MAGLEV DEPLOYMENT PROGRAM

The Maglev Deployment Program (MDP) was included in the Transportation Equity Act for the 21st Century (TEA-21) of 1998. Between 1999 and 2005, a total of $55 million (with non-federal matching funds, $80 million) was spent by 7 projects for “Pre-construction Planning Activities” as defined in the bill. Of these original projects, five are still active and moving forward with their planning and preliminary engineering. The Baltimore – Washington and Pittsburgh Projects have since completed their Draft Environmental Impact Studies (DEIS) (and), the California-Nevada (Las Vegas) Project (as it is commonly known) has initiated its DEIS, and the California Maglev (SCAG) and Atlanta-Chattanooga Projects are continuing with their planning and development activities.

Independent of the MDP, the Orangeline Maglev Project in Los Angeles has moved into the active planning / project development stage and in San Diego, investigations are continuing into using maglev to connect the city with a possible new outlying airport or to one of the airports in greater Los Angeles.

In August 2005, the reauthorization of TEA-21, now named SAFETEA-LU, was passed by Congress and identifies $90 million in Federal funding for Fiscal Years 2006 - 2009 for two maglev projects to complete the environmental (EIS), planning / engineering, and safety certification work necessary before these projects can begin construction. This presentation will provide an overview of the U.S. Maglev Deployment Program and the Transrapid maglev projects under development in the U.S.A. including Southern California, as well as the transportation, economic, and regional context for each project.
Nevada), is “earmarked” by name as the “Western U.S. Project”, while a second maglev project, “East of the Mississippi River” shall be selected by the Secretary of Transportation. Although the $90 million were identified in the Transportation Bill, it was later determined that “correction” to the Bill is necessary to classify these funds as “Contract Authority Funding” (this is currently pending).

2 TRANSRAPID PROJECTS IN THE U.S.

Although the Transrapid maglev technology is equally suited to the following applications:

- Airport connector,
- Regional network,
- Medium and long distances (intercity),

the current U.S. projects are all high- and medium-speed airport connector applications. Although in general, the large distances between U.S. cities tend to favor air travel, fast, convenient, and reliable access to these airports has become a growing problem. And as individual airports become overloaded, the shifting and redirecting of air traffic to better utilize the airport resources in the region has become a priority in transportation planning. These recent trends have favored these types of projects for the initial use of maglev technology in the U.S.

**Baltimore-Washington Maglev Project**

This project plans to connect downtown Baltimore (business/sports district) to the Baltimore-Washington International Airport (BWI) and on to downtown Washington DC (Union Station). It will allow expedient commuter and tourist access to both Baltimore and Washington and allow BWI Airport to serve as a third airport for Washington DC. Long term, corridor extensions are foreseen to the north to Boston and to the south to Charlotte.

The B-W Project was down-selected in 2001 to receive increased funding and using this, was able to complete its Draft EIS in Fall of 2003. It plans to complete its Final EIS in 2007. It is one of three projects competing for the “Eastern U.S. Project” funding in SAFETEA-LU.

**Pennsylvania Maglev Project**

This project will serve Pittsburgh commuters and help alleviate congestion on the bridges and tunnels leading into Pittsburgh. Two „Magport“ terminals are planned at the Pittsburgh Airport - one for air passengers and visitors using the terminal’s shopping mall and one for commuters heading for downtown (with park and ride services). The downtown station will serve both business and entertainment passengers with its convenient location for major employers and professional sporting arenas.

The Project is planned to be completed in two phases: Airport - Downtown and then on to the eastern suburbs of Monroeville and Greensburg. Future extensions are foreseen to Cleveland (to the west) and Harrisburg and Philadelphia (to the east).

The Pittsburgh Project was down-selected in 2001 to receive increased funding and using this, was able to complete its Draft EIS in Fall of 2005. It plans to complete its Final EIS in 2007. It is one of three projects competing for the “Eastern U.S. Project” funding in SAFETEA-LU.
**Pittsburgh Airport - Greensburg**

| Route length | 86.9 km / 54.3 miles |
| Stations | 5 |
| Trip time | 35 minutes |
| Headway | 8.5 minutes |
| Vehicles | 8 (3 sections each) |

Figure 3: Pittsburgh Airport - Greensburg

**California-Nevada (Las Vegas) Maglev Project**

This project is ultimately foreseen to connect Las Vegas with the southern California basin (Orange County) as well as to the SCAG regional maglev network and the California North/South high-speed rail corridor. Foreseen to be completed in phases, the initial segment will connect LV with Primm (near the Nevada state border). This will later be followed by Anaheim - Ontario Airport, Primm - Barstow, and Barstow - Ontario Airport. The initial segment offers a premier showcase for high-speed maglev technology in one of America’s most popular visitor destinations, while at the same time promising fast implementation and low investment cost.

The Las Vegas Project initiated its Draft EIS in 2004 and with the funding foreseen in SAFETEA-LU, it is expected to go into construction toward the end of the decade.

**Las Vegas Airport to Primm**

(Initial Segment)

| Route length | 56 km / 35 miles |
| Corridor length | 434 km / 270 miles |
| Stations | 2 |
| Trip time | 11 minutes |
| Headway | 20 minutes |
| Vehicles | 3 (8 sections each) |

Figure 4: Las Vegas Airport to Primm

**Maglev (SCAG) Project (Los Angeles)**

The Southern California Association of Governments (SCAG) is planning a regional high-speed rail network for greater Los Angeles (LA) which will connect the major regional activity centers and significant inter/multi-modal transportation facilities in Los Angeles, Orange, Riverside, and San Bernardino Counties. This system as envisioned will also provide a connection to the San Diego Region, the California-Nevada Maglev Project, interline with the proposed California North/South high-speed rail corridor, and allow further expansion into the high desert portion of Los Angeles and San Bernardino Counties as the region grows.

An initial operating segment, West LA - Union Station - West Covina - Ontario Airport, has been selected for intensive planning including preliminary engineering and preparatory work for the EIS. In addition to providing fast, reliable, commuter access to downtown LA (via the intermodal facilities at Union Station), it will allow air passengers convenient access to Ontario Airport (which has open capacity), thereby decentralizing the air traffic of LAX, which is already operating at capacity.

SCAG is also investigating the possibly of connecting up to six airports in greater LA with a regional high-speed network to allow passengers and potentially air cargo to be distributed more evenly and thereby better utilize airports with open capacity.
SCAG Initial Operating Segment (IOS)

| Route length | 87 km / 54 miles |
| Stations     | 4               |
| Trip time    | 31.5 minutes   |
| Headway      | 10 minutes     |
| Vehicles     | 10 (8 sections each) |

Figure 5: SCAG Initial Operating Segment (IOS)

Orangeline Maglev Project (Los Angeles)

The Orangeline Project has developed out of a private initiative of communities along the “Orange-line” corridor, an unused rail corridor extending from Union Station to Anaheim in Orange county. Formed in 2003 by communities interesting in developing a maglev line in the corridor, the Orange Line Development Authority (OLDA) provides the legal framework for the project and administers the development, funding, planning, and ultimately the construction and operation of the route.

A project development and planning team was chosen in a public tendering process in 2004 and the initial planning phase will be completed in September 2006.

San Diego

San Diego is currently investigating possibilities to increase airport capacity and also to improve its access to the Los Angeles basin. The current airport is located within the city and only has one runway, both of which constraint its growth potential. There is also a growing commuting population between San Diego and Los Angeles. A maglev route connecting San Diego with a new out-lying airport or to LA with an intermediate stop at an existing LA airport are under investigation. The second option could also connect into the proposed SCAG maglev network (see California Maglev (SCAG) Project).

Atlanta-Chattanooga Maglev Project

This project shall connect Hartsfield Airport with Atlanta, Cartersville, Dalton, and the Chattanooga, Tennessee airport. Hartsfield Airport is at capacity and further expansion would be difficult. A high-speed connection to the Chattanooga airport would allow sharing of traffic and services. The project also incorporates park and ride stations along the congested I-75 highway corridor to encourage commuters traveling to downtown Atlanta or the airport to transfer to the maglev link.

This project was actively funded and planned during the first three years of the MDP. Additional planning funds have recently become available and a public tendering process has now been completed to choose a new planning team. In addition to more detailed planning of the current corridor and preparation for the EIS, extensions to Nashville (west) and Savannah (east) are also being considered.
3 SUMMARY

The inclusion of the Maglev Deployment Program in the original TEA-21 and its continued support in SAFETEA-LU have been instrumental in establishing maglev transportation technology as a high-performance alternative to conventional rail and road systems as well as short-haul aircraft. Although numerous projects are in planning, until the first one is build and in operation, the break through will not yet be achieved. With the perseverance of our local project partners and the continued financial support at the federal, state, and local levels, the vision of high-speed maglev transportation can also become a reality in the U.S., as it already has in China.