

# RICHARD F. MAKSE

## Years of Experience

35

## Education

M.A. Communications, Fairfield University, 1975

A.B. Modern Languages, Fairfield University, 1969

## Key Qualifications

Dick Makse has extensive experience in railroad simulation modeling. With 17 years of solid accomplishments in this unique field, he specializes in tackling complex urban rail infrastructure and distilling that infrastructure into a presentable yet precise representation of operating conditions. His models have spanned all ranges of traffic density including two major studies in the routing-challenged Richmond, VA region and New York City's Penn Station and Grand Central Terminal.

He brings to his rail operations expertise a diverse portfolio of experience in commuter rail operations and administration, with substantive accomplishments in community outreach, marketing, publications, software development, train scheduling, service planning and simulation.

An experienced PC programmer, Dick has done extensive work in crew and equipment optimization and delay analysis. In the early years of personal computers, he developed software and hardware to replace the manual recording of New York Penn Station's train movements with a computer-based automated solution and designed and implemented production software for the seamless publication of customer timetables. Portions of his original program are still used to generate LIRR timetables both in print and online, attesting to the long-term survival (15 years) of the program.

His career credentials include an extensive public education/relations campaign to pass the 1979 NY State Bond Issue (the foundation of New York's Metropolitan Transportation Authority's ongoing capital program), pioneering use of computers (1978) to develop trend analyses of commuter service issues; management of a 70 person payroll to support Long Island Rail Road beverage and first class marketing efforts (a profit center within a public transit agency); recipient of the first annual Metropolitan Transportation Authority Webmaster's Award for timetable design on the Internet.

He is a licensed user of RTC, a product of Berkeley Simulation Software, and he has been professionally involved since 1992 with that firm and its simulation products.

## Rail Freight

- Colorado Front Range Railroad Infrastructure Rationalization Project ("R2C2"). Developed a simulation model to document existing (2007-2008) conditions and evaluate two alternative routes east of Denver to remove Powder River Basin coal movements from the I-25 corridor. The model covers over 2000 route miles in the states of Colorado, New Mexico, Oklahoma and Texas.
- ACCA Yard Study. Developed a simulation model of the CSX RF&P, A and S Lines between Baltimore, MD and Florence, SC to evaluate passenger and freight capital improvements in the Richmond, VA area.
- Florida East Coast capacity and fuel consumption studies. Performed a series of system simulations of the Florida East Coast Main Line and Medley Branch to test key locations for the expansion of double track to improve system capacity and performance; updated model to 2008 to evaluate optimum motive power/speed configuration to reduce fuel consumption.

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- Midwest Corridor Study: Designed a nine-phase MIS simulation study for a major freight railroad to evaluate a range of capital improvements including track, signals and motive power reassignments covering a secondary freight corridor with extensive local freights and a mix of through freights and trackage rights operations., operations impacts, and cost estimates

## **Commuter Rail**

- Denver RTD – Operations planning and simulation team member of a public private partnership consortium that is responding to an agency RFP for heavy rail EMU service on three proposed lines in the Denver area as part of the FasTracks project.
- Caltrain Peninsula Line. For Project 2025, developed a simulation model depicting major capital improvements at the North and South Terminals and successfully demonstrated the system’s capability to operate a 172 train timetable utilizing electrified service. Additional scenarios tested included the implementation of zone schedules and optimum trip time schedules using three types of motive power.
- Created working simulation models of the LIRR and NJT networks to demonstrate the capabilities of RTC software.
- METRA California Ave Rail Study. Simulated METRA operations at the complex diamonds at the former Western Ave (A-2) interlocking in Chicago to determine the benefits from relocating the hardware of the interlocking east of its current location and documenting the reduction in delays from the interlocking reconstruction.
- CPTM (Brazil). Developed a conceptual operating plan (using RTC simulation software) to reschedule CPTM’s service for the future years of 2006 and 2010. The study helped recommend interlocking design at key terminals, test future schedules, routings and calculate equipment requirements.
- Access to the Region’s Core, Phase III. Developed operating plans and a simulation network modeling the operations of New York region railroads serving Penn Station and Grand Central Stations to test future capital development studies for integrated passenger service in the Metropolitan area.
- Metro-North Penn Station Access-MIS/DEIS. Create an operating plan for this complex Major Investment Study that will examine ways of incorporating Metro-North service into New York’s Penn Station. The tasks include schedule development, terminal track assignments, tunnel assignments and service interaction/coordination with Amtrak, the Long Island Rail Road and New Jersey Transit. Custom software is being developed to graphically manipulate line and terminal schedules and insure precise schedule coordination.
- Metro-North Hudson Line Extension. Develop proposed schedules including proposed stops, siting of terminal facilities and station stops for the extension of Metro-North service to Tivoli, New York, 99 miles from Manhattan.
- LIRR Port Washington Branch. Designed schedule simulation to evaluate increased (hourly to half hourly) off-peak service from Penn Station to Port Washington while maintaining distinct maintenance windows between interlockings (implemented). Simulated schedule impacts of capital improvements on the branch including the reconfiguration of Great Neck interlocking (implemented) and the installation of interlocked yard switches at Port Washington terminal (implemented).

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- Reservation System design: pioneered (1988) a PC based reservation and fax-back confirmation system using CAS technology for the LIRR's Hamptons Parlor Car service. Direct mail marketing of the service increased seasonal first-class reservations from ten percent to 95 percent, reflected in 98 percent occupancy.

## **Intercity Rail**

- Israel Railways. Developed a model of the proposed A-1 Line between Tel Aviv and Jerusalem to test optimum motive power and equipment configurations on this route noted for its extreme grades.
- Amtrak California Rail Study. Designed a simulation network and modeled Amtrak's California Rail operations for existing and emerging corridors serving Northern and Southern California. This task represented one of the largest simulation networks (in terms of both computer resources and physical miles – 1500 miles) modeled. The network captured not only the rail passenger infrastructure of California – including the San Francisco, San Jose and Los Angeles based commuter services – but also the complex Union Pacific and BNSF railroad infrastructures supporting intermodal rail freight operations at Oakland and the Los Angeles Basin. This modeling effort supported Amtrak and State of California infrastructure investments for the next 2005, 2010 and beyond.
- Amtrak West Arizona Rail Service simulation. Modeled Union Pacific Railroad's busy Sunset Route across southern Arizona to measure the impact of the restoration of intercity rail service between Phoenix and Tucson. This study evaluated scheduling stresses on existing and proposed Union Pacific infrastructure with various levels of Amtrak intercity service.
- I-64 Corridor MIS: developed for PB, operations simulation of passenger service on the CSX Peninsula Subdivision between Richmond and Newport News. PB was asked to analyze current operations and future service enhancements by the State of Virginia including new stations, new track configurations and signal and track improvements while supporting CSX's present and future levels of coal movements to Newport News.

## **Light Rail**

- Houston Metro – developing an operating plan and simulation of the expanded light rail network now under construction in Harris County, Texas.
- Passaic-Bergen Light Rail. Performed QA/QC of the model and its signal system (modeling was done by a colleague) to verify the accuracy of the simulation which involved shared trackage with the New York, Susquehanna & Western Railroad.
- Hudson-Bergen Light Rail. Developed a simulation model to test various infrastructure alignments connecting the HBLR to Conrail's Northern Branch and to a proposed line to the New Jersey Meadowlands.
- Canal Streetcar Line, New Orleans. Developed an operating plan and coordinated streetcar/bus schedules for New Orleans's RTA. The proposed service was scheduled on two legs of the new Canal Streetcar line and integrated with existing services on the RTA's existing Riverfront Line.

## **Administrative Services**

- Reservation System design: pioneered (1988) a PC based reservation and fax-back confirmation system using CAS technology for the LIRR's Hamptons Parlor Car service. Direct mail marketing of the service increased seasonal first-class reservations from ten percent to 95 percent, reflected in 98 percent occupancy.
- Internet schedule design: created Long Island Rail Road schedule Internet site (1100 pages) and interactive fare pages covering the schedules of over 700 daily passenger trains and rapid access to most frequently used timetables for 130 plus system stations.

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## **Bus Transit**

- Rail/Bus schedules: created a series of joint bus/rail timetables with Long Island Bus/Long Island Rail Road showing seamless connecting schedules at major Long Island hub stations. Designed locator maps to site major employers and destinations on key feeder bus routes to promote increased use of coordinated transit services.