

Internship Report

King Mongkut's Institute of Technology Ladkrabang, Thailand

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This report is written about my experience in internship program at KMITL, Thailand. I'm happy to be of any help to those who live in there.

1 Introduction

1.1 Purpose of participation

I applied the International Internship Program for the reason because I want to be a Telecommunication Engineer. But nowadays Japanese telecommunication company hope person who have internationality. Because infrastructure of Japanese telecommunication service were already constructed almost completely and the market of business are becoming saturation. So I have to get not only knowledge of telecommunication but also good working skill and insights into the culture of other countries.

That's why I participated this Internship Program. And this term I selected to study at department of Telecommunication Engineering in King Mongkut's Institute of Technology Ladkrabang(KMITL) , Thailand as my first choice. KMITL was established as Telecommunication Training Center in 1960 with academic cooperation from the Government of Japan and now take a important role to build up the technology in Thailand.

In short, the purpose of this internship is to brash-up following abilities.

- Communication skill in foreign country
- Good English
- Higher knowledge of Telecommunication engineering

and also making good foreign friends needless to say.

1.2 Schedule

My schedule was following Table. Unfortunately, I couldn't join in an instruction on outside of KMITL. (Usually participant of internship program work on the company such as broadcasting station as a trainee.) So My schedule became enough comfortable to study and enjoy during this period.

1st week

1 (Mon.)	Arriving KMITL, Welcome Party
2 (Tue.)	Instruction of Internship Program
3 (Wed.) - 5 (Fri.) Talking	Discussion about latest telecommunication technique
6 (Sat.)	Travel tour at Bangkok
7 (Sun.)	Free day

2nd week

8 (Mon.) - 11 (Thu.)	Experiment of Telecommunication Engineering
12 (Fri.) - 14 (Sun.)	Home-stay at Lab. student's house, Khorat.

3rd week

15 (Mon.) - 19 (Feb.)	Writing experiment report
20 (Sat.)	Travel tour at Ayutaya
21 (Sun.)	Free day

4th week

22 (Mon.) - 25 (Thu.)	Preparing Personal Report
26 (Fri.) - 27 (Sat.)	Free day
28 (Sun.)	Departure day



2 Study in KMITL

On a weekday, I studied at telecommunication engineering laboratory from 10 A.M. to 5 P.M..

2.1 Discussion with laboratory members

On the first week, We discussed about telecommunication engineering with professor Pisit and some students of laboratory. According to them, Thailand employ previous technique than Japan for Television system, Mobile communication and cable network today. The students were surprised when I let know them that the LTE has already launched and we can use it. Also I was surprised because my understand was technology level of Thailand is as almost same as Japanese one until this term. But there is a gap yet in spite that their living standard is rapidly advances.

They were well-acquainted for latest telecommunication technology and I was shocked for my poor knowledge. In the discussion, Prof. Pisit asked me a question "Which technique is employed for Japanese Television System?". I couldn't answer correctly in spite of my measure. I got embarrassed. From this experience, I could realize I should be more diligent to study.

After these discussion, We exchange own opinion about a research. Fortunately, all of students of laboratory ware in Master Course as same as me. So we could learn about each activity on research deeply. In talking with them, I heard that more than half of students of Master Course in KMITL have a job during daytime. They can study only after working and start to do own research at night. This is very hard schedule than me obviously. But they can do it and some students join in a lot of international conferences. I respect their stamina and strength of mind.

2.2 Experiment

To get more fundamental knowledge, Professor let me conduct an experiment as a assignment during this internship. Through this experiment, I learned how to operate the analog signal by using well-known simulation software "MATLAB". MATLAB has been applied in wide range of areas of research such as Electric and Communication Engineering. In order to get an skill to operate it, I conducted two experiments. The first one is to convert a digital data which is created on MATLAB to analog signal. And another one is to input an analog signal to MATLAB. Then, I applied the Hardware Device "Agilent U2351A" which is one of the USB multifunction data acquisition (DAQ) device and it is classified as Agilent U2300A series. I employed this device as a D/A and A/D converter.

Then I assumed the OFDM system for these signal. It is employed for latest wireless LAN, mobile network system such as LTE and 4G and Digital broadcasting.



```
>> daqhwinfo('agilentu2300')

ans =

    AdaptorDllName: [1x71 char]
    AdaptorDllVersion: '2, 0, 0, 36'
    AdaptorName: 'agilentu2300'
    BoardNames: {'U2351A'}
    InstalledBoardIds: {'0'}
    ObjectConstructorName: {1x3 cell}

>> |
```

Sample Code

```
ao=analogoutput('agilentu2300',0);
out=daqhwinfo(ao)
addchannel(ao,0:1);
% ActualRange = setverify(ao.Channel,'OutputRange',[-1 1]);
% set(ao.channel,'UnitsRange',[-1 1]);

data= sin(linspace(0,2*pi*1000,44100)');

set(ao,'SampleRate',100000);
set(ao,'RepeatOutput',inf);
putdata(ao,[data data]);
start(ao);
ao
```

After finishing the experiment, I had to not only write the report but also explain the detail and reason why these results were appeared for Professor until he say OK. That's why a skill of writing and speaking English is required to convince him. But before internship, I mainly focus on listening and reading skill to get high TOEIC score. So this practical assignment is difficult for me and let me study English hard every night. While I work through it, Professor instruct me about how to write a report, which thing is important to consider the result, how to explain them in English,···. He taught me quite a lots things. This was good opptunity to brash-up my practical English skill and mental strength.

2.3 Homestay

Professor said me "You should also study about a life in Thailand.". So, besides attending a study in College, he let one of laboratory student invited me to his house. We had ridden on a bus for 3 hours from central station of Bangkok. After the long way, we arrived at home. On there, my friend's family had already prepared a dinner which includes many types of Thai foods. It was incredible delicious and little bit of spicy. I was impressed by their smile and kindness.



My friend's parents couldn't speak English. But they didn't feel frustrated at all and welcome me. I was able to be comfortable and enjoy talking with them by using body language thanks to their graciousness. It was worth experience to change my mind. I realized we should have more positive attitude for foreign students in Mie University.

On the next day, they bring me to Phimai historical park by car. This place is the site of war between Cambodia and Thailand. But it didn't occur to me that once war was happened at all because of so beautiful place. I grateful for peace today and remembered that war makes only rubble and no worth.

My friend's small brother and sister also accompany with us. They are a little shy but

always had concern with my action. Sometimes they smiled. It made me happy.



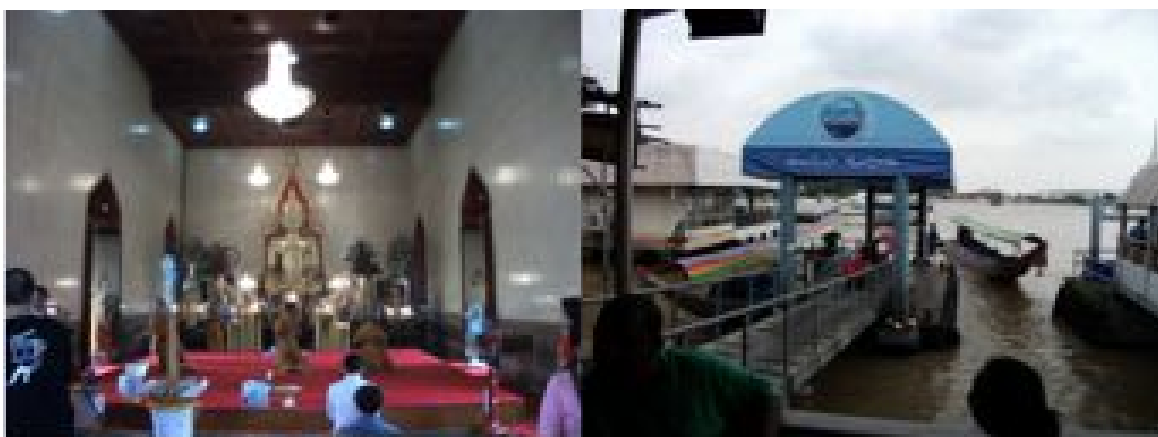
3 Travel

I could visit to a lot of historical places such as Gland Palace, Temple and Remains in Thailand. These travels offered me profound insights into ancient civilization and many situations to talk with laboratory students in English.

While I live in Thailand, I found that Thai people have a sense of great respect for a King at all time. There are a lot of objects represent a King such as stature, board, monument and so on in Thailand. And Thai people pray for the King through these objects. In addition, a National Anthem is streamed twice in a day and people can't fail to pray during the song is streaming. It seems that Thai people have a noble patriotism compare to Japanese people.

3.1 Bangkok

- Wat Phrakeaw (Gland Palace)
- Chao Phraya



3.2 Khorat

- Khorat stadium
- Class reunions of laboratory friend



3.3 Ayutaya

- What Phra Sri Sanphet
- Wiharn Phra Mongkhon Bophit



4 My feeling of Thailand

The first impression was "heavy rain". I surprised its humid climate and suddenly it become rainy even if it was complete sunny before few minutes. Interestingly, Thai friend said they also cannot predict change in the weather. According to the guidebook of Thailand, October is just border line between monsoon season and dry season. After finishing this period, I breathed a sigh of relief about there is no trouble of massive flood during I live in there.

About the student of KMITL, they are active and kind. One of the student of laboratory couldn't speak English well as same as me. But he always talked with me, asked me question about Japanese News, Soccer, and entertainment such as manga and anime. Furthermore, he invite me to football team. In there, all of player were Thai people except for me, and apparently, almost of them couldn't speak English. But they didn't hesitate to play football with me. I had a very nice time thanks to my friend's active personality. On the other hand, their generosity works badly on some situation. For instance, manner of ridding a motorcycle. I surprised when seeing their form when they drive a motorcycle. Most of them didn't wear the helmet on their head. On the contrary, I often met a 3 people who ride on 1 motorcycle and go through the road even if the policeman stand along there. I think this is not good example as appearing the personal feature of Thai people.



Anyway, as we can see, living standard of Thailand rapidly advances. However, still there are lot of poor people in Thailand. In fact, I saw them every time I go out. When I went to bar with laboratory friends, one child who looks from other county coming up and try to sell a mindless goods for me. It indicates the gap of level of living standard between developing-country and developed-country. These experience let me more would like to become a businessman work in the world. I don't forget a lot of people faced serious bad situation to discipline myself.

5 Conclusions

Thorough living in Thailand, I could make many good foreign friends. They give me a joyful memories, opportunity to learn the culture of Thailand and grow up my mind. I forget them to keep my motivation of becoming a good engineer.



In the study of KMITL, professor instruct me about how to write a report, which thing is important to consider the result in the engineering experiment and how to explain them in English. He taught me quite a lots things. It brash-up my practical English skill and mental. Participation of this Internship Program in KMITL offered me worthy and precious experiences.

I think I couldn't have finished this Internship program without solid support of all the stuff. At last, I really grateful to stuff of Center of International, Prof. Pisit, laboratory students and all of people I met in Thailand.