Transportation History: The Trolley, Tram and Streetcar

<u>Thomas Davenport</u> debuted his model train in 1830 and inspired engineers to work on developing electric trains devoted to transporting passengers. Trams, trolleys, and streetcars emerged from this inspiration, and electric driven trains were one of the first significant uses of electricity (outside of electric light).

Trolleys and Trams

The first <u>trolleys were pulled by horses</u> and were in wide-spread use before the advent of <u>electricity</u> in the 1880s. The electric trolleys used the steel wheels from old horse-drawn trolleys. Many trolley and tram systems used metal rails, but ran on streets that were also used by horses, pedestrians, and eventually automobiles. Some trolleys used rubber tires and drive under overhead wires known as <u>catenaries</u>. While many trolley systems operated in dense urban areas, some had fewer stops and were the forerunner to the <u>light rail systems</u> that link smaller cities and communities together.

How do trams, trolleys, and streetcars work? Traction motors (both AC and DC) drive the <u>wheels</u> of the railcars. The vehicle might be controlled by a computer or operated by a human. The overhead wires which run over the top of some trolleys are known as catenaries. One wire is strong and curved (that's the catenary) and connects to a wire below known as the contact wire. The contact wire provides a smooth service for overhead poles to make contact with the vehicle's conductors.

<u>Frank Julian Sprague</u> created the first reliable electric traction motor in the 1880s and quickly formed his own company. The constant speed non-sparking motor he developed was copied around the world. General Electric bought Sprague's company.

History

The trolley lines built in urban areas in the late 1800s allowed for the development of suburbs. Suddenly, people who worked in factories or other in-town professions had more choices where to live. Trolleys made investors a lot of money. It was also most people's first contact with electricity. Only the very wealthy had power in their homes, but trolleys touched many people's daily lives.

So how did these systems, which moved people efficiently and made investors money, disappear? Some believe that the oil industry and General Motors worked together to kill the trolley systems so that cars and buses could monopolize transportation in the United States. Some <u>trolley systems were purchased and</u> <u>destroyed</u> to create dependence on bus lines. The press was encouraged to extensively cover trolley accidents involving automobiles to make people believe trolley systems were inherently dangerous. Since General Motors and <u>Standard Oil</u>'s political power wasn't as high in Europe and elsewhere, these areas still have robust tram, streetcar, and trolley systems.

Trolleys, A Modern Solution?

Many engineers believe that the third rail or overhead cable systems used by trolleys and streetcars are the most energy-efficient form of transportation. These efficient electric engines could be placed in individual cars, which would draw power from a line embedded in the roadway, reducing our dependence on fossil fuels. Some cities are ahead of the curve and using streetcars once again. <u>Atlanta</u> and New Orleans have recently reintroduced new streetcar lines.

• <u>What is a Streetcar Suburb</u>?: Suburbs popped up as streetcar lines allowed for easy commutes to city centers or factories for workers living in other neighborhoods.

• <u>10 New Streetcar Lines Taking Shape Across the U.S.</u>: Across the US, cities are considering adding streetcars back into their mass transit mix.

Trolley and Streetcar History

- 1. <u>All Aboard! DU Student Digitizes Denver's Streetcar History</u>: A University of Denver graduate student documented and digitized every Denver streetcar line from the system's founding in 1872 to its 1950 demise.
- 2. <u>The Desire Line: Streetcar Loss & Rebirth in New Orleans</u>: Thanks to Tennessee Williams, the Desire Line is probably one of the most famous streetcar lines of all time. The track dates to 1920, but was discontinued in 1948 in favor of bus service.
- 3. <u>Early Rapid Transit In New York</u>: Before the New York subways, the first rapid transit consisted of elevated tracks running through the city.
- 4. <u>Historic Streetcar Systems in Georgia</u>: Both large and small cities in Georgia had streetcar systems before the rise of the automobile and bus.
- 5. <u>On Route of Early Texas Streetcars</u>: Streetcars weren't limited to the Northeast or large metropolises. People who lived in communities as small as those in Fannin County, Texas, depended on trolleys and streetcars to move through their region.
- 6. <u>A Peek Into Atlanta's Streetcar History</u>: Atlanta is known today for its never-ending traffic problems, but Atlanta once had a robust streetcar system that shaped its in-town neighborhoods.
- 7. The <u>Real Story Behind the Demise of America's Once-Mighty Streetcars</u>: During the 1920s, most city residents commuted via streetcars or trolleys. Learn more about how these systems were replaced by the automobile.
- 8. <u>A Streetcar City: The Trolley and Daily Life</u>: The advent of the electric streetcar and trolley systems in the 1880s fundamentally changed the way Americans moved through their towns and allowed for the creation of suburban living.
- 9. <u>The Streetcar Era</u>: Streetcars came to Saint Paul in 1890, and the streetcar routes helped drive development in the west side of the city.
- 10. <u>Street Railways in Seattle</u>: Seattle's first cable car line was introduced in 1887, and streetcar service was established in 1889.

Trolley Museums

- 1. The <u>California Trolley & Railroad Corporation</u> 200,000 visitors a year ride the historic trolleys operated by the CTRC.
- 2. The <u>Connecticut Trolley Museum</u> is home to trolleys and streetcars from around the country; restored cars are used on a 3-mile loop open to museum guests.
- 3. The <u>Electric City Trolley Museum</u> operates out of Scranton, PA. Along with rides on restored trolleys, the museum hosts an exhibit called "Trolleys Exposed," which allows visitors to see inside a restored trolley car.
- 4. The Fort Collins Municipal Railway Society offers a three-mile roundtrip on a restored Birney Car 21.
- 5. The <u>Fort Smith Trolley Museum</u> brought a working trolley back to Fort Smith, Arkansas, in 1979, 46 years after the last trolley had rolled through town. Visitors can ride the restored trolley while visiting the museum.
- 6. The <u>Heritage Express Trolley</u> is the only operating rail-based trolley in Oklahoma. Visitors ride in a 1924 Brill Motor Car.
- 7. The <u>National Capital Trolley Museum</u> is housed in Colesville, Maryland. The museum hosts a variety of educational events and operates various historic trolleys.
- 8. The <u>Shore Line Trolley Museum</u>, located in East Haven, Connecticut, claims to host the oldest continuously running suburban trolley line in the USA and was recently named one of the "25 Best Things to Do in Connecticut."
- 9. The <u>Trolley Museum of New York</u> has trolley cars from around the world on display and offers trolley rides through downtown Kingston.
- 10. The <u>Yakima Valley Trolleys</u> supports the United States' last operational interurban electric trolley system.

Streetcar Museums

- 1. The <u>Baltimore Streetcar Museum</u> opened in 1996. Along with exhibits about streetcar history, visitors can ride antique Baltimore streetcars through a closed circuit.
- 2. The <u>Brussels Tram Museum</u> is a museum located in an old tram depot in the Woluwe-Saint-Pierre neighborhood of Brussels, Belgium.
- 3. The <u>Flemish Tram and Bus Museum</u> is located in the Berchem area of Antwerp, Belgium, in a former tram shed. It displays historic trams and buses and houses archival material about the De Lijn transit company.
- 4. The <u>Minnesota Streetcar Museum</u> operates eight streetcars on two different historical lines. Trips on the Excelsior Streetcar Line includes a stop at the car barn where visitors can view the on-going restoration of a vintage streetcar.
- 5. The <u>New Orleans Streetcars</u> are both a rolling museum and a daily part of life in the city.
- 6. The <u>National Streetcar Museum at Lowell, Massachusetts</u>, is an off-shoot of the New England Electric Railway Historical Society's Seashore Trolley Museum in Kennebunkport, Maine. Along with exhibits about the history of streetcars, the museum offers streetcar rides on a restored streetcar from New Orleans.
- 7. <u>San Diego Restored Streetcars</u> are operated by the Metropolitan Transit System and are all post-war examples of the mode of transit.
- 8. The <u>San Francisco Railway Museum & Gift Shop</u> is rare among streetcar museums because it features vintage streetcars operating in an urban environment.
- 9. The <u>Steveson Interurban Tram Museum</u> is located in Canada and offers virtual and real-life tours of their collection of tram and streetcars.
- 10. The <u>Western Railway Museum</u> in Suisun City, California, offers an 11-mile ride on a restored streetcar through scenic Northern California.

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