Project Transport to study high-speed transportation for Northeast Corridor

By Bob Horvitz

These terms should come into common usage here in the near future. MIT, at the request of the Department of Commerce, is conducting a comprehensive study of the technological potential for high-speed transportation in the Northeast Corridor. The project, as this study is called, includes participants from a number of the nation's foremost experts in the field of transportation, including representatives from several schools and departments of the Institute, including Civil Engineering, Mechanical Engineering, Electrical Engineering, Aeronautics, Political Science and City Planning.

"The Project," explained Prof. Robert J. Hansen, the Project Director, "is concerned with the evolution of an entirely new system to transport people at high speeds from door to door in the region between Boston, Mass. and Washington, D.C., through 1980."

Project Transport is an attempt to identify research areas in which progress could advance transportation technology, and will necessitate detailed exploration of various alternatives. High-speed ground transportation (HSWT) systems are being analyzed first. Two different methods are possible to perform HSWT. First of all, present day modes of transportation could be upgraded. Secondly, there is the possibility of new systems of HSWT, which may go far beyond any present day modes. Objectives, system requirements, range of possibilities, technological research requirements, requirements of achievement, such as a number, and related issues and factors are some of the initial questions being analyzed by the staff of Project Transport.

Any transportation system has certain basic objectives: 1) Geographic mobility — Door to door transport. As the diffusion of the population and industry in the Corridor increases, this will no longer be possible to think of transportation between centers of large metropolitan areas. Ideally, in other words, good transportation should be available from door to door with the doors in the same location.

2) Minimum time door to door — Speed is of the utmost importance. Future systems will yield to more rapid modes of transportation.

3) Safety, comfort and convenience — These factors will also affect public choice between transportation modes. Safety, particularly, is an important consideration.

4) Cost of transport — Although low cost is a significant objective, the issue is not one of minimum cost but of acceptable cost, and the specific goal should be to design transportation services whose cost is acceptable in view of the services offered and the problems solved.

5) Social, political, and economic considerations — A new transportation system should not generate side effects and other effects which contradict or contribute to any stated social, political, or economic goals of the community, either local or national.

One possibility of improving transportation would be to upgrade one of the present day modes, i.e., highways, rail, or air. Highways should continue to satisfy a significant percentage of the transportation needs through 1980, however, where closely spaced end points of a journey in areas of high population density, automobile travel became much less efficient. In railway transportation, both speed and accessibility are problems. To compete on a door-to-door time basis with airplanes, train speeds of around 200 mi/hr are necessary. Also, although the present track layout gives access to the major metropolitan centers and at some smaller ones along the right of way, poor access to new off-track areas will develop by 1980.

In both rail and air transportation, the time required to stop and start necessitates exceedingly high actual speeds to average overall the same times as an automobile. In addition, there are not enough airports, and as they develop, problems of safety and capacity of airlines and airports will result.

Thus it seems there is a need for an additional mode, possibly some new type of high-speed ground transportation meeting the requirements of speed, accessibility, comfort, cost, frequency, and safety, while being readily adaptable to alterations necessitated by increases or shifts in population, or changes in travel habits.

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Good reading

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