Risk Factors

The Board of Directors realizes that its operations may face many risks, including economic, social, political, financial, innovation, technological, all of which can affect all areas of the Company.

The Board of Directors has, therefore, established a Risk Management Committee to manage risks which affect the Company. The Risk Management Committee will evaluate both general and specific risk factors quarterly, summarizing and reporting all risks to the Board of Directors for consideration, review and determination of risk prevention procedures.

The following information describes significant risk factors which might affect the Company's operations, financial status, or business performance. However, the Company has already prepared plans to deal with and mitigate the risks outlined below.

Strategic Risks

1. Risk during the transition period in the communications satellite business from the concession system to the telecommunication license system and the services continuity after the expiration of the concession.

At present, the satellite regulation is in the transition period from the concession regime to the telecommunication license regime. The government agencies such as the National Institute of Standards and Technology (NIA), Ministry of the Digital Economy and Society (Ministry), Office of the Broadcasting Commission Television National Broadcasting and Telecommunications Commission (NBTC) are working on an orbital management approach, satellite operator permission criteria and practical guideline. The draft of the NBTC Act 2010 (No. 3) has been revised in defining rules and procedures for the satellite filing management, and implementing the market access policies to open of the market for foreign satellites operator to provide service with equal competition etc.

The company has participated in this process by supporting the information needed to set the criteria, such as International practice to build understanding of the satellite industry to the public continuously.

The company also considers other business opportunities with the business partners in foreign countries to develop Satellite business and services such as renting the satellite to provide additional services abroad, collaboration in the acquisition of telecommunication rights in foreign countries to expand the opportunities to do business.

2. Risks Related to THAICOM 7 and THAICOM 8

The Company is currently operating THAICOM 7 and THAICOM 8 under a telecommunications license granted by NBTC in accordance with the currently applicable laws, namely Telecommunications Business Act B.E. 2544 and the Act on Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunications Services B.E. 2553. The Ministry of Digital Economy and Society, or Ministry notified NBTC that authorization to use the orbital slots had been granted for the two satellites in question and NBTC then specified the said authorization in the license granted to the Company.

The extraordinary meeting of the Board of Directors No. 11/2017 dated 24 October 2017 was arranged to consider this agenda cautiously and carefully with the legal consultant. The Company has concluded that THAICOM 7 and THAICOM 8 are not the satellites under the Concession Agreement since the operation of both satellites are under the license framework granted by the NBTC. Also, the Company has complied with the terms and conditions of the Concession Agreement completely with the different perspective between the Ministry and the Company. The meeting resolved that the Company has submitted a formal letter to argue that the Ministry opinion by confirming that the THAICOM 7 and THAICOM 8 operate under the license framework. Therefore, the Company has the right to use the article no. 45.1 of the Concession Agreement by bringing the matter into arbitration to be the judge. The Company filed its dispute with the Thai Arbitration Institute on 25 October 2016, as a black case No. 97/2560.

According to Clause 45.6 of the Concession Agreement, in the event that the dispute is pending arbitration, the parties still have to comply with the terms of the Concession Agreement. Therefore, while the dispute is pending arbitration, the Company has no duties in compliance with the opinion of the Ministry referred to above until the final decision is made by the arbitrator.

3. Risk from regulatory changes of the national frequency allocation to accommodate additional spectrum for 5G technology

In response to the government's strategy of Thailand 4.0, formulated to promote the development of nation-wide digital infrastructure, led by the applications of 5G technology, NBTC has initiated its consideration to revise the country's frequency master plan as well as the national frequency allocation in order to accommodate additional spectrum to 5G within year 2020. In this matter, the C-band and Ka-band portions which have been currently operated by the fixed satellite service (FSS) are among those to be considered.

Since losing the satellite spectrum will cause impacts to the satellite service in Thailand, the Company therefore has addressed our concerns to the NBTC for their understanding of the impacts so as not to include the satellite spectrum in C and Ka bands in this 5G's additional spectrum allocation. Besides, the company also participated in all relevant discussions with the NBTC and a working group assigned in this regard as well as providing comments and information in meetings for the NBTC's plan and roadmap of a frequency recall. At present, the NBTC is considering a field trial on the use of C-band and Ka-band for 5G in order to study the feasibility of the impacts of the allocation of frequencies in that spectrum to 5G technology. The study is expected to be conducted in 2019 in order to find a conclusion within 2020.

In this regard, the company has provided all information and clarifications as relevant to convince the NBTC and others government bodies to re-consider this 5G's spectrum allocation plan due to the adverse impacts caused to Thailand as well as the satellite service in the country. Nevertheless, since the 5G implementation is largely supported and taken as an urgent mission for all the government units to consolidate their efforts for successful implementations, the company's attempt in protecting the satellite spectrum may not be totally achieved at the end. Therefore, the company has already considered and will conduct some measures as appropriate in order to alleviate and cope with such adverse impacts from the 5G spectrum allocation.

Operational Risks

1. Shorter Service life of satellites

Although satellites generally have no less than 15 years of service life, there are some factors that may decrease their service life such as the structural quality, the sturdiness and durability of spacecraft components, the performance of the launch vehicle to deliver satellite to the correct orbit, satellite fuel consumption, and the operator's skill in controlling the satellite under different conditions. The Company might lose customers and revenue if the Company's satellites have shorter service lives than expected and the Company cannot launch replacement satellites in a timely manner. Therefore, the Company's satellite engineering team regularly calculates the remaining service life of our satellites. If a satellite approaches the end of its service life, the responsible department will be informed to plan for preventive measures such as the leasing of satellite from other operator or make an investment on new satellite to replace the one whose service life approaches the end.

2. Risks from In-Orbit Failure

The satellite is a state-of-the-art piece of technology and engineering which, once launched into orbit, is subject to risk from possible system failure, solar discharges, or collision with other objects in space. These damages can affect the Company's services to its customers, temporarily or permanently degrading the satellite's ability to uplink and downlink signals. The Company may lose current customers and/or may not acquire new customers while replacing the damaged satellite.

However, all satellites are designed to withstand a certain space environment in order to maintain international standard reliability. Thaicom maintains a contingency plan to minimize the adverse effects on customers in the case of severe damage to the satellites. These plans include transferring as many customers as possible to available transponders on the remaining Thaicom satellites. The

Company has also discussed agreements with other satellite operators for possible temporary leasing of transponders for service continuity.

The Company is aware of the potential risks to satellites in geostationary orbit. Therefore, it minimizes such risks by fully insuring the Thaicom satellites. Under the Domestic Communications Satellite Operating Agreement, the Ministry of Information and Communication Technology (currently Ministry of Digital Economy and Society, MDE) and Thaicom are co-beneficiaries on the insurance policy for Thaicom satellites. The Ministry is the owner of the satellite assets while the Company owns the right to operate them. The insurance policy is for full coverage with partial loss and 1 year renewable insurance period. This means that the Company can immediately make a claim from the insurer when the satellite is partially damaged. To make a claim, the Company has to submit a Notice of Loss and Proof of Loss to the insurers. After the insurers are in agreement with the Proof of Loss, the claim under the policy will be paid.

3. Failure to extend THAICOM 5 service life

The Company has considered extending the service life of THAICOM 5 satellite by launching another satellite to dock it and to supplement the amount of propellant. Technically, the on-board electrical equipment has service life longer than 15 years. The service life of a satellite in geosynchronous orbit mainly depends on the amount of propellant in tanks. Once the satellite propellant is depleted, the satellite will not be serviceable but all of the on-board equipment still functional. Some vendors in the industry has introduced their offer to extend the service life of in-orbit satellite by launching another small-size satellite with enough propellant, specifically designed for the life extension service, to the orbit and dock it to the nearly expired satellite. This allows the nearly expired satellite to use the propellant from the small-size satellite for life extension.

The vendor is developing and building this specific satellite for launching to the space. However, there is a risk associated in using the life extension service such as the timely launch and readiness of the service at the required timeline. Therefore, the Company has closely monitored and tracked the progress of the satellite construction and launching including the backup plan in case it is not completed as planned.

The additional risk of this service is the success of docking operation and its performance during the service period in orbit. The Company has planned to review the design and to test the satellite and docking algorithm with the vendor to ensure its compliance with the requirement. The Company is also planning to procure the in-orbit insurance to protect THAICOM 5 satellite from all risks during the period of this life extension in the same way as of the existing insurance of THAICOM 5.

4. Risks as a result of the use of information technology

The Company may be exposed to risks if its computers and IT data receive threats from outside due to its computer system and internet connection, which could be detrimental to its business.

In view of this risk exposure, the Company sets up a committee to manage IT risks. The committee is responsible for prescribing guidelines and policies, and assessing and managing risk. The committee annually assesses its IT system's environment, status, and risk management so that it is flexible enough to keep up with changes in technology, information, and communication, and to lower risks to an acceptable level at an appropriate cost.

The company also has Business Continuity Management and ISO 22301: 2012 Business Continuity Management. In addition, the company has insured both Commercial Crime Insurance to prevent financial damage and Cyber Insurance to reduce the damage from cyber threats.

Financial Risks

1. Currency exchange risk

Thaicom offers both domestic and international services. Therefore, the Company faces the risk of currency exchange fluctuations in its accounts payable and accounts receivable, as well as any foreign currency loan. These fluctuations could affect the Company's financial statements as well as cash flows.

The Company has a hedging policy to manage such risk by controlling the net exposure of foreign-currency-dominated transactions, i.e., the risk is managed by balancing the revenue and expense structure in foreign currency to maintain a currency balance. In the event of an imbalance, the Company may use several hedging approaches such as foreign exchange forward, foreign exchange options and cross currency and interest rate swap.

2. Potential loss of major customers

The major source of the Company's revenue comes from only a few major customers, most of whom provide telecommunications and broadcast services. Some major customers may cancel their services or may not renew contracts with the Company. This could affect the Company's financial results. The Company, therefore, usually signs long-term contracts with its major customers, offering high-quality services with flexible technical and business solutions to help customers grow. Moreover, the Company consistently maintains good relationships with its customers to ensure customer satisfaction and win-win cooperation, as well as regularly conducts a customer health report of its major customers. In addition, the company continues to expand into new markets and acquire new customers in order to mitigate its reliance on major customers.

Compliance Risks

1. Domestic Communications Satellite Operating Agreement

The Company provides satellite communications services under the Domestic Communications Satellite Operating Agreement, dated 11 September 1991. The agreement was originally between the Ministry of Transport (currently the matter is under the supervision of the Ministry of Digital Economy and Society) and Shinawatra Computer and Communications Co., Ltd., whose name has been changed to Intouch Holdings Public Company Limited. Intouch Holdings Plc is the major shareholder of the Company.

Risks related to such agreement may be divided into 2 main areas as follows:

(A) Shareholding ratio

According to the Domestic Communications Satellite Operating Agreement, Clause 4, Intouch Holdings Plc has to establish a new company (currently Thaicom Plc) to operate the satellite business under the agreement. This new company has to have a registered capital of no less than Baht 1 billion, and Intouch Holdings Plc must not hold less than 51% of the shares in this new Company. In 2005, the Company had to raise capital through Public Offering (PO) of new shares, so Intouch Holdings Plc's proportional percentage of shareholding would have dropped below 51%. Before issuing the new PO, the Company consulted with the Ministry of Information and Communications Technology (currently Ministry of Digital Economy and Society) and asked it to review the agreement and adjust the shareholding ratio from at least 51% to at least 40%.

Subsequently, the Ministry submitted the matter to the Cabinet for consideration, but the Secretary General of the Cabinet notified the Ministry that the matter did not need to be submitted to the Cabinet. Furthermore, the Cabinet was working to decrease the number of matters to be considered by the Cabinet, subject to the Regulations of the Office of the Prime Minister, Section 22. The regulations did not specify any further procedure once a matter has been rejected for consideration. As the matter was not deemed to be an issue for consideration by the Cabinet, it was returned to the Ministry. The Ministry further requested the opinion of the Juridical Council (the Council of State) on this issue twice. The Juridical Council informed the Ministry that as the Secretary General of the Cabinet had informed the Ministry that the matter did not need to be considered by the Cabinet, the Ministry could make the final decision in the case. Previously, the Juridical Council had given the opinion that the Domestic Communications Satellite Operating Agreement could be amended, per the Company's request, because, regardless of the shareholding ratio, Intouch Holdings Plc still retained the same rights, duties, and obligations under the agreement. Further, although Intouch Holdings Plc's shareholding ratio might be reduced, its duties and commitments would remain in place, and the reduction in shareholding would not affect the benefits to be returned to the Ministry under this agreement.

Furthermore, the reduction in Intouch Holdings Plc's shareholding in the publicly listed company, Thaicom, from 51% to 40% of total shares issued, would also negate the classification of Intouch Holdings Plc as a controlling entity according to Section 247 of the Securities and Exchange Act B.E. 2535.

Later on, the Supreme Court of Justice's Criminal Division for Persons Holding Political Positions deliberated and made rulings on some facts regarding the amendment of agreement in order to change in Intouch Holdings Plc's shareholding ratio. However, the Company was not a party in the said court case, hence the final judgement of the Court is not binding and cannot be enforced on the Company.

Regarding any amendments to the agreement, the Company proceeded properly in compliance with all its contractual and legal obligations, having received Ministry approval. The Ministry later appointed a committee under Article 72 of the Private Investment in State Undertaking Act B.E. 2556, in order to find a proper solution to this issue. The Company has coordinated with the Ministry and the recently established committee regarding further procedure.

(B) Back-up satellite

According to the Domestic Communications Satellite Operating Agreement, the satellites built and delivered under the agreement shall be agreed upon by the Ministry and the Company. This agreement will include the technical specifications of the satellites. Under this agreement any subsequent satellite shall not be of lower specifications than the initial main satellite. However, the number of transponders and frequency on the satellites will depend on the joint consideration of the Ministry and the Company. Where the issue of THAICOM 4 is concerned, the Company performed in strict accordance to its obligations under the agreement.

However, THAICOM 4 was approved by the Ministry and launched as a subordinate or back-up satellite and the technical specifications are not the same as those of THAICOM 3. There is question, therefore, as to whether or not the THAICOM 4 satellite should be considered a back-up satellite for THAICOM 3. The Supreme Court of Justice's Criminal Division for Persons Holding Political Positions has made ruling on some facts regarding THAICOM 4. However, the Company is not a party in the said court case, hence the final judgement of the Court is not binding and cannot be enforced on the Company. Regarding the Company's THAICOM 4 operations, the Company proceeded properly in compliance with all its contractual and legal obligations and have received Ministry approval. The Ministry has since appointed a committee under Article 72 of the Private Investment in State Undertaking Act B.E. 2556 to consider the most appropriate course of action. The Company has coordinated with the Ministry and the recently established committee regarding further procedure.