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From Mules to TRAX : A Brief History of Salt Lake City's Mass Transit

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Spring 2002

CELEBRATING THE
TRANSCONTINENTAL
RAILROAD **P. 2**

FROM MULES TO
TRAX **P. 14**

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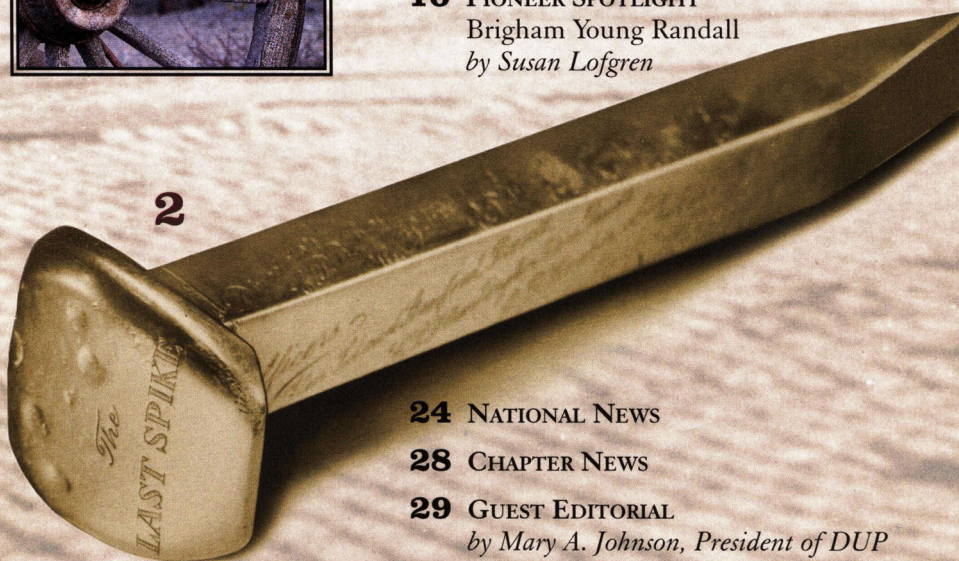
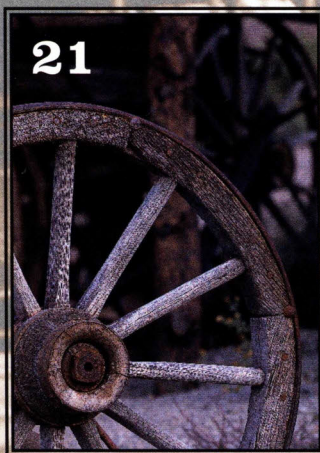
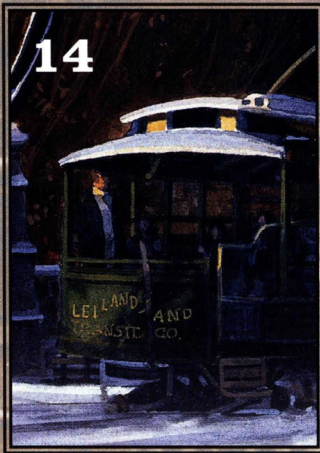
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From Mules to

TRAX



A Brief History of Salt Lake City's Mass Transit

By J. Michael Hunter

John Stephenson, a young New York wagon builder, created the animal-drawn streetcar in 1832. His creation was an elaborate thirty-passenger stage-coach-on-rails, with elegant paintings on the side panels. By the 1880s, there were more than 500 animal-powered transit systems in 300 cities and towns in the U.S., with more than 100,000 horses pulling the cars along the rails. Salt Lake City's pioneering efforts into mass transit began on 17 July 1872,

when teams of mules were hitched to the first streetcars in the city.¹

Like all mass transit systems, the animal-rail system had its problems. Its biggest drawback was the pollution it caused. In New York City, for example, the horses annually deposited an estimated 2.5 million pounds of manure and 60,000 gallons of urine on the streets. Chicago street cleaners had to deal with one million pounds of animal waste a year. Salt Lake City's horses and mules left behind an estimated 60 tons of manure and 3,000 gallons of urine, and Salt



Lake City had no program of regular street cleaning.

And there was the problem of what to do with all the dead horses. New York had to deal with an estimated 15,600 horse carcasses a year, and Chicago 7,000. This problem was compounded in 1872, when an animal epidemic hit the East Coast, killing 3,000 horses in Philadelphia in three weeks and 18,000 more in New York. With 700 horses a day dying in New York, their bodies were being dumped in the Hudson River.

In Salt Lake City, people often left their dead animals lying in the streets to avoid the removal cost. While it was the city marshal's responsibility to see that dead animals were quickly removed, decaying carcasses were often left lying by a curb for many days.²

In addition to these problems, Salt Lake City's animal-transit system had irritants unique to its mule-powered system, namely stubborn mules. For example, two new mules from Porter Rockwell's ranch were placed on the Liberty Park line in the 1870s.

In addition to pollution problems, Salt Lake City's animal-transit system had irritants unique to its mule-powered system, namely stubborn mules.



While crossing a narrow bridge over a twenty-foot sewer trench, the mules changed sides and turned to face the driver. The reins and tugs became tangled, and as the mules twisted and cavorted to get loose, they fell off the side of the bridge, hanging in the air. Miraculously the streetcar stayed on the track to the relief of panic-stricken passengers. The driver ended up cutting the mules loose and letting them fall.³

Another hindrance was keeping cars on the tracks, as any bump on the rails could knock a car off the track. By shifting the passengers about, it was often possible to swing the car back into position. This had to be done carefully, however, because if passengers crowded to one end, the other end would often raise off the ground.

Since these cars only traveled four to six miles per hour, passengers got cold from sitting so long in the winter. In Salt Lake City, stoves were installed to heat the cars. Coal stations were placed along the line, where motormen could step from the car and get a pan of coal for the stove.⁴

Major cities began to look for alternatives to the animal-transit system. In 1873, a San Francisco man named Andrew Smith Hallidie developed a horseless streetcar system powered by underground

cables. A giant stationary steam engine pulled a continuous cable through conduits beneath the street. The cable cars had a grip on the bottom to hold them to the moving cable.

A few other cities started cable car systems that proved successful. Chicago operated a cable system at half the cost of horse cars, but cable cars needed paved streets to protect their conduits. Salt Lake City never experimented with a cable-car system.⁵

In 1887, Frank J. Sprague, president of the Sprague Electric Motor Car Company, obtained a \$75,000 contract with the Union Horsecar Company of Richmond, Virginia, to develop "a rail system of 16 miles, a powerhouse, an electrically generated overhead system and 80 motors for 40 horse cars." Sprague's innovative electric streetcar system started service in Richmond on 2 February 1888.⁶

Sprague's invention foreshadowed the end of animal-drawn streetcars with their inevitable messes. Cities all over the country converted to electric-powered lines. At the time these conversions were taking place, Salt Lake City's animal-powered streetcar system included some fourteen miles of track and twenty-one street-

cars. A ten cent fare was being charged.⁷

On 11 October 1889, Salt Lake City's first electric streetcar went into operation. Competition soon grew between three electric streetcar companies—Salt Lake Rapid Transit, Popperton Place and Fort Douglas Rapid Transit, and East Bench Street Railway Company. By 1901, they had all merged into the Consolidated Railway and Power Company.

The new electric system took care of the pollution problem but brought problems of its own. Most of the electric cars were open, and no provisions were made for heating them in the winter. To help avoid frostbite, straw was spread deeply over the car floors. The single-track cars often centered themselves on humps in the tracks and stopped. Passengers and crew would unload and vigorously rock the car over the hump.⁸

Another problem was street congestion. Salt Lake City's downtown streets were covered with track and overhead power lines. The streetcars also hit careless pedestrians.⁹ Yet, by all indications, the electric streetcar system was a success. By 1914, E.H. Harriman had bought controlling interest in the streetcar system and renamed it Utah Light and Railway Company. It operated as a subsidiary of the Union Pacific Railroad until Utah Light and Traction Company assumed management. By this time the system was used extensively.¹⁰

Approximately half of the adult population of Salt Lake City rode the streetcars every day. Passengers paid five cents for rides

around town as far as North Salt Lake and Emigration Canyon, or thirty-five cents round trip to Saltair. In 1914, a record 38.9 million fares were collected.¹¹

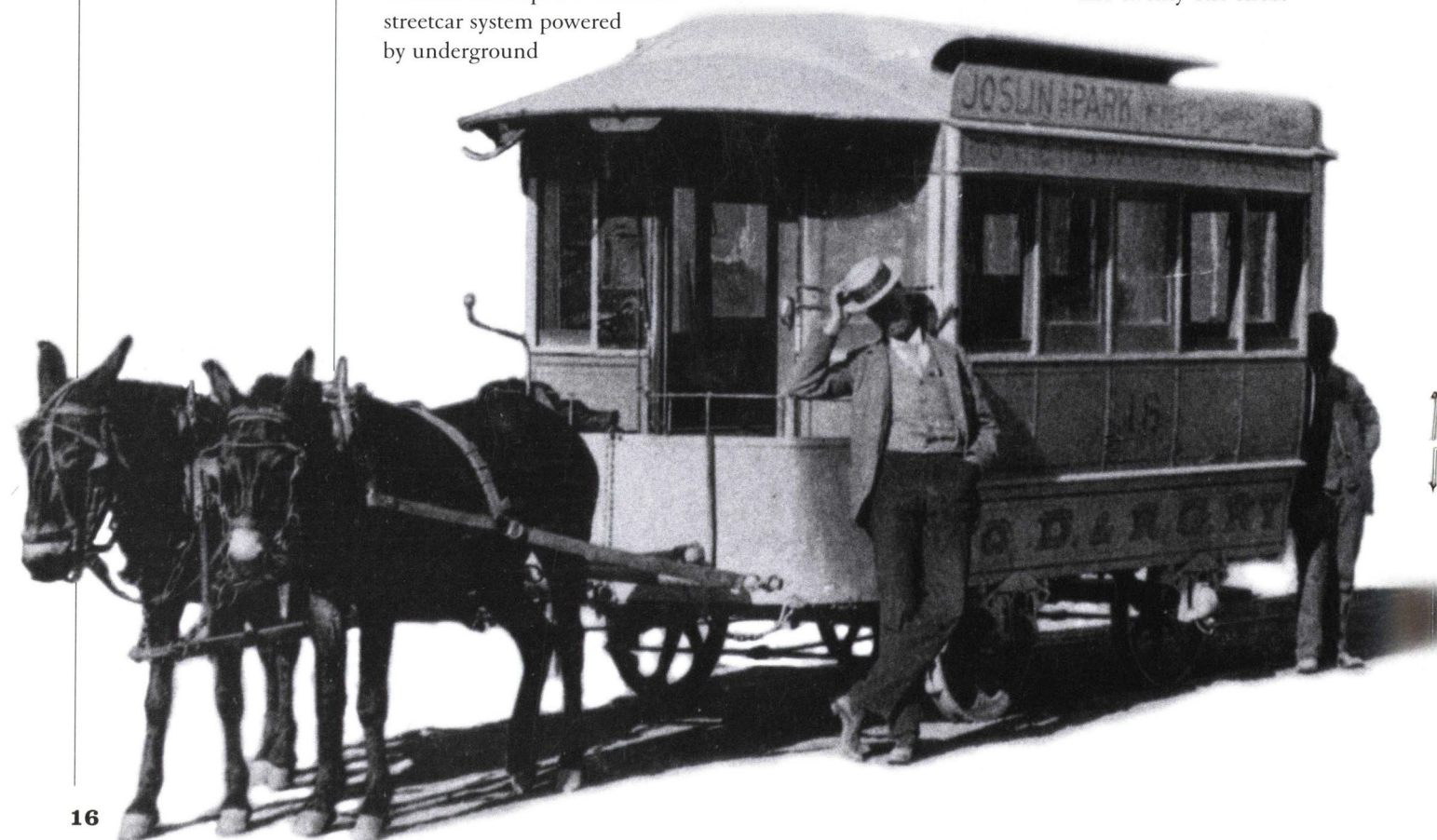
Wanting to save every nickel, Salt Lake's streetcar company devised a plan to crack down on abuse of transfer privileges. The transfer stated that they were "Not Transferable," and streetcar officials made sure they stayed that way by designing a ticket with seven faces on it—five men's faces and two women's faces. The men's faces ranged from clean-shaven to handlebar mustaches to beards. The women's faces were of two sorts—the younger sporting a sailor's cap and the older a bonnet. When a patron requested a transfer, the conductor punched out the face that most closely matched the patron's appearance.¹²

By 1917, there were 45,000 miles of U.S. streetcar lines. By the 1920s, there were 80,000 streetcars in America. By 1923, over \$9 million was invested in Salt Lake City's streetcar system with 143.92 miles of track, 217 cars, and three million passengers a month.¹³

So what happened to it all? The first blow to the trolley system in the U.S. came in 1893 with the development of the automobile. Streetcar investors had nothing to fear at first. The automobile was little more than a toy for the rich for more than a decade. But when Henry Ford put his Model T into mass production in 1908, the car became affordable to the masses.

Soon editorials in the newspapers began

On 11 October 1889, Salt Lake City's first electric streetcar went into operation. The new electric system took care of the pollution problem but brought problems of its own.



Far left: Early photo of mule-drawn streetcar.

Above: Streetcars that ran between Calder's Park (now Nibley Park) and Warm Springs on North 200 West. Pictured probably on 700 East where there was a small section of double tracks where cars met to pass.

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to complain about the mix of trains and cars traveling side-by-side through downtown streets. Ironically, the streetcars were seen as the invaders and not the automobiles. The Salt Lake papers carried editorials asking for the removal of the rails. Some people vandalized the streetcars, greasing the tracks and pulling the arms from the electric wires.¹⁴

However, the deathblow came with the development of the motor truck. At first companies transporting goods used it, but people could be transported in large numbers by these motor vehicles as well. When Frank J. Sprague, the father of the electric trolley, died in 1934, streetcars were already in decline as the country converted to buses.

By 1949, General Motors was involved in the replacement of more than 100 electric transit systems with GM buses in forty-five cities, including New York, Chicago, Philadelphia, Detroit, St. Louis, Baltimore, and Los Angeles. Cities across the nation began to pull up or pave over old railways. That same year, sixty-one years after starting it all, Richmond, Virginia's Sprague Electric Motor Car Company destroyed their streetcars by setting them ablaze.

In his *The American Heritage History of Railroads in America*, Oliver Jensen describes the sad scene: "As the flames roared through the very last car, a strange thing happened—agonizingly and slowly it turned right side up, as though it were trying to say something to forgetful Richmond and ungrateful America, a message about a day when cities

that destroyed their railway systems would painfully have to rebuild them."¹⁵

Salt Lake City didn't give up its streetcar system without a fight, however. The Salt Lake Traction Company developed a new type of motor with a lower starting torque that permitted the use of air-filled tires on trolleys, allowing electric trolleys to ride on streets rather than rails. The company managed to attract business capital before actually manufacturing the new streetcar by doctoring a photograph.

Company officials induced the driver of a gasoline-powered bus that was passing through Salt Lake City to park his bus in front of the Salt Lake Temple. The officials took a photograph of the bus and then superimposed a trolley on the bus. The result was a photograph of the new electric trolley bus operating on Salt Lake City's streets.

When these trackless streetcars were finally put into service in Salt Lake City, representatives from twenty-six states and thirteen foreign countries were sent to Utah to study the design and operation of the new system.

In the end, the trackless trolley couldn't compete with gasoline-powered vehicles. A 31 May 1941 *Deseret News* headline announced, "Streetcars to Make Last Run in Salt Lake Tonight." One line, from 900 South and 1300 East to the University, continued to operate until about 1946 (Students could buy a book of ticket for 50 rides at a cost of \$2.00). Tracks in Salt Lake City were

torn up and repaved, ending the era of the streetcar and beginning the era of the gasoline-powered mass transit bus system.¹⁶

By the 1970s, people were beginning to realize that gasoline-powered engines were in many ways worse than horse manure and carcasses. Pollution and congested highways had become a problem in many U.S. cities.

People once again looked to the electric streetcar to solve their problems. In 1981, San Diego opened its light rail system, a modern, electric version of the nineteenth-century streetcar.

Other cities followed suit: Baltimore, Boston, Buffalo, Cleveland, Dallas, Denver, Los Angeles, Memphis, New Orleans, Newark, Philadelphia, Pittsburgh, Portland, Sacramento, St. Louis, San Francisco, and San Jose.¹⁷

Like other cities in the U.S., Utah cities faced difficult transportation problems in the 1980s. In the early 1990s, Utah's transportation officials began to look at options for solving these problems, including monorail and commuter rail technologies. Their findings concluded that a light rail system was the most effective, economical solution.



Above: Folks posed for the last trip of this Main Street trolley, 31 May 1941. Recognize anyone in this photo???

Send positive identifications to Pioneer Magazine, 3301 East 2920 South, Salt Lake City, UT 84109, or e-mail us at sonsofutahpioneers@networld.com.

Transportation officials stressed that this was only one component to the solution and not a cure-all.

Utah's \$312 million TRAX light rail system includes fifteen miles of track between downtown Salt Lake City and Sandy. Trains of two to four cars controlled by one operator take about 30 minutes to get from Sandy to downtown, stopping at 17 transit centers along the way. Buses traveling east and west feed into the light rail system.

It is not surprising that critics of the light rail system complain about the same issues voiced by critics of the nineteenth-century streetcars. After all, light rail is simply a modern version of old streetcars. Light rail, however, is faster and more efficient. Passengers don't have to jump off and push the cars over humps, nor do they have to warm themselves in knee-deep straw.

There are other improvements as well. Light rail can travel fifty-five miles per hour and has crossing gates to protect traffic. The rails are flush with the pavement so that cars, bikes, and even wheelchairs can cross them with no problems. Whether light rail will win over its critics at the start of the century, as the old streetcar system did at the turn of the century a hundred years ago remains to be seen. Salt Lake's TRAX light rail system began transporting passengers on 4 December 1999.¹⁸

About this same time, Salt Lake City approved an alignment from existing tracks on

Below: streetcar traffic on Main Street and 200 South looking north.



Light rail is simply a modern version of old streetcars. Light rail, however, is faster and more efficient. Passengers don't have to jump off and push the cars over humps, nor do they have to warm themselves in knee-deep straw.



Main Street eastward along 400 South to Rice-Eccles Stadium. Transportation officials hoped to have the line completed by February 2002 so it could be used to transport spectators to the opening and closing ceremonies of the Salt Lake 2002 Winter Olympics. The 2.5-mile, \$118-million TRAX line from downtown Salt Lake City to the University of Utah opened on 15 December 2001. However, security concerns prevented this line

from being used during the Winter Olympics. Meanwhile, transportation officials began seeking funding for a 1.5-mile extension to the University of Utah Medical Center, and officials along the Wasatch Front began planning for eventual light rail access to their cities. ▼

J. Michael Hunter is the American, British, and Mormon History librarian at Brigham Young University.

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