What's New in ArcLogistics™ 9.3

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An ESRI White Paper

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Overview

ArcLogistics™ 9.3 is a rewritten and significantly improved version of ArcLogistics Route 3. Its name has changed to ArcLogistics, and it will be the first in a family of fleet management products from ESRI. ArcLogistics 9.3 contains many enhancements to make it more functional, simpler to use, and easier for international distributors to localize.

Underlying Technology

- ArcLogistics uses ArcGIS® Engine as the base technology along with components from ArcGIS Network Analyst.
- Routing projects are now stored in a file geodatabase for virtually unlimited capacity.
- ArcLogistics shares the same VRP solver with ArcGIS Network Analyst to solve routing problems.
- A network dataset is used for the routing network. Any organization that has created a network dataset in ArcGIS can use it in ArcLogistics 9.3.

Solver Changes

- Paired Orders
  - This new feature creates a hard association for two separate addresses and requires that they be placed on the same route as a pickup and a delivery. This is used in the paratransit and courier industries.
  - Paired orders contain business rules for transporting people such as maximum ride time in the vehicle and curb approach.
  - Trip requests help you import or enter paired orders by generating appropriate time windows based on arrival or pickup times and ride time flexibility.
- Mix of Hard and Soft Time Windows on Routes
  - Routes can now contain a mix of orders (i.e., some contain hard time windows while others contain soft time windows).
- Two Soft Time Windows
  - Orders can now have two time windows that are soft.
- Depart within Time Windows
  - This ensures that routes depart from a stop before the time window closes. Previously, a vehicle could arrive at an order within the time window, but with the addition of service time, the vehicle could exceed the time window.

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- Deliveries and Pickups
  - Orders can be either pickups or deliveries. ArcLogistics will track the capacities throughout the routes to make sure there is enough capacity available. This is especially useful when transporting people to make sure there is enough room in the vehicle to pick up another person.
- Four Capacities per Vehicle
  - There is an additional custom capacity field.
- Maximum Travel Distance
  - This feature is used to set the maximum distance a vehicle can travel.
- Predefined Sequence
  - Routes can be built that honor a specific, predefined sequence. This is especially useful when modeling an existing routing scenario to determine total cost and time to set a benchmark for performance improvements.
- Zones
  - Zones are geographic map features that are associated with vehicles in order to send that vehicle into a preferred area. Zones can be hard or soft. Hard zones can be polygon areas such as driver territories. Point zones act like gravity points for routes.
- Dynamic Point Zones
  - This feature allows better spatial clustering of routes and minimizes route crossover.

User Interface Improvements

- Two List Views
  - There are now two List Views, allowing users to see all route statistical data in one view and individual route schedule details in another.
- Hide Fields
  - Fields in the List View can be hidden, allowing only the desired data to be seen.
- Customizable MapTips
  - This feature allows you to choose a specific field to be included in the Map View’s MapTips.

- Hide Stem Time
  - There is an option to hide or display the leading and/or trailing stem time. This removes clutter from the Map View when there are many routes by hiding the route line from the start location to the first stop and the route line from the last stop to the end location.
- Label Customization
  - This feature allows you to change the user interface labels on 10 specific fields for Orders and Vehicles: Volume, Weight, Custom, Custom 2, Comments, Comments 2, Description, Description 2, Phone (H), and Phone (W).
- Additional Fields
  - There are two additional custom text fields for orders.
  - Specialties can have a description associated with them.
- Manual Editing of Routes
  - In the List View, you can now drag orders into specific sequence positions.
- Duplicate Vehicle
  - This is a new function to quickly make many copies of a vehicle.
- Order Import
  - This is a new option for updating existing orders, even if they are already routed.
- Default Properties
  - This feature allows you to set default properties for new vehicles and trip requests.

Street Network

- Your own network dataset for routing
  - Any network dataset can be used in ArcLogistics, allowing organizations with their own street data to easily create, edit, and manage the street data used in ArcLogistics.
  - It honors restrictions if available.
  - The data model is flexible and no longer fixed to a particular schema.
- Your own locators for geocoding
  - Any locator created in ArcGIS can be used.
  - Fallback options are determined by the composite locator.

- Barriers
  - Barriers are blockages to street segments that prohibit routes from using those streets. Barriers can be imported or drawn directly in ArcLogistics. Barriers are a complete blockage on street segments.
- U-turn Policy
  - Set your U-turn policy to allow U turns everywhere, nowhere, or only at dead ends.
- Network Attribute Parameters
  - Parameters are settings that modify how ArcLogistics computes the drive times or restrictions for the streets. Typically, these are used to modify the speeds associated with the network dataset.

Map View and Map Data

- Add your own GIS data layers to the Map View.
  - This includes points, lines, polygons, and raster data.
- Add Web services to the Map View.
  - Visualize real-time data such as weather and traffic.
- Symbology control is included.
  - The Map View contains a table of contents that can be hidden.
  - Data layers can have their rendering changed.
  - Orders can have their symbols changed to any of five predefined solid shapes.
  - ArcMap™ can be used to modify the .mxd used for advanced symbology.
- Hide or show routes quickly by clicking them in the Tree View.

Export Routing Data

- This feature enables additional export of routing folders as .csv files.
- You can save named Export Profiles.
- A plug-in is available to export routing folders as a network analysis VRP layer for use in ArcGIS Network Analyst.
- A plug-in is available to export routes as .grf files for use in ArcLogistics Navigator.

Reports

- Sizable stop vicinity maps.
- Adjust the radius (extent) of the stop vicinity maps in reports.

Localization

- Regional settings are available.
  - Regional settings are used for number formats, time, currency, date/time format, and so forth.

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- Localization uses resource DLLs like ArcGIS localization.
- Address formats on forms conform to the locator being used.

Customization/ Plug-ins

- Use as a COM or .NET component.
- Add a button to the user interface that responds to application events for automating common or cumbersome tasks.

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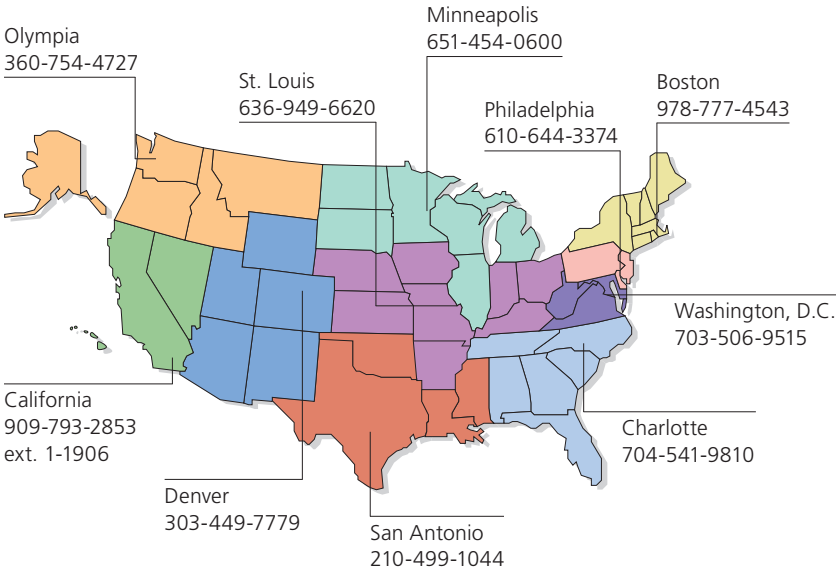

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