

MANIFEST BUILDER

EFFICIENT RIDE SHARING

PARATRANSIT SERVICE PROVIDERS

MEDICAID SERVICE PROVIDERS

SHUTTLE SYSTEMS

DEMAND-RESPONSIVE TRANSIT



INTRODUCTION

Manifest (Route) Builder is a user-friendly module designed to take in thousands of trips and create efficient ride-sharing routes. IT Curves' Manifest Builder minimizes capital cost by minimizing the number of vehicles needed and optimizes operating costs by lowering driver hours.

Manifest Builder uses IT Curves' patented Efficient Ride-Sharing Algorithm (ERSA) to build thousands of trips into routes, using a minimal number of vehicles and lowering operating hours. ERSA optimizes operator costs and complies with many contractual Service Level Agreement (SLA) parameters, including pick-up and drop-off windows, maximum ride times, maximum driver hours per day, and vehicle capacity.

PUNumber	PUName	PUNumber	LOS	Address
04/24/2014 3:00PM	GREEN, ELEANOR	W		Dill Rd
04/24/2014 3:15PM	CHRISTIAN, LARRY	A		4118 W Broad St
04/24/2014 3:15PM	SMITH, ROBERT	A		4118 W Broad St
04/24/2014 3:15PM	HARDEN, JOHN L	A		4118 W Broad St
04/24/2014 3:15PM	GALLIMORE, PATRICIA L	A		4118 W Broad St
04/24/2014 3:30PM	WASHINGTON, DIANE	A		4118 W Broad St
04/24/2014 4:00PM	DAVIS, MILDRED J	A		1901 Westwood Ave
04/24/2014 4:00PM	SMITH, NAIOME	A		1901 Westwood Ave
04/24/2014 4:00PM	JORDAN, SERON W	A		1901 Westwood Ave
04/24/2014 5:00PM	MORRIS, ANNIE	A		1500 Hull St
04/24/2014 5:30PM	SCOTT, JANET G	A		1115 Boulders Pkwy
04/24/2014 2:45PM	NELSON, SHARON	W		3600 Saunders Ave
04/24/2014 2:55PM	COLEMAN, SIERRA J	A		1601 Shirleydale Ct

Driver Name	PUNumber	PUName	LOS	PickupAddress	DropoffAddress
	04/24/2014 2:45PM	BROWN, LAFONDA M	A	3600 Saunders Ave	3204 Barton Ave
EW	04/24/2014 7:15AM	FARRISS, THOMAS A	A	4716 Red Coach Ln	4220 Oak
W	04/24/2014 7:15AM	GREENE, JEFFREY T	A	4716 Red Coach Ln	4220 Oak
	04/24/2014 7:15AM	STEELE, JONATHAN	A	4716 Red Coach Ln	4220 Oak
	04/24/2014 7:30AM	GARNER, LESLIE D	A	1204 Carlisle Ave	417
	04/24/2014 7:45AM	DAVIS, MILDRED J	A	3106 Carolina Ave	1
	04/24/2014 7:45AM	BROWN, LAFONDA M	A	3204 Barton Ave	
	04/24/2014 8:00AM	LENARD, LOUISE	A	3 E Clay St	
	04/24/2014 7:15AM	SMITH, ROBERT	A	3206 Chamberlayn	
	04/24/2014 5:30AM	TAYLOR JR, ASHTON S	A	705 N 35th St	
	04/24/2014 6:15AM	BRANDENBURG, DEBORAH	A	2905 D	
		DIXON, HUNTER	A		
		SMITH, NAIOME	A		

LOAD AND VERIFY TRIP DATA

There are multiple ways to input trip data into the system by using a set of utilities for field mapping and verifying trips.

- Load trips electronically from Excel or other tab-delimited files
- Create macros to directly import raw data without extra modification or formatting
- Trips may be booked by phone, the MARS smart phone app, or by Web Reservation
- Verify trip addresses from Microsoft Map Point and Google Maps
- Look up addresses that are not found using the map
- Maintain provider miles and verify trip distance and fare using actual and estimated values for correct cost calculation

PREPARATION UTILITIES

Utilities are important in preparing the data before building routes. With these utilities:

- Quickly identify and remove duplicate trips
- Edit and correct trip data
- Combine trips from multiple providers while maintaining different contractual parameters
- Create print or digital lists of rejected trips
- Keep track of missing trips, no rides, and exclusions
- Create and maintain Locked Routes and sub-routes for a group of riders with repeating pickup and drop-off





AUTOMATIC MANIFEST BUILDING

- Efficiently routes thousands of trips
- Optimizes routes to minimize the number of vehicles and drive times
- Allows for route starts from multiple depots
- Vehicle capacities and start time are predefined



SERVICE LEVEL AGREEMENT (SLA) CONSTRAINTS

- Algorithm calculates a configurable time frame around requested pick up or drop-off times
- Takes into account maximum ride time to prevent any passenger exceeding contractual limits
- Limits driver's daily time to contractual regulations
- Service time at pickup and drop-off is taken into account based upon type of service
- Allows addition of breaks breaks to the routes before or after formation of route



VISUALIZATION AND MANUAL ADJUSTMENT TOOLS

- Displays each route and all stops on a map
- Provides a tabular view of all routes and loads
- Illustrates trip pickup and drop-off in sequence
- Drag-and-drop to modify routes
- Monitor violations of SLA constraints caused by delays in the route or dispatcher modifications



DISPATCH MANIFESTS TO DRIVERS' SMART DEVICES

- Manifests are dispatched to the drivers' smart devices and can be printed
- Displays manifests on the smart device in order of stops.
- Monitors each route's stop-by-stop progress to display on-time performance in tabular and graphical formats



DYNAMIC MODE OPERATION

- Will calls or other unassigned trips can be dynamically inserted while route is in progress
- Trips can be added or removed while routes are in progress
- Leverages smart algorithms to most efficiently insert trips into routes in progress or in the queue
- Recommends a number of best-fit routes with lowest cost for each trip to be added, allowing dispatcher to select a route

IT Curves Field Engineer
 . System Setup
 . Parameter Setting



Setup
 . Users
 . Vehicles
 . Driver Time

Call Center



Load & Verify



Electronic Service Request



MARS

DATA VERIFY

Pre-Process Data
 . Missing & Regular
 . Locked & Blocked



Build Routes



Manual Adjustment



**Call Center
Same Day Calls
Will Calls**



Dynamic Dispatch



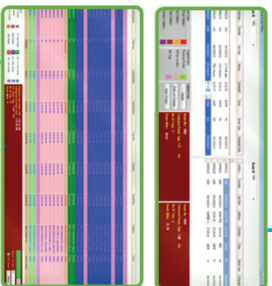
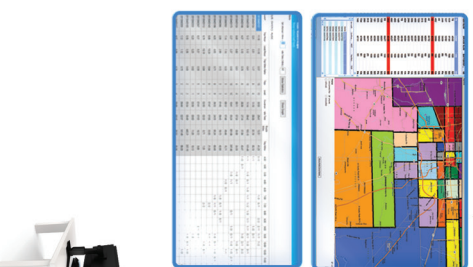
**Performance
Data and Reports**



Accounting



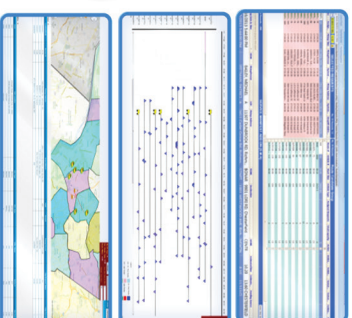
**Invoice & Billing
Post Receipts**



Printed Manifest



Electronic Manifests



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