JTTRI International Seminar on Utilization of Mobile Phone Big-Data (MBD)for the Transport Sector in Thailand
Mr. Arkhom's speech

Dear Mr. Masafumi Shukuri, Chairman, JTTRI, Mr. Yasuhiro Okanishi, Director-General for International Affairs, MLIT-Japan, Speakers, Associate Prof. Yoshihide Sekimoto, the University of Tokyo and Dr. Tiranee Achalakul, Associate Professor, Director of Big Data Experience Center who was away due to other commitment, representative from the ASEAN countries and the ASEAN Secretariat, Thai friends and Japanese expatriates in Thailand.

I was asked to give guest remarks, in this seminar. It's a great opportunity, so I'd like to talk a little more. A while ago there was a question of, "Why the mobile phones not yet popular in 2011?".   2011 was the year of the Flood. At that time, it became clear that mobile phones and mobile service companies were playing an important role in communication. Another thing that can be communicated during the flood, apart from a mobile phone, is the radio, which is under military supervision. The only way to help people during a catastrophe, in Japan as well, is through communication.

Especially at the situation when the elderly are at work while their children are at home. This is the reason why telecommunications companies have built base stations that use solar energy to communicate with rural areas in case of a disaster or flood. Therefore, actually, I think that mobile phones became widespread in 2011 already. So today, there were many topics about the utilization of mobile phones to be discussed.

Like Associate Prof. Sekimoto's presentation, I also wanted to show the movement of people in Bangkok at this seminar, but there are some technical and personal information issues, so I allow me to show you next time. Talking about personal information, telecommunications companies already have our personal information, by collecting all information, such as credit cards, which is a big problem because we do it without knowing that we will provide personal information when we sign the approval of the card. We don't read various and conditions deliberately when doing it. This problem becomes one of our attention. In Thailand, the Personal Information Protection Law was enacted last year. According to this Personal Information Protection Law of 2019, personal

information cannot be shared without the permission of the owner. However, it can be used for government planning and policy making purpose. The previous presentation also showed that what kind of data is considered personal data, what is not. I believe that data analysis is already possible and can be done without problem.

Because a lot of different information is available and so there more alternatives have to be planned for the citizens, planning with MBD will give more complicate life for planners. On the other hand, citizens will have better lives from MBD. As Dr. Tiranee showed earlier, Google could be used to measure travel time. Google can estimate the travel time even from the specific departure time. Still, it is not yet perfectly accurate.

In fact, mobile big data is not new. The fundamental is statistics. The representative from ASEAN Secretariat mentioned earlier about questionnaire survey. We have used to conduct questionnaires to get samples in the past. In addition, the number of samples was determined according to the confidence interval. When I worked as a public employee, my first job was as a questionnaire surveyor. With the government survey, the personal information of respondents is guaranteed not to be disclosed. However, now we can plan more accurately using other technologies. In one of the previous presentation mentioned about the demand forecasting. The accuracy of the passenger number forecast depends on the number of samples. The current surveys, compared to 30 years ago, requires a very large samples due to the expansion of the urban area. While our railways were planned 20 to 30 years ago, at that time housing had not expanded yet. However, the current expansion of residential area in Bangkok prevents land acquisition for TOD. This is our problem. The 99.9% of people ride on trains are using mobile phones. Some people turn on GPS with their phones on. Some people are talking on the phone. Therefore, the system can analyze when the GPS has been turned on and grasp the location on the train. These are useful for planning.

In this seminar, we have to thank the MLIT and JTTRI. ASEAN also endorsed ITS 2016, and at the ASEAN-Japan Transport Minister Meeting in 2018, the Initiative on MBD was approved. Seminars on MBD have begun to be held in many countries since 2019. I hope the JTTRI will continue to support this seminar for a discussion based on Japanese experiences, which will lead to our benefit.

When I was Minister, I was also focusing on these issues. For example, the representative from the MOT explained that the ministry is using GPS to supervise a very large number of trucks to prevent the accidents. Situation of road accidents have been improved, from the second largest to the ninth largest in the world. But the road traffic death tolls are 22,000 per year, which is still unpleasant. Therefore, the legislation is stipulated, by which truck companies must install GPS on their trucks and establish a truck management center within each company to prevent accidents.

Finally, I would like to address the two main objectives about MBD. The first one is disaster prevention. Prof. Sekimoto was talking about an example of the application of the earthquake disaster in Japan. However, in Thailand, the flood is our major concerned although we have some earthquakes. MBD has a merit of disaster simulation. The second one is about the railway plan in Bangkok. The current plan is not yet sufficient. From yesterday's seminar, you can walk to the station within the distance of 500m anywhere in Tokyo. However, it still takes about 500m to 1km in Bangkok. So we need a new master plan. All 10 routes in the first master plan was already approved by the previous administration. Therefore, in the next plan, we are in the process of creating a plan to organize more feeder networks. The new master plan is expected to use a questionnaire survey as before. Therefore, if the MBD can be used to collect the data, more than 90% reliability can be achieved, and data on people's movements, etc. can be analyzed. According to Prof. Sekimoto's explanation, it would be possible to use twin digital. In summary, the first purpose is for disaster, and the second is for transport.

Furthermore, utilization of MBD is practically common in private companies, but it is still not in common for the government. Currently, the government uses MBD in the MOT and the MDES. These two ministries used to be the same body before. There are several issues in applying MBD to transport. The first issue is for road and railway construction and the second issue is transportation services, such as railway services and bus terminals. The third issue is business. Recently, information from mobile carriers has been used to jointly provide specific car services such as VIP rental cars. The mobile phone company's main businesses are the mobile phone service business and VIP rental car service. Another point is about logistics. This means that private companies can reduce transportation costs

by choosing the best route.

Finally, regarding ASEAN, we expect that we can be all connected. However, there are still many differences among countries. In the future, we would like to ask ASEAN Secretariat to assist them in promote seamless connectivity as well as reducing transportation costs in ASEAN areas, so that our benefit can be maximized.

Thank you again. I would like see this kind of seminar regularly. Also, I would like to ask MOT for the support too.

Thank you very much.