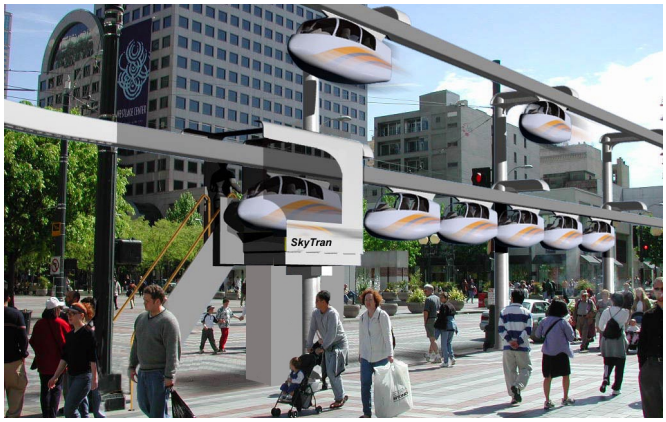


NASA Ames Maglev PRT Demonstration Project

California Energy Commission
AB 118 Alternative Vehicle Program Briefing

Commissioner James Boyd
Commissioner Karen Douglas

February 20, 2009

Unimodal Systems of Irvine, CA has achieved an important technical breakthrough under a U.S. Department of Transportation Research and Innovative Technology grant: the development of key components for a super energy-efficient, low-cost, high-speed magnetically levitated (maglev) personal rapid transit (PRT) monorail system. The next step is a demonstration system at the NASA Ames Research Center in Mountain View, CA where key components will be integrated into a full-scale operational maglev PRT system.

U.S. DOT Research & Innovation program maglev guideway installation.

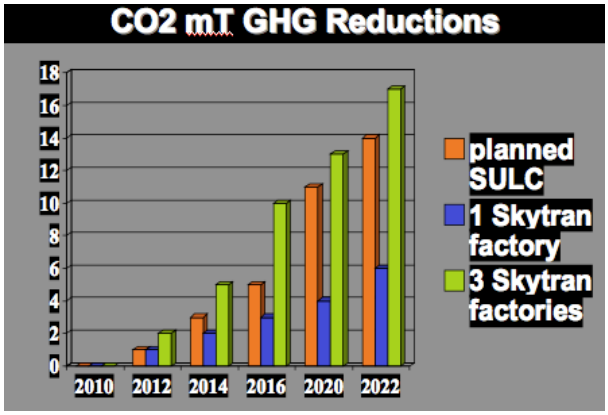
One Cycle Control, Inc. advanced power electronics.

The CARB's Economic Technology Advancement Advisory Committee (ETAAC) report indicated that PRT could potentially contribute to the largest reductions in greenhouse gases and congestion when compared to conventional transit technologies *(ETTAC Final Report 2/11/08 Pgs 3-4, 3-12).*

PRT responds to a clear consumer preference for public transit that provides *private*, high-speed, on-demand, non-stop point-to-point service. The system emulates the best characteristics of a car—one passenger, one destination---thereby increasing the likelihood of widespread adoption of public transit and reducing vehicle miles traveled.

The NASA Ames Maglev PRT Demonstration Project is consistent with the AB 118 priority of supporting gap technologies in the Super-Ultra-Low carbon category. Maglev

PRT has great potential to reduce GHG, VMT, and to accelerate transit oriented development expansion. At 500 MPG the Unimodal magnetic levitation/linear synchronous motor powertrain is the most energy efficient surface transportation electric drive system.



Unimodal's SkyTran maglev PRT manufacturing output correlated with GHG reductions.

Comparison Matrix

	ULC/SULC	Transit	Skytran
Permits			
Capital Cost	$100B	$450B	$45B
Total Cost	$0.50-$0.90/mi	$1-$3 /mile	$0.25-$0.50/mile
Tax subsidy			reduces
Lb. CO2 /pass mile	0.2	2 .06	.02
User Experience	Private, slow-rush	Public, slow	Private, fast
Cal Business			

SkyTran maglev PRT compared to ULC/SULC and transit.

PRT can be deployed as public-private partnerships (PPP). Historically, federal and state government have been the main purchasers of public transit systems. Private investors need market signals that government is prepared to jumpstart new, innovative technologies by making key investments in demonstration systems. As public-private partnerships develop, and private investment in PRT expands, the need for government to subsidize public transit will dramatically decrease. Unimodal has signed a Memorandum of Understanding with a major infrastructure financing company prepared to finance PRT projects currently under consideration by four cities in California.

For the traveling public, PRT demonstration responds to AB 118 goals of encouraging the creation of an entirely new market that will broaden consumer choice and reduce the costs of personal mobility to half the cost of driving without tax subsidies.

The Investment Plan draft currently outlines advanced vehicle development programs that could lead to incremental improvements to the existing automobile infrastructure. Maglev PRT is a bold step in a new direction. Automated high-speed maglev PRT guideway systems are, in fact, electric car highways that don't depend on extension cords or storage capacity improvements to be commercially viable.

By eliminating tax subsidies from transit and reducing congestion, maglev PRT is the 21st century transportation network infrastructure that fulfills the vision of a truly practical Automated Highway System. By using mass-produced modular components rather than protracted on-site construction techniques, maglev PRT has the potential to rapidly become an infrastructure program of the size and scope of the Interstate Highway program. AB 118 support for maglev PRT offers California the historic opportunity to

take the lead in this emerging global industry by creating clean-tech jobs and manufacturing within the state, while also achieving aggressive reductions in transportation related GHG emissions


SkyTran vehicle development at Advanced Digital Manufacturing in Santa Ana, CA

Unimodal has assembled a world-class team of California technology and manufacturing companies to build the NASA Ames Maglev PRT Demonstration System and rapidly transition to commercial deployments across the state. Unimodal is prepared to build factories in California to respond to growing demand.

Maglev PRT has huge implications for California and communities across America looking to build affordable 21st century hi-speed public transit infrastructure that is energy efficient, simulates green economic development, and reduces traffic congestion and VMT.

We urge the CEC to consider the NASA Ames Maglev PRT Demonstration for AB 118 funding.