

## STREETS

FIXED ROUTE SOFTWARE SUITE





## **FIXED ROUTE SOFTWARE**

Advanced Transit ITS Software and In-Vehicle Computing

TRIPSPARK'S FIXED ROUTE SOFTWARE is a fully integrated Intelligent Transportation System (ITS) solution with software applications designed to help increase efficiencies across your entire organization.

#### IN THE OFFICE

Computer-aided dispatch (CAD)

A rugged in-vehicle computer,
Ranger is proven to withstand the harsh
transit environment. Ranger meets
military specifications for vibration
and shock, as well as the international
standard for water ingress protection.
With internal antennas, Ranger is
tamper-proof and easy to install
and maintain. A life cycle of 7+ years
significantly lowers an agency's Total
Cost of Ownership (TCO).

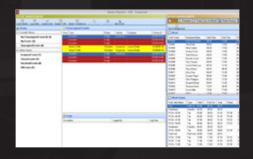
Automated Vehicle Location (AVL)

With the Streets AVL map, dispatchers can track the real-time location and status of all vehicles under their care. Follow specific vehicles, and group them by route, status, region or agency. Call-

takers can quickly and accurately respond to 'Where's my bus?' customer questions using address lookup features.

#### **Comprehensive Reports**

Access a comprehensive suite of standard and customizable reports including NTD, on-time performance, schedule adherence, vehicle location, idling reports, and much more. In addition to the list of customizable pre-made reports, users can design and create their own reports using simple drag-and-drop functionality. Reports are dynamic, allowing the data to be easily summed, averaged, sorted, and more. Fleet will automatically generate and email the selected reports to the appropriate personnel on a daily, weekly or monthly basis or distribution can be triggered when specific data within a report changes.







# RUGGED MOBILE COMPUTING BUILT FOR TRANSIT

### RANGER IS A RUGGED, COMPACT COMPUTER, BUILT FOR THE TRANSIT INDUSTRY.

A rugged in-vehicle computer, Ranger is proven to withstand the harsh transit environment. Ranger meets military specifications for vibration and shock, as well as the international standard for water ingress protection. With internal antennas, Ranger is tamper resistant and easy to install and maintain. A life cycle of 7+ years significantly lowers an agency's Total Cost of Ownership.

#### BUILT FOR TRANSIT

- Reduce human error by automatically capturing arrival and departure times as well as odometer readings all in real-time for your Paratransit and Fixed Route fleets.
- Automatically update Fixed Route operators regarding their on time performance.
- Fixed Route and Paratransit Dispatchers will easily determine how their vehicles are performing compared to their schedules with live data.
- Rangers offer a dual-boot solution for shared vehicles between Fixed Route & Paratransit for a seamless integration.



#### TWO-WAY COMMUNICATION

Real-time electronic communication connects drivers and dispatchers. Ranger's integrated VoIP capabilities provide a voice solution for your fleet and Wifi and LTE capabilities ensures communication is low-cost and safe.

#### **BENEFITS**

- LTE Wireless Data Modem
- · 72 Channel GPS Receiver
- Optional Rear-view camera interface
- · Optional VoIP Hands-free calling
- Internal Antennas
- G-Force Sensor
- Telemetry Inputs

#### RETURN ON INVESTMENT

- Faster dispatching
- Lower fuel costs
- Improved response times to customer calls
- Better vehicle maintenance
- Lower staffing maintenance



## THE ULTIMATE PASSENGER INFORMATION SOLUTION

Make transit more convenient and desirable by providing your riders all the transit information they need at their fingertips. With MyRide, you can share real-time GPS-based bus location information, news and route-specific alerts with your riders.

## BY GIVING RIDERS ACCESS TO RELEVANT TRANSIT INFORMATION, YOU CAN:

- · Help riders choose the best way to get to their destination
- · Reduce riders' wait times, which is especially important in inclement weather
- Minimize the inconvenience of service disruptions
- Inform riders about changes to fare structures and schedules
- · Promote community events, conduct rider surveys and more

#### LOCATE CLOSEST STOPS AND ROUTES

Geolocation on riders' mobile devices enables MyRide to determine the closest bus stops to their location. With one screen-tap, riders can view estimated departure times for the next buses and routes servicing these stops.





#### TRIP PLANNER & INTERACTIVE MAP

By selecting a favorite location or route, or entering a starting point and destination, riders will receive real-time GPS-based information for all possible bus options. Trip Planner can also make future transit plans.

Riders can track the location, estimated departure time and passenger load of the selected bus on an interactive map powered by Google.

\* St. John's Transit is a fictional agency created for the purposes of this document.



Because MyRide is integrated with Ranger MDTs and Streets CAD/AVL, riders always see the same real-time GPS-based location information that drivers and administrators see.

SERVICE INTERRUPTION MANAGEMENT

Lessen the impact of service disruptions and road closures by sharing real-time information about detoured routes and temporary stops. Enabled by the Service Interruption module available for Streets, MyRide automatically publishes service interruption information and provides real-time bus departure information for temporary stops.

BUS DEPARTURE NOTIFICATIONS

From their customer account, riders can create text, email or push-notifications containing bus departure information so they don't have to monitor bus status. Riders can create one-time or recurring notifications for specific routes, days and times.

NEWS MANAGEMENT

Create news stories about inclement weather, detours, community events, promotions and more. Publish route-specific or general news and add picture or video content. Administrators can choose post immediately if news is urgent or post-date it to have it published automatically.

NEWS SUBSCRIPTIONS

From their customer account, riders can subscribe to receive text, email or push-notifications containing news that is relevant to them. Riders are able to select general news and/or route-specific news for their regular routes.





CUSTOM SITE APPEARANCE

Administrators can modify the appearance and branding of MyRide without any technical know-how by simply clicking on drop-down menus to add logos and adjust colors.

BUS DEPARTURE INFORMATION ON-DEMAND

Riders without data plans can get real-time information as well by texting a designated phone number. Upon inputting their stop number, the system will automatically return estimated departure times for the next buses. With the IVR add-on, riders can also call to receive automated voice next bus information.

 $\ensuremath{^{*}}$  St. John's Transit is a fictional agency created for the purposes of this document.

## MANAGE DETOURS & SERVICE DISRUPTIONS

Service Interruptions Management for Streets ITS (TripSpark's **fixed route software**) allows agencies to quickly and easily schedule service interruptions without having to re-post schedules. The module also allows agencies to communicate detoured route information to drivers and riders via on-board Ranger MDTs, automated voice announcements and signs, wayside signs, and the MyRide **passenger information system**.

### Q

#### **SCHEDULING DETOURS**

Using the Service Interruptions module, agencies can easily create detoured routes that override the regular route during the days and hours that a detour is in effect. Service interruptions can span multiple schedules, be reused for recurring events, and even be scheduled for only specific hours of the day over the duration of a detour.

#### Reasons for scheduling a service interruption include:



#### **CIVIC EVENTS**

e.g. parades, block parties, and cultural festivals



### CONSTRUCTION-RELATED ROAD CLOSURES

Including construction closures that only occur during non-peak commuting hours



#### INCLEMENT-WEATHER ROUTES

e.g. snow routes that only run when there is heavy snowfall



### UNPLANNED ROAD CLOSURES

e.g. a major storm that has downed power lines, or a water main break

### **AGENCY BENEFITS**

- Save time. Detours are activated on top of the current production schedule, bypassing the need to update and post a temporary schedule with each new detour. Agencies can set the service interruption to expire at a certain time, after which the regular schedule automatically goes back into production.
- Capture data for temporary stops. In addition to supporting accurate reporting, this data can be used to assess how the detour impacted ridership.
- Remain ADA compliant, even when detours are in place. Make real-time information accessible to all riders via MyRide and the on board AVA system.
- Re-Use detoured routes. Detours can be re-used for recurring events such as annual parades.



#### RIDER BENEFITS

When Service Interruptions is used in conjunction with the MyRide Passenger Information System, riders will know when their route is impacted by a service interruption, if their usual stop is closed, and the locations of any temporary stops. Riders that use MyRide SMS or IVR also learn about service interruptions without needing to open the MyRide app or website. Riders get real-time information for temporary stops, and if they enter in the code for a closed stop, they will be informed that it is closed. They can also be directed to MyRide, the agency website, or elsewhere to get more information.

- No need to call the agency for info. Riders are provided with temporary stop locations and real-time bus departure information. Providing multiple ways for riders to access real-time detour information virtually eliminates the need to call the agency.
- Improve mobility. With access to clearly defined detoured route information, riders are able to quickly and easily find the correct bus and stop to get them where they need to go.
- Ability to plan in advance. When riders receive a notification about a planned detour, they can plan the correct time to arrive at the nearest temporary stop to minimize the impact of the detour on their day.
- Know about emergency situations immediately. If there is an unexpected service interruption such as a road closure due to a traffic accident, riders can be informed within minutes.





Riders clearly see detoured routes, closed and temporary stops. Riders can also see more information, including picture or video content.



## AT A GLANCE HEADWAY MONITORING AND MANAGEMENT

Have a bird's eye view of every route with ROUTE MONITOR for Streets. Rather than misleading maps, the linear layout easily shows the on-time status of actual buses on their assigned routes. At a glance you can see how far away each bus is from each other. You can then send alerts to drivers to warn them about possible schedule violations. Rolling over the bus icon produces even more information for quick analysis to help dispatchers make informed decisions.

Maps can be confusing and don't easily show the relative spacing between vehicles or the difference between where they currently are, versus where they should be, based on the schedule. Dispatchers benefit from a more precise view of operations.

### HEADWAY MONITORING Quickly identify buses getting

too close or too far apart



#### ROLLOVER INFO

Bus number, driver name, driver ID, schedule adherence



#### **LINEAR VIEW**

De-clutter with a simplified view that only shows you mission critical information



#### **HOT OR COLD**

Colors indicate if buses are on time or not



#### **DRIVER UPDATES**

Communicate with drivers to keep them informed



#### MISSING BUSES

See if a bus is missing from an assigned route



For more information and to watch a demo of Route Monitor for Streets in action, talk to your Sales Rep. With total integration into your existing ITS suite, this powerful tool is a simple add-on that provides huge functionality.

## TRIP PLANNING JUST GOT EASIER FOR RIDERS

TAKE PASSENGER NOTIFICATION TO ANOTHER LEVEL WITH THE TRIPSPARK GTFS-REALTIME ADD-ON.

Passengers can now get real time updates directly from your transit schedule and trip planning website and connect them to Google Maps. This module easily integrates with TripSpark's MyRide and provides riders with real time feeds.

A vast amount of riders are connected to the Internet through a variety of devices. Figures show that around 64 million people access Google Maps. Users expect a certain amount of dependability when it comes to the services they can access online, which includes transportation. Connectivity is going to play a major role in the technological future of all public transit agencies.

GTFS-Realtime provides a direct feed of schedule data from Streets ITS to Google Maps. Your agency can "push" data as events occur in real time, to the Internet, which affords riders a deeper level of information regarding their trip details:

- Trip updates. Immediate indication about a delay or cancelation
- Vehicle location. Pass on information about bus position
- Trip overview/planning. Riders can see their entire planned trip, the stop IDs, bus name and number



Using complex algorithms, stop time updates can provide service updates for arrival and/or departure times. All of these functions blend seamlessly into your existing passenger information web service. And all without having to navigate away from your site.

Talk to your sales rep today to learn more about the benefit of GTFS-Realtime for you and your riders.

### **IN-VEHICLE HARDWARE AND** PERIPHERAL DEVICES

#### TRIPSPARK PERIPHERALS OFFERED



#### AUTOMATED AUDIO AND VISUAL ANNOUNCEMENTS (AVA)

TripSpark's AVA solution presents stop, route, transfer • Files and pronunciation dictionaries are stored point and other information both audibly and visually, providing riders with important travel information. The automated system ensures agencies meet ADA requirements, eliminating the need to rely on drivers to make stop announcements.

- Integrates seamlessly with the Ranger MDT and Streets.
- · Text-to-speech, pre-recorded messages and multiple languages are supported.

- locally, for continuous service.
- · Interior and exterior messages can be triggered independently and provide unique content.
- · Pre-configured announcements can be triggered on the MDT by the driver.
- Dispatchers can remotely send real-time, ad-hoc announcements to any or all vehicles in the fleet.
- Volume can be controlled locally or remotely.





AUTOMATED AUDIO AND VISUAL ANNOUNCEMENTS (AVA)



#### AUTOMATIC PASSENGER COUNTER (APC)

APCs provide cost-effective and accurate collection of ridership data that can be used for reporting and identifying service improvements. Superior 3D matrix infrared sensor technology performs in all lighting conditions, provides accurate boarding/alighting counts even with bunching, and differentiates passengers from objects such as luggage and strollers.

- · The current passenger load is visible in Streets, allowing dispatchers to take pre-emptive action to address capacity issues.
- · Passengers can view bus capacity via MyRide, allowing them to make more informed travel plans.
- · APC data is incorporated into multiple reports, supporting NTD reporting and revealing valuable operational insights.



AUTOMATIC PASSENGER COUNTER

#### MYRIDE INFOTAINMENT

MyRide Infotainment improves passenger awareness of real-time status and travel options, helping riders make informed travel choices, save time and enjoy their commute. Real-time information from Streets is pushed to all modes of the MyRide passenger information system, including infotainment, giving riders access to important trip information, service alerts and wayfinding information.

- An unmatched range of digital display sizes, shapes and capabilities for transit property and on-board signage is available.
- Signage supports multiple media types, including: PDF, images, video, HTML5 animations, interactivity, and visual apps.
- Content can be changed or triggered depending on the geographic area, pre-selected external conditions (like weather), and time of day and/or calendar schedule.
- Agencies can offer advertising opportunities, opening up a non-farebox revenue source.
- Adaptable system and content management support tiers meet the needs and internal staffing capacity of any sized agency.
- Cloud-based software remotely monitors all devices in the network and allows agencies to oversee their content anywhere, anytime.





MYRIDE INFOTAINMENT



MOBILE VIDEO SURVEILLANCE

#### MOBILE VIDEO SURVEILLANCE

Installing cameras and a recording system on-board buses not only improves passenger and operator safety, it can also provide tangible financial benefits. These benefits range from being a deterrent against vandalism to mitigating fraudulent and frivolous lawsuits, which can lead to lower insurance rates.

#### **▼** LOCATION MONITORING UNITS (LMU)

Location Monitoring Units can be installed in supervisor and other agency vehicles, so dispatchers can quickly find the location of support vehicles on the AVL map in Streets Dispatch. Agencies are also able to review vehicle history, offering visibility into past locations and speeds of vehicles.



LOCATION MONITORING UNITS (LMU)

Vehicle Diagnostic
Vehicle: ME50
Driver: Not Available
Started: 12/2/2014 11:37 AM
Ended: 12/2/2014 11:37 AM
Ended: Unspecified
Protect Lamp:: Unspecified
Amber Lamp:: Unspecified
Amber Lamp:: Unspecified
Active DTCs: SPN: 4616 FMI: 3, SPN: 1622 FMI: 3, SPN: 264 FMI: 11
Total Time: 1h 40m
Priority: None

ADVANCED VEHICLE DIAGNOSTICS

#### PASSENGER WI-FI

Purpose-built routers create Vehicle Area Networks (VANs) that allow agencies to offer on-board wireless Internet access to their riders, makings their journeys more enjoyable and productive. The ability to connect to multiple on-board components means that only one data plan is required.

#### ADVANCED VEHICLE DIAGNOSTICS

TripSpark offers a comprehensive vehicle health monitoring solution delivered by our sister company, AssetWorks. The mobile vehicle health monitoring application runs in the background on the Ranger MDT, collecting and reporting mechanical and driver behavioral data points. The data are then sent to a separate hosted environment that can be accessed online.

- Engine Diagnostic Monitoring: monitor and report Diagnostic Trouble Codes, mileage and engine hours.
- Driver Behavior: track unwanted behavior such as aggressive driving, speeding, idling and unauthorized use. These metrics can also be used to create personalized driver scorecards and to validate customer complaints.
- Accident Reconstruction: the Ranger MDT gathers speed, location, acceleration/ deceleration, RPM level and input state once every second, so a detailed incident reconstruction report can be generated for any incident that has occurred within the last seven days. A real-time alert is also sent to dispatch if incident thresholds for acceleration, breaking and swerving



#### WAYSIDE SIGNS (LCD AND LED)

LCD wayside signs display on-time bus status, emergency or general information at busy transfer points or central stations. They run automatically, displaying real-time information from Streets and can be branded with an agency's colors and logo. Signs come in a wide range of sizes. Both indoor and weather-proof, sunlight-readable outdoor versions are available.

LED wayside signs, also known as dynamic message signs, display real-time bus departure information, RSS feeds, messages, time and weather conditions at high traffic bus stops or transfer stations. A number of single or double-sided display sizes are available, with optional integrated audio announcements.



WAYSIDE SIGNS (LCD AND LED)

#### SUPPORTED PERIPHERAL INTEGRATION

- Automatic Passenger Counters (APCs).
   TripSpark has integrated with multiple APC solutions, and has supported mixed fleets that used previously installed and new APCs.

   For agencies with existing APCs, TripSpark can integrate with them to support real-time tracking of passenger loads and provide consolidated reporting.
- Third-Party Fareboxes. The Ranger MDT interfaces with many commercially available electronic fare card readers, including GFI fareboxes.
- **Headsigns.** The Ranger MDT integrates with headsigns, automatically changing route and

- destination information when interlining routes so drivers don't have to trigger signage changes.
- Wheelchair Ramp Deployment Monitoring.
   Track wheelchair ramp deployments and generate reports to provide evidence of ADA support, identify where passengers are accessing lifts, and ensure adequate dwell time to allow for boarding.
- Transit Signal Priority (TSP). Transit Signal
  Priority systems keep buses running on time
  by reducing dwell times at traffic signals, either
  extending green lights or shortening red lights.
  The Ranger MDT can trigger the TSP emitter
  on the vehicle when it exceeds the schedule
  adherence threshold configured in Streets.

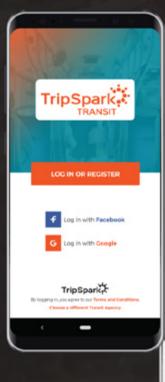


## ON-DEMAND RIDER APP TO MEET MODERN TRANSIT NEEDS

TripSpark's new mobile app helps solve various challenges faced by transit agencies, while meeting the needs and expectations of today's riders. The Rides on Demand iOS and Android apps allow agencies to offer a flexible service that sits between fixed route transit and more personal transportation options, without investing in a separate software platform. Integrated with both Novus and PASS, TripSpark's demand-response platforms, agencies can choose to have dedicated transit-on-demand or support mixed service, where paratransit and conventional riders travel together in the same vehicles. This provides agencies the opportunity to maximize the use of resources and reduce road congestion in their communities.

#### BENEFITS

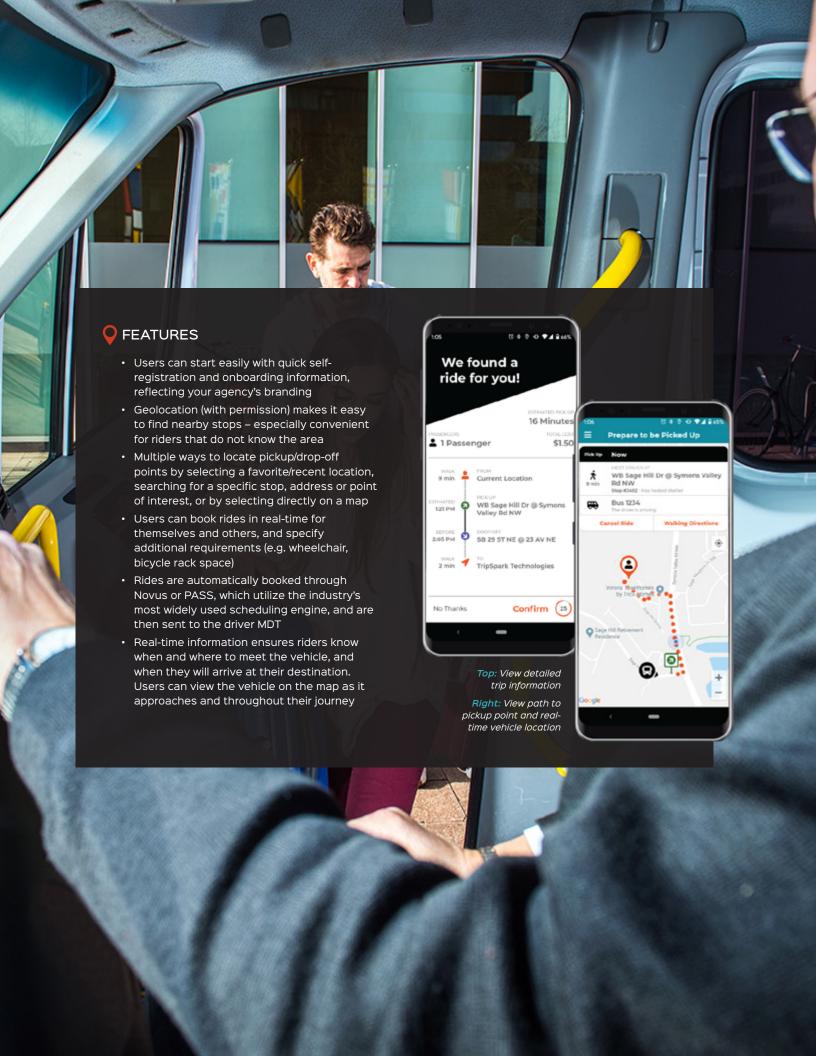
- Keep your operations simple with a microtransit solution that works seamlessly with Novus and PASS (no need for users to learn or support a new platform)
- Realize greater value from existing infrastructure and investments
- Provides an alternative to adjusting coverage, frequency and/or hours for fixed routes with low ridership in an effort to lower operating costs
- Improve transit service in mid/low density areas or at off-peak hours
- Improve accessibility to fixed route through first mile/last mile service, increasing ridership
- Flexibility to pick up and drop off riders at common locations, reducing travel time and increasing passengers per vehicle hour
- Ability to adjust service in response to demand



**Left:** Custom-branded login screen

Below: View nearby pickup stops





## PROFESSIONALLY MANAGED DATA CENTER SERVICES

#### TRIPSPARK HOSTED SOLUTIONS PROVIDE:

- Secure access to the application via the Internet
- 100% power uptime
- 99.5% network and server availability
- · Fast implementation and training
- 24/7 Customer service and server monitoring
- Multiple redundant Internet connections providing up to 100 Mbps
- · Backups are nightly full with hourly database transaction logs
- Latest Hyperconverged Architecture providing redundancy for disk and workloads across all server nodes
- · Network configurations feature Cisco hardware
- Diverse product offering including private cloud to enable Disaster Recovery and Scalability
- · Hosted in a US based facility of a Worldwide co-location company
- Flexibility to offer hosting in over 60 data center locations
- Network connectivity and carrier diversity
- N+1 cooling System Configuration (Redundancy)
- N+1 power generator configuration with a minimum of two fuel replenishing companies
- Per month fees

#### O DATA CENTER SPECIFICATIONS

- · Uptime Institute Tier III Certified
- Over 160,000 sq. ft., 24" raised floor
- Fire detection and suppression systems (VESDA)
- · Climate control systems to strict ASHRAE standard



### WHY TRIPSPARK?

TripSpark solutions enable transportation providers to deliver accessible, flexible, and comprehensive transportation services to their communities. Our advanced software, in-vehicle hardware and mobile technologies help increase ridership, improve service, and operate more efficiently.



#### **LEGACY**

TripSpark comes from a family of companies with an impressive legacy across North America and globally, with decades of experience in software innovation.



#### SINGLE VENDOR SOLUTION

For many of our long-term customers, a single-vendor solution for both their hardware and software means better support, dependable product integration, and top-of-the-line reliability.



#### **IMPLEMENTATION**

Our trainers employ a "train the trainer" methodology to empower your staff to confidently train others. Implementation always includes a thorough needs assessment, and rigorous testing and piloting process in preparation of your go-live date.



#### **EXPERT CUSTOMER CARE**

Our support representatives come from the industry and have years of industry experience. They are very knowledgeable, and not your typical "front-line" support. Our customers come to know them well as our reps work one-on-one with them to solve problems, provide training, and discover new opportunities.



#### **RESOURCES**

TripSpark offers comprehensive operational and industry resources. Our customers can access online training resources, including monthly training courses on new features and functions, user guides and collaborative discussion forums.



#### ONGOING SUPPORT

Responsive and effective customer support is critical for your operations. Our Customer Care team is available 24/7 by phone, email or online through our Customer Care portal.

