

Talk on Enhancing Stage Bus Services for Northern States in Malaysia

PROJECT MANAGEMENT TECHNICAL DIVISION



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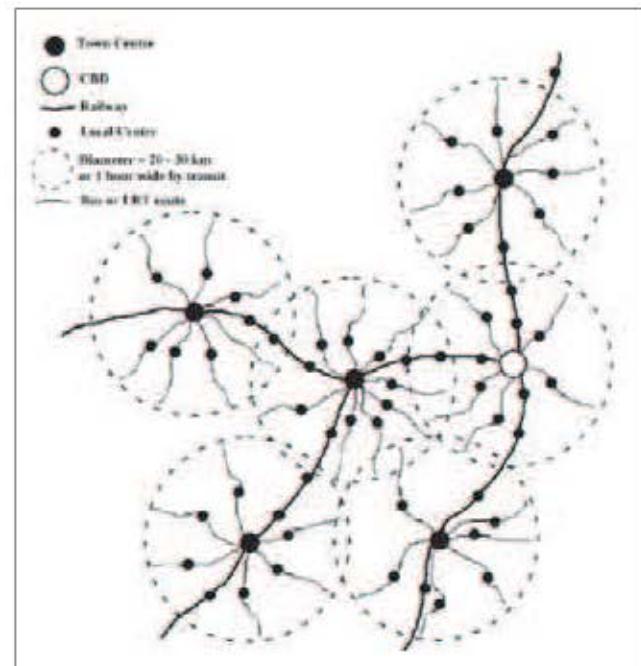
THE Project Management Technical Division (PMTD) of The Institution of Engineers, Malaysia organized the above talk on 14 May 2013 at Wisma IEM. It was attended by 48 participants. The talk was delivered by Ir. Tengku Kahar Muzaffar, currently the Manager of Policy, Planning and Research Division, Land Public Transport Commission (SPAD). According Ir. Tengku Kahar Muzaffar, the public transport in Malaysia, prior to 1995, consists of two modes, i.e. buses and taxis. Mini buses and traditional stage buses operated within their own territories. Intrakota was introduced in 1996 to enhance bus services in Klang Valley. By this time too, rail services began operations with KTM Komuter, and STAR LRT and PUTRA LRT commencing in 1996 and 1998 respectively. From year 2000, Prasarana, through RAPID, controls and operates about 60% of buses in Klang Valley. Rail services were expanded via ERL in 2002 and KL Monorail in 2003.



The participant listening to the talk

However, each transport mode has its own challenges. Rail services are over-crowded during rush hours. Bus services have become less reliable in rural areas. Taxi drivers sometimes overcharge customers. Network coverage too can be further expanded to cater to the ongoing demands of the public.

Presently, public transportation does not seem to be the favourite choice of travel. One of the prime reasons for this is the increasing affordability of private vehicles. As of end 2011, private vehicles registered reached more than 21 million, or a 1:1 ratio of vehicles and persons. Malaysia's high GDP per capita has inadvertently contributed towards



Radial approach for public transport

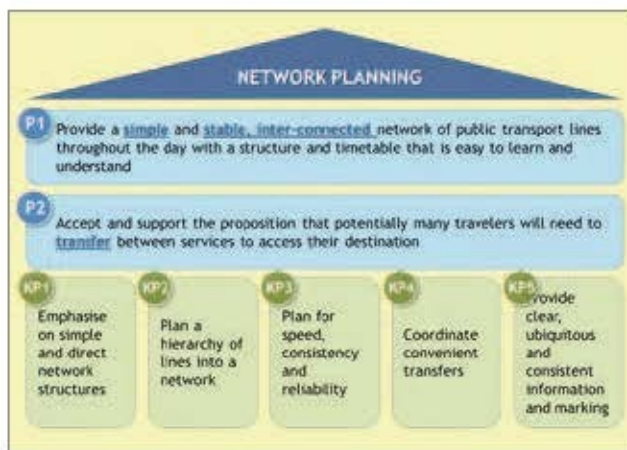
this. With this latest trend, there is a significant reduction in modal split for public transportation from 34% in 1985 to only 16% at present. This is an urgent gap that needs to be addressed as it will lead to greater congestion in city centres where the road network will be unable to accommodate the number of vehicles. By the same token, high ratio of private vehicles will also burden the nation with an over consumption of fuel.

Most stage bus networks in Malaysia implement a radial approach.¹ From a metropolitan region, bus routes are dispersed outwards focusing on intra-regional trips and peak hour commuter travel.

Moving forward, S.P.A.D. plans to implement a Network Planning approach that has two Principles and five Key Practices.¹ Multiple routes running close to each other are to be combined via a trunk and feeder system. Networks are stable, with only the frequency varying depending on the demands of the day. The network is to be interconnected so that an *anywhere to anywhere* travel option can be offered. The only disadvantage here is that passengers may need to transfer between services to get to their destination. However, through convenient transfer strategy,

buses should be planned to arrive within 10 minutes at the transfer station. High speed cross city lines or trunks would have the advantage of a *forget the timetable* concept if the frequency is less than 10 minutes. Feeders, although low in frequency, would need to be consistent for users to plan their journey. Information at bus stops is essential to ensure that passengers know exactly when the next bus is arriving, and the buses need to arrive according to schedule.

S.P.A.D. has initiated a nation-wide effort to enhance public transportation in Malaysia. For stage buses, within all states in the peninsula, S.P.A.D. has embarked on a massive project to revamp services. Beginning end 2012, upon the completion of the National Land Transport Masterplan, S.P.A.D. has spearheaded pilot projects for identified district(s) for each states with revised routes and operation plans scheduled to be ready by mid-2013.



Network planning

A case study is elaborated here for Perlis, as one of the northern states. Present routes in Perlis utilises a radial approach, with both MARA Liner and CityLiner running the services^{2,3}. Applying Network Planning principles, the routes are proposed to be revamped to enhance connectivity and increase present coverage to more than two-fold. A main trunk is introduced running from Kangar, as the state's commercial and governance centre, to Arau, as a major transportation link for the state. The express bus terminal at Jalan Bukit Lagi in Kangar is proposed to be fully utilised as the primary end point. Three major interchange hubs are identified: Kangar, Arau and Besei. All bus schedules are planned to start via a clock-faced approach (i.e. 00 - 15 - 30 - 45 minutes interval). The pilot project also introduces a new modus operandi where bus operators are to be compensated via km-run instead of the present fare box collection model.

Looking at global implications, land transport utilises 20-25% of the world's energy consumption. Additional economic costs include traffic congestion that slows movement of people, goods and services. Additional social costs include air pollution where land transport contributes to 23% of greenhouse gases emissions⁴. As such, the Government is paving the way toward provisioning a more efficient public transportation system. Environmental



Present bus network in Perlis

sustainability is becoming a pressing matter that needs a paradigm shift for the better. All of us should be agents of change, by simply taking steps to use public transportation.

The talk finished at 7.30 p.m. according to the allotted time, practising the Project Management on timely delivery. ■