz per a license.
2. Launching the broadband internet service to 3,920 border villages by September 2018 and encouraging the low-income people of 520,000 households to register for using broadband internet access free of charge.
3. Having drafted the criteria for refarming the unused or underutilized spectrum so that the spectrum can be utilized efficiently and the remedies for agencies whose frequencies have been refarmed shall be done completely.
4. Resolving more current problems of digital TV business operation in addition to the resolution on the extension of the spectrum auction payment period and providing support for the provision of digital TV services as required by Must-Carry rule.
5. Having provided the mobile SIM card users registration with a new digital identity platform to be covered all sales channels throughout the country since 1 February 2018 onwards.
6. Providing support to the Bank of Thailand, Thai Bankers' Association, and the Telecommunications Association of Thailand under the Royal Patronage, for the operation and co-regulation of PromptPay service, in order to ensure the people of the security of the service.
7. Encouraging the people to use new services via the Internet of Things (IoT) technology in the frequency band of 900 MHz for facilitating their daily lives and promoting economic development.



Expenditure Budget Plan in 2018

The Office of the NBTC has used the Strategies under the Strategic Plan of the Office of the NBTC as guidelines for setting priorities of missions and tools for allocating the annual expenditure budget for the efficient and effective operation of the Office of the NBTC. However, as the Office of the NBTC is in the transition period of the Act on the Organization (No. 2) B.E. 2560 (2017), in which the new NBTC commissioners' selection process will be done to replace the existing NBTC commission whose term of office has ended since 7 October 2017, therefore, to avoid the discontinuity of the operation under the plan of the Office of the NBTC, coupled with, if the disbursement fails to be done under the terms of the contract, it will cause damages to the Office of the NBTC. In this regards, the NBTC Meeting had thus approved the expenditure budget framework in the year 2018 for the following essential expense and tied over budget which are necessary and urgent to be carried out at the amount of 3,820.060 million baht.

Unit : Million Baht

Detail	Amount
Annual expenditure budget in 2018	3,820.060
Essential expense	2,075.271
Tied over budget	1,744.789

The expenditure budget of the Office of the NBTC in 2018 at the amount of 3,820.060 million baht can be divided according to the strategies under the Strategic Plan of the Office of the NBTC No. 1³⁰ as follows:

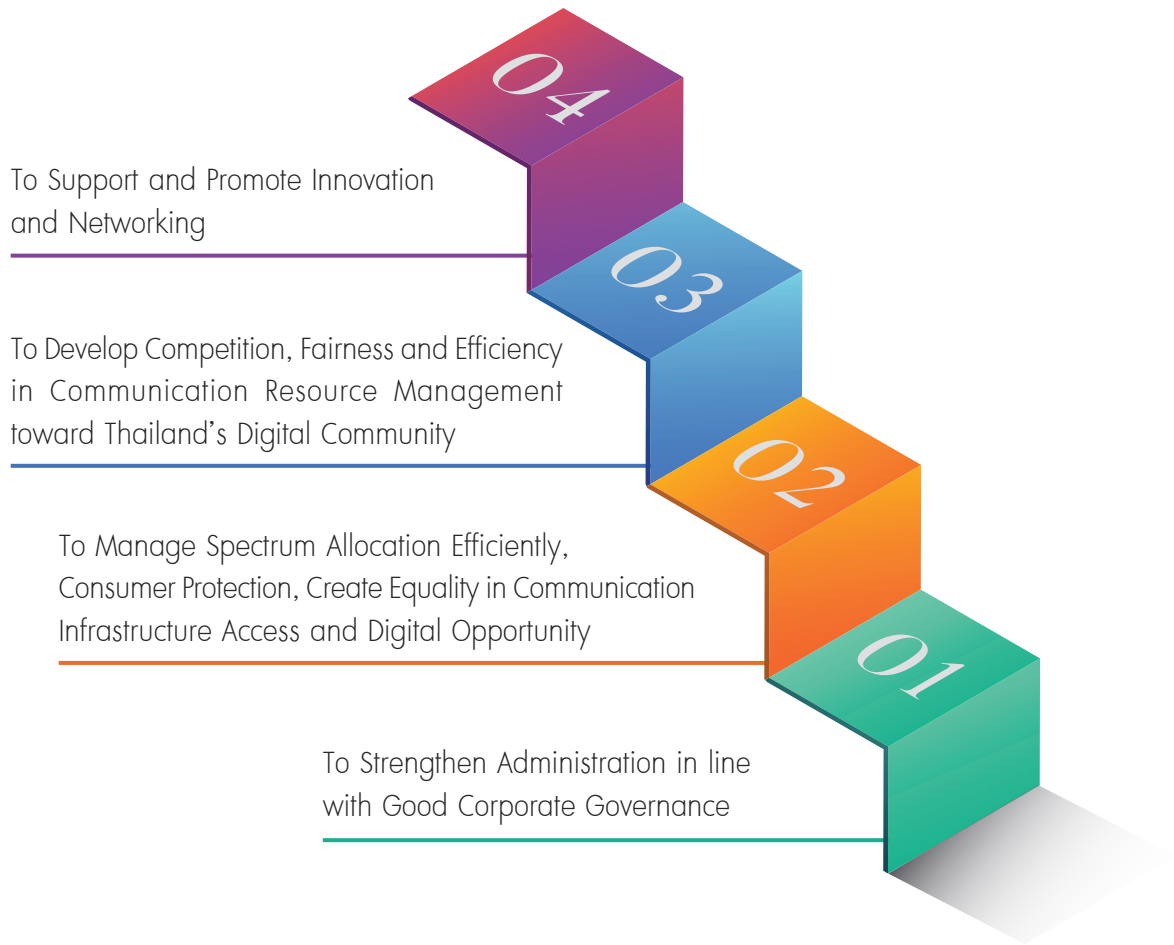
Strategy 1 : To Strengthen Administration in line with Good Corporate Governance, the NBTC has allocated total budget of 2,856.497 million baht for 22 projects and 3 activities that supported by the organization and strategic management plans and projects/activities.

Strategy 2 : To Manage Spectrum Allocation Efficiently, Consumer Protection, Create Equality in Communication Infrastructure Access and Digital Opportunity, the NBTC has allocated total budget of 670.746 million baht for 20 projects that supported by the spectrum management and regional affairs plans and projects/activities.

Strategy 3 : To Develop Competition, Fairness and Efficiency in Communication Resource Management toward Thailand's Digital Community, the NBTC has allocated total budget of 149.610 million baht for 16 projects and 4 activities that supported by the broadcasting and telecommunications services management plans and projects/activities.

Strategy 4 : To Support and Promote Innovation and Networking, the NBTC has allocated total budget of 143.207 million baht for 8 projects and 2 activities that supported by the organization management plans and projects/activities.

³⁰It is now in the process of drafting the Strategic Plan of the Office of the NBTC No. 2 which is focusing on the operation in accordance with the government's policy on Thailand 4.0 and the 20-year National Strategic Plan as well as the Digital Development Plan for Economy and Society. However, the Strategic Plan of the Office of the NBTC No. 1 shall be temporarily used as a guideline for driving the operation of the Office of the NBTC continuously meanwhile the Strategic Plan of the Office of the NBTC No. 2 is being prepared.



PART 7

Obstacles and Problems
in the Broadcasting
and Telecommunications
Businesses Which are
Important to the People



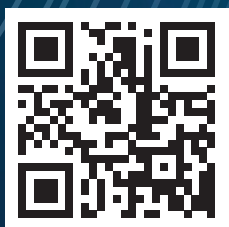
Obstacles and Problems in the Broadcasting and Telecommunications Businesses Which are Important to the People

Broadcasting Services

The trend on digital disruption has an impact on business operation in many industries including the radio and television industries. The expansion of digital technology or internet emerging from the over-the-top (OTT) service provision such as TV and video service provision through YouTube, Facebook or other similar applications is considered as digital disruption for radio and television services as the services are getting more and more popular and taking the role in a daily life of people in many ways. It also changes the behavior of people in listening to the radio and watching television to be likely to listening and watching through internet channels. For consumers, they shall get benefit from having channels to access to a variety of information or products and greater convenience; however, in the traditional radio and television business operators' aspect, the digital disruption could cause two major problems and obstacles. Firstly, more competition may decrease the advertising market share of radio and television business operators as more advertising will be used on digital media or the internet, therefore, the radio and television business operators must plan and adapt themselves to be able to survive in the industry. Secondly, there is a disparity of laws which have been used in the regulation of the traditional radio and television business operators and the OTT service providers. However, the NBTC has realized the problems and is in the process of studying the appropriate way to regulate OTT service providers in order to ensure the equal and fair competition and promote the broadcasting and television businesses development. Also, the NBTC Meeting on 24 April 2017 had approved that the provision of broadcasting or television services via other networks (OTT) which are not broadcasting or television networks is the broadcasting or television business.

Telecommunications Service

Due to the expansion of the network installation of base stations of mobile phone system (or tower) for the people in areas or communities where demands of use are increasing continuously, many people living in the nearby areas or in areas where the base stations are installed concern about the potential impact of the electromagnetic emission from base stations on health safety. In 2017, the Office of the NBTC had received 118 complaints from consumers regarding the base stations and those issues have affected the mobile operators for being unable to install base stations. The NBTC has placed important on consumer protection and realized of the concerns of people from the network expansion of base stations of mobile phone system, and, therefore, issued the NTC Notification on Criteria and Measure for Regulating Safety on Human Health from the Use of Radio communications Device which prescribing that the licensee of telecommunications business shall operate under guidelines for making understanding with people who living in the areas where the base stations are installed or nearby areas regarding the installation of radio communications stations in order to ensure them of safety and prevention of people's concerns that may occur. The NBTC also focuses on organizing activities continuously to raise people's awareness, knowledge and understanding about the impact of electromagnetic emission from base stations including publicizing media, videos, radio spots, and printed media through various channels.



www.nbtc.go.th

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