

A New Solution to Public Transportation

The need for markedly improved public transportation has become more and more pressing as a result of increasing congestion, increasing costs, a relative decline in ridership experienced by most conventional transit systems, and sometimes slightly increasing ridership at exorbitant costs. Research and development work at the University of Minnesota during the 1970s and 1980s led to the design of a totally new form of public transport of the class called Personal Rapid Transit (PRT). The system is now called *SkyWeb Express (SWE)* (formerly called Taxi 2000). Investigators in a number of countries have recognized *SWE* as the most rigorously designed new transit system in the world, and it has been called "an essential technology in a sustainable world." The technology required to design such a system effectively became widely available during the 1980s and has improved since then. During the 1990s the *SWE* design won three international competitions. Taxi 2000 Corporation (T2C) has built a full-scale prototype vehicle that runs on a short section of guideway at its facility in Fridley, MN and is seeking funding to fully commercialize the system. Sponsored by the Minnesota High Tech Association, the system was exhibited in the Wonders of Technology Building at the Minnesota State Fair, 21 August – 1 September, 2003. Using an LCD projector, Dr. Anderson will use a movie, slides, and operational simulations to describe the system and its implications for our society.

Offshoring Poses Serious Challenges

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WASHINGTON (18 March 2004) — Offshoring contributes to high unemployment levels among U.S. technologists, and poses a serious, long-term challenge to the nation's technological and innovative leadership, its economic vitality and its military and homeland security, according to a position recently adopted by IEEE-USA.

"We must develop a coordinated national strategy to maintain U.S. technological leadership and promote job growth in the United States," IEEE-USA President John Steadman said. "But it's going to be difficult to remain technologically competitive, if we continue offshoring the jobs of our innovators at rates currently projected."

Offshoring, or the outsourcing of high-wage jobs from the United States to lower-wage countries, is contributing to unprecedented unemployment rates for U.S. electrical and electronics engineers (EEs) and other information technology professionals. The EE joblessness rate rose by 47.6 percent in 2003 to a record 6.2 percent, compared to 4.2 percent in 2002. The 2003 unemployment rate for computer scientists and systems analysts reached an all-time high of 5.2 percent.

IEEE-USA also believes that new U.S. workforce assistance programs are needed to help displaced high-tech workers. One immediate step is to expand the Federal Trade Adjustment Assistance (TAA) program's eligibility guidelines to cover all workers whose jobs move offshore. TAA extends unemployment compensation for up to two years, and offers job training, job search and health insurance assistance to eligible U.S. workers who lose their jobs because of foreign competition.

The entire position statement, developed by the IEEE-USA Career & Workforce Policy Committee, is available at www.ieeeusa.org/forum/POSITIONS/offshoring.html.

IEEE-USA is an organizational unit of The IEEE, created in 1973 to advance the public good, while promoting the careers and public-policy interests of the more than 225,000 electrical, electronics, computer and software engineers who are U.S. members of the IEEE. The IEEE is the world's largest technical professional society. For more information, go to www.ieeeusa.org.

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A New Solution to Public Transportation

Featuring: Dr. J. Edward Anderson, Ph.D., P. E.

Monday, April 19th, 6:30 pm
Mayo Medical Sciences Building
(321 3rd Avenue SW, Rochester)

► Pizza at 6:30; Meeting at 7:00 ◀

For 23 years Dr. Anderson was a Professor of Mechanical Engineering at the University of Minnesota where he worked on the theory and application of PRT systems since 1968. He chaired three international conferences on PRT, has lectured widely in the U. S. and abroad on transit systems analysis and design, and authored the textbook *Transit Systems Theory*. In 1981 he initiated the design of the system now called SkyWeb Express. In 1986 he moved to Boston University where he taught engineering design for six years and formed an industry team with members from five Boston-Area companies to carry the design of his system to the point that in 1989 it attracted the attention of the Chicago RTA. In 1994 he moved back to the Minneapolis area where he has continued to work to commercialize his system.

In his early career he worked for 12 years at the Honeywell Aeronautical Division on instrument design, autopilots, inertial navigation, and spacecraft development; and before that two years as an Aeronautical Research Scientist in the Structures Research Division at the National Advisory Committee for Aeronautics, Langley Field, VA. He has a Ph.D. from M. I. T. in Astronautics, a Master of Science in Mechanical Engineering from the University of Minnesota, and a Bachelor of Science in Mechanical Engineering from Iowa State University. He is a registered professional engineer, was named Outstanding Inventor of 1989 for the Taxi 2000 patents, and is a Fellow of the American Association for the Advancement of Science.s."

MSU IEEE Job Fair

The MSU IEEE Job Fair will be held at Minnesota State University, Mankato on **Thursday, April 8th**, 2004, from 9AM-2PM. The job fair is an effective way to gain company recognition among future graduates even if not currently hiring. For details, please see the brochure at: www.ewh.ieee.org/r4/southern_minnesota/

Coulee Region Scholarship Event

The 2004 Coulee Region Engineering Societies' Scholarship Award Event has been set for **Tuesday April 13th** in the Banquet Room at the Seven Bridges Restaurant in Onalaska, Wisconsin. Award recipients have been identified and will be our guests. Social hour begins at 5:15pm with buffet dinner to follow at 6pm. Cost is \$15.00 to \$17.50 for the meal including gratuity and tax. All CRES members, significant others and guests are encouraged to attend. RSVPs required by April 5th. Contact Paul Ulland p.ulland@ieee.org (608) 787-3563(work) or (507) 895-2215(home), (608) 787-2669(fax) .

Hal Ottesen Receives 100th Patent

reprinted courtesy of the Rochester Post Bulletin

Hal Ottesen, a University of Minnesota Rochester professor, has received his 100th patent. Patent Number 6,678,108 is entitled "Method and apparatus for identifying spindle imbalance in a hard disk drive." It was issued Jan. 13. Ottesen has been a full professor at the university since August 2000, working in the Institute of Technology's Electrical and Computer Engineering Department and the Digital Technology Center. He teaches courses in digital signal processing, image processing, fuzzy logic and digital control. For the past 10 years he has also been an adjunct professor in biomedical engineering at the Mayo Graduate School of Medicine.

Professional Development Course

IEEE is offering the Reactive Power Compensation and Voltage Stability Short Course on **Thursday, May 13, 2004** in Davenport, IA. It is worth 7 professional development hours. The registration fee is \$80 payable to the Treasurer of IEEE, Bill Serre, on or before May 3rd. For more details, visit the Iowa-Illinois Section Website at:

<http://ewh.ieee.org/r4/iail/>



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Dated Material – Please Delivery Immediately



The IEEE-USA Employment & Careers Services Committee welcomes you to the new virtual community where members can network and collaborate with one another on employment and career strategies. This community will provide you with discussion groups, chat rooms and resource files. These resource files include: powerpoint slides and word documents that pertain to resume writing, networking, interviewing skills and information on setting fees if you are a consultant. We invite you to become a member and help us build this new community. Visit <https://www.ieeecommunities.org/ecs>

IEEE Pre-college Educator Award

The **deadline for nominations** for the IEEE Pre-college Educator Award is **30 April**. Colleagues of pre-college educators who have inspired in their students an appreciation and understanding of mathematics, science and technology, and engineering are encouraged to nominate that individual for the 2004 IEEE Pre-College Educator Award. Qualified candidates must be current pre-college classroom teachers. The award consists of a US\$1,000 honorarium and plaque. To nominate a colleague, visit: (www.ieee.org/organizations/eab/EAB Awards/awardprecollege-2004.htm)

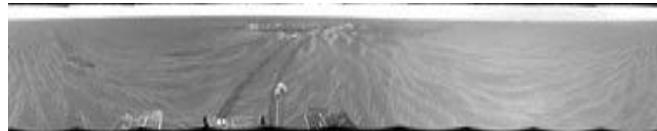
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Looking Back at 'Eagle Crater'- Mar 23, 2004 (Courtesy Jet Propulsion Laboratory)



This image is the first 360 degree view from the Mars Exploration Rover Opportunity's new position outside "Eagle Crater," the small crater where the rover landed about two months ago. Scientists are busy analyzing Opportunity's new view of the plains of Meridiani Planum. The plentiful ripples are a clear indication that wind is the primary geologic process currently in effect on the plains. The rover's tracks can be seen leading away from Eagle Crater.