Intercity Rail Passenger Systems Update

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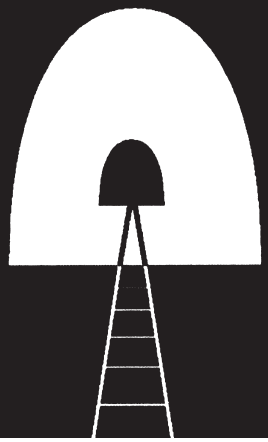

CURRENT RESEARCH AND DEVELOPMENT IN INTERCITY RAIL PASSENGER SYSTEMS

NUMBER 11 FALL 2005

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TRB 85th Annual Meeting, January 22–26, 2006
Washington, D.C.
www.TRB.org/meeting/

The Transportation Research Board's Committee on Intercity Rail Passenger Systems (AR010) is concerned with research that will lead to better planning and implementation of intercity rail passenger systems, with particular emphasis on the full range of high-speed systems, including new technology. Research will include demand analysis, financial considerations, economic effects (including consideration of user and social benefits), and public-private partnerships and should address impacts on other rail operations and the environment, coordination with other modes, rail–highway interfaces, corridor versus system concerns, technology assessment, and implementation strategies.

Intercity Rail Passenger Systems Update is published intermittently by the Transportation Research Board to disseminate information about current research and development in intercity rail passenger systems. Albert C. Witzig, editor; John C. Tone, Chairman; and Nazih K. Haddad, Vice Chairman, TRB Committee on Intercity Rail Passenger Systems; Elaine King, TRB staff. Any findings and conclusions are those of the authors and not of TRB. Submit news items to *Intercity Rail Passenger Systems Update*, Transportation Research Board, 500 Fifth Street, NW, Washington, DC 20001, telephone 202-334-3206, or e-mail eking@nas.edu. **www.TRB.org**

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

Also in This Issue

LETTER FROM THE EDITOR

Dear Readers:

The Fall 2005 newsletter presents three items of general interest to members and friends of the Committee on Intercity Rail Passenger Systems.

The first item explores the early results of the new Korean Train Express (KTX) high-speed rail network in Korea. At the Committee's meeting during the TRB Annual Meeting last January, Professor Sunduck Suh introduced the main factual information about the KTX, then went on to present his research findings on customer service issues with the new service. His insights into the realignment of other modal services in the areas where the KTX now operates were extremely interesting and warrant this summary prepared for a wider audience. The full paper, "Customers' Reactions to the Introduction of High-Speed Rail Service: Korean Train Express," has been published in *Transportation Research Record: Journal of the Transportation Research Board,* No. 1916.

In the second item, also from the Committee meeting, Randy Wade of the Wisconsin Department of Transportation presents an overview of his state's incremental program for intercity rail within the context of the national Amtrak program and in terms of Wisconsin's active participation in the Midwest Regional Rail Initiative.

Besides the useful and informative content of each presentation, both presenters shared numerous personal insights into the processes that affect the decisions and results of these rail programs. I encourage Committee members and friends to attend the TRB Annual Meeting to gain the benefit of the presentations scheduled for this year.

The third contribution comes from Ross Capon, the Committee's expert Amtrak watcher. The summary gives a year-end look at Amtrak's financial outlook and operational policy issues.

I hope you find these reports to be of interest and value. As always, your contributions are most welcome. Please note the details on page 9 on how you can submit contributions to future issues of the *Intercity Rail Passenger Systems Update.* Thank you.

Sincerely,
Al Witzig, Editor

P.S.: Committee Chair Jack Tone invites you to attend the TRB Annual Meeting in Washington, D.C., January 22–26, 2006, and to join the Intercity Rail Passenger Systems Committee meeting on Tuesday, January 24, at 3:45 p.m., in the Shoreham Hotel, Exhibit Hall C.

Also in This Issue

KOREAN TRAIN EXPRESS: AN ELEMENT IN A BALANCED TRANSPORTATION SYSTEM

The Korean Train Express (KTX) started high-speed (300 km/h) rail service in April 2004. This culminates a 12-year period from groundbreaking to initial operations, achieving two goals: new rail capacity on two trunk routes (Seoul to Busan and Seoul to Mokpo) and the transfer of new high-speed technology for further local application.

The Seoul-to-Busan corridor forms the backbone of the Korean economy, and rail capacity enhancement was a major necessity. Financial considerations led to a phased implementation, including electrification of existing rail lines as well as constructing entirely new links. The completion of the second phase in 2010 will deliver a completely dedicated 408-km high-speed rail service on a new alignment.

The line to Mokpo, which shares a large trunk portion of the Busan line, also will be completely electrified and upgraded for high-speed use. Costs of Phase 1 have been about $10.6 billion (at 1,200 won to the U.S. dollar) and will reach an estimated $15.3 billion including Phase 2.

The KTX fleet consists of 20-car train sets (2 locomotives, 2 powered coaches and 16 regular coaches) at a length of 388 meters. This allows for 127 first-class seats in 1+2 configuration and 808 second-class seats arranged as 2+2. These long trains are well suited for Seoul-to-Busan service, but shorter trains may prove more effective in the Seoul-to-Mokpo corridor. Frequencies are roughly four trains per hour throughout the day, with up to five in the peaks and slightly fewer midmorning and late at night.

In addition to the transportation aspects of the new lines, planning for the KTX emphasized station area development. Brand-new stations were conceived for Gwangmyong and Cheonan-Asan, growing areas near Seoul. Joint-venture stations were renovated in Seoul and in Yongsan to integrate retail and cultural uses in addition to rail station operations. Station improvements were undertaken up and down the lines to ease connections to other modes and to local transport.

Operationally, preparations were carried out throughout the Korean peninsula in response to the anticipated effects of the new KTX rail service. Other transportation providers calibrated responses to what they perceived would be the effects of customers' perception of reduced travel times. Pre-KTX rail speeds were around 150 km/h and intercity highway speeds 110 km/h, less than half the speed of the new KTX offering. For example, some express bus services were reconfigured to routes not in competition with KTX, and service hours were expanded to attract new riders. Route alliances with strategic connections to KTX, however, have not yet materialized. Air service between KTX city pairs was cut back, but fares did not change greatly. The biggest change in mode share from air to KTX was for Seoul to Daegu, a relatively short hop for air service—rail proves to be more attractive.

Also in This Issue

Extensive restructuring of the Korean National Railways (KNR) service was necessary, because of mixed operation on some segments. New fare structures also were introduced to favor long-distance travel. The KTX fare levels for second class are roughly 30% higher than KNR service and 62% of air fares.

Surveys were conducted to discern passenger expectation, and ticket sales formed the basis for travel pattern analysis. The data were used to optimize target scenarios that would emphasize revenues, profitability, or fastest travel times.

Results show a strong use of the KTX system and a major reorientation of other transportation modes in response to KTX. Ridership reached its first milestone, 1 million customers, after only 14 days of operation, and 10 million customers had traveled in the first 142 days. This level, however, is only a bit more than half the forecasted use, which was predicated on shorter travel times with a completely dedicated alignment, not on the mixed operations currently in place. Some public disappointment was registered over an initial service offering that was less than expected, and complaints were made about the level of amenities on the train sets, especially seating comfort and orientation. A slow economy also did not help.

However, rail demand rose 25% in the second three months of service (April–June 2004). Rail revenue in general increased more than 91% from the previous year on a 33% increase of seats offered in the network. Recent observations indicate a growth trend and increasing public acceptance of the service. Daily ridership is now in the range of 85,000 passengers.

Diversions from other modes show wide variability, according to customer surveys. KTX enticed 56% from existing rail services, 17% from air, 15% from express buses, and 12% from the highways. More auto users are expected to switch to KTX as rail speeds increase in Phase 2.

Despite growing pains at the startup and initial dissatisfaction with some cutbacks in conventional rail service, KTX is an important addition to the Korean transportation system. The entire country is now reachable within three hours, and the commuting range from Seoul can expand to 150–200 km. The additional service offering of KTX significantly expands the seats available for the transportation network. KTX is settling into and helping to define a new balance in Korea's national transportation system.

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Also in This Issue

WISCONSIN'S PASSENGER RAIL DEVELOPMENT PROGRAM

Wisconsin is using the success of current Amtrak service as a foundation for the expansion of intercity rail services, through an ambitious program of capital and operating improvements.

Hiawatha Corridor serves the state between Milwaukee and Chicago, and the Empire Builder provides long-distance service. The seven pairs of Hiawathas carried more than 546,000 passengers during the federal fiscal year 2004 that ended in September—a new record. Empire Builder passengers in Wisconsin added another 76,000 to the total. At 92%, the Hiawatha has the best on-time performance of any Amtrak service. With seven round trips per day, the Hiawatha offers the third highest number of frequencies in the nation, after the Northeast Corridor and California.

Wisconsin DOT markets the rail program aggressively, augmenting word-of-mouth support and cooperative opportunities among Amtrak, Canadian Pacific Railway (CPR), Midwest Airlines, the General Mitchell International Airport, and the Wisconsin Tourism Division. In 2005, Milwaukee Airport Rail Station was completed and opened, making General Mitchell International Airport one of four major airports in the country with Amtrak service.

The Amtrak Station in Milwaukee is being rehabilitated and positioned to serve as a gateway to downtown Milwaukee. A multimodal hub for rail and Greyhound bus, the station is the centerpiece of a downtown development program. The project will be completed early in 2007 at a cost of more than $20 million in federal, state, city, and private funds. In addition, a new replacement station at Sturtevant, west of Racine, is under construction.

Wisconsin is committed to high-speed rail through the Midwest Regional Rail Initiative. Phase 1 supports higher speeds and increased frequencies in the Hiawatha Corridor between Milwaukee and Chicago and extension of service between Milwaukee and Madison. Plans call for up to 10 round trips by 2008 on a 2.5-hour schedule for the full route. Phase 2 would extend service to the Twin Cities by 2009. The Phase 3 objective would be 7 round trips from Milwaukee to Green Bay by 2014. Phase 4 circles back to the Madison–Chicago route for 110-mph operation of 17 round trips daily.

These incremental steps are under way, through corridor studies, environmental assessments, and preliminary engineering on the Milwaukee–Madison corridor. A "finding of no significant impact" issued by the Federal Railroad Administration in August 2004 under National Environmental Policy Act regulations assures that the project is "ready to proceed." Wisconsin has purchased 33 miles of the corridor. Other improvements include highway crossing work and a positive train control project with the

CPR. The state has committed more than $47 million in station, infrastructure, right-of-way, and operating projects and is seeking federal partnership to maintain momentum into the next phases of the program.

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YEAR-END AMTRAK UPDATE

A tumultuous year for Amtrak kept getting more tumultuous as the year sped toward its end.

Congressional Actions

On November 4, even the strongest supporters of passenger rail were amazed by a 93–6 vote for S.1516, the Lott–Lautenberg rail passenger reauthorization bill. Senator Trent Lott (R-MS) had introduced S.1516 as an amendment to the Senate's budget reduction bill (S.1932). The House had approved its own budget-cutting bill on November 18, with no comparable provision. With big differences between the House and Senate budget bills, final dispositions of both the budget bill and the Senate-approved rail provisions are unclear.

Moreover, Lott and Senator Frank Lautenberg (D-NJ) are searching for a vehicle to which they can attach Senate Amendment (SA) 1627, which was filed last summer at the same time as S.1516. SA-1627 has the bonding provisions necessary for much of the funding that would make S.1516 effective, including federal–state partnerships, with the federal government paying up to 80% of state-sponsored corridor rail development projects.

While the reauthorization struggle goes on, the FY 2006 appropriations process ended November 18. A House–Senate conference agreed, and both houses passed, the Transportation–Treasury–Housing and Urban Development appropriations bill with $1.315 billion for Amtrak. Only $495 million is for operations, however, and $5 million of that is for developing a "managerial cost accounting system [with] average and marginal cost capability."

The Amtrak Board approved an FY 2006 budget that assumes $540 million in federal funding. This includes $46.3 million in "undefined budget savings" and compares with $560 million in the board's plan released last April and with $570 million in FY 2005. Also included is $780 million for capital investment and debt service; the debt service may not exceed $280 million.

Policies and Operations

The remaining $40 million is new Efficiency Incentive Grant program funding, controlled by the Secretary of U.S. DOT; however, at least $8.3 million is to be made available immediately "only for a revenue service demonstration of not less than 5,500 carload shipments of premium temperature-controlled express." In FY 2005, Amtrak handled fewer than 1,500 ExpressTrak carloads, and only continued the service to comply with a court order governing the ExpressTrak bankruptcy.

The Efficiency Incentive Grant program funds not earmarked for the express business can be used to "maintain…existing routes [and] avert [Amtrak's] entry into bankruptcy." U.S. DOT also gains authority to revise the fees that commuter authorities pay Amtrak for use of the Northeast Corridor.

Amtrak, meanwhile, may not offer any discounts greater than 50% off regular fares. This effectively prohibits Internet bargains that are commonly offered by Amtrak and many other big companies. Countering the claim that Amtrak is buying market share with low fares, Amtrak's yield rose 2% in FY 2004, even with the Acela not operating for several months; the yield on long-distance trains rose 4% in the same period.

For Amtrak to continue subsidizing food and sleeper car services after July 1, 2006, the U.S. DOT Inspector General must first "certify that Amtrak has achieved operational savings."

Personnel Issues

The Amtrak Board fired President and CEO David L. Gunn on November 9, and Chairman David Laney announced that Chief Engineer David J. Hughes would be acting president and CEO. Gunn had recruited Hughes, the former president of the Bangor and Aroostook Railroad and founder of Regional Railroads of America, to Amtrak. The board has yet to decide on a "permanent" replacement for Gunn and a permanent arrangement for Amtrak.

—Ross Capon
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Also in This Issue

RAIL LINKS

Korean Rail Express
http://ktx.korail.go.kr/eng/feature/

Wisconsin Department of Transportation Rail Programs
http://www.dot.state.wi.us/modes/rail.htm

Midwest Regional Rail System, Executive Report, September 2004
http://www.dot.wisconsin.gov/projects/state/docs/railmidwest.pdf

Inside Amtrak
http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/InsideAmtrak

National Association of Railroad Passengers
http://www.narprail.org/cms/index.php

TRB Calendar
http://trb.org/calendar/

NEWSLETTER COMMENTS

Comments on this newsletter, and most especially, continued contributions by committee members, friends of the committee and others can be sent to the editor,

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