Regional Rail for U.S. Metropolitan Areas: Concept and Applications

JOHN W. SCHUMANN AND S. DAVID PHRANER

With old rail systems largely rebuilt and several new-start projects in revenue service, it is timely to discuss the idea of regional rail as a service concept, its historical evolution, and how it uses traditional rail "modal" technologies—heavy rail, light rail, commuter rail—as the basis for creating coordinated, multidestinational metropolitan transit systems. Regional rail is defined as "an emerging rail transit service concept and institution superimposed on a metropolitan region, employing conventional rail technologies, incorporating elements of older rail operations and infrastructure where they exist, and adding new links where required to integrate suburban, urban and downtown travel functions." It is suggested that regional rail distributes riders like rapid transit or light rail in the central business district, while providing express line-haul transportation like commuter rail between central cities and their suburbs. Thus, regional rail can respond well to the long trips characteristic of U.S. metropolitan areas. The place of regional rail in the phasing over time of transit system development is discussed, as are its general characteristics, organizing principles, and several examples. Finally, regional rail is seen as an opportunity to implement new operating practices and reforms, to investigate and apply technical innovations selectively, to control costs while attracting new customers from markets that street transit finds difficult to penetrate, and to offer a concept that managers can use to coordinate a range of integrated, high-quality transit services that can be sold across a spectrum of the traveling public.

Heavy rail, light rail, commuter rail: planners and engineers have been promoting and building these rail transit technologies for quite some time. Now that old rail systems are largely rebuilt and several new-start projects are in revenue service, professionals find themselves increasingly thinking less of these specific technologies and more about a fast-emerging service concept: regional rail. This paper discusses the idea of regional rail, its historical evolution, and how it uses traditional rail "modal" technologies to create coordinated metropolitan express transit systems.

U.S. RAIL TRANSIT PROGRESS IN THE FREEWAY ERA

Despite Americans' long-running, policy-supported, and publicly funded mania for automobiles, freeways, and low-density development, rail transit systems soon will serve more than half of the 39 U.S. conurbations that house more than 1 million people (Figure 1). Where they survived the mass rail abandonments of the mid-20th century, older rail systems have been renewed, and a dozen U.S. cities—many in the Sunbelt—have opened one or more completely new rail lines since the early 1970s.

J. W. Schumann, LTK Engineering Services, Skidmore Building, Suite 500, 28 S.W. First Avenue, Portland, Oreg. 97204. S. D. Phraner, Transportation Planning and Policy, Interstate Transportation, Port Authority of New York and New Jersey, One World Trade Center, Room 54E, New York, N.Y. 10048.

First built were rapid transit "heavy rail" projects in San Francisco, Washington, Atlanta, Miami, Baltimore, and, currently, Los Angeles. As these systems were opening in the 1970s, light rail transit (LRT) took off, partially in reaction to perceived problems with established rail modes:

- Heavy rail cost too much and provided more capacity than medium-sized regions needed.
- Commuter trains had high labor costs; freight railroads had no incentive to run them.

Unlike heavy rail rapid transit, LRT offered short trains on lower-cost, mostly surface alignments. Unlike commuter rail, a train of light rail vehicles (LRVs) could be operated by just one person. New LRT systems are running in 12 North American cities previously without rail (8 in the United States, 2 in Canada, and 2 in Mexico). Two more are under construction, as are extensions elsewhere.

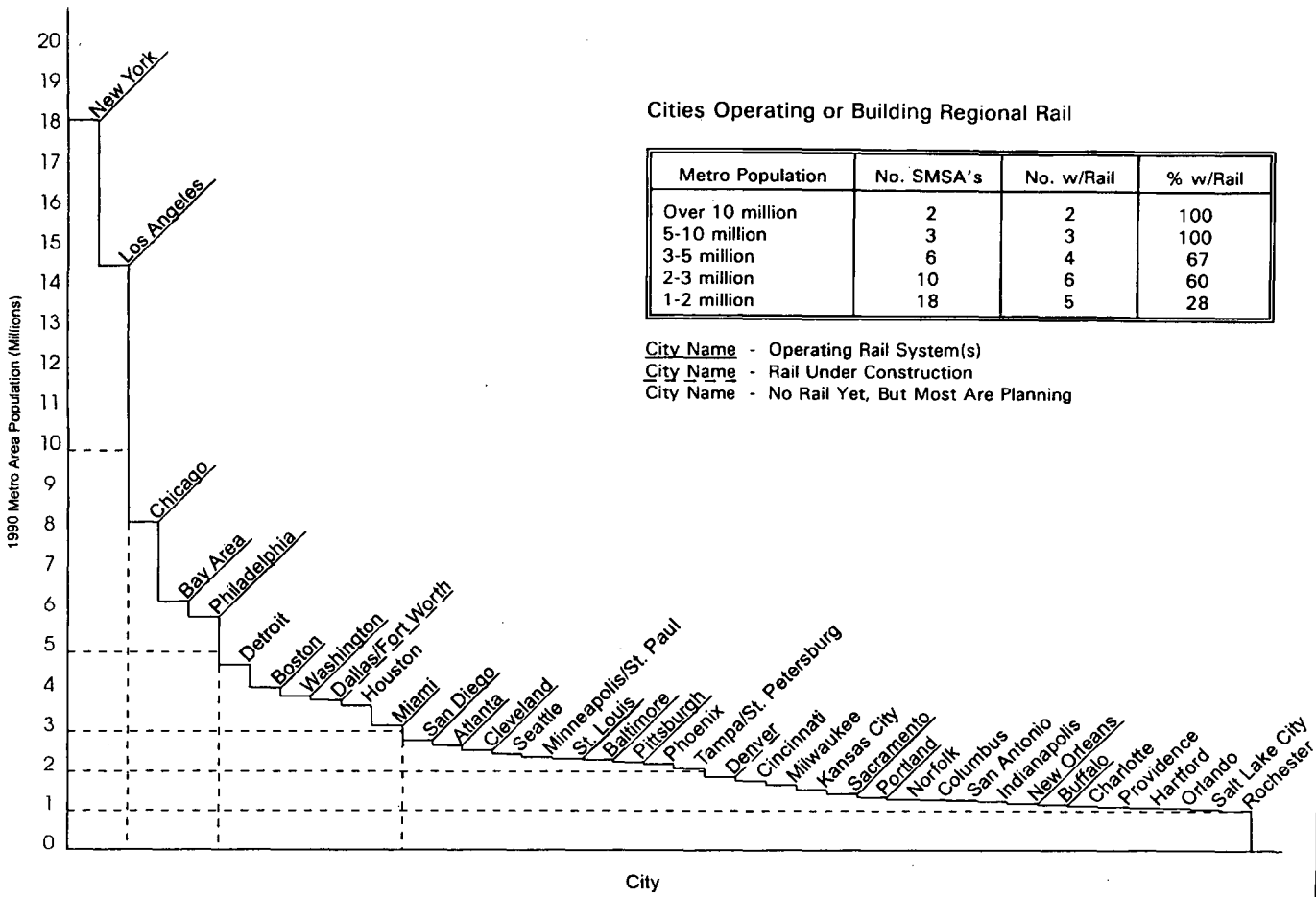
Perhaps even more surprising, the commuter train has been reborn. Agreements to reduce train crew sizes began to be negotiated about the same time that Congress passed the Staggers railroad deregulation act. These actions set the stage for less costly train operation and the growing realization that publicly subsidized commuter services could actually turn modest profits for the private railroads running them under contract to public transit authorities. Today, older systems continue to be renovated and expanded, and there have been three completely new commuter rail start-ups since 1989: in Miami; Washington, D.C./Virginia; and Los Angeles.

REGIONAL RAIL CONCEPT AND PRACTICE

What is regional rail and why is it important to transit in North America? Responding to these queries is this working definition:

> Regional rail: An emerging rail transit service concept and institution superimposed on a metropolitan region, employing conventional rail technologies, incorporating elements of older rail operations and infrastructure where they exist, and adding new links where required to integrate suburban, urban and downtown travel functions.

A shorter description would be to state what it does. "Regional rail distributes riders like rapid transit or LRT in the central business district (CBD), and provides express line-haul transportation like commuter rail between central cities and their suburbs." In the past decade, there has been a tendency to think of regional rail as using the "railroad" technology traditionally called com-



Metro Population	No. SMSA's	No. w/Rail	% w/Rail
Over 10 million	2	2	100
5-10 million	3	3	100
3-5 million	6	4	67
2-3 million	10	6	60
1-2 million	18	5	28

FIGURE 1 U.S conurbations of more than 1 million ranked by metropolitan population (*6*).

muter rail in the United States (*1*). This paper suggests that regional rail is more a service concept than a description of systems hardware and that, depending on various factors such as corridor lengths and trip densities, regional rail service may be provided by one or more of the rail modal technologies: heavy rail, commuter rail, and light rail.

Whichever technologies are used, regional rail must provide adequate capacity, a high order of rider comfort, and fast and reliable service, and it must be an environmental "good neighbor" in the community (*2*).

Some planners consider the ultimate regional rail systems to be in Europe, networks such as Paris' Réseau Express Régional (RER) or the S-Bahns in major German cities and Zurich, which blend local city rapid transit/light rail and national railway commuter/intercity rail. There is much to be learned from how the French, Germans, and others have re-formed their metropolitan rail systems. Nonetheless, regional rail is a complex and potentially daunting issue for North American authorities because its introduction requires strategies to

- Integrate the schedules and fares of separate operating entities,
- Connect lines using different technologies in a unified system, and
- Coordinate transit planning and regulation across multiple jurisdictions.

Creation of a regional rail network could be considered as the ultimate step in the evolution of a mature metropolitan public transport system. Discussions with a variety of transit professionals suggest that this process and the emerging concept of regional rail is occurring somewhat differently in two primary categories of North American conurbations:

- Coordination of extant lines that grew up around traditional commuter rail and rapid transit networks in older cities (e.g., Philadelphia), and
- Completely new rail systems in an increasing number of places where former rail services, if they even existed, had long since been discontinued (e.g., Los Angeles).

CHARACTERISTICS OF REGIONAL RAIL

Regardless of whether it is a reorganization and integration of traditional rail transit modes or a newly built system using one or more rail technologies, regional rail exhibits common characteristics:

- Integrates the traditional domains and roles of urban rapid transit and suburban rail. Integrates transit systems and subsystems selectively, for example, by providing common public information systems and signing as on the multimodal system in metropolitan Boston.

- Serves both urban and suburban parts of a metropolitan region, not being associated exclusively with either the core cities or suburbs. Regional rail connects both places.
- Spaces stations variably to account for varying densities of the areas served and whether stops serve dispersed origins or concentrated destinations.
- Routes directly through the CBD, to distribute within the CBD and provide suburb-to-suburb regional travel options.
- Uses high-performance trains, preferably electric, either multiple unit or locomotive-hauled push-pull sets. Regional rail may be diesel-powered, as in Chicago, although nonelectric propulsion limits rail's capability for direct CBD penetration.
- Operates high-capacity single- or bilevel rolling stock, with amenity levels appropriate to a high-density but seated ride.
- Conducts automated zoned fare system; the most advanced forms of regional rail feature self-service ticketing. Fares should be fully integrated with surface transit systems in the region, with no penalty imposed on intermodal transfers.
- Employs level boarding, using fully accessible high platforms or low-floor cars, to reduce station dwell times. However, Zurich, Chicago, and other cities provide examples of regional rail systems with low platforms.
- Serves multiple travel functions in an urban area including not only journeys to work in the CBD but also accommodating reverse commutes, express and local distribution trips, access to intercity transport (air, rail, bus), and recreation travel.
- Provides opportunities for institutional, regulatory, and other reforms.

Of the 18 U.S. metropolitan areas with operating rail systems, 12 have lines serving more than a single urban transportation corridor and thus may be identified as regional rail. Included are a range of systems in terms of size, technologies used, and regional population. These systems also meet many of the other characteristics outlined earlier and in Table 1. For comparative purposes, Table 1 also includes information for a "model" European regional rail system: Zurich.

TRADITIONAL RAIL TRANSIT CITIES

Regional rail could be expressed as the next step in an evolution of rail transit for older rapid transit and commuter rail properties such as New York, Chicago, and Philadelphia. This evolution, which has been in progress over the last several decades, consists of five phases, the last of which is implementation of regional rail:

- Phase 1: Preserve failing passenger rail (and bus) systems through public subsidies of private operators to prevent further route abandonment or discontinuation of services.
- Phase 2: Stabilize rail (and bus) transit systems with purchase or transfer from private to public ownership and the formation of public authorities with the obligation to continue essential public transit service.
- Phase 3: Rebuild railroad, rapid transit, or streetcar infrastructure and replace life-expired rolling stock to bring systems into a good state of repair and to project an up-to-date image to potential users. Rebuild transit properties that were allowed to deteriorate through deferred maintenance.
- Phase 4: Upgrade and extend rail transit service by applying new technology and operating innovations, by selectively restor-

TABLE 1 Key Characteristics of Regional Rail Service In Place on U.S. Systems

Regions and Modal Technologies (a)	Through Routing (b)	Intermodal Coordination (c)	High-Perf. Elec. Trains (d)	Integrated Fares	Level Boarding	Trip Functions Served by Regional Rail			
						CBD	MACs (e)	Leisure	Airport
Model System: Zurich (CR/LR)	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
New York/Newark (CR/HR/LR)	HR	Some	HR/LR/ Most CR	No	HR/ Most CR	Yes	Some	Yes	No
Chicago (CR/HR)	HR	Yes	HR	Some	HR	Yes	Some	Yes	Yes
Bay Area (CR/HR/LR)	Some HR/LR	Yes	HR/LR	Some	HR/ Some LR	Yes	Some	Yes	No
Philadelphia (CR/HR/LR)	HR/CR	Yes	Yes	Yes	HR/Some CR&LR	Yes	Some	Yes	Yes
Boston (CR/LR/HR)	Most HR	Yes	HR/LR	Yes	HR/ Some CR	Yes	Some	Yes	Edge
Washington (CR/HR)	HR	Yes	HR	Most	HR	Yes	Some	Yes	Yes
Miami (CR/HR)	HR	Yes	HR	Most	HR	Edge	Few	Some	No
San Diego (LR)	Yes	Yes	Yes	Yes	No	Yes	Few	Yes	No
Atlanta (HR)	Yes	Yes	Yes	Yes	HR	Yes	Some	Yes	Yes
Cleveland (HR/LR)	HR	Yes	Yes	Yes	HR	Edge	Some	Some	Yes
Baltimore (CR/HR/LR)	LR	Some	HR/LR	Yes?	HR	Yes	Some	Some	No
Sacramento (LR)	Yes	Yes	Yes	Yes	No	Yes	Few	Some	No

(a) Modal technologies: CR--Commuter Rail, HR--Heavy Rail, LR--Light Rail; (b) Suburb to suburb across the CBD; (c) Between rail modes and rail w/buses; (d) CR = push-pull diesel trains in NY/Newark (some); Chicago, Washington, Baltimore (most); Bay Area, Boston, Miami (all); (e) MAC-Major activity center.

ing former services, and by adding new extensions as regional growth patterns indicate a need.

- Phase 5: Rationalize and reorganize portions of existing rail systems into regional rail and add new links as necessary, thereby integrating and adapting networks and services to changing urban demographics and economics and coordinating transit with adjacent land uses.

Modifications exemplifying Phase 5 development may be observed in greater New York (subway rationalization, NJ Transit rail connections), Boston (reinstatement of Old Colony lines), Chicago (Wisconsin Central commuter rail), and the Bay Area (Caltrain extension to Gilroy).

NEW RAIL CITIES

As they grow ever larger, U.S. metropolitan areas must deal with the problems of moving masses of automobiles: congested highways and streets, deteriorated air quality, too much land used for parking lots, and bus systems that cannot attract choice riders because they are mired in the general traffic. An increasing number of these cities are turning to rail transit, almost always in the form of regional rail, to provide a viable alternative to automobile travel for commuters and other choice riders. Transit systems in these places also are going through a five-phase process:

- Phase 1: Preserve failing bus systems through public subsidies of private operators to prevent further route abandonment or discontinuation of services.
- Phase 2: Stabilize bus systems by purchase or transfer from private to public ownership and formation of public authorities with the obligation to continue essential public transit service.
- Phase 3: Rebuild and expand bus systems to bring them into a good state of repair. Rebuild transit properties that were allowed to deteriorate through deferred maintenance.
- Phase 4: Build rail "starter lines" in one or more key corridors to serve the region's principal arterial trunk routes with high-quality express routes, carefully integrating rail with a revised system of local and feeder buses, and with automobile park-and-ride lots.
- Phase 5: Expand and extend starter lines to create a fully developed regional rail system that continues to adapt over time to changing urban demographics and economics, and coordinating transit with adjacent land uses.

New systems that have reached Phase 5 include Bay Area Rapid Transit (BART), Washington and Atlanta, all heavy rail, plus Calgary (Canada) and San Diego using LRT. The other new U.S. heavy rail, LRT, and commuter rail cities all are working through Phase 4.

NEW-START APPLICATIONS OF REGIONAL RAIL ORGANIZING PRINCIPLES

Today's newer regional rail properties such as the Bay Area, St. Louis, Washington, and Atlanta lost their original rail service and infrastructure entirely back in the 1940s and 1950s. These cities started with a clean slate, fashioning new rail transit systems in part by adapting remaining fragments of the old abandoned systems. In the Bay Area, for example, the old Key System and Sacramento Northern rail properties begat BART. In Baltimore, the Northern Central and Baltimore & Annapolis alignments formed the base for the new Central Corridor LRT, and so on. Although real estate and infrastructure fragments of the former rail properties were inherited and recycled, obsolescent regulatory and institutional "baggage" was not.

In the smaller or less densely populated metropolitan areas such as Portland, San Diego, and Calgary, regional rail takes the form of light rail corridors linking both the urban and suburban parts of the metropolis. In more extensive or more dense metropolitan regions such as Atlanta, Miami, and Washington, regional rail takes the form of a hybrid heavy rail rapid transit/commuter rail that blankets the region.

EXAMPLES OF REGIONAL RAIL: PAST, PRESENT, AND FUTURE

Some aspects of the regional rail idea are hardly new. Serving today's sprawling U.S. urban regions, however, requires both adaptation of old practices (e.g., bus-rail timed transfers) and introduction of new innovations (e.g., single operator crewing of commuter trains using bidirectional equipment with automatic doors and combined with proof of payment fare collection methods).

North Shore Line: Regional Rail Precursor

Imagine a 140-km (85-mi) rail line using local streetcar tracks at one end of its line and operating jointly with heavy rapid transit trains at the other end. Imagine that this property ran its trains at speeds as high as 140 km/hr (85 mph) to compete with parallel commuter and intercity trains. Suppose service featured meals on board as well! It sounds like an absurd rail integration fantasy, and yet most will recognize this supposition as the now-defunct Chicago North Shore and Milwaukee Railway. This was an "interurban" that emulated local streetcars, intercity express trains, commuter rail, and rapid transit all in one ride between the Chicago and Milwaukee CBDs.

Cross-CBD Links in Mature Cities

Several attempts to develop regional rail in traditional rapid transit cities have met with varying degrees of success. The Queens Long Island Mass Transportation Demonstration Program of the 1960s spawned the idea of a super subway, applying the concept to the Port Washington Branch of the Long Island Rail Road. The originator of the term "super subway" (*3*) later regretted using it because it conveyed the impression that the city subway system would be extended into the suburbs. This notion created a backlash ("not in my backyard") among suburbanites who despised the city's subways (and perhaps those who rode on them).

In the early days of the Tri-State Regional Planning Commission, a series of travel demand networks were coded to test various proposals being refined for Tri-State's regional transportation plan. One of the most ambitious proposals tested was to convert the relatively lightly used Broadway BMT line for use by the Long Island Rail Road. Points of connection would have been at Brooklyn's Atlantic Avenue Terminal and the 63rd Street Tunnel under the East River. The often-proposed but only partially built Second Avenue Subway has also been suggested by planners as

an upgraded version of rail rapid transit approaching regional rail standards.

The principal objective in these proposals was to avoid single stop or stub terminal operation for commuter rail within the CBD. New York/New Jersey, Boston, Chicago, and Philadelphia all inherited architecturally grand but functionally obsolete stub and stub-like terminals of former competing railroads. This configuration followed the model of the great European capitals with several stations, each positioned in the geographical sector where its builder railroad held exclusive domain.

The operational advantages of through-running suburb-to-suburb transit routes are well known and practiced extensively in bus transit and on several newer LRT systems such as Calgary and Sacramento. Through running increases the efficiency of subway lines entering Manhattan from Queens, the Bronx, and Brooklyn and dates from the era when the rapid transit systems were operated by separate, private managements. Rapid transit lines were through routed in Boston, Cleveland, Chicago, New York, Philadelphia, and other traditional rail transit cities, but their commuter rail lines were not, even when through station capability existed and was used as such by intercity trains (e.g., Penn Station, New York).

In the commuter rail sector, however, through running is discouraged by lack of critical links, conflicting physical standards, and institutional turfs. These conditions reduce trip, residential, and employment choices for urban and suburban residents. It is easier to commute 50 mi or more into Manhattan on NJ Transit, Metro North, or the Long Island Rail Road than it is to go 10 mi between densely settled places in Hudson County, New Jersey; and Queens, New York. Currently, these trips typically are being made by automobile through some of the highest-density transit service territory in the United States. All the conditions necessary to support transit are there: infrastructure, employment, and residential densities. Yet systems are linked neither physically nor operationally, so they do not serve new travel markets arising from changes in metropolitan demographics and development patterns.

New-Start Regional Rail Systems

In metropolitan areas that lost their rail transit and undertook to build all-new systems, the older rail transit CBD route patterns are not replicated. BART through routes and distributes along San Francisco's Market Street rather than terminating at Key System's East Bay Terminal. St. Louis' LRT through routes rather than stub ends, as its predecessor Illinois Terminal Railway did. Washington, Miami, Atlanta, Calgary, Sacramento, and other "new" rail properties through route rail services to provide suburb-to-suburb travel, as these properties' routes all begin and end in suburbs. Through routes also link opposite ends of both the CBD and the city. Finally, through routes tend to enhance services for a variety of travel functions, including airport access.

One might conclude from these observations that if the traditional rail cities were to build their systems all over again, they would serve the same corridors and locations. This time, however, the rail lines would be linked and operated differently to promote more interchange and broader travel choices.

Philadelphia Regional Rail: Center City Commuter Connection

Philadelphia was the first U.S. city to replace its commuter rail stub terminals with a cross-CBD tunnel purpose-built to enable through running. It helped that both formerly independent rail networks had already been supported by substantial subsidies from the city of Philadelphia and suburban counties before being transferred to public ownership and were controlled by a single public transit authority when the Center City Commuter Connection (CCCC) was finally implemented. The CCCC, a new line to Philadelphia International Airport, and the 12 inherited commuter rail branches together make up what may be considered the first of the older U.S. commuter rail systems to enter Phase 5, reorganization of older rail properties into a regional rail system.

Multimodal Regional Rail Systems

Regional rail in Philadelphia is more than the extensive commuter lines. The system also includes two fully grade separated rapid transit lines, Market-Frankford and Broad Street, and three suburban LRT lines, all interconnected with networks of city and suburban bus routes. Always bedeviled by inadequate funding (a plight shared by other public service providers in larger, older regions) and a troublesome city-suburban split at the policy level, the Southeastern Pennsylvania Transportation Authority has never been able to provide a truly attractive alternative for choice riders in terms of service frequency, reliability, and amenity. Thus, the full potential of the region's superb regional rail network remains unrealized.

Integrated regional transit systems in other countries provide an indication of what can be achieved. One of the best is Zurich. With a regional population about one-fourth of Philadelphia's (or about the same as Portland, Oregon; and Sacramento, California), Zurich residents enjoy a multimodal 14-line regional rail S-Bahn system incorporating commuter rail lines run by the national railway as well as local railways and three LRT lines. Railway S-Bahn lines use either EMU or electrically propelled push-pull trains. LRT S-Bahn lines use single- and twin-unit LRVs, with or without trailers.

Most lines are through routed, with the CBD in the middle of routes starting and terminating in outlying suburban towns. In addition, there is an extensive streetcar, trolleybus, and motor bus city transit system within Zurich itself, as well as local bus services in some outlying towns. Schedules are coordinated, and there is a unified fare structure. As a result, users experience it all as one system.

Through-routed S-Bahn lines penetrating the CBD operate through a new tunnel dedicated to their use. However, there are so many lines that tunnel capacity was immediately filled; so four S-Bahn lines continue to use the ground-level stub tracks in Zurich Hauptbahnhof (main railway station). Two of these lines are through routed. Drivers simply change ends during the 5-min station dwells. This is done reliably, hour after hour, day in and day out. To cover rare occasions when a train arrives downtown late, a spare train and crew are kept ready to pick up the second half of the run. The late equipment and crew then becoming the reserve train.

REGIONAL RAIL AND REGULATION

Recent federal initiatives and mandates—the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Clean Air Act, Energy Act, and Americans with Disabilities Act—require transit practitioners to reconsider strategic planning options. Many of the physical requirements to comply with new mandates are embodied in regional rail: electric traction as a clean fuel, accessible level

boarding using high platform stations or low-floor cars, and improved levels of amenities and enhancements to help lure automobile drivers. Where it exists today, regional rail demonstrates a high level of coordination and integration between transit modes, institutions, and governments. Regional rail, therefore, is consistent and supportive of fulfilling these requirements.

Under ISTEA, capital plans called transportation improvement programs (TIPs), long-range plans, and unified work programs of study must be coordinated through metropolitan planning organizations (MPOs). Although ISTEA leaves the structure of transit operations and institutional organizations as local metropolitan options, it does require formal coordination. It also requires states to develop statewide transportation plans. These state plans combined with the MPOs' regional plans provide a coordination mechanism among levels of government and between governments and transportation providers. ISTEA also establishes a climate for planning rail new starts, including regional rail.

PLANNING FOR REGIONAL RAIL

Recall that older metropolitan areas with rail are in the fifth evolutionary phase as described previously. Their rail operations are relatively stable, and properties are in a fair to good state of repair. Systems have expanded, in some cases by reopening dormant rail corridors. What is next?

New York provides some current examples of possible next steps. The Second Avenue Subway, when and if built, will most certainly not be just another line oriented only to local city service.

Very preliminary discussions are under way between three transit agencies—NJ Transit, New York Metropolitan Transportation Authority, and the Port Authority—on new trans-Hudson capacity linking midtown Manhattan and the rest of the region. The press has characterized this discussion most frequently as a proposed extension of the Flushing IRT to the Hackensack Meadowlands. However, this link could serve as the initial piece in a more extensive upgrading of rail transit services. As a $1 billion proposal, a new Hudson River crossing might also be the last such affordable project of its type. It must be adaptable to a variety of future technologies and modes. For example, by using dual-mode (AC/DC) commuter rail technology, the link could serve through-routed NJ Transit and Long Island Rail Road lines as part of a regional rail network while simultaneously relieving crowding at Penn Station. This kind of action, in turn, could facilitate some "capacity swapping" between Penn Station and Grand Central Terminal, using the latter's ample space for lines terminating in Manhattan and opening Penn Station for through-routing strategies involving Metro North Hudson or New Haven lines.

The issues arising from such a project are those same issues considered by new-start cities designing their regional rail. Which institutions will build and operate it? How will it be financed? On what physical standard will it be designed? How will it link to existing transit services? How does it rationalize operations and improve the existing transit network? Is goods movement a consideration? How will it serve changing patterns of demand? How should the facility be sized and designed to anticipate advances in technology?

These questions revolve about a central strategic dilemma: adapting inflexible rail infrastructures and entrenched institutions to meet changing travel demands, dispersing travel patterns, aging populations, and other demographic transitions and economic realities.

CONCLUDING COMMENTS

Total rail transit abandonments characteristic of the 1930s to 1950s now seem unlikely. Instead, new-start rail lines appear likely to appear in more cities, while older metropolitan areas will continue to rebuild and reorganize their existing rail systems and institutions.

Regional rail may be considered a new start in the broadest sense of the term, even in the older rail cities, because it requires a departure from conventional habits of planning, engineering, and administration. Regional rail is an opportunity to implement new operating practices and reforms, to investigate and apply technical innovations selectively, and to control costs while attracting new customers from markets that transit finds difficult to penetrate. It is an opportunity to integrate systems that remain separate for no good reason except historical happenstance.

Almost 30 years have passed since one astute observer recommended that the future of transit as a public service enterprise depended on the effective implementation of "integrated marketing packages, reflecting price, product planning, market research, and promotion designed to attract different classes of riders" and that transit undertakings needed to reorganize to "*sell* as well as *produce* transit services" (*4*). As one of today's regional rail managers observes, "the need for public transportation is unchallenged in the nation's large urban areas," but outside the top dozen or so metropolitan areas, "the need for transit is not so clear ... and transit must fight for every passenger" (*5*). In U.S. urban regions with a million people or more, and perhaps in some smaller cities as well, regional rail offers a concept that today's managers can use to coordinate and enhance the utility of multidestinational systems offering a range of integrated, high-quality transit services that can be sold across a spectrum of the traveling public.

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