COMMUTER PROBLEMS

Everyone is aware of the problems involved with commuting. Workers, shoppers, and even students have been frustrated with traffic congestion, parking and lost time. During commuting hours the situation is approaching grid-lock in many areas. The concentration of vehicles, most with only one person on board, results in more and more pollution.

People put up with this deteriorating situation because they want and need the privacy, security, and convenience of their own personal transportation vehicle. If there was an alternative transportation system that provided the benefits of a personal vehicle without the problems, people would quickly begin to use it.

PROBLEMS WITH NON-AUTOMOTIVE TRANSPORT

The non-automotive transport systems available today are satisfactory at moving people under certain conditions. These systems work well under these conditions but they have these short comings:

Railroads

Commuting on a railroad works fairly well when the commuters and their destination are along the corridor served by the railroad. The commuters are subject to the train schedules and they still need transportation to and from the train stations on both ends of their trip. Rail commuters have limited privacy and varying degrees of safety. They are also limited to bringing with them only those things they can carry.

Buses

Many of the problems associated with commuting on a railroad are also experienced on buses. Buses can offer more destinations than trains, but this usually results in even more waiting for the right one. Since buses operate on the public road system, they are no faster than an automobile.

The lack of convenience, safety, and privacy has lead most commuters to the conclusion that riding the bus is something they wish other people would do.

Car Pooling

When commuters can arrange it, car pooling is an obvious benefit for all those involved. Even when it can be arranged, however, it has limited effect on the overall commuting problem. Note that even where car pooling is encouraged, the average automobile still carries only 1.2 persons.

Motorcycles

Commuting via a motorcycle solves many of the basic problems with lane-splitting. A given road can carry twice the traffic, and parking can be increased by a factor of four. A motorcyclist has the freedom to come and go on his own schedule, and he can carry a limited amount of goods.

The problem with commuting on a motorcycle are obviously safety and comfort. Driver skill is obviously required but anyone riding on a motorcycle is going to be subjected to the weather so this is not a viable alternative to many commuters.

WHAT IS NEEDED

An analysis of the above indicates that the ideal commuter vehicle would be a narrow car. It would have all the advantages of a regular car:

- Flexibility of schedule and destination
- Personal safety and comfort
- Convenience and ability to carry goods

With the added advantages of a motorcycle:

- Less congestion and pollution

- Easier and less costly parking
- Less cost to own and operate
- Can use split-lanes

THE TANGO IS THE ANSWER

The Tango is a new concept in personal transportation. It is a 2 passenger car that is no wider than a motorcycle. Like a motorcycle, the seating is arranged in tandem with the driver in front. The rear seat can be used to carry a passenger, a baby seat, or it can be removed to carry groceries or other goods. The Tango is narrow, but it is a normal height. This together with its roll cage structure make it a very safe vehicle. The Tango is less likely to tip-over than most vehicles because it uses ballast to achieve a low center of gravity.

The narrow profile of the Tango has commuter car advantages as described above. The first Tangos will be electric so they will reduce pollution as well as reduce congestion. Most commuter trips are within the range of an electric Tango.

AN ELECTRIC TANGO

The first Tangos will be electrical powered because most commuter trips are within the Tango's 75 mile range. Since many Tangos will be used in congested areas, the use of electrical propulsion will result in less pollution in those locations that need relief.

It is expected that most Tangos will be second or third car so the lack of long range capability should not be a problem. The Tango has enough power to more than keep up with traffic, so driving a Tango will be fun as well as environmentally correct.

A garage roof mounted, solar cell charging module is being developed so a Tango can be charged for no cost while it is parked.

As more electric Tangos are in use, it will be economically feasible to have charging stations at many locations. Every place there is a parking meter there could be a charging station. The parking fees would include the nominal cost of charging the Tango's batteries. Away from home charging will obviously extend the daily range of a Tango so it can be an even more useful transportation system.

FUTURE TRANSPORTATION SYSTEMS

The Tango is the first step in many new transportation systems. Because it is narrow, it can split lanes just like motorcycles do now. Several State Highway Officials have indicated they will make split lanes common as soon as there are vehicles to use them. Normal parking spaces can be divided into 4 which will greatly expand the available spaces.

With the availability of narrow vehicles like the Tango, it will be possible to set up rail cars to piggy-back them for larger trips. The Tango is short enough that it will fit on a rail car sideways. This means it will be possible for the Tango drivers to easily load and unload their vehicles at train stations.

The advantage of piggy-backing Tangos is that commuters could use railroads for intermediate length trips and still have their personal transportation for the short trip at either end of their commute.

Commuter and other people will use new transportation systems when they are cheaper, faster, and more convenient than the alternatives. The Tango offers these advantages so it won't take people long to see this and to want one. All that is needed for a commuter to want a Tango is for him to be passed by one while he is stalled in traffic. It's just a matter of time before you will want one.

	TRAIN	BUS	AUTO-MOBILE	MOTOR-CYCLE	TANGO
Adds to Congestion	Good	Fair	Poor	Good	Good
Parking Availability	Good	Good	Poor	Good	Good
Parking Cost	Good	Good	Poor	Fair	Fair
Adds to Pollution	Good	Fair	Poor	Fair	Good
Flexibility of Schedule	Poor	Poor	Good	Good	Good
Flexibility of Destination	Poor	Poor	Good	Good	Good
Can Carry Goods	Poor	Poor	Good	Fair	Good
Personal Safety	Fair	Fair	Good	Poor	Good
Personal Comfort	Fair	Fair	Good	Poor	Good
Cost to Operate and Own	Fair	Fair	Poor	Fair	Fair