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Policy and Regulatory Updates – Thailand

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The 66th APEC Telecommunications and Information Working Group Meeting

At the APEC TEL 66, Thailand would like to share with the member economies the latest information on Digital Economy promotion and policies. The highlighted works and activities which have been implemented include:

1. Digital Infrastructure

1.1 Establishment of Government Data Center and Cloud Service (GDCC)

Government Data Center and Cloud Service (GDCC) is a shared cloud system for government agencies, that require computing resources. It aims to provide highly secure and high-availability Cloud Infrastructure as well as Big Data facilities. GDCC is supported by the Office of the National Digital Economy and Society Commission (ONDE) in conjunction with the National Telecom Public Company Limited (NT).

Currently, the infrastructure provides almost 3,237 systems and 6,244 cloud servers which cover 285 departments and 997 government agencies. Besides the central government agencies, GDCC also serves as a data exchange and backup center and internal data center for local academic institutions and public hospitals. Moreover, GDCC hosts government services for public use, for example, patient information exchange for participating hospitals, remote consultation, and COVID-19 data center for government medical departments, e-learning center for public schools and universities, and seeds and plants database for the agricultural learning center.

In the year 2023, GDCC has continued to provide cloud services to government agencies. ONDE has the plan to implement more services to GDCC Marketplace where any government agencies can choose digital services according to their needs which include;

- Platform for AI services
- Platform for IoT
- Platform for OCR (Optical Character Recognition)
- Security Service
- Performance Service
- Database as a service
- Platform for Data Analytic tools
- Platform for Big data mining
- Online Conference
- Cloud Storage Service

Within this year, Ministry of Digital Economy and Society will establish the studies of related GDCC regulations and data strategies of Thailand. GDCC will also have GDCC Marketplace where any government agencies can choose digital services according to their needs in upcoming future.

1.2 The Village Broadband Internet project or Net Pracharat

Net Pracharat – the Village Broadband Internet project (or Net Pracharat) is a flagship digital infrastructure development project of Thailand. The main objective of Net Pracharat is to strengthen broadband network by expanding high - speed Internet network to reach all villages in the economy, so that local Thai people who live in the remote areas will be able to access broadband or high-speed Internet as those who live in the cities. Ministry of Digital Economy and Society (MDES) collaborated with relevant authorities to deploy the Village Broadband Internet Project (Net Pracharat) in 2017. The project was to install fiber optic cable networks to 24,700 rural villages throughout the economy. Each village was equipped with public Wi - Fi service at the speed of 30/10 Mbps (Download/Upload). The Wi - Fi service has been continuously provided until now with the speed increased up to 100/50 Mbps. This is to ensure that Thai people has reliable broadband infrastructure and equitable access to information and communication technology throughout the economy.

As of now (December 2022), there are over 11,415,197 registered users using Net Pracharat Wi - Fi service. This initiative has contributed to bridging the digital divide and leading to the equitable and affordable access to sources of information and services such as e - commerce, education, healthcare and government services.

1.3 The Increasing Efficiency of International Internet Networks Towards Being an ASEAN Digital Hub project (ASEAN Digital Hub project)

Ministry of Digital Economy and Society has initiated the Increasing Efficiency of International Internet Networks Towards Being an ASEAN Digital Hub project (ASEAN Digital Hub project), aims to upgrade the infrastructure of Thailand to have an international network and has enough capacity to meet the needs of Thailand and neighboring economies. It also reduces the service fee for internet connection abroad to be able to compete with neighboring economies. This will help to reduce the cost of Internet services for the public. In addition, it also promotes the investment of large content providers, making Thailand a hub or the center of Internet information exchange or digital information exchange center in the ASEAN region. It consists of 3 activities as follows:

Activity 1: Procurement of equipment to increase network capacity connecting the borders with Cambodia, Laos and Myanmar and to the submarine

cable stations in Chon Buri, Phetchaburi, Songkhla, Satun and The telecommunication center of National Telecom Public Company Limited (NT), with a total capacity of 2,300 Gbps.

Activity 2: Expansion of the system's existing international submarine cable network capacity 1,770 Gbps.

The capacity expansion of the submarine cable system helps Thailand to be ready to provide services to the world's largest OTT service providers. At present, large OTT service providers have already set up servers in Thailand to be service hubs. It is used on submarine cable systems that have been expanded to capacity. With the readiness to expand such capacity as a result, the IG service has sufficient capacity to support traffic from abroad and can support any amount of traffic from Home User in Thailand.

Activity 3: Construction of a new international submarine cable network (ASIA Direct Cable (ADC)) is in the process of joint construction of a new international submarine cable network connecting Thailand and other economies with 6 member economies in the Asia - Pacific region, namely: Thailand, China, Singapore, Philippines, Japan and Vietnam.

1.4 5G

5G significantly enhances not only the telecommunication sector but also other industries including healthcare, agriculture, transportation, manufacturing as well as education. To prepare other industries which will ultimately benefit the Thailand's economy as a whole, pilot projects and use cases are very crucial to fully utilize 5G technology in the economy.

The National Broadcasting and Telecommunications Commission (NBTC) provides support to Thailand's telecommunication and our achievements are evidently accomplished including (1) 5G Use Case and (2) Regulatory Sandbox.

1) 5G Use Case

Thailand's 5G committee has been established in 2020 with Prime Minister Prayut Chan-o-cha as chairman, involved ministers and parties as committees, and Office of the NBTC and ONDE as secretariat team to set a 5G strategic direction to support a wide range of 5G applications that will promote Thailand's social and economic development. The committee has approved of various pilot projects using 5G technology, one of which is Siriraj 5G Smart Hospital Project. The project aims to use 5G and critical technologies to improve healthcare services of Siriraj Hospital. It consists of 8 sub-projects which have all been completed in year 2023, such as

- (1) Development of Multi-access Edge Computing (MEC) Solution
- (2) 5G AI smart emergency room
- (3) Permission based blockchain for e-Health record
- (4) 5G-AI smart emergency medical system (EMS)
- (5) Pathological diagnosis with 5G and AI
- (6) 5G AI platform for non-communicable diseases (NCD)
- (7) AI for hospital's demand forecasting and medical and non-medical products inventory management using 5G Ai platform
- (8) Smart logistic with 5G self-driving transportation vehicle

2) Regulatory sandbox

NBTC has issued “the Notification Re: Criteria for Permitting Frequency Use for Innovation Development and Testing in a Sandbox Area in 2019. It can be called the “Sandbox Notification” for short. Sandbox Notification allows sandbox participants to use certain frequencies and conduct frequency testing, within a sandbox area, for the development and testing of equipment, network, or system for pre-commercialization purposes. From 2019 - present, there are 11 sandbox operators who have received approval from NBTC to utilize an area for frequency testing and use.

1.5 Smart City Thailand

Smart cities aim at using technological and digital solutions to improve the efficiency and sustainability of the cities; advance public-private partnerships; and promote digital start-ups.

The Government is also running a smart city project in Phuket, Chonburi, and Bangkok in order to be a part of the ASEAN Smart City Network (ASCN), where cities in ASEAN economies work together towards common goals of smart and sustainable development.

The common goals include 6 areas: Smart Economy, Smart Governance, Smart Living, Smart Mobility, Smart People, and Smart Energy/Environment.

For the Promotion of Smart City Development, the Ministry of Digital Economy and Society, through Digital Economy Promotion Agency (DEPA), has worked with foreign counterparts to develop a smart city in 3 forms namely; (1) Awareness Building, (2) Capacity Building and (3) Pilot Projects, innovation experiment areas, as well as, assisting companies who request permission to use innovative experimental areas to collect target results.

As of January 2023, DEPA has incubated and welcomed 72 cities from 43 provinces into promotional zone, and 30 cities out of 72 were endorsed by the National Steering Committee receiving official Smart City Thailand logo which represents their leads in driving economy, society, and environmental developments. Moreover, apart from being an incubator providing guidance and support for these cities to increase their capacity, DEPA has also tried to raise awareness to people in the local area and groom young generation to be the leader of each city, called Smart City Ambassador Program. This campaign aims at supporting smart city development with new perspectives from the young people and encouraging local employment that draws young talents back to their hometowns. The participants will be trained to foster their digital skills and fundamental skills in smart city development before they become Smart City Ambassadors working at a participating organization from either the public or private sector for 12 months with the local staff as their mentors.

By the end of 2023, the expectation is to reach 90 smart cities in the promotional zone and 45 smart cities approved as Smart City Thailand. The agency also continues promoting City Data Platform (CDP) development with the target of CDP in 7 pilot areas, and designing smart solutions for 11 cities that already endorsed by the committee.

1.6 Thailand Digital Valley

DEPA has founded the IoT & Digital Innovation Institute with a core mission to build Thailand Digital Valley, a major new digital hub for Southeast Asia. Located in the Eastern Economic Corridor (EEC) of Thailand, the Thailand Digital Valley aims to provide the necessary infrastructure, digital ecosystem, and business matching service between large tech companies and start-ups. Investors are also entitled to receive tax and non-tax incentives through one-stop service by the Board of Investment (BOI) and DEPA such as exemption on corporate and personal income tax and Smart VISA for foreign workers.

The Thailand Digital Valley project comprises 5 buildings:

- (1) TDV 1 “DEPA Digital One Stop Service”
- (2) TDV 2 “Digital Start-ups Knowledge Exchange Centre”
- (3) TDV 3 “Digital Innovation Centre”
- (4) TDV 4 “Digital Edutainment Complex”
- (5) TDV 5 “Digital Go Global Centre”.

The construction of TDV1 and TDV2 has been completed, with companies fully moving in TDV1 and almost 100% of spots in TDV2 already being reserved by tech companies and digital start-ups. The TDV3 is at the early

stage of construction and expected to complete by 2024, including the 2 remaining buildings.

2. Soft Infrastructure

2.1 Anti - Fake News Center Thailand

Thailand had launched an Anti - Fake News Center since 1 November 2019 which has helped in the fight against misinformation. The Anti-Fake News Center Thailand is primarily responsible for monitoring and inspecting information published on social media, as well as analyzing and identifying fake news, using digital technologies to improve operational efficiency and performance.

The goal would be to fight all kinds of fake news by focusing on misinformation 4 groups are; (1) **Disaster** e.g. floods, earthquakes, dam breakage, tsunamis, fires; (2) **Economic** e. g. Finance and Banking; (3) **Healthcare** products; e.g. hazardous substances, cosmetics, including other illegal goods and services and; (4) **Government Policy** and Domestic Security. If news with fake content is found, the Center will coordinate with relevant departments to produce accurate data, and disseminate accurate information to the public.

This is one of the mechanisms that help people to be able to receive verified information from credible sources for the purpose of maintaining peace and order in Thailand.

Anti – Fake News Center Thailand has received and screened whistleblower and online conversations, from 1 November 2019 to 31 December 2022 total of 987,127,138 messages.

A total of 10,320 subjects have been checked with relevant agencies which include 4,689 subjects that have been publicized, categorized as 3,127 fake news, 1,076 factual news, and 486 distorted news.

2.2 Call Centre and SMS Scams

In recent years, fraudulent calls and phishing scams via SMS aiming to siphon personal information or money from telecommunications consumers have become serious problems in Thailand. To collaborate with related agencies to have the problems effectively solved, Office of the NBTC has set up a multilateral working group on tackling call center and SMS scams, which comprises representatives from various agencies including Ministry of Digital Economy and Society, Personal Data Protection Committee, Bank of Thailand, Technology Crime Suppression Division, Cyber Crime Investigation Bureau, mobile operators, Telecommunications Association of Thailand under the Royal

Patronage and Consumers Council. The working group has worked to develop measures to deal with the call center and SMS scam issue and follow up on the measures. On 24 August 2022, NBTC board has approved measures to combat call center and SMS scams the working group proposed, for example:

(1) Operators shall add a +698 sign prefix for all incoming calls from someone using mobile numbers registered in Thailand, but using roaming services to call from overseas within 60 days.

(2) Operators shall develop a technical system that allows consumers to block all international calls or turn off international call blocking such as USSD within 90 days.

(3) In case a natural person sends SMS messages, phone number of that person shall be displayed on the receiving device. In addition, in case a juristic person sends SMS messages, either phone number or sender name registered with SMS operators of that person shall be displayed on the receiving device. The only person qualified to register sender name is a juristic person who has never found guilty of sending illegal messages.

The progress after NBTC board approved the proposed measures is as follows:

(1) a +698 sign prefix is added to all incoming calls from someone using mobile numbers registered in Thailand, but using roaming services to call from overseas. In addition, a +697 sign prefix is added to all incoming calls from overseas that have non calling line identification. Thus, people who have no acquaintance in other economies can identify calls from call center scammers.

(2) USSD code for blocking all international calls; *138*1# and USSD code for turning off call blocking; *138*2# were introduced to the public by Office of the NBTC and operators in December 2022. The call blocking will help prevent people from being victimized by overseas call center gangs.

(3) Office of the NBTC has created a database system which is a tool for operators to send information regarding sender name registration to Office of the NBTC, and check whether the sender name to be registered is the same as and similar to the already registered sender name and set up a blacklist of juristic persons who are scammers.

Moreover, Office of the NBTC has created a "SCAM Alert" website database that compiles information about common scams, contact phone numbers to report call center and SMS scams and video clips to warn public to beware of scammers.

2.3 Thailand's Cybersecurity Strategy and Developments

The Establishment of the Office of National Committee on Cybersecurity (NCSA) under Cybersecurity Act B. E. 2562 (2019) ("Cybersecurity Act"), which is entered into force since 27 May 2019, endeavoring to enforce legal safeguards to ensure the security of cyberspace, and in particular, sets out a cybersecurity risk assessment plan to prevent and mitigate against cybersecurity threats that may affect the Critical Information Infrastructure (CII).

In addition, **Cybersecurity Policy and Action Plan 2022 - 2027** was approved by the Cabinet on 20 September 2022 and has been effective since 10 December 2022 with a view on cybersecurity for Thailand's critical services to ensure economic and social sustainability. This Cybersecurity Policy and Action Plan focus on building capacity (personnel, knowledge, and technology), integrating partnerships (domestic and international), creating cyber resilience, and developing government agencies' standard.

3. Capacity Building Program

3.1 Establishment of Government Big Data Institute (GBDi)

The Government Big Data Institute (GBDi) under the supervision of DEPA, has been designed as a special unit with flexible management. GBDi provides advisory services, system and data design, and human resource development for the public and private sectors in the fields of data science, data engineering and data analytics. It also drives the government's big data projects. GBDi has been pursuing its mission to upskill government officials on big data through its training courses which over 3,800 personnel participated in 2020 and 2022. In 2023, GBDi focuses on training big data skills to 500 entrepreneurs including SMEs and startups, and 600 general people, of which are 400 for basic level and 200 for intermedia level.

Furthermore, GBDi has continuously developed a platform to provide a service in the healthcare sector called the **Health Information Exchange (HIE)**. HIE's main objective is to connect patients' health records and profiles so that doctors from different hospitals can access their patient's information quickly and efficiently upon the patients' consent. The HIE's actual testing process has started in December 2020, and Siriraj Hospital is the first pioneer. As of now, over 100 pilot hospitals have joined the platform with a target of 200 hospitals by the end of 2023. The patient's data will be encrypted and stored on the cloud of CAT Telecom Public Company Limited with a data security policy under ISO27001.

Since April 2021, GBDi has been collaborating with the Department of Medical Services and the Ministry of Public Health to develop a system of bed allocation called “CO - link” that collects data from different hotlines, for example 1668, 1669 and 1330 and from the Department of Disease Control Ministry of Public Health. This system is to facilitate efficient workflow for staff on allocating beds for COVID-19 patients within 24 hours. Currently, the system is available for areas in Bangkok and its neighbourhoods and it is under the development of operating across the whole economy in the future.

Also, the institute in collaboration with travel-related government agencies has been developing “Travel Link,” a Thai tourism data platform providing collected data on tourist attractions, accommodations/hotels, public transport, tourist behaviour and other information from relevant agencies and online sources. The platform will facilitate the government’s travel sector implementation, business operation, and open data services for the public. Currently, the Travel Link system is being tested with relevant agencies such as the Office of the Permanent Secretary, the Ministry of Tourism and Sports, and the Tourism Authority of Thailand (TAT), etc. A data platform for Thai children called, “Youth Link,” is also under development. This platform aims to improve the quality of children’s lives with linked data on children’s information from related agencies.

1.2 The Provision of ICT skill Development Training

In 2017, NBTC has issued the Plan on Universal Basic Telecommunications Services and Social Services No.2 (B.E. 2560-2564) that sets a goal to support the provision of ICT skill development training to at least 500,000 people. To drive the goal forward, Office of the NBTC has signed MOUs with the Department of Skill Development, and Disabilities Thailand on 8 April 2022, to fulfill the provision of ICT skill development training to at least 20,000 socially disadvantaged persons and 20,000 disabled persons within 720 days. The two agencies are on the process of providing training to target groups.
