

INFORMATION HIGHWAY

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Drew Tuttle is among the new friends Jared Jackson has made this year at Canyon Crest Elementary School in Provo.

The boys discuss their families, their hobbies and school. Jared likes to water-ski. Drew wants to try it. Maybe Jared will give him lessons - if Drew ever gets to Utah. Drew lives in Forest Hill, Md.

Jared and Drew are building a friendship over the Internet system, a computer network of thousands of databases that will be one of the roadside attractions of the information superhighway that's being touted from the White House to Utah's state-house.

Built on a roadbase of fiber optic and digital technology, the highway promises to merge television, telephone, computer, satellite consumer electronics and publishing in one super-powered information vehicle. Connecting people in distant locations is only a small part of what the superhighway will do.

``Just as we created a network of roads (the interstate freeway system) that greatly facilitated transportation of commodities, the most critical commodity - information - will be transported over this information highway," said Evan Ivie, a Brigham Young University computer science professor.

With a television, telephone or computer tapped into the information highway, people will be able to access and in many instances interact with: movies, television shows, shopping catalogs and malls, teleconferences, telemedicine services, educational services, libraries, databases, books and periodicals, video games, video phones, sports and concerts, news, do financial and governmental transactions, book travel services - a literal ``communicopia."

``We went through an agrarian culture in this country, then an industrial revolution and now our country has gone almost totally to an information technology society," Ivie said. ``If you talk to people now, you almost never meet someone who produces something tangible.

“Almost everything is information-based. What's going to happen with the information superhighway is that it will further emphasize that stress we have in this country on information.”

Some services, such as the cable shopping channel QVC, already exist. And a savvy computer user using one of several limited networks can access a variety of database services. The difference tomorrow will be in who, when, how, volume, speed and degree of information available. For example, take television. As the highway takes shape the number of channels will double, quadruple and finally enter a post-channel era. In the post-channel world of the information highway, it won't matter if you get home too late to catch the 6 p.m. news.

By punching a few buttons you will be able to configure your own lineup of programs: the local evening news from an archived bank, the season premiere of “Fortysomething,” the hit series of the decade, and cap it off with your favorite episode of “I Love Lucy” from the '50s.

Or education: A master teacher, say from the Harvard School of Business, could teach thousands of students via an interactive educational network. Students from across the country, including your college-age child, interact with the teacher and each other from the comfort of their living rooms.

Observers predict that as the information highway is paved it will spur a trillion-dollar industry of data and service providers.

“It will be very profitable to people who jump in and are part of the supernetwork - suppliers, distributors,” Ivie said.

Gov. Mike Leavitt has vowed to ensure the information highway doesn't bypass Utah. To be left out, Leavitt said in his inaugural address in January, would mean “real isolation” and “economic devastation.”

He formed an “electronic highway task force” shortly after taking office to assess where Utah is in the information revolution, where it wants to go and to come up with a blueprint for getting there.

“When you have a major wave coming through society, if it's for the positive, you

better get on it," said LaVarr Webb, deputy for policy in the governor's office and task force liaison.

In particular, Leavitt sees the information highway and its associated technology as a speed-of-light way to improve and expand Utah's education system. He also acknowledges it is crucial for businesses that compete in a global marketplace.

And, it can make government more efficient and accessible.

"Each day, thousands of citizens must interact with government for a variety of purposes," Leavitt told the Utah Entrepreneurial Forum earlier this year. "Many of those necessary encounters with government could be accomplished via computer terminal or electronic kiosk."

Among the ideas the governor's task force is mulling over to get on the information highway are: electronic transfer of birth certificates, licenses, taxes and business registrations; providing access to its databases of information; "smart" drivers licenses and human service cards that can be read by scanners; and electronic information kiosks set up in malls, libraries and other public places.

Leavitt believes Utah is well positioned to profit from the information highway because of its array of high-tech enterprises, expertise and information industry leaders. Bits of the highway are already being paved here:

- US WEST Communications plans to test a hybrid video and voice communications network in Omaha next year, pending FCC approval. Over the next 10 years, it plans to expand that network throughout its 14 state region, including Utah.

The company began building a fiber optic trunk line along the Wasatch Front about seven years ago.

In November it expects to complete an extension of that line connecting St. George and Parowan. The last 100-mile section from Parowan to Nephi will be finished next year, completing a fiber optic backbone, with several branches, the length of the state.

- Electric Lightwave Inc. of Vancouver, Wash., is installing a digital fiber optic telecommunications network in downtown Salt Lake City. The network will provide

access to interstate long distance service and private networks in the United States. The company expects to finish the first network by the end of the year.

- Tele-Communications Inc., based in Denver, announced earlier this year it will replace major portions of its cable system in Salt Lake City with optic fiber over the next three years, bringing the information highway to the curbs of 90 percent of its subscribers in the area.

The company's system in West Valley and Sandy will be upgraded sometime after 1995.

- TCI installed a fiber optic trunk line in Provo last year; it plans to run a branch as far south as Salem next year.

The state will leave construction of the highway to private enterprise. Its role, Webb said, will be coordination, encouragement, ensuring rural areas aren't bypassed and regulation.

Regulation raises some interesting questions for state government. For example, US WEST, one key player in the information highway, is currently regulated by the Public Service Commission. TCI is not. What happens when they cross technologically into each other's territories - US WEST offering video-based services and TCI telephone-based services?

``Do you regulate the new competition or deregulate the industry and let the market work?" Webb said. ``If you do (deregulate), do rural areas suffer because it's not financially viable to do it there? The policy side of this has to keep up with rapid changes and development in technology."

The populace at large faces the same challenge. The information highway is coming. But becoming ``licensed drivers," so to speak, will take time.

``It will probably take a generation or two to really effectively utilize it," Ivie said.