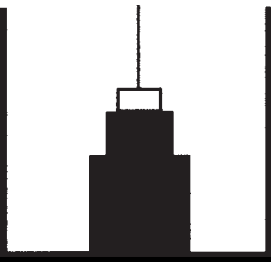
Intercity Rail Passenger Systems Update



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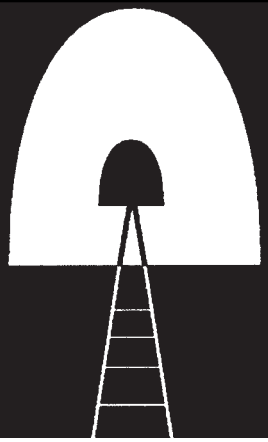

CURRENT RESEARCH AND DEVELOPMENT IN INTERCITY RAIL PASSENGER SYSTEMS

NUMBER 13 WINTER 2008

CONTENTS

The Transportation Research Board's Intercity Rail Passenger Systems Committee (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 impacts (including consideration of user and social benefits), and institutional arrangements, including public–private partnerships. The research should also address impacts on other rail operations, coordination with other modes, rail–highway interfaces, corridor versus system concerns, technology assessment, environmental impacts, and implementation strategies.

Intercity Rail Passenger Systems Update is published intermittently by the Transportation Research Board (TRB) to disseminate information about current research and development in intercity rail passenger systems and to present individuals' perspectives on timely issues related to intercity passenger rail. Opinions expressed by individual authors are those of the authors and not of the committee or TRB. Albert C. Witzig and Matthew J. Melzer, coeditors; Anthony D. Perl, Chair, TRB Committee on Intercity Rail Passenger Systems; Elaine King, TRB staff officer. Submit news items to *Intercity Rail Passenger Systems Update*, Transportation Research Board, 500 Fifth Street, NW, Washington, DC 20001, telephone 202-334-3208, or email eking@nas.edu. **www.TRB.org**

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

Also in This Issue

◆

Back to Page 1

CHAIRMAN'S LETTER

Dear Readers:

This edition of *Intercity Rail Passenger Systems Update* follows the TRB 87th Annual Meeting, where I learned much from our committee's workshop on measuring and managing the shared use of rail infrastructure and from our sessions on trends in high-speed rail and on assessing intercity rail passenger performance. Those who could not attend these events can now review the presentations on the TRB Intercity Passenger Rail Systems Committee (AR010) website: http://ar010.york.cuny.edu/. My thanks go out to everyone who participated.My greatest insight of the 2008 Annual Meeting came when I attended an aviation session where both airline and government presenters spoke positively about the potential of using intercity passenger trains to feed long-distance flights. I counted 60 people attending our committee's meeting—a record in my years of participation in AR010. These experiences suggest that there is a growing interest in what intercity passenger trains can do for America's future transportation needs.

The theme for TRB's 88th Annual Meeting will be energy and climate change, and our committee will be issuing a call for papers on ways intercity passenger trains can contribute to making America's transportation system more sustainable. At our midyear meeting, tentatively scheduled for May 31 at the Hyatt Regency Embarcadero in San Francisco, we will be considering other ways to engage TRB committees, as well as initiatives on which to focus for the 2009 meeting. I hope you will consider joining us in San Francisco, or participating in a toll-free teleconference that TRB will provide. Please check our website for more details on the meeting and on teleconference information.

—Anthony Perl
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On April 14, 2008, Intercity Rail Passenger Systems Committee Chair Anthony Perl was appointed to the board of directors of VIA Rail Canada, Inc. Created in 1977, VIA Rail Canada operates Canada's national passenger rail service. The board of directors is responsible for oversight of business activities and corporate affairs.

Also in This Issue

◆

Back to Page 1

EDITORS' INTRODUCTION

The common thread connecting the articles in this issue will be a familiar one to those persons associated with TRB's Committee on Intercity Rail Passenger Systems. The authors once again discuss the institutional arrangements that underlie rail passenger service, with articles on the rules that govern how existing rail capacity for freight and passenger rail operations in the United States is apportioned; a search for new, high-speed passenger routes in the Southeast; and the reconfiguration of a successful partnership to create a new high-speed route in the United Kingdom.

From a policy-level perspective, David Simpson considers the necessary tradeoffs in mainline capacity as freight volumes grow and passenger service becomes a more attractive option in the public mind. Garold Smith and David Foster report on building a Southeastern coalition to extend high-speed rail south of Washington, D.C., and Richmond, Virginia. Finally, Daniel Roth details how London's new, high-speed alignment was conceived and financed. We thank all the contributors for their willingness to share their expertise and for taking time from their busy schedules to prepare these reports.

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Also in This Issue

◆

Back to Page 1

BUILDING A RAIL-FILLED FUTURE— ONE INDUSTRY OR TWO?

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Bold descriptions of nationwide passenger rail capital needs and an immediate response from the Association of American Railroads (AAR) brings into sharp focus the work that remains for the development of a coherent and consistent rail policy agenda for the United States.

On December 7th, the Passenger Rail Working Group of the National Surface Transportation Policy and Revenue Study Commission issued a report identifying over $350 billion in needed passenger rail investments to carry the United States to mid-century. This number, somewhat startling at first glance, does appear more reasonable when converted to an $8.8 billion annual spending rate—a bit less than half of what is invested today on an annual basis by the freight rail industry.

A response to the working group announcement was issued later that same week by AAR President Ed Hamberger, who warned that "piggybacking on privately owned and operated freight railroad assets will give America a third-rate passenger rail system, one that is not attractive to passengers or competitive with automotive and air travel." He also warned that burdening the freight network with passenger rail expansion would jeopardize the ability of freight carriers to move more traffic, forcing even greater volumes of freight onto the U.S. highway network.

Are freight carriers right to be concerned? Is full physical separation of service networks the only feasible approach? Will setting the bar for passenger service development too high ensure only a continuation of well-reasoned, high-profile corridor failures such as the Texas TGV and Florida Overland Express system in Florida?

In summer 2007, the National Cooperative Highway Research Program began a $500,000 project to survey and to describe best practices for the sharing of corridor capacity between freight and passenger operations. A guidebook containing these practices will be published in 2009, after lengthy discussions and consultations with the stakeholder groups—Amtrak, the freight carriers, commuter rail agencies, and state departments of transportation (DOTs)—that are represented on the project's technical panel.

While it is far too early to predict the shape of these guidelines, we may observe some of the background conditions that contributed to the December exchange:

- The alignments of the current, official high-speed rail corridors as designated by the Federal Railroad Administration were chosen in most cases because they are the routes for existing Amtrak operations. Regionwide, multi-alignment assessments based on a robust service profile for both passenger and freight services have simply not been done. There may be some real benefit to passenger and freight interests alike in segregation of alignments by service type

Also in This Issue

◆

Back to Page 1

once certain train frequencies and speeds have been achieved. Ten years ago the need for such evaluations may have appeared less acute; the near-capacity status of most Class I freight mainlines today creates a very different planning environment.

- Many passenger rail advocates cringe at the notion of developing greenfield—physically isolated corridors for new passenger rail operations. This past fall, the new Train à Grande Vitesse (TGV) alignment between France and Germany moved from initial construction to revenue service in less than six years. The U.S. political and legal environments guarantee that a similar project in this country would require multiples of six years to achieve revenue service. True European-standard, high-speed operations are also viewed in many alignments as being too costly and as lacking a political base for funding, at least until more of the general public can experience more modestly upgraded rail service as a positive alternative to highway and air travel.
- The freight industry has generally been reactive rather than proactive regarding passenger rail development, fearing ever-growing public interest demands on a privately-funded and taxed freight-service network. Passenger advocates seek startup service scenarios at the lowest possible cost to demonstrate service benefits and to build political momentum for more robust investments. Freight carriers, fearing a long-term tenancy with little new capital over the long term, seek to protect their capacity needs for decades to come as a condition for day-one operations. Each side is ultimately viewed as unreasonable by the other.

Moving beyond the current "we said–they said" environment will require more comprehensive development of a policy framework that reassures the private freight industry and their interests. For public agencies, this implies an expenditure of planning resources and multimodal planning that goes well beyond startup rail service scenarios and considers the growth of both freight and passenger rail service demands. For freight carriers, it means a level of engagement and information sharing with states and other public bodies that goes beyond historic norms. For all stakeholders it means creating a detailed policy and investment framework to deal with dynamic freight and passenger service needs.

America's history of mixed public–private investments as ongoing enterprises is thin, at best—most public incentives are one-time affairs, involving tax abatements, training allowances, real estate incentives, and the like. Sharing the rail service network with ongoing capital inflow from both sides is bound to be complex. Building an understanding of how this new world can work will take considerable time, energy, and patience. It is also the only option for building a network that properly levers the advantages of rail for passenger and freight interests alike.

Joint tenancy is a viable solution, but not everywhere. Understanding when and where freight and passenger operations could or should move into their own worlds (or at least onto their own tracks) is a worthwhile endeavor, one that can be driven by operations scenarios and modeling tools rather than statements of philosophy and obligation. Recent polls suggest that Americans are looking for pragmatic leadership on many levels—are we up to the task?

Also in This Issue

◆

Back to Page 1

THE SUMMIT: HIGH-SPEED RAIL FOR THE EAST COAST

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On October 22, 2007, a day-long summit to discuss high-speed rail was held in Raleigh, North Carolina. Sponsored by the North Carolina Department of Transportation (DOT) and the Women's Transportation Seminar, The Summit: High-Speed Rail for the East Coast brought together, in panel format, transportation professionals from state and federal government, private industry, and academia to exchange ideas on the future of high-speed rail.

Topics of discussion included the challenges of implementing high-speed rail in corridors on the East Coast, the increasing demand for passenger and freight rail service, and addressing comingled traffic in limited corridors. A key issue was compatibility of freight and passenger services in an integrated, high-speed environment. A series of panels examined what is and is not working in high-speed rail both nationally and internationally, as well as ways to take leadership on and overcome the complex challenges of passenger–freight synergy.

Photo: North Carolina DOT, Rail Division

Neil Peirce, syndicated columnist and chairman of the Citistates Group, engages Summit attendees during his keynote address.

The Summit opened with speaker Neal Peirce, syndicated columnist and chairman of the Citistates Group. Peirce explained that although other modes of transportation are limited by population growth within the United States's mega-

Also in This Issue

regions, passenger rail service is not, and that for rail service to become a reality, transportation funding decisions needed to be approached using modal agnosticism: a level playing field that views all modes of transportation equally based on their return of public investment. This idea, Peirce maintained, would provide an opportunity for smart rail projects to come to fruition.

A highlight of the summit was a discussion on policy and funding issues, with input from congressmen James L. Oberstar (D), John Mica (R), and David E. Price (D), and professional House and Senate staffers. Panelists agreed that a lack of highway and airport capacity and problems of congestion and air quality are driving the need to find stable and sustainable sources of funding for rail infrastructure and operations. Congress members indicated that there are constructive conversations taking place in Washington, D.C., regarding the future of passenger rail and that funding must come from federal, state, local, and public–private partnership sources.

The Summit was brought to a close by Roberto Canales, Deputy Secretary for Transit, North Carolina DOT. Canales concluded by pointing out that the elements of transformation—focus, persistence, collaboration, and partnership—are required to create and nurture opportunities for partnerships between the public and private sectors, and to further the future of passenger rail transportation.

As the United States, and particularly the East Coast, faces challenges presented by double-digit population growth, capacity constraints on transportation infrastructure, congestion on highways and at airports, and the fiscal and environmental costs of dependence upon oil, the need to develop and support a passenger-rail system intensifies. Through careful combination of planning, financial, policy, and infrastructure partnerships in the public and private sectors, the possibility of high-speed, reliable, and extensive passenger and freight rail systems exists for U.S. East Coast corridors. As the Summit adjourned, a sense of energy could be felt among participants and attendees, an energy that seemed to say, "It's time."

For more information, go to www.sehsr.org.

◆

Back to Page 1

Also in This Issue

◆

Back to Page 1

THE PUBLIC–PRIVATE PARTNERSHIP THAT DELIVERED THE UNITED KINGDOM'S NEW HIGH-SPEED LINE IS BEING SOLD

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The recent announcement that London and Continental Railways (LCR) is to be broken up and sold marks the successful completion of the Channel Tunnel Rail Link (CTRL) and the transition to a completely operational phase. November 2007 saw the official opening of the renovated St. Pancras Station terminal for the United Kingdom's first high-speed line, which runs 68 miles from London to the Channel Tunnel.

The journey from London to both Brussels and Paris is now completed entirely on high-speed lines at top commercial speeds of 186 mph. The new line, opened in two phases, has reduced the London–Paris high-speed journey (provided by international operator Eurostar) by 40 minutes, fundamentally altering competition with air travel.

During its construction, the high-speed line (now known as High Speed 1) was called the CTRL. It was built over a period of almost 10 years, on-time and on-budget, at a total cost of £5.9 billion, including land acquisition and 19 miles of tunnels. The project was conceived as an international link and as a way to increase capacity and reduce journey times for commuters from the southeast. With the inclusion of several new stations, the project had the parallel ambition of encouraging the regeneration of several areas to the east of London. Though not anticipated at the time, the plan for the new Stratford station also contributed to London's successful bid for the 2012 Olympics, and it will provide high-speed connectivity from the Olympic park to central London (in 7 minutes) and to Paris and the European continent.

The U.K. government's policy at the time favored public–private partnerships, and the entire rail industry had recently been privatized, albeit with continuing government subsidies. In 1996, LCR won the government's contract to build CTRL and to own and operate EUKL: the U.K. arm of the tri-country Eurostar Group. LCR's shareholders are engineering firms Bechtel, Arup, Systra, and Halcrow; transport operators National Express Group and the Société Nationale des Chemins de Fer Français (SNCF); electricity supply company EDF; and UBS investment bank.

Rail Link Engineering (RLE) is a consortium made up of LCR's engineering shareholders and was contracted to design and manage CTRL's construction to LCR's requirements. EUKL is operated under contract from LCR by a consortium of National Express Group, British Airways, and the French and Belgian national railways (SNCF and the Société National des Chemins de Fer Belges, respectively). LCR's station and properties subsidiary is redeveloping St. Pancras and the surrounding area, as well as developing land along the line, including major

Also in This Issue

◆

Back to Page 1

mixed-use developments at Stratford City and around other new stations.

The project was funded through a combination of government-guaranteed bonds, government grants, bank debt, and structured finance, but was forced through several turbulent restructurings. LCR was selected the preferred bidder in 1996 on the basis of lowest government grant required, greatest risk acceptance, and other technical factors. In 1977, however, after Eurostar's first years of operation, LCR's financing plan failed when it became apparent that their source of debt service—Eurostar cash flow available for track access charges—would be negative for some time.

A deal was struck, where Railtrack—then the United Kingdom's privatized railway network—backed additional bank debt by agreeing to buy the line at completion, and the U.K. government guaranteed the remaining debt. However, Railtrack went bankrupt in 2001, and the government enabled LCR to buy back Railtrack's rights by providing guarantees on CTRL's future access charge payments, while LCR simultaneously agreed to transfer operation (and future access charges) of the completed CTRL to Railtrack's successor, Network Rail (a quasi-public company). LCR's overall financing costs declined markedly, as government came to be the backer of the entire financing structure.

St. Pancras Station

It is anticipated that the net cost to government of the entire financing structure will amount to £1.8 billion (on a net present value basis), after accounting for gains from property sales and rental income—about one third of the total cost. The government's backing enabled over £6 billion of financing to be raised on the capital markets and the government guarantees meant that the taxpayer was significantly exposed in the event of cost overruns—a real risk in public works projects of this size.

However, LCR's shareholders were never freed from their equity commitments and the very significant risks they had taken on. Additionally, several im-

Also in This Issue

◆

Back to Page 1

portant principles were adopted in the contracts between LCR and its contractors to incentivize cooperation and cost management. These principles included target-cost contracts with pain–gain share mechanisms (including some gain for government), simplified claims handling, and layering of insurance to provide backstops at different levels.

Ultimately, LCR has proven itself to be a successful private-sector mechanism for achieving the United Kingdom's first high-speed line. Although government guaranteed private financing was more costly than government-direct borrowing, it is generally agreed that the project would probably not have been completed as successfully as it has without financing. The many contractual and financing structures tested hold useful lessons for future large-scale rail and public works projects. Now that the LCR business is past the riskiest construction period, its CTRL and Eurostar businesses will be sold off with proceeds going to shareholders and government.

NEWSLETTER COMMENTS

We look forward to your feedback on the format and the content of this publication. Comments on this newsletter, and most especially, continued contributions by committee members, friends of the committee, and others can be sent to the editors:

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