Chapter 4

EXISTING FACILITATION

Air freight is one kind of business that is rapidly growing in economical importance . Not only airlines or carriers domonate this business , but also some other working groups that have their parts in this business . Cargo agents and ground handling or other ground facilities working groups are members which join their work in this type of business . Also , the working of customs in clearance of cargo and other documentary requirements seem to be something like a valve to let smoothly or obstructively flow of freight that seem to be an important part . In the past few years , many states have made special efforts , both internally and through international co-operation , to promote trade with other countries by facilitating the flow of air cargo shipments through the reduction documentary requirements and acceleration of handling and clearance procedures . According to airtransport , speed is the most valuable asset , anything tends to diminish this advantage , e.g., delays in clearance controls , should be carefully studied and reduced to a minimum .

To transport air cargo from Thailand to any parts of the world is not an easy task to be done . It requires to pass many red tapes before the cargo can be shipped . The government of Thailand had made several efforts in development of air cargo transport . One way is to adjust the tariff of air cargo , especially for the products from agri-

culturist or manufactory in this country to transport outward . Rate of outward duty and rate of air freight have been set at very low value for competetive selling reason . This means further improvement of national economics of Thailand .

International airlines using Bangkok International Airprot include Thai Airways International Ltd. do not handle their own ground process for air cargo . They let the agent handle the process of contacting thecustomers , clear the goods through customers etc. . There are many air cargo agents that are doing this work now . Not only Thai companies , but also foreign groups are working in this field of business . Some air cargo agents that play importants role in this business are all members of the International Air Transport Association (IATA), they are as follow ;

1. Bangkok Air Services Co.Ltd.
2. World Express Ltd.
3. Schenker-Asg (HK) Ltd.
4. Chiang Huat Ltd. Partnership
5. United Transportation Co.Ltd.
6. Metropole Travel Ltd.
7. Tour Royale Ltd.

All of these companies have tried hard to work against the difficulty facing them in this field of business untill they were trust worthy in economical foundation and ability to operate this work . This can be seen from the acceptance by IATA to register these companies

as their members . An interesting and pleasurable thing to see that Tour Royale Ltd., a Thai company which just started in this field not more than 10 years is able to gain IATA acceptance for the membership at a short period of time .

These companies have their shippers making contact with the customs and other government authorities . These persons will do the processes in documentary requirements for shipments and also the payment for all of the government fee . Expense in air cargo transportation can be divides as :

1. The cargo forwarder will pay freight dues to the carrier according to IATA rate .

2. The cargo forwarder have to pay for municipal tax and business to the customs-house varying in rate with kinds of cargo .

3. The carrier will pay for income tax according to freight dues .

4. Air cargo agent will recieve the payment from the carrier by percentage of cargo or as their agreement . Also , business tax will have to be paid to the municipal and government revenue department .

The above mentioned works and persons who run this business may be the brief introduction before the study and analysis of the existing facilitation will be entered . It is known that Bangkok International Airport is in the state of improving , there may be some obstruction in services especially in the field of air cargo . The study and analysis in this chapter may be used as a guidance for the improvement of

existing facilitation at this airport concerning air cargo .

Carriers and Their Aircrafts

It is the fact that there are two main types of flight served by international airlines , they are scheduled and non-scheduled flight . All-freight/mail flights are provided by 8 international airlines at this international airport which seem to make progressive in this field of service days after days . List of international scheduled and non-scheduled flights are shown in Appendix C-1 and Appendix C-2 .

As the development in aeronautical technology have gone so far at present compared with that of the past , longer range of flights and more payload can be made which means less operation costs and more income as well as more quantity of freight can be loaded . Some modern types of aircraft widely used in commercial flights today are shown against their characteristics in Figure 4.1 .

One of the most important features of modern jet aircraft is the sizable lower-deck capacity available for the carriage of passenger , baggage and cargo . While this capacity was already significant in the case of such widely used four-engined jet aircraft as B-707 and DC-8 , it has become an even more important consideration following the general introduction of wide-body aircraft such as B-747 , DC-10 , L-1011 and A-300 . The rapid growth in lower-deck cargo capacity brought about by the introduction of such aircraft has played an important role in air freight marketing and has reduced the need for all-freight aircraft

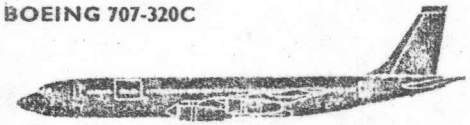
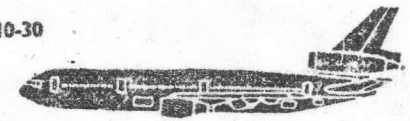
AIRCRAFT	MAX. T.O. WEIGHT	MAX. WEIGHT PAYLOAD	VOLUMETRIC CARGO CAPACITY			LOWER DECK VOLUME AS % OF TOTAL	DESIGN CARGO DENSITY
			MAIN DECK	LOWER DECK	TOTAL		
	(kg.)	(kg.)	(cu.m)	(cu.m)	(cu.m)		(kg./cu.m)
BOEING 707-320C  The most popular aircraft for long haul charters because of its great economy. Generally operated palletised with 125" pallets.	151,318	42,898	216	50	266	19	162
BOEING 747  The freighter configuration of the 747 offers maximum versatility and load sizes. Mass shipments in large containers can be carried on both the main deck and lower hold.	351,540	123,456	497	171	668	26	185
DC-8 (60 SERIES)  Range and payload make the DC-8 highly suitable for intercontinental charters. Some versions carry up to 41000 kgs. Almost all operate palletised.	161,024	50,493	284	71	355	20	144
DC10-30  Now operating on international routes, the freighter version carries up to 30 pallets with on-board pallet loader. The standard passenger aircraft has three cargo compartments, with a total 15000 kg payload	251,742	70,629	347	131	478	27	148

Figure 4.1 Commercial aircrafts playing important role in air freight

on all but the most dense traffic routes . The advantage of being able to load a larger amount of air cargo in the bellies of combination passenger/cargo aircraft is how airlines are able to provide more frequent departures for freight shipments than they would be able to offer by other way .

A comparison of the first-line aircraft used at the present time shows that a B-707 in an all-cargo verson normally in international service carries up to 36 tonnes , while in a passenger configuration , it can carry approximately 4.5 to 6.5 tonnes of cargo in its lower hold in addition to passenger baggage and mail , or slightly less than one-half of the maximum cargo payload that could be carried by such early all-cargo aircraft as the Lockheed Constellation or the DC-7F . The aft lower-cargo compartment of the B-747 can hold as many as 14 large containers or a combination of containers and pallets , with each container offering a maximum payload of 1,179 kilograms (totaling 16.5 tonnes) . In addition , the forward lower compartment is designed to carry 16 passenger containers , but in normal use at least 4 of these containers (totaling 4.7 tonnes maximum payload) are not required for baggage . Another wide-body aircraft general in use is DC-10-30 which can accept , for example , for Air New Zealand operations , up to 25.4 tonnes are stored in the forward lower compartment and 3.4 tonnes of bulk cargo in the aft hold , leaving the center hold for passenger baggage and mail . As may be seen from Figure 4.1 , the volumetric capacity available on the lower deck of the B-747 is almost 3.5 times that available on B-707-320C . As a general rule it can be observed that slightly more

than one-quarter of the total volumetric capacity of the new generation of wide-body aircraft is available on the lower-deck , compare to approximately one-fifth in the case of B-707 and DC-8-63 .

From the number of airlines and their aircrafts providing services in and from Bangkok International Airport , it may be accepted that this international airport has attracted quite a large number of international airlines and their flights . If more convenient services can be developed on the ground , it is certain that more business in air cargo will foster which mean better income to the nation .

Storage and Handling Facilities

Warehouses

The existing area of warehousing at this international airport may be divided as 2 areas as follows ;

A. Warehouse at the northern area of the airport

This area of warehouse composed of 2 buildings which are building No.1 and building No.2 as shown in Figure 4.2 . Details about both buildings are as indicated below ;

Building No.1 This building which is called as Warehouse No.1 is the first one to be introduced . The Airport Customs-House of Thailand collect the rent of this building from 7 airlines which are Lufthansa , Air France , Air Celon , Air Nepal , Air Burma ,

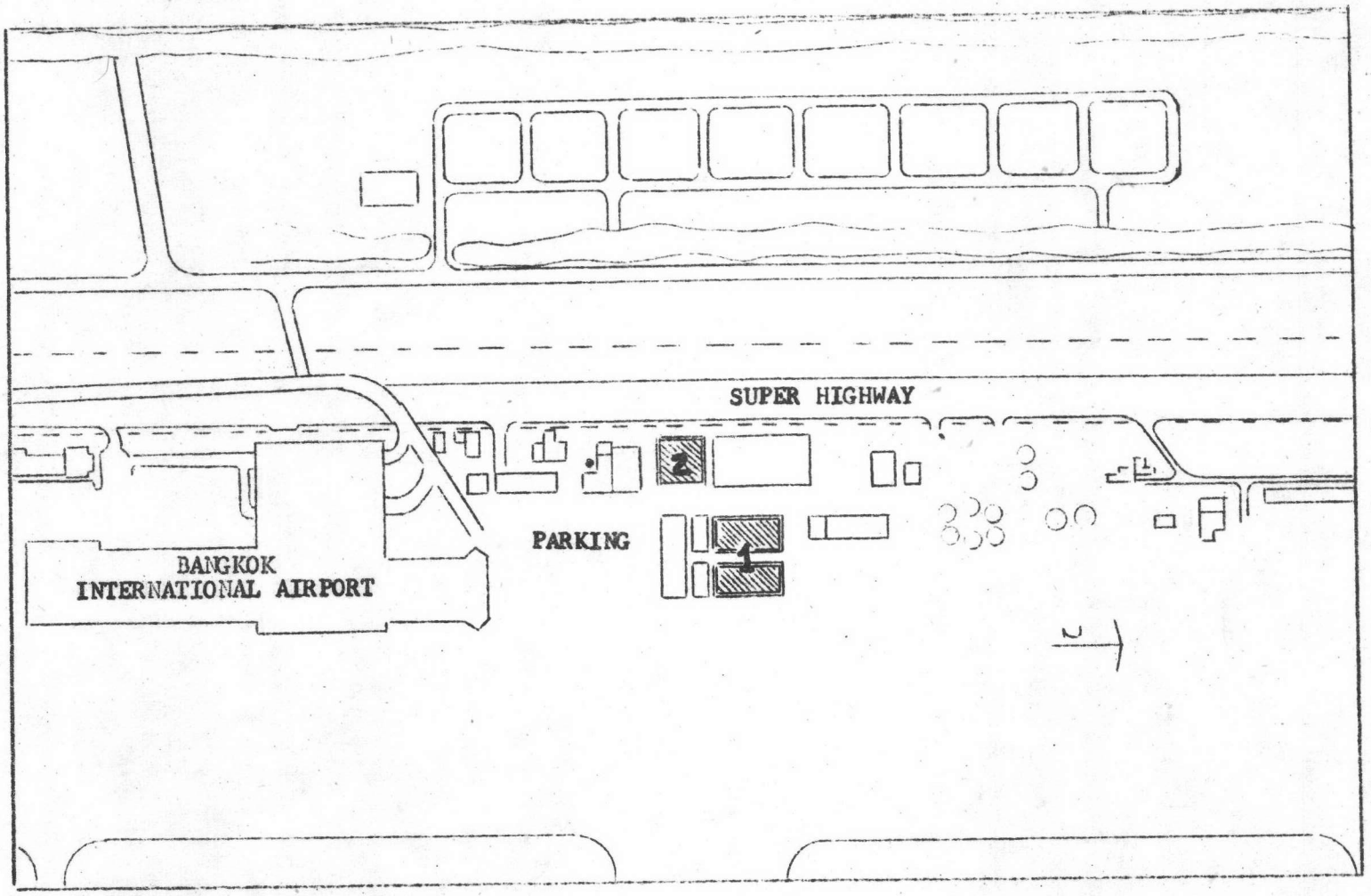


Figure 4.2 Location of warehouse at the northern area of Bangkok International Airport

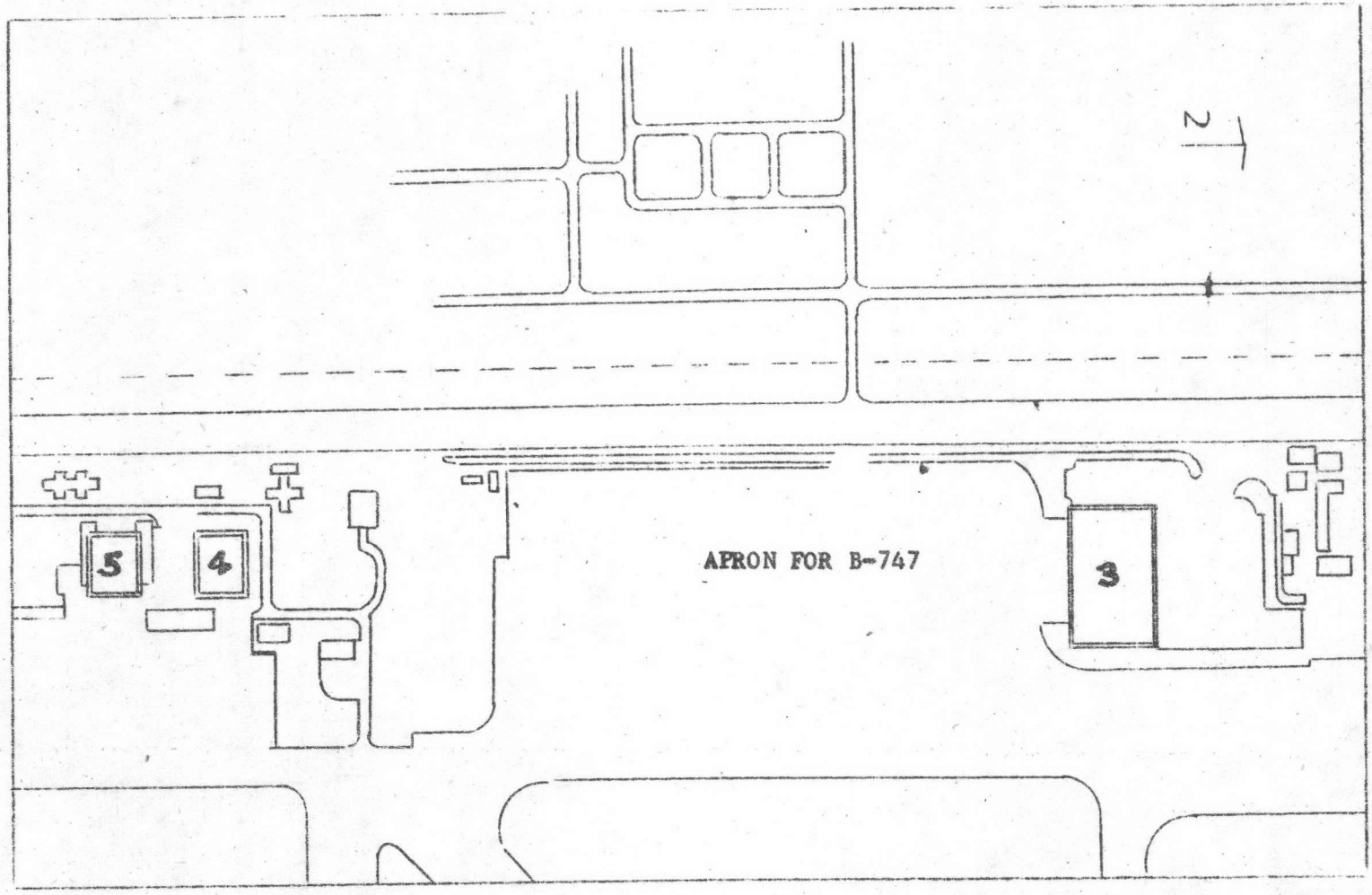


Figure 4.3 Location of warehouse at the southern area of Bangkok International Airport

Alitalia and T.M.A. . These airlines have used this building as their warehouses for air cargo and also for office area . This building is a two-storey one which composed of approximately 1,600 square metres for the area of each storey . From the observation , this building is not in a good condition , the worse condition is when it rains . So , it may be said that this building is not suitable to be used as a warehouse if no improvement is being made . Nevertheless , it is used as storage and offices , the split area being about half and half .

Building No.2 The area of this building is about 600 square metres . This building has been rent by 2 airlines , THAI and CPA , from the Directorate of Civil Aviation , RTAF . The improvement of this building is being done by new re-construction , so , the available to use it as a warehouse is not feasible .

B. Warehouse at the southern area of the airport

At this side , there are 3 buildings available to be used as warehouses , they are building No.3 , building No.4 and building No.5 . Locations of these buildings are as shown in Figure 4.3 . The users and details of these buildings are as follow ;

Building No.3 This building is in quite a good condition . It lays at the northern area of the apron for B-747 . Warehouse NO.2 has been named for this building as it is used for the purpose of air cargo storage by 4 airlines which are BOAC , JAL , KLM and PAA . Total area of this building is 5,040 square metres which about

2,560 square metres is rent by the said airlines and the rest is used by the customs-house . It is observed that the area used as storage for this building is about 2,160 square metres while about 400 square metres is used as office space by airlines . Summary of all warehouse area are shown in Table 4.1 .

Table 4.1 Summary of available area for warehouse at Bangkok International Airport (October , 1977)

Location	Storage area , m^2	Office area , m^2
Warehouse No.1	800	800
Warehouse No.2	2,160	400
Warehouse No.3	3,200	650
Total	6,160	1,850

In the field of storage facility at this international airport , it is mostly done by each airlines except THAI that included services for 18 other airlines which are ;

1. THAI
2. SAS
3. CAL
4. KAL
5. MAS
6. PIA
7. SWISS AIR
8. SABENA
9. EGYPT AIR
10. AEROFLOT
11. SIA
12. CPA
13. BANGLADESH
14. AIR INDIA
15. CHARTER
16. IRAQI AIR
17. JORDANIAN
18. POLISH AIR

It is known that there have been some improvements in the area for the storage of air cargo , but it is not enough . Such area when compared with annual total quantity of air cargo that passed through this international airport , " CARGO HANDLING CAPACITY " is an index used in the estimation of cargo area . It revealed that in 1973 there were 6.7 ton./square metre of cargo storage at Don Muang and rose to 9.3 ton./square metre in 1974 . It was estimated that the index will move up to 17.6 ton./square metre in the near future . This is quite a serious disadvantageous in the field of storage facilities and it means an inclined down of future air freight at Bangkok International Airport .

From the conference among the authorities of Bangkok International Airport and IATA in May , 1976 , it was concluded that this index of ton./square metre for each airport is not up to international standard . It does not only depend on the area of storage , but also level of service of another ground facilities . If these services are mostly done efficiently , the standard index may grow up to 12 ton./square metre while any airport that provide poor level of service , the standard index may be lower as 5 or 6 ton./square metre . For Bangkok International Airport which is classified as an airport that serves medium level of service , although it is less in area of storage , but the instruments and services here are said to be good enough to gain the standard " CARGO HANDLING CAPACITY " of 8 ton./square metre . This means that if total quantity of air cargo handled through warehouses at this international airport being not more than 8 ton./square metre in a year , this field of service is in standard limit or ground service staffs are able to run the handling service well . Table 4.2 indicates the comparison of Bangkok International Airport and some important international airports about " CARGO HANDLING CAPACITY " for the year of 1976 .

From the existing location of warehouses and management of this field of service at Bangkok International Airport , there are some disadvantages that some improvement which are as follows ;

1. Warehouses are separated in different locations which are more difficult to transport the cargo than that of a single location like that of some improved international airports such as at

Table 4.2 Comparison of " CARGO HANDLING CAPACITY " of some important international airport (1976)

Airport	Cargo Handling Capacity, ton./m^2	Storage Area m^2
Bangkok	13.3	4,578
Singapore	8.8	8,000
Hong Kong	4.5	38,090
Amsterdam	6.0	30,000
Copenhagen	11.4	12,700

Hong Kong and Singapore .

2. Management of air cargo storage is not done by a single staff , each airline operate their own service except that of 18 airlines which recieve their service from THAI . More operating fund is needed since more workers and more instruments are required . One more disadvantage is that each airline will conduct the business according to each standard which may not be according to IATA's standard . This means that poor service may be provided by some airlines at this international airport which in turn is bad for the business .

3. It has been seen that the Thai Government policy in the past was to improve only the passenger service side and nothing about air cargo facilities . When it was said that this international airport was not capable enough that required a new international airport , the supporting of the government for the improvement of storage facilities at Bangkok International Airport seemed to be actually reduced