

COMPANY BACKGROUND

SmartRoute Systems

Cambridge, MA

To mitigate the two billion hours Americans spend in over 181 million cars delayed in traffic jams each year, SmartRoute Systems, the Kendall Square, Cambridge, high-technology venture inaugurated its "real-time, on-demand and location-specific" traffic, transit, road condition and related traveler information system in the Greater Boston area in May 1991. The company is scheduled to launch its second site in Cincinnati in mid-1995, with two others to follow by the end of 1995.

Designed around a sophisticated network of live and slow-scan TV cameras located at crucial intersections throughout the metropolitan area; an elaborate network of regularly scheduled two-way radio and cellular phone probes; electronic scanners; fixed-wing aircraft; direct communication links with a number of public agencies; plus an evolving network of over-the-road traffic sensing technologies, the SmartRoute Systems Operation Center collects and manages real-time traffic, transit and other related traveler information in a proprietary network of data fusion and dissemination technologies. Traveler information from the SmartRoute Systems database is presently sold and delivered to the public via landline telephone (POTS), cellular carriers, cable TV, traditional radio and TV, and pagers. New delivery systems and joint marketing relationships are being developed for servicing PDAs, alternative telephony providers, on-line services, interactive television and in-vehicle navigational devices.

In September of 1992, the Federal Highway Administration and the Massachusetts Highway Department awarded SmartRoute Systems a test of an "Advanced Traveler Information Service". The test was the first in the nation to be funded by the 1991 Intermodal Surface Traffic Efficiency Act (ISTEA). The \$3 million (annual) project, called *SmartTraveler*, now operates in collaboration with the Massachusetts Highway Department, and remains the only fully deployed, vertically integrated, metropolitan-wide, real-time Advanced Traveler Information Service in the country.

*SmartTraveler* utilizes a single phone number -- (617) 374-1234 -- providing direct access to up-to-the-minute, route-specific information for both mass transit and highway travelers. The phone number is a local call from any telephone in eastern Massachusetts. Extensive independent evaluation of *SmartTraveler* has demonstrated the profound impact the service has on traveler behavior, and its ability to reduce congestion and its attendant air pollution.

As the economic and technological model in Boston has proved successful, SmartRoutes is presently developing roll-out strategies for other major metropolitan markets. The *SmartTraveler* system is scheduled to be launched in Cincinnati in mid-1995 and at least two other cities by the end of 1995.

A comprehensive description of SmartRoute Systems' projects nationwide is available in "Company Experience."

SmartRoute Systems' Intelligent Traveler Information System took three years to design and develop, before its initial deployment in 1991. The invention of President and CTO John Liebesny, SmartRoutes is based on extensive research into the potential for -- and constraints on -- using technologies in traffic management; consumer attitudes toward congestion, travel behavior modification, and acceptance of new traveler information technologies; and emerging computer and telecommunications technologies with applicability to traveler information collection, management and dissemination. The proprietary software was developed by Liebesny together with MicroLogic of Waltham, Massachusetts, the developers of the underlying technology used in the LoJack Auto Recovery device. Liebesny has advanced degrees in electrical engineering from MIT and an MBA from Harvard Business School. He held various engineering and product marketing positions at Hewlett Packard and Mitek Surgical Products before founding SmartRoute Systems in 1988.

Chairman and CEO Stephen Crosby joined SmartRoutes in the fall of 1990 after selling his successful enterprise, The Crosby Vandenberg Group, a leader in the publication of cable television and other custom-produced magazines. He holds a JD from Boston University School of Law and a BA from Harvard College. Previously active in Massachusetts politics, he served as campaign manager for Governor Francis W. Sargent and Mayor Kevin H. White of Boston, Legislative Assistant to Lieutenant Governor Donald R. Dwight and Administrative Assistant to Congresswoman Margaret M. Heckler in Washington, DC.

Executive Vice President and *SmartTraveler* Project Director David Stein holds a BA from Bucknell University and an MBA from Boston University. With a background in real estate development, Stein served as project manager for the \$250-million mixed-use CambridgeSide Galleria in Cambridge, Massachusetts. He also founded and served as President of Real Estate Communications, Inc., a publisher of trade magazines in New England and California, before selling his successful enterprise. He developed many of SmartRoutes' operational procedures for congestion management, traffic monitoring and Advanced Traveler Information Services.

SmartRoute Systems' Principal-in-Charge of Public Sector business, William Twomey, holds a BA from Boston University School of Management. Twomey recently joined SmartRoutes after 20 years of public and private sector experience in transportation management. Prior to joining SmartRoutes, Twomey served as the Massachusetts Highway Department's Project Manager for the Central Artery/Third Harbor Tunnel Project in Boston, Massachusetts (presently the largest highway project in the United States), and as a Director of Transportation Services for TAMS Consultants, Inc., a nationally-recognized architectural and engineering firm specializing in the transportation field.

SmartRoute Systems is a founding member of ITS America, an organization formed by the federal Department of Transportation, dedicated to encouraging the development of an ITS industry in the US and fostering private sector participation in ITS technology.

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