

# TECHNOLOGY IN OUR LIVES

## Keeping The Space Station On Track

(NAPSA)—The world's newest type of train has a top speed of only 300 feet per hour, yet it moves nine times faster than a speeding bullet—and it only stops at one station: The International Space Station (ISS).

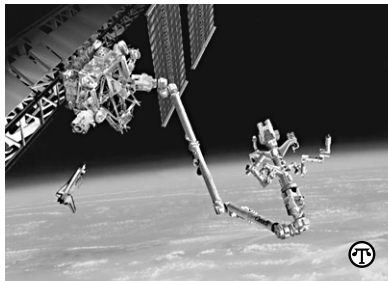
The train runs on a 100 yard-long railroad NASA built along the structural backbone of the space station. The entire line, tracks and all, will circle the earth at over 17,000 miles an hour.

“Just like the transcontinental rails pulled together our country,” says NASA Mobile Transporter Subsystem Manager Tom Farrell, “these rails pull together 16 nations around the world, cooperating in orbit.”

When completed in 2004, the truss will stretch over 360 feet, the longest structure ever built in space. The operation of the railway is critical for continued assembly of the station. It will let the ISS's Canadarm2 robotic arm carry future truss segments and solar arrays down the tracks to install them. Although driven by dual electric motors that generate only about a hundredth of one horsepower, the transporter can move 23 tons of cargo down the rails.

What is the hardest part about building a zero-gravity railroad? Keeping a train that moves at a maximum speed of one inch per second from jumping track.

“We have to be sure it will be safe during all the station's activities,



**A new space railroad runs along the International Space Station. Astronauts use it to help make repairs and to transport cargo—and themselves.**

like reboosting its orbit or having visiting vehicles dock,” says Farrell. The transporter stays on track with two sets of roller suspension units that ensure the transporter can't float loose.

Although it can be driven from the station or from the ground, the engineers for NASA's space railroad will normally reside in Mission Control, Houston, driving the train from thousands of miles away and hundreds of miles below.

Space-walking astronauts will also have an opportunity to ride the rails. They will operate a small handcar to maneuver up and down the rail line. Called the Crew and Equipment Translation Aid, two such carts will be delivered to the station before 2003.

For more information visit [www.spaceflight.nasa.gov](http://www.spaceflight.nasa.gov).