



ROUTESMART FOR UTILITIES

**Reduce Mileage and Overtime with
Route Planning and Workload Balancing
Solutions Designed for Utility Operations**

- ▶ Cycle Day Balancing
- ▶ Meter Route Territory Planning
- ▶ Read Order Sequencing
- ▶ Mobile Automated Meter Reading (AMR)
Route Restructuring
- ▶ Daily Work Orders, Surveys, and Inspections
- ▶ Outage Management



The world's most intelligent routing system

routesmart.com



Routing Optimization Maximizes Savings

Streamline and Improve Your Meter Reading Operations by Optimizing Your Routes

Geographic Information System (GIS) technology is now part of most modern utility services. But when it comes to workload planning for field service crews, meter operations, or other geographically oriented activities that require territory planning, such as inspections, meter change-outs, and service activities, many utilities continue to use manual techniques to plan.

RouteSmart for ArcGIS® eliminates the guesswork by enabling electric, gas, and water utilities with a powerful route optimization tool set to plan the workloads of even the largest data sets.

RouteSmart for ArcGIS gives you the ability to:

- Balance routes and meter reading cycle days based on total route time desired, number of crews available, number of stops/meters to service, or geographic preference of the workload territory
- Automatically sequence route-level workloads in optimal order that minimizes driving or walking time
- Model sophisticated routing business rules such as those associated with AMR routes
- Provide full, open standards-based import and export support for getting data between RouteSmart and your CIS
- Increase meter reading efficiency and achieve per-meter cost-to-read goals
- Create detailed street-level routing directions along with maps of service areas and individual routes

RouteSmart for ArcGIS route optimization software operates within the Esri ArcGIS technology platform and uses highly accurate street data from HERE (NAVTEQ and Nokia Maps) to power its solution. RouteSmart maintains official business partner status with both Esri and HERE to ensure your solution is up-to-date and compatible with their latest releases and updates.



RouteSmart — Built for Utility Routing

METER CYCLE & WORKDAY OPTIMIZATION

Precise Utility Routing That Minimizes Resources and Increases Efficiency

Servicing your customers must be an efficient process every month, and billing must be accurate and timely. Reading meters for monthly billing processes requires more frequent updates than ever because your territories are growing and technology is always changing.

- Cycle day balancing: Balance meter reading workloads into contiguous geographic areas across all of your cycle days. Advanced solvers allow users to maximize efficiency gains by creating geographically compact cycle days, while minimizing the day changes based on assigned rules of a maximum number of days shifted forward or back. The new cycle days are balanced on service times, geographically compact, and more efficient to read.
- Daily route balancing: Once cycle days are balanced, it becomes much easier to create daily routes that provide appropriate workloads for all of your meter readers.
- Read order sequencing: Minimize travel distances through advanced settings that allow you to have complete control over the meter read sequence. Solver options allow you to control the walking and driving flow of handheld routes up and down the streets and within buildings. Set maximum parameters to allow your users to park their vehicles and perform the routes in manageable tours. Finally, perfect your meter read sequence with tools designed to effectively integrate your local area knowledge.

MOBILE AUTOMATED METER READING (AMR) ROUTE RESTRUCTURING

Gain the Most from Your AMR Implementation and Significantly Reduce Travel Distances

Utilities spend significant resources implementing automated meter reading infrastructure, allowing them to acquire monthly reads much more easily than traditional walking and driving routes. However, existing routes are typically combined in inefficient ways. RouteSmart helps make your monthly meter reading workload more efficient in two important ways:

- Balancing cycle days based on the new AMR route parameters: Many utility companies will be able to significantly reduce the days of service required each month, and building geographically compact cycle days is critical to achieving efficiency.
- Optimizing the new AMR travel path: RouteSmart's advanced AMR solvers minimize your travel times and distances by taking into account varying read ranges of ERTs, and create a driving travel path that can decrease travel distances by 50% or more, allowing you to increase your daily read rate.

WORK ORDERS, SURVEYS & INSPECTIONS

Utility Routing Tools That Account for Every Challenge

Utilities are responsible for conducting a variety of surveys and inspections within their service territory. RouteSmart daily route optimization can be integrated with inspection compliance software to relieve these cumbersome processes and to automatically perform daily workload planning and geographic territory assignments for:

- Leak surveys
- Cathodic gas inspections
- Advanced Metering Infrastructure (AMI) audits

OUTAGE MANAGEMENT

React and Respond Quickly when It Matters the Most

RouteSmart Technologies has developed capabilities that enable utilities to improve their response effectiveness to electric and gas outages. The geographic information systems-based nature of RouteSmart for ArcGIS® enables utilities to target portions of their service area and determine the optimal number of crews required to restore service.

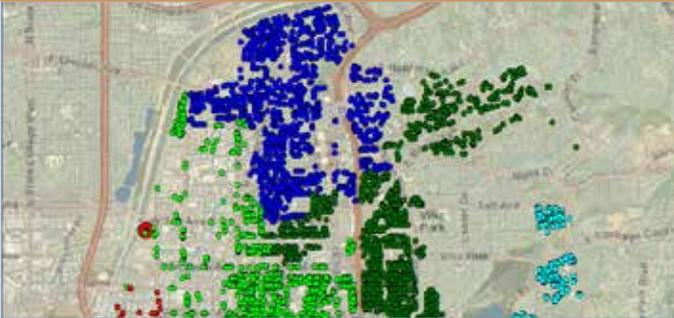
Outputs, including maps, turn-by-turn directions, address listings, and data for navigation systems, allow crews unfamiliar with territories to more efficiently complete the assigned work.

RouteSmart Product Features

RouteSmart for ArcGIS is a visual route planning tool developed exclusively on the Esri ArcGIS platform with Premium Street Centerline data from HERE (NAVTEQ and Nokia Maps). RouteSmart has robust capabilities to solve your most complex routing challenges and enables you to easily manage your operating territories. The system helps you model the unique constraints of cycle day balancing, daily routing, walking and driving read order, and AMR routing.

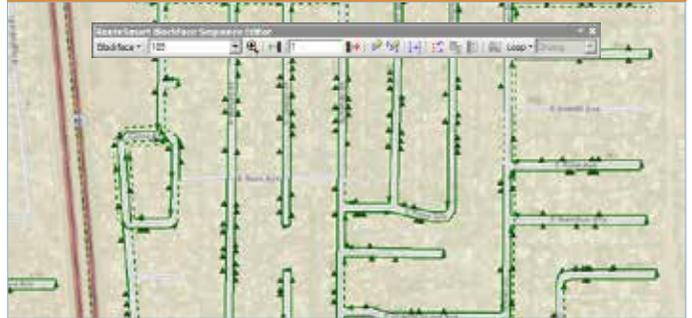
Improve your operations by balancing address-specific, side-of-street level routing to reduce the number of personnel, vehicles, vehicle miles, nonproductive time, and overtime.

Cycle Day Balancing



Leverage RouteSmart's advanced solvers to create balanced workloads for every day of the week. Balance routes based on time, fixed number of routes, and other parameters.

Read Order Sequencing



Side-of-street, address-specific calculations from the solvers provide precise results. RouteSmart solvers are specifically designed to handle large-scale, high-density routing problems quickly.

Mixed Mode Service



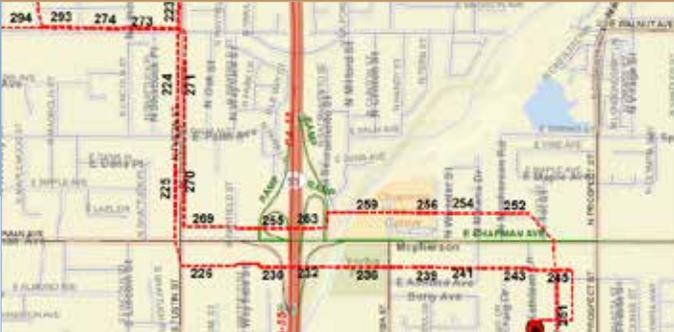
Define the mode of service, walking or driving, for each route. Define travel speeds and account for walking fatigue. Create walking tours that allow you to return to the vehicle as required.

AMR Route Planning



Input ERT broadcast range and use RouteSmart solvers to create geographically compact, balanced cycle days, and minimize the distance traveled.

Work Orders and Inspections



Perform automated nightly tasks with RouteSmart. Generate routes based on nightly order files from your work-order management system. Create maps, reports, and turn-by-turn directions, and save hours of planning time.

Reports

Blockface Summary Report	Report Date:	7/15/2013	
Blockface Summary Report	Report Date:	7/15/2013	
Solution Name: 20 Routes EDITED	Report Time:	3:35 PM	
Solution Label:			
<small>Disclaimer: The directions provided below are computer generated and may not reflect actual traffic conditions. You are required to obey all traffic rules and regulations at all times. Each traffic rule and regulation shall take precedence over the computer-generated directions.</small>			
Route 101			
Start route	WEST	0:00 AM	
Right out of roadway	N GRAND ST	0.0	0:00 AM
Turn left onto	W VALE AVE	0.0	0:00 AM
Turn right onto (1.4 miles)	W MAIN ST	1.4	0:03 AM
Turn right onto (0.1 miles)	W ORANGEWOOD AVE	1.5	0:03 AM
Service on the right	7542Q		
Turn right onto	N POPLAR ST	1.7	0:04 AM
Service on the right	653 64F		
Stay straight on	N POPLAR ST	1.8	0:05 AM
Then make a U-turn	N POPLAR ST	1.8	0:05 AM
Service on the right	7552D		
Stay straight on	N POPLAR ST	2.0	0:06 AM
Turn right onto	634 N Poplar St	2.1	0:07 AM
Service on the right	619E		
Turn right onto (0.2 miles)	N COKKOFF ST	2.3	0:08 AM
Service on the right	649Z		

Route Summary Reports and Solution Comparison Reports show you how much you have improved. With more than 25 standard reports in RouteSmart, you can view reports geared specifically for each of your utility needs.

At the Forefront of Route Optimization Technology

Leading organizations in the utilities, public works, postal and parcel delivery, and newspaper industries have come to rely on RouteSmart Technologies to solve their complex routing problems. With an unrivaled combination of insight, experience, and industry specialization, RouteSmart Technologies has established itself as a leader in vehicle route optimization software technology for the community of clients we serve.

RouteSmart route optimization technology is driven by people with a passion for vehicle routing technology that achieves measurable results, and is continually being enhanced by an expert team focused exclusively on the needs of our clients. Composed of the leading geospatial technologies from Esri and HERE (NAVTEQ and Nokia Maps), RouteSmart software integrates with client-side systems to form a complete routing solution for meeting the demanding operational needs of the industries we serve.

Our Experience Improves Your Results

In our fourth decade of providing sustainable route optimization solutions that sweat the details of solving the most complex routing challenges with the highest degree of precision and processing performance, RouteSmart Technologies and our network of exclusive distributors are passionate about driving costs and inefficiencies out of our customers' routing operations. With deployments that span the globe, RouteSmart Technologies software forms the backbone of organizations that are responsible for servicing millions of addresses on a daily basis.

RouteSmart Technologies works with the largest municipal and investor-owned organizations responsible for operating effectiveness. RouteSmart for ArcGIS® from RouteSmart Technologies is relied upon for its comprehensive suite of capabilities for balancing routes and creating operational efficiencies for our clients' operating environments.

Hundreds of organizations worldwide work with RouteSmart Technologies and form a community of user experience that is unrivaled among the competition.

Nothing Speaks Louder than Success

See firsthand how we have helped organizations worldwide streamline their routing and realize a significant return on investment. Visit our Success Center on the web, stocked with case studies and videos: routesmart.com/success

This Way Forward

To optimize your routes with RouteSmart Technologies, call us at **800.977.7284** or visit routesmart.com today. See real routing results in your future.



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