The Inevitability of Automated Transit Networks

Neil B. Sinclair, Chairman
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In The Beginning...
City Centers were the highest value areas
Transportation was mostly on foot
Highest value residential real estate was near the town center
Average range in a day’s travel was around 10 miles
Few owned horses
Then...
Industrial Revolution led to changes
Electrification
Factories
Higher population
Crowded streets and cities
Along Comes the Car
Increases mobility from 10 miles in a day to 100 miles in a day
Starts as a fad for rich
Ford mass produces, bringing down cost
Massive proliferation of cars, consumption of gasoline
Auto industry consortium buys up and tears out urban electric rail transit
Then the War...
Germans demonstrate value of National Highway system for rapid mobility
Eisenhower recognizes value
Environmental degradation continues in inner cities, cars add noise, air pollution
Cars and Highways...
Post war boom in housing, jobs, economy
Federal Housing Administration created to build suburbs
Federal Highway Administration created to build highways to connect inner cities to new suburbs
Result...
Cars continued to degrade inner city environment, lowering residential values
Poor and racial minorities are left to live in inner cities
Wealthy suburbs emerge  (Roger Rabbit)
Society becomes more dependent economically on automobiles.
Steadily increasing Auto Dependence
Auto companies, oil companies, highway builders become wealthy and powerful
Instability in Middle East, war in the holy lands, 6 Day War 1967
Wave of nationalization of oil fields
1973 Arab oil embargo, the rise of OPEC
Gasoline price goes up, interest in transit increases
Petrol consumption per day
Litres bn, 2003

Sources: Foreign Policy; International fuel Prices 2007
American oil supply falling
Enter Gentrification...
American Gentrifier
Brooklyn Edition Winter 2005

10 VIOLENT CRIMES YOU CAN LIVE WITH
LOCAL DELIS NOW STOCKING BRIE
BED STUY: STILL TOO BLACK?
PLUS: WHEN TO START THE KIDS ON ANTIDEPRESSANTS
New emphasis on renewing inner cities
Traffic congestion in cities adds time, frustration to work commute
New building near urban cores begins to raise property values in cities again
Yuppification ensues, urban “renaissance”
Lower class forced out of inner cities by increased housing costs

FUTURE SQUATS OF SAN FRANCISCO!

The construction of these luxury “live-work” condos in the city’s low-income neighborhoods is part of a strategy by real estate speculators to drive working class and poor people out of San Francisco. Crooks like Joe O’Donoghue of the Residential Builders Association are destroying the working class and multi-racial character of our neighborhoods.

Pigs like Bloated Joe don’t act alone — they are assisted in their crimes by the clowns in the Mayor’s Office, the Planning Commission and the San Francisco Police Department.

ONLY THE RICH CAN AFFORD TO LIVE IN THESE LUXURY CONDOS— BUT LARGE-SCALE DIRECT ACTION BY WORKING CLASS AND POOR PEOPLE CAN TURN IT AROUND!

CONFRONT THE DOT-COM CREEPS WHEN THEY COME TO LOOK AT THE CONDOS!

CONFRONT THEM WHEN THEY TRY TO MOVE IN!

A WORD OF ADVICE FOR PROSPECTIVE LUXURY CONDO DWELLING SCUMBAGS: HOW WISE IS IT FOR YOU TO PAY $300,000 TO $600,000 TO MOVE INTO A NEIGHBORHOOD WHERE YOUR NEIGHBORS HATE YOU, AND YOUR PROPERTY WILL NEVER BE SAFE FROM RIGHTEOUS WORKING CLASS ANGER?

MISSION YUPPIE ERADICATION PROJECT
Moving on out...
As demand for cheaper housing moves out to the peripheries, workers commute greater distances.
Cars get “cleaner” but Vehicle Miles Traveled continue to climb, so pollution increases in many areas.
Longer commutes mean more time spent in cars – lost productive time estimated at $65B/year annually in the US

**Figure 2**

*Growth in Peak-Period Travel Times*

*Added time needed for travel in peak periods*

*Over/compared to “free-flow” conditions*
US auto makers focus on new SUV market
Oil consumption continues to rise due to longer driving distances, growing population.
Japanese and European auto makers begin to dominate market

Traveling along two different roads

-General Motors Corp. — the world’s No. 1 automaker — and Japan’s Toyota Motor Corp. have been heading in different directions lately. GM is losing market share and reported losses in the past two quarters, while Toyota’s profits have been strong.

General Motors Corp.

QUARTERLY INCOME

Toyota Motor Corp.

QUARTERLY INCOME

SOURCES: The companies; Telerate

AP
Concern about oil security leads to war against Iraq in Kuwait
Cities get very interested in electric transit again
But...
Existing rail transit technology is large, heavy and expensive - many systems are costing $100 M/mile and up
Big, heavy, expensive systems are not convenient for most to use, not enough stops, lose money and need subsidies
Highway lobby fights hard for more road building money
Transit industry resistant to change
What about the Application of Automation to Rail Transit?

New Enabling Technologies

1. Computers
2. Communication
3. Power Electronics
   DC to AC
Opportunity to do System Redesign

Distributed Load

Smaller, lighter

Lower cost
New Disruptive Technologies

Automated Transit Networks
Personal Rapid Transit
Group Rapid Transit
UltraLight Rail Transit
Easier to install

More stops

More convenient for passengers
Direct to Destination
On - Demand
Possible to privately finance

Particularly in concert with real estate development

PPPs
Electric
Out of traffic
Nonpolluting
Solar Ready
So what’s the holdup?

Politics

Business

Unions

Human Nature
So What’s the Answer?

Awareness

Education

Action