



First Mile

Enhancing Community Mobility, Improving Quality of Life

June 2008 Vol 2 No 3

The Report is In: MyGo-Pasadena

MyGo-Pasadena - CALSTART's First Mile program to integrate small and efficient Local-use Electric Vehicles (LEVs) into door-to-door transit solutions - has concluded its initial phase, and while some barriers were identified, the overall results are positive. A preliminary report has been filed for review.

As new light rail systems and bus rapid transit services are developed in the United States, millions of people will remain unable - or unmotivated - to access public transit for their traveling needs, particularly if it necessitates walking over a half-mile to reach a new transit service. Park-and-ride facilities are not cost-efficient: Parking guru Donald Shoup, in his book *The High Cost of Free Parking*, presents evidence that aboveground structured parking often costs about \$10,000 per space and that underground parking often costs about \$25,000 per space. There are better, more economical options available for commuters who live in the neighborhood of transit stations. LEVs, such as electric bicycles, offer an exciting opportunity because they are a "smaller step" from the family automobile for short trips.



MyGo Members at Goldline Station

After an extended period of research and evaluation - including focus groups and on-site surveys - CALSTART initiated MyGo-Pasadena. The member-based program offered purchase incentives to qualified participants who committed to using their e-bike or scooter twice a week to commute via the Goldline light rail system. If their use exceeded the minimum, they could become eligible for other cash rewards of up-to \$30 per month.. Once their initial enrollment period ended, they received a prorated buy-down of between \$150 and \$500, depending on the cost of the LEV they purchased.

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Buying People Out of Their Cars

A recent 2008 study by AAA, the nation's largest organization for motorists, concludes that the cost of driving a passenger vehicle has increased 1.9 cents per mile nationwide in the last year and now averages 54.1 cents per mile. Costs for maintenance, insurance and depreciation are all slightly lower this year, but the savings is being quickly offset by rapidly escalating fuel prices and cost increases for tires, financing, license, registration and taxes.

What if you could earn even more cash per year (added to the savings noted above) by taking public transit? Now would you switch to the bus or a carpool for your daily commute? The answer to that question likely lies in how much you value the perceived convenience of your single-occupancy vehicle (SOV).

Employees in California who do not drive their personal car alone to work may be eligible for a "parking cash-out allowance" which is mandated by state law and which requires

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MSVs: Proposing a New Vehicle Class to NHTSA

The Medium Speed Electric Vehicle (MSEV) Coalition has taken the bold step of petitioning the Federal Government for new regulations, modifying existing rules for Low Speed Vehicles (LSV) or potentially creating a new Medium Speed Vehicle (MSV) class.

Under the aegis of the Coalition, various stakeholders crafted letters requesting the change from the National Highway Traffic and Safety Administration (NHTSA). The main letter from the electric vehicle dealer Environmental Motors in Glendale asks "for NHTSA to consider establishing a Medium Speed Vehicle standard, with the definitions of maximum speed and safety requirements being mutually agreed upon by the manufacturers and safety officials alike." NHTSA has just notified the Coalition that the requests are being considered.

Low speed or Neighborhood Electric Vehicles (NEVs) have been on the streets for years, though it's been relatively recently that, in some areas, they have been cleared to navigate main roads with speed limits up to 35 mph. That has largely limited their utility to neighborhood trips on residential streets or within contained complexes or campuses. The Coalition sees a much greater role for smaller electric vehicles if regulations can be modified to allow an intermediate class between LSVs and the larger EVs that can operate at low highway speeds of 55-60

mph, requiring full Federal Motor Vehicle Safety Standards compliance. With the current spike in gas prices, ongoing issues related to parking congestion, criteria and greenhouse gas emissions, and quality of life concerns, the need seems clear.

The "second-car" niche also recognizes that most people drive less than thirty miles in any given day. Battery electric vehicles get filled up every night and existing, proven technology can make 30-mile range available every day without having to go near a gas station.

The kind of car we are talking about is a far cry from a golf cart and a big step up from the average NEV that goes up to 25 mph. Vehicles that typify an MSEV are the ZENN (zenncars.com) the Miles EV (milesautomotive.com) or the E-Ride (e-ride.com). The vehicles can get the equivalent of up to 200 miles per gallon with zero emissions. They are currently limited by Federal Regulations to 25 mph under the LSV rules. They do, however, have safety features far beyond the LSV specifications and are capable of going 40-45 mph, allowing them to travel main thoroughfares in most cities. Coalition members have done market research on what makes this second-car option work. Many urban areas have so much traffic that congestion is limiting the effective speed to 35 mph, and often far less. This means that for local trips, a vehicle with a top speed of 35-40

Buying People Out of Cars

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employers to offer a cash allowance equal to the cost of the company-paid parking space, which can sometimes amount to as much as \$150/month, depending on parking scarcity in the area. The intent of the law is to reduce vehicle commute trips and emissions by offering employees the option of "cashing out" their subsidized parking space in favor of alternative commutes. The law covers public and private employers that have at least 50 employees and that offer free parking in a leased lot.

Other available commuter incentives in lieu of parking subsidies could include (1) travel allowances, which are financial payments provided to employees instead of parking cash-out, and (2) transit or rideshare benefits, which are free or discounted transit fares provided to employees. In Los Angeles, these benefits usually amount to about \$50 per month and

are tax-exempt up to \$100 per month in the U.S., which has motivated an increasing number of employers to offer transit benefits as an alternative to parking benefits.

Shouldn't the "loss of time or convenience" for using public transit in lieu of a car be factored into this financial equation? Let's assume for example that it takes a given commuter an additional 10 minutes each way to take transit instead of a car, adding 20 minutes to the round trip travel time.

If we assume that this commuter earns \$30.00 per hour or 50 cents per minute, then it costs \$5.00 in time to take transit one way instead of a car. A one-way Metro fare in Los Angeles plus this "time is money" factor equals \$6.25 per trip (\$1.25 fare + \$5.00 = \$6.25) or \$12.50 per round trip.

Assuming the average transit commuter rides the train 20 days per month round trip, his total cost of taking transit is approximately \$250 per month or \$3,000 per year, which is significantly less than the cost of owning and operating a car at \$10,604 per year. When you add on any of the commuter financial incentives mentioned above for swapping out your car, the economic case for permanently switching travel modes is compelling.

Finally, financial gain may not be the most persuasive motivation for an alternative commuting switch. There is strong evidence that time spent commuting alone has a large negative effect on levels of happiness. One study found that a 23-minute commute had the same effect on happiness as a 19% reduction in income. It appears that alternative commutes can bolster the mind, as well as the pocketbook.

The Cheapest Trip: The Trip NOT Taken

In general, First Mile issues revolve around getting people out of single occupancy vehicles (SOVs) and into alternative modes, offering low-impact options or smart growth and planning solutions. As recently reported on *Procurement.travel*, American Express, Concur and GetThere have been quietly but earnestly actualizing the idea that the cheapest trip is the trip not taken at all. In this time of skyrocketing fuel costs and the ripples that impact all other aspects of the economy, this is surely a technology that will get serious scrutiny by corporate and individual business clients alike. Their strategies have involved implementing online booking technology that intervenes at the point of sale to convert a physical trip to a video-, Web- or audioconference.

Soon after the November 2006 introduction of its American Express Intelligent Online Marketplace, powered by Rearden Commerce, Amex tested the waters for a new way to prevent trips by shifting prospective travelers to Microsoft Live Meeting or WebEx with just a few clicks of the mouse. The application includes a rules engine that allows clients to customize standards for a call to action, and even differentiate those criteria between different types of employees.

GetThere last June introduced a dynamic messaging function for its booking engine that allows corporate clients to influence user behavior at the point of sale. The first GetThere client deployed it last fall specifically to

convert trips to such alternatives as WebEx. The company declined to discuss any additional details of its application, but suggested that by this summer, it would introduce a next-generation demand management service that addresses trip avoidance as a strategic objective.

This month, Concur will roll out the initial stage - a menu of service providers - of what it said will be the first truly comprehensive and fully integrated solution. An extension of Concur's Cliqbook booking-engine and expense-reporting platform will enable corporate clients to not only eliminate trips in lieu of an alternative, but also tabulate and report the savings accrued, said Tom DePasquale, Concur executive vice president and general manager.

Based on customer research, Concur will deliver a full range of more than a dozen popular options for video-, Web- and audioconferencing, as well as document sharing and management, and invitation management capabilities.

BCD Travel senior vice president of technology solutions Ellen Trotochaud thinks Concur's offering is an important innovation. Compared with other booking tools, "Concur has a much more integrated approach because of the travel and entertainment (T&E) expense integration," Trotochaud said, noting that almost half of BCD's Americas bookings are made with Cliqbook.

Trotochaud added that BCD in December began a formal initiative of its own to convert some internal travel to a new videoconferencing network. BCD's network currently links 12 key international cities, including Atlanta, Burbank, London and Singapore.

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Funding for the project was provided in part through a grant from the Los Angeles County Metropolitan Transportation Authority, with additional sponsorship by the City of Pasadena, Pasadena Water and Power, and the Federal Transit Administration.

While the cost of owning and operating a e-bike is negligible (less than 4 cents per mile), the total annual savings of the MyGo commuter package had to account for the cost transit passes - a monthly Metro pass was \$62 per month or \$744 annually. This could frequently be offset by a "parking cash-out allowance" mandated by the State - through which employers would offer a cash allowance equal to the cost of a company-paid parking space up to \$150 per month - or other incentives.

Data gathered during the program identified barriers and opportunities, provided valuable profiles of likely target audiences, highlighted local infrastructure needs, and revealed technical issues involving the pool of available

vehicles that would need to be addressed in future roll-outs of such programs. Preliminary conclusions indicate that commuters may choose to abandon their cars for short trips to transit stations once they are properly informed of the availability and reliability of discounted electric vehicles, and the location of safe and enjoyable corridors on which to operate them. The report also revealed that quality of life issues figured prominently into the users' decisions to participate.

Environmental benefits were identifiable and statistically significant, particularly when projected for a wider deployment of such a program. Also, branding and the availability of a "virtual mobility provider" web site could streamline management processes and attract members.

For more information on the results of the MyGo-Pasadena pilot program, contact Whitney Pitkanen, Project Manager at (626) 744-5600 or wpitkanen@CALSTART.org.

Cheap Trip (cont'd from page 3)

Jiten Bhalgat, practice leader of compliance and change management at American Express Advisory Services, said there is significant demand for the new approach to curbing travel and, hence, cutting costs. "The interest in procurement circles has increased during the past year and a half," according to Bhalgat, and "the interest is large."

Still, Norm Rose, principal of Travel Tech Consulting, cautioned that many ideas hyped at the research and development stage ultimately have fallen flat with end users.

"I think this is a significant opportunity for companies to manage trips in a better fashion," Rose noted, "but the key to success will be how it is implemented: It comes down to how it is integrated into the flow of booking travel and whether it becomes a clear message about alternatives for those segments within the corporation for which this could be a realistic alternative." (*This condensation is based on the article by John Buchanan, and can be found on the web site at <http://www.procurement.travel/news.php?cid=travel-alternatives-remote-conferencing.Mar-08.28>*)



Zenn Microcar



Miles EV



e-ride EV

MSVs (cont'd from page 2)

mph can get as much done around town as a freeway cruiser, with greatly reduced fuel costs. Since these vehicles will generally be smaller and more maneuverable, they can also have significant positive impacts on parking.

Another argument in favor of this class and increased utilization of such vehicles is economic: generally these cars may be less expensive or on par with conventional vehicles to purchase; and over their lifetime, fuel and maintenance costs will be significantly less. A study by the American Automobile Association in 2006 noted the average annual cost of owning a car at nearly \$8,000. With the price of gasoline nearly doubling in that time, it's clear that the MSEV advantage has only increased.

But will changing the speed from 25 to 35mph make much of a difference? Arjun Sarkar from Fleet Service at UCSB thinks that it will. According to him "Increasing LSV's from 25mph to 35mph is one of those leverage points that can have exponential effects. It can allow smaller manufactures an ability to gain a larger market share." New state laws in Montana and Washington allowing LSVs to operate at higher speeds has had a positive effect on the EV markets there.

There is no specific date for response from NHTSA. In the meantime, this effort may require the support of a wide range of people and companies. You are encouraged to learn more about these vehicles by getting in touch with Environmental Motors at 134 South Glendale Avenue Glendale California 91205 818.549.0000. You can also help support the effort by contacting the Sustainable Transport Club at 310-450-7419 main@sustainableclub.org. (*Thanks to Russell Sydney of the Sustainable Transport Club for contributing this article.*)

First Mile: News & Information

The *First Mile* newsletter provides regular updates on the latest developments, success stories and trends in innovative mobility services. By providing accurate and relevant information on this emerging industry, the *First Mile* newsletter will help increase awareness of a wide array of mobility options that are available

The *First Mile* is published on alternating months. All comments and suggestions on how we can improve the quality of this publication are welcome. CALSTART is a non-profit organization that works with a wide array of public and private partners to encourage development and commercialization of advanced transportation technologies and systems.

Please direct questions, feedback and story suggestions for *First Mile* to the Editor, Gregg Moscoe at gmoscoe@calstart.org.

First Mile is produced with support from the Federal Transit Administration.

PARTICIPANT Profile:

Intrago Corporation is an electric vehicle systems company offering right-sized, economical transportation options for people to move about local environments. The company's patent-pending offerings under development include automated rental and vehicle management systems for small, personal electric vehicles such as electric bicycles, electric scooters, Segway Personal Transporters, and a range of other local vehicle options.



Dan Sturges

Intrago is scheduled to launch a Pilot system at the University of Washington (UW) in the Fall of 2008. Founded by CALSTART alumnus Dan Sturges, it is an example of the new companies springing up to address issues of urban mobility with new technologies and innovative approaches.

The project was catalyzed by a \$200,000 award received from Washington State DOT through its Trip Reduction Performance Program (TRPP), part of the larger Commute Trip Reduction (CTR) program. This program is fairly unique in its commitment to awarding innovation, as it offers up to 50% of the total award to each recipient for start-up costs, which it quickly reimburses. In other words only 50% of the total award has to be performance-based! They also have built-in financial mechanisms to award "bonuses" for exceeding CTR goals.

What initially began with four stations and a total of 40 pedal-electric bikes has since grown. Two other prominent organizations in the area have expressed interest in being a part of an expanded pilot system. The additional support provided by these organizations will increase the total size of this pilot system to seven stations with a total of 7) pedal-electric bikes.

This program will be the first in the world (so far as we or anyone with whom we have spoken knows) to offer an on-demand, light-electric vehicle rental system. The system initially will be member-based and will include members of the UW community. Once registered, members can walk up to any station, present their GoKey™ to a vehicle, enter their PIN, and cruise around town to meetings, errands or just for fun.

Seattle is a fairly hilly place. While nothing beats the environmental efficiency of a conventional bicycle, most people do not ride them. Is it the distance, the hills, the sweat, their confidence, their errands . . . what keeps them driving?

People still need a convenient, affordable vehicle for quick local trips. By offering commuters a local vehicle that they can use to get around during the day, many more will likely come without a car, or at least leave their cars parked during the day. Combined with other U-Pass programs, including heavy subsidies for mass transit and promoting carpooling, vanpooling and carsharing, the Local Vehicle on Demand (LVOD) system from Intrago fills a missing link. The partnership with UW is based upon the belief that Intrago's rental system will enhance all of these other offerings.

Sturges, Intrago's president, remarked, "We are thrilled that University of Washington sees the value in our system that manages personal powered vehicles in addition to pedal bicycles. The electric bicycles provide some riders the extra assist they may need to make it up hills or travel longer distances while sharing the benefits of exercise and a non-polluting vehicle. It's great to see that Josh and his team want to offer options to make it as easy as possible for a wide range of people to get out of their cars."

The anticipated rental rates will \$5/hr. for General Members, \$4/hr. for U-Pass Holders, billed in 15-minute increments. The average trip might cost a dollar and change. Other organizations involved may provide various subsidies for their employees, such as providing the first 30 minutes free of charge to the user. *(Thanks to Mitchell Magdovitz of Intrago for contributing this article. Intrago is a CALSTART participant.)*

Want to find out more about Intrago: Visit www.IntragoMobility.com on the web.

Want to find out more about CALSTART's First Mile Program: Visit www.calstart.org/programs/cm/

Become a CALSTART Participant: Visit www.calstart.org/joinus/participantinfo.php?p=joinus, or contact **Melanie Savage** (msavage@calstart.org)



Industry Calendar

PRO-WALK / PRO BIKE 2008, Seattle, WA.....September 2-5, 2008

Bike Conference is heading back to the Pacific Northwest in 2008. Join with hundreds of bicycle and pedestrian advocates, elected and appointed officials, bike/ped specialists, transportation experts, land-use planners, safe routes to school coordinators, public health practitioners, and many more who want to make our cities and communities more walkable and bicycle-friendly places. The 14th biennial Pro Walk/Pro The Westin Hotel in Seattle will be the headquarters for the September 2-5, 2008 event, but you'll have ample opportunities to get out and see first-hand examples of the facilities and programs that are making Seattle and the Puget Sound a model city and region for the role of bicycling and walking in 21st century communities. CALSTART Program Manager Whitney Pitkanen is scheduled to speak at this event. Visit: <http://www.bikewalk.org/2008conference/index.html>.

California Chapter APA 2008, Hollywood, CA.....September 21-24, 2008

The California Chapter presents a statewide conference annually that provide networking and educational opportunities for its members. These popular conferences attract planning professionals from throughout California, the United States, and around the world. Conferences include an opening reception in a spectacular venue, keynote speakers, concurrent tracks of programs and seminars including practical "nuts and bolts" sessions, mobile workshops to local planning related venues, the CCAPA awards luncheon, and the California Planning Foundation auction to fund scholarships for planning students. CALSTART Program Manager Whitney Pitkanen is scheduled to present a talk entitled "Bicycle Incentive Programs: Electric and Folding Bicycles." Visit: www.calapa.org/en/cms/?2465

Rail~Volution 2008, San Francisco, CA.....October 26-29, 2008

Rail~Volution 2008, a national transit and livability conference, provides a perfect opportunity to apply new approaches and lessons learned in your own community. Rail~Volution offers something for everyone: planning professionals, community activists, government officials, civic leaders, private developers and business leaders. The Bay Area is among the world's most vibrant regions – with its world class art and culture, resplendent green and open spaces, wonderfully divergent neighborhoods, strong global economy, and leadership in sustainability and energy issues.

Visit: <http://www.railvolution.com/>

First Mile NewsNotes

LA to Get Google Transit by Summer

Los Angeles, CA, April 16, 2008 - According to the Emerald City Blog at the LA Times, Google Transit is coming to the Los Angeles area by the summertime. The online resource seamlessly integrates all modes of transit, from walking to public transit, using Google Maps to allow commuters to plan trips. As Emerald City reports, "Google Transit is a huge opportunity for us," said Francisco Oaxaca, Metrolink's manager of media and external communications, "because we think we're the ones most vulnerable to not having a multi-agency trip planner." Oaxaca said many Metrolink riders require multiple transfers between different agencies, and often have to go cobble together a route using multiple trip planners from various agencies. Google Transit, by contrast, would give people "an opportunity to plan door to door." Representatives from Metro bus said their information is being tested and they are awaiting the train information's inclusion before going live with the program. Initially, the goal was to beat Earth Day challenge set forth by Google and have the system up and running by April 22. For alternative fuel users in Southern California, CALSTART's CleanCarMaps.com rolled out its Google Maps trip planner in 2007 for vehicles powered by biofuels, electricity, hydrogen and natural gas.

Fuel Cell Cabs for London Olympics

London, England, May 19, 2008 - According to a press release from Intelligent Energy, plans have been announced that will lead to zero emission taxis serving London by 2012, when the Olympic will be held there. A collaboration led by hydrogen fuel cell developer, Intelligent Energy, and including Lotus Engineering Ltd, LTI (London Taxis International) Ltd and TRW Conekt, will see a fleet of classic London cabs fitted out with zero-emission-hydrogen-fuel-cell-power systems. The program is part of the Technology Strategy Board's recent allocation of funding of £23 million (about \$45 million) for 16 innovative low-carbon vehicle development programs. Chief Executive Officer at Intelligent Energy, Henri Winand, said, "With the price of oil continuing to rise and CO2 emission increasing, we need to introduce alternatives to the petrol and diesel engine. Fuel cell vehicles offer considerable well-to-wheel emission savings, and produce no pollution at the tail-pipe. The black cab is an internationally recognized and iconic symbol of London and this partnership is an important part of making low carbon transport a practical and near-term reality. This project is central to our plans to supply zero emission power systems to the automotive market." The taxis will be powered by fuel cells and batteries configured into an electric hybrid, so the vehicles will be able to operate for a full day without refuelling. They will be capable of achieving speeds of up to 75 mph, with the fuel cell powertrain providing better acceleration than standard taxis. The vehicles will fill up their hydrogen tanks at central depots in a refuelling process that will take only a few minutes.