

**Feature Sections** ▾  
**Today's Features**  
 > [Health](#) > [Movies](#)

**7-day site search**  
 **GO**  
[More search options](#)

**Stock Quote**  
 **GO**  
 Ticker  Name

Partly Sunny with Flurries  
 H -1 / L -3  
**4 Day Forecast** 

## Members

[Edit Profile](#) | [Logout](#)

[Membership Centre](#)

## News

[Ontario](#)

[Canada](#)

[World](#)

[Opinion/Editorials](#)

[Editorial Board](#)

[Letters](#)

[National Report](#)

[Obituaries](#)

[Editorial Cartoon](#)

[Corrections](#)

[Today's Paper](#)

[Star Columnists](#)

>ADVERTISEMENT<



## Special Reports

- > [Doctor's Aceh diary](#)
- > [Tsunami Tragedy](#)
- > [MFP Inquiry](#)
- > [Ad Scandal Probe](#)
- > [Conflict in Iraq](#)
- > [\[More Specials\]](#)

## My Email Newsletters

[My Scoreboard](#)

[My Stock List](#)

[My Print Subscription](#)

## Features

- > [Brand New Planet](#)
- > [Contests/Events](#)
- > [Crosswords](#)
- > [Ellie](#)
- > [Horoscopes](#)
- > [Lottery Results](#)
- > [Traffic Cams](#)
- > [TV Listings](#)

[Print Story](#)

[E-mail Story](#)

Feb. 7, 2005. 01:00 AM

# Wireless streetcar gains momentum

Ottawa, New Jersey, San Diego using them

Diesel vehicles pave way for electric transit later

GREG GORMICK  
SPECIAL TO THE STAR

In an era when branding something as wireless has become commonplace, one more product with that moniker would hardly seem earth-shattering. But the import of wireless, diesel-powered streetcars from Europe to North America is starting to create a buzz all its own.

Known as diesel multiple unit cars (DMUs), these cousins of the electric streetcars are making inroads partially because they bring down the initial cost of building new transit lines by about 20 per cent by eliminating overhead wires and other electrical gear.

But the cost saving from their wireless operation only partly explains why they have found homes in Ottawa, San Diego and the Trenton-Camden area of New Jersey. While they haven't been examined in detail by the Toronto Transit Commission as part of the massive light rail-streetcar expansion proposal that was unveiled last month, they also haven't been rejected for certain aspects of that plan.

"The DMU is not a panacea," says Michael Roschlau, president and CEO of the Canadian Urban Transit Association. "It's a very specialized vehicle suited for unique situations. In many cases, full electrified light rail is the ultimate goal, but this is a way to put an innovative, rail-based transit system in place at low cost.



CITY OF OTTAWA

Ottawa's O-Train — basically a diesel-powered streetcar — crosses a bridge in the capital. The vehicles rank below electric transit in over-all efficiency, but are a relatively affordable stepping-stone toward it.

In  
U  
cc  
ch

Gr

M

**Initiatives**

- › Classroom Connection
- › Fresh Air Fund
- › Santa Claus Fund

**The Star**

- › About Us
- › Media Kit
- › Affiliates
- › Archives
- › Careers @ the Star
- › Contact Us
- › FAQ
- › Internships
- › News Releases
- › Pages of the Past
- › Star Store
- › Subscribe

**Search the Web**



"Often, it is used as a starter system and then electrified when funds and ridership justify it."

Roschlau says that although there are no hard and fast rules, the diesel light rail concept is not appropriate for pure street running in dense downtown areas, such as those served by the TTC's electric streetcar lines.

Rather, he says, it lends itself to situations where new lines will be built predominantly on private rights-of-way, such as active or dormant railway lines in outlying areas.

The first diesel multiple unit light rail system in North America was Ottawa's O-Train, which began service in 2001 over a little-used Canadian Pacific Railway line in the city's west end, serving Carleton University.

The availability of the single-track line was a key factor in keeping costs down. The eight-kilometre operation uses three off-the-shelf, German-built Bombardier Talent diesel multiple unit cars, which have a capacity of 135 seated passengers and 150 standees.

The entire O-Train project was built for \$30 million, or \$3.75 million per kilometre. Double-track, electrified light rail lines typically cost about \$25 million per kilometre, while subways cost 10 times that amount.

Transit professionals caution that diesel multiple unit service is a double-edged sword in the cost department.

The diesel engines and mechanical transmissions need more maintenance than electrical gear. The result is that the initial cost advantage of the diesel multiple unit is lost over a long period of time due to high life-cycle and operating costs, not to mention the uncertainty of fuel prices.

Still, many transit advocates point to the O-Train as an example of how transit can be built at a basement price and then incrementally upgraded. A starter system, in other words.

This is exactly what has happened with the O-Train. It has been such a hit that Ottawa is now proposing the line be extended and electrified as part of a \$3 billion, 101-kilometre light rail transit system stretching across the city. The original cars would then be available for other starter lines or sold.

A larger version of the O-Train was launched last year by New Jersey Transit between Trenton and Camden using freight railway tracks and streets running through many towns enroute.

As in Ottawa, the line uses Bombardier diesel multiple unit cars. There were engineering problems and costs on the 55-km project soared, but the line is catching on. "The naysayers were predicting the River Line's doom

M  
A  
R  
S  
wT  
N  
Y  
T:  
A  
st  
pl  
wO  
B  
S  
bi  
A  
U  
w  
olP  
T  
(F  
F:  
T:  
A  
w

from the word go," says Bill Vantuono, editor of the trade magazine *Railway Age*. "Despite the cost overruns, they were wrong. It is attracting riders, just as I think other lines will in specialized situations across the continent."

Next up will be San Diego's Escondido-Oceanside line, which is being built on an existing railway corridor and will open in 2006. German-built Desiro cars have been purchased from Siemens. As with the Bombardier equipment, these will be low-floor, making them fully accessible for all users.

The low-slung, 48-metre-long diesel cars are packed with microprocessor-based systems for control of propulsion, signalling and a variety of other purposes. The San Diego cars require specialized systems to ensure absolute separation of the transit cars and freight trains.

Light rail vehicles typically "are built to transit crashworthiness standards," says Mario Peloquin, national manager of business development for Siemens Canada. "Railways use bigger and heavier equipment and that means the standards must be higher." Peloquin — a 20-year veteran of rail operations and safety at CN and various regulatory agencies — was manager of the O-Train diesel multiple unit project in Ottawa prior to joining Siemens.

He says that experience demonstrated the effectiveness of the diesel multiple unit concept and technology, and has also shown the institutional and regulatory hurdles that future operations will have to surmount.

"It's just a matter of convincing regulators and the railways that it works," says Peloquin. "They've overcome those hurdles in Europe because there quite simply is a will to get people off the roads and onto the rails and transit."

Peloquin, Vantuono and Roschlau think there is a market for transit and intercity versions of the diesel streetcar. Roschlau sees "a possibility for things such as off-peak commuter rail service, where you don't need to use a full-length, high-capacity train. It may also be a means of introducing commuter rail service to smaller cities."

Says Vantuono, "The DMU car (diesel streetcar) proves that old concepts and new technologies can be reworked and modified to give rail transit technology a new edge in the fight against the automobile."

---

**Greg Gormick** is a Toronto

*transportation writer and analyst.*

› [Get the NEW Sunday paper! Save 50% now!](#)

 [Print Story](#)

 [E-mail Story](#)

---

[FAQs](#) | [Site Map](#) | [Privacy Policy](#) | [Webmaster](#) | [Subscribe](#) | [My Subscription](#)

---

[Home](#) | [GTA](#) | [Business](#) | [Waymoresports](#) | [A&E](#) | [Life](#)

---

**Legal Notice:** Copyright Toronto Star Newspapers Limited. All rights reserved. Distribution, transmission or republication from [www.thestar.com](http://www.thestar.com) is strictly prohibited without the prior written permission of Toronto Star Newspapers Limited. For more information, please contact us using our [webmaster form](#). www.thestar.com online since 1996.