3.0 Bus and truck industry structure

Commercial fleets are regulated by DLT according to the provisions of the Land Transport Act, 1979 (ie LTA). The principal classifications are made not on vehicle size or power, but on function, and are defined in Table 3.1. Examples of each main vehicle type are shown in Figure 3.1.

Table 3.1 – Commercial Vehicle Categories and No of Operators According to LTA (1979)

Plate type	Function	No in-use registered ir Bangkok, 2002 (est)	No of operators
Bus			
10 plate – yellow	Fixed route bus (urban or inter-city)	15,157	BMTA plus 35 private j-v bus companies for large bus operations. Bangkok Microbus Company has a separate license from DLT. There are also 1,550 song-taew representing around 1,000 owner operators.
20 plate – white	Small vehicle public transport – fixed route	None in Bangkok	NA
30 plate – yellow	Non fixed route buses for international and local tourists	5,418 (according to DLT data on operator licences 2004 there are NFR 8,128 buses of which 7,776 were A/C single deck and 276 were A/C double deck).	1,226 operators
40 plate – white	Private bus – ie for own account	2,320	734 operators
Truck			
70 plate – yellow (could be 71, 72 etc)	Truck for "hire and reward" to 2nd parties - known as non-fixed route trucks in Thailand	25,730 (see Table 9)	1,045 operators
80 or 90 plate – white (could be 81, 82, 91 etc)	Truck for own account transport ie for transport of own goods	50,387	7,525 operators

Note: Of the 1,045 NFR truck operators which are registered in Bangkok some probably operate throughout Thailand. Total NFR truck operators in Thailand are around 1,300. *Note: to be checked.*

Table 3.2 shows that there are 1,045 NFR truck operators with offices in Bangkok (ie City of Bangkok that is also known as the Bangkok Metropolitan Area) and on their licences they operate 41,380 trucks in total which exceeds the number of estimated NFR trucks (25,700) actually in-use. However, DLT's official information on NFR truck registrations approximately equals the number of vehicles which operators have on their licences. According to DLT data from the NFR truck operator licences shown in Table 3.2, of their total registered fleet around 3,000 (about 7%) appear to be long wheel base vehicles with some sort of trailer.

Table 3.2 – No of NFR truck operators in Bangkok

Year – licence renewed	Total NFR Operators	Vehicles						
		Total	Other	Hazardous Goods	Vehicle with Full trailer	Vehicle /Semi-trailer	Vehicle /Long semi-trailer	Trailer (only)
2004	39	1,312	604	118	47	277	0	266
2003	225	6,693	2,702	211	260	2,103	86	1,331
2002	234	6,913	6,907	0	0	0	0	6
2001	206	10,279	10,279	0	0	0	0	0
2000	175	6,485	6,482	0	0	0	3	0
1999	166	9,698	9,447	0	0	0	169	82
Total	**1,045**	**41,380**	**36,421**	**329**	**307**	**2,380**	**258**	**1,685**

Source: DLT data, 2004. These NFR truck operators are believed to operate throughout Thailand and may have trucks registered in other provinces.

Figure 3.1 – Examples of vehicle types under LTA (1979) in Bangkok

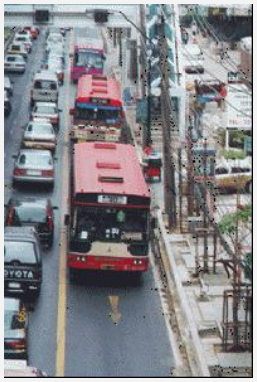
Plate type	Example	Example
Bus		
10 plate – yellow	 BMTA-own non A/C pre-Euro bus	BMTA-own A/C pre-Euro bus
	BMTA sub-contractor non A/C bus	BMTA own Euro 2 bus, A/C
	BMTA sub-contractor green non A/C pre-Euro mini-bus (to be phased out prior to 2007)	A/C Mini-bus pre-Euro of Bangkok Microbus Co.
	Song Taew – truck with 2 passenger benches, operating in outer Bangkok. Some are licensed directly to	Rot Too – passenger van point to point service, regulated by BMTA

Plate type	Example	Example
	BMTA.	
20 plate – white	None in Bangkok	None in Bangkok
30 plate – yellow		
40 plate – white		
Truck		
70 plate – yellow (could be 71, 72 etc)		
80 or 90 plate – white (could be 81, 82, 91 etc)		

Data available from DLT license information shows that the fleet size distribution of the 225 NFR truck operators (ie about 20% of all NFR operators in located in Bangkok) in Bangkok whose license was renewed in 2003 is:

- One operator with more than 400 trucks;
- 2 operators with between 300 and 400 trucks;
- 3 operators with between 200 and 300 trucks;
- 12 operators with between 100 and 200 trucks; and
- 207 operators with between 0 and 100 trucks – 3 operators had zero trucks. This needs to be further clarified.

Analysis of a 16% sample of records produced by DLT's Computer Division on in-use NFR trucks registered in Bangkok in 2002 showed that about 10% of known truck types were medium trucks. This analysis required identifying information on model types which was often incomplete. Where model data were available information on manufacturer's specifications was referred to.

The definition of medium truck varies as follows but generally but leads to a similar result:

- DLT do not have a strict definition – but trucks of 4 and 6 wheels are generally referred to as small to medium trucks. Trucks with 10 wheels or more are defined as large trucks and subject to restrictions from operating in Bangkok;
- The Thailand Automotive Institute and truck manufacturers refer to trucks with a tare weight of between 1 and 5 tons; 5 to 10 tons and more than 10 tons. Generally, trucks with a tare weight of between 1 and 5 tons would have GVW of up to 8 tons and not more than 6 wheels.
- For the purposes of the Diesel Project, trucks with a GVW less than 3.5 tons are referred to as small trucks; those with a GVW of between 3.5 tons and under 8 tons as medium trucks; and those trucks with a GVW of more than 8 tons as large or heavy trucks.

Analysing all records of the in-use NFR data base produced by DLT's Computer Division showed that the age distribution (based on year of first registration) was as follows:

- 14% registered for the first time in 2001 and 2002;
- 32% registered for the first time between 1995 and 2000; and
- 54% registered for the first time before 1995.

Data available from DLT license information shows that the average fleet size of the 7,525 private (own account) truck operators in 2003 was 6.7 trucks – there were no data on the distribution of fleet sizes. Similarly, no information was available on the age distribution but it may be similar to that for NFR trucks.

Analysis of a 7% sample of records from produced by DLT's Computer Division on in-use private (own account) trucks registered in Bangkok in

2002 showed that about 30% of known truck types were medium trucks. As earlier analysis had shown that the private truck data base had not been kept up to date in recent years, our sample of analysed records was drawn from data records of vehicles registered for the first time between 1989 to 1991.

Generally, the information on fleet sizes of the private and NFR truck operators which are both small in general may actually overstate the true fleet size of trucks actually owned by a particular operator. As for the bus sector (eg BMTA and its sub-contractors) many truck operators are believed to sub-contract a high proportion of their operations to other smaller owner/ operators. At a later date, information from the DIESEL project's commercial vehicle surveys will provide more information on the extent of sub-contracting which occurs.

The above information has shown that the NFR truck fleet tends to consist of larger trucks than the private truck fleet. In general, NFR trucks mainly carry out a line haul function between Bangkok and other cities and provinces. Due to restrictions imposed by the truck ban many of these line haul trucks trans-ship their freight at small private terminals and the DLT-owned terminal located to the east of Bangkok just to the west of the Outer Ring Road which facilitates convenient travel to all parts of Thailand. Refer to Figure 3.2. Small and medium size trucks and large numbers of pickups deliver and collect freight from these truck depots to/from destinations in Bangkok as shown in Figure 3.3.

Estimates of vehicle-km performed in 2000 by small (4 wheel), medium (6 wheel) and 10 wheel trucks in Bangkok based on simplified transport modeling carried out for the World Bank's proposed Motorcycle Upgrade Project in 2001 shows that:

- 70% of total small and medium truck-km are performed in the City of Bangkok with the balance being performed in other parts of the region;
- 30% of total heavy truck-km are performed in the City of Bangkok with the balance being performed in other parts of the region; and
- The amount of heavy truck-km performed per day in the BMR in 2000 was 2.7M veh-km and the amount of medium/ light truck-km performed per day in the BMR in 2000 was 3.7M veh-km . *These numbers all need to be checked. In addition, information from vehicle classified counts on various major roads throughout the BMR need to be examined.*

Figure 3.2 – Major Truck Terminal Locations

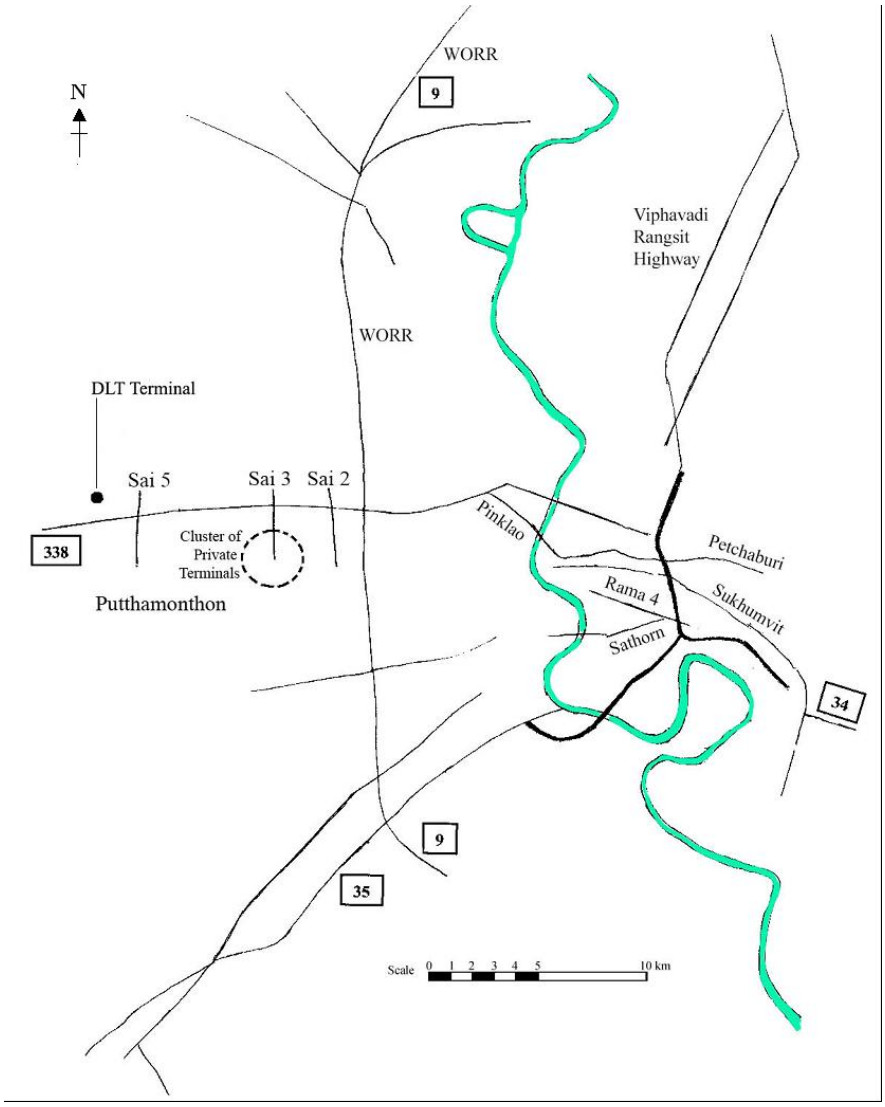


Figure 3.3 – Pickups and Medium Trucks Used for Urban Goods Distribution

	Modified pickup providing own account urban freight function. This vehicles is registered privately, not as an own account 80 plate truck.
	Modified pickup providing own account urban freight function. This vehicles is registered privately, not as an own account 80 plate truck.
	Medium truck providing own account urban freight function. This vehicle is registered privately, not as an own account 80 plate truck, and most likely as a pickup or private car.