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December 8, 2014

Walt Lenz Senior Project Director - Technology Pinellas Suncoast Transit Authority 3201 Scherer Drive North St. Petersburg, FL 33716

RE: CleverWorks® Data Management Tool Proposal

Dear Walt:

Thank you for the opportunity to propose our innovative new data management tool, CleverWorks<sup>®</sup>. CleverWorks<sup>®</sup> is designed to empower you to easily manage schedules, GIS, multi-lingual audio stop announcement data and most significantly; map based data collection; offering Pinellas Suncoast Transit Authority (PSTA) an intuitive and easy way to maintain data. As you will see in our proposal CleverWorks<sup>®</sup> with its Dynamic Scheduling option is a cost saving upgrade to BusTools<sup>®</sup>.

This proposal describes the functionality of CleverWorks<sup>®</sup>, the implementation plan, the training plan, as well as our maintenance and service agreements. Clever Devices will provide project management, engineering, training and support to PSTA. CleverWorks<sup>®</sup> optional Dynamic Scheduling module will be available in 2015.

As a valued customer, I have worked with management to offer PSTA a \$11,076 discount applied to the CleverWorks base price. Included in this revised quotation is the server sizing, text to speech, and training information you asked for.

Please contact me at (919) 313-3046 or by email at CCates@cleverdevices.com. Our proposal is valid for 90 days from the above date of submittal. As a senior officer of the firm, I am authorized to make a binding commitment with regard to the information contained in this document.

Sincerely,

R. Christopha Cates

Chris Cates Strategic Account Manager Clever Devices Ltd.

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Clever Devices' Proposal to



# for upgrading BusTools<sup>®</sup> to CleverWorks<sup>®</sup>

with Dynamic Scheduling, Multi-lingual options, Text to Speech, and Training

December 8, 2014



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## 1 CleverWorks<sup>®</sup> Overview

CleverWorks<sup>®</sup> is Clever Devices' next generation of data management and is the culmination of 15 years of experience combined with state of the art technology. The result is an intuitive product that significantly reduces the level of effort to manage ITS data.

ITS systems such as Automatic Vehicle Announcements (AVA), Automatic Passenger Counters (APC's) Turn Single Priority (TSP), single point logon, Computer Aided Dispatch (CAD), Automatic Vehicle Location (AVL) and Real-time Passenger Information (RTPI) require data that defines what these systems are supposed to do, otherwise known as build time data. This includes the route and stop spatial/GIS data, temporal/schedule data, audio files, signage text and configuration data. Paramount to the data is the management of the data, as it is complex. Clever Devices offers CleverWorks<sup>®</sup> as a comprehensive Intelligent Transit System (ITS) data management solution that is intuitive and comes with built in data integrity and measurements to ensure PSTA's ITS systems run with optimum efficiency.



Figure 1 CleverWorks® Route View



### The advantage to PSTA is that CleverWorks®:

- Provides powerful data editing and management tools in a modern and intuitive user interface
- Offers built in data integrity rules and measurements
- Dramatically decreases the level of effort required to manage the data required by ITS systems
- Utilizes Google Maps that include satellite map and hybrid views
- Organizes data for efficient use and ease of understanding
- Is backward compatible with existing Clever Devices' deployments
- Upgrading from BusTools<sup>®</sup> is easy and painless

CleverWorks<sup>®</sup> affords PSTA the opportunity to make an additional and significant leap forward in the management of build time data required by ITS systems. It enhances your data processes while ensuring you can support new ITS systems with existing resources. The deployment of CleverWorks<sup>®,</sup> sufficient training, and Clever Devices' hands-on support will ensure success and a more efficient solution for managing the data required by your ITS applications.

W	CleverWorks	
Y	CCAD-PM1-SL CCAD-PM1-SL\CleverCAD	

CleverWorks<sup>®</sup> is a client/server solution allowing multiple users to access the system simultaneously by locking the screen to avoid conflicting edits. CleverWorks<sup>®</sup> also supports Active Directory for PSTA management of user authorization and authentication.



**1.1** CleverWorks<sup>®</sup> Feature Overview CleverWorks<sup>®</sup> is a state-of-the-art core infrastructure component of Clever Devices' ITS system solution. The following is a summary of its major features and capabilities.

	CleverWorks <sup>®</sup> Major Features
Map Window	• View routes, stops and timepoints on Google Maps with satellite and
	hybrid views
	• Edit routes and stops without field data collection
	Requires no ongoing maintenance costs for map layers
Schedule Data	• Provides data integrity checks to ensure a complete and accurate dataset is
Validation	compiled
Route and Stop Data	• Ability to configure, edit, and validate route paths to ensure the most
Management	efficient route geo-path is created
Data Integrity	Enforces data integrity rules and notifies the user of violations related to:
	Import rules
	• Editing rules
	Export rules
	Version control
AVA Data	Management of all audio and text announcement data for AVA including:
	• Next stop
	Route and destination
	• Transfer
	• Public service (automated and manual)
	Maintenance action necessary (M.A.N.)
BusTime <sup>®</sup> RTPI Data	• Management of the data to display in BusTime <sup>®</sup> and on signs
Canned Text Messages	• Creates and manages all canned text messages for the operator and for the
	dispatcher when CleverCAD <sup>®</sup> CAD/AVL is deployed
Geofences	Supports the creation and management of Geofences in support of
	• Diesel particulate filter (DPF)
	• Depot/Garage to notify when the bus is in or out of the garage
	Low object warning system
	• Detecting and notifying when the bus enters and/or, exits a Geofence
GTFS	Export for Google's General Transit Feed Specification
Backward Compatible	• Backward compatible with existing BusTools <sup>®</sup> functionality and exports
	Easy migration from BusTools <sup>®</sup>
Export	• With the click of a button, CleverWorks <sup>®</sup> will export data for use by all
	Clever Devices products



### **1.2 Data Tracing versus Data Collection**

Traditionally, to support route modifications, data was collected manually using a data collection vehicle that was required to drive the expect path while collecting the route's geo-spatial data. Once the vehicle completed the geo-spatial data collection process, a Microsoft Access Database file is created. This file was then imported using BusTools<sup>®</sup>. This time consuming process is referred to as **Data Collection** and will continue to be supported.

**Data Tracing** is a term that refers to how geo-spatial data is defined and managed using CleverWorks<sup>®</sup>. CleverWorks<sup>®</sup> provides PSTA with the ability to make various modifications to routes such as adding new stops, existing stops, and modifying geo-paths to optimize how route variations are operated using map-base tools. The ability to make edits on a map and actually recollect the paths to support changes is **Data Tracing**. **Data Tracing** eliminates the need collect data using a data collection vehicle and will drastically improve PSTA's ability to verify the accuracy of routes and take corrective action in a timely cost effective manner.



### **1.3 Schedule Management**

CleverWorks<sup>®</sup> provides PSTA's users with the ability to perform map-based schedule management to provide an accurate holistic view of the expected route and attributes within the route. Prior to accessing

the "Schedules" tab from the main menu bar schedule data and BusTools<sup>®</sup> data (if applicable) should be uploaded.

Home	Import/Export	Schedules

### **1.3.1 Preparation**

Before viewing schedule data in CleverWorks<sup>®</sup>, PSTA will need to import the schedule. Clever Devices make this easy by integrating Clever Devices' proven Schedule Extraction Tool into CleverWorks<sup>®</sup> allowing PSTA's system administrators the ability to upload the schedule and extract it through the CleverWorks<sup>®</sup>, user interface. Once the schedule extraction is complete, CleverWorks<sup>®</sup> will provide the user with a detailed error log. The user will have the ability to review the error log prior to proceeding with the remaining portion of the import process. Once the extracted schedule has been verified, the user may begin importing the schedule into CleverWorks<sup>®</sup>. Alternatively, if the schedule has already been extracted the user may import the schedule by proceeding to the Import/Export tab on the main menu bar and selecting Import Schedule from the side navigation bar.

System Name:		
Clever Devices Standard	•	
ansit Control Head Display Option	IS	
Select the fields from the scheduling syste display.	m for drivers to use as their login identifie	ers in the onboard
Select the fields from the scheduling syste display. Primary Login ID (WorkID2):	m for drivers to use as their login identifieSecondary Login ID (WorkID1):	ers in the onboard
Select the fields from the scheduling syste display. Primary Login ID (WorkID2): RouteId	m for drivers to use as their login identifie Secondary Login ID (WorkID1): TripNumber	ers in the onboard
Select the fields from the scheduling syste display. Primary Login ID (WorkID2): RouteId port File Selection	m for drivers to use as their login identifie Secondary Login ID (WorkID1): TripNumber	ers in the onboard
Select the fields from the scheduling syste display. Primary Login ID (WorkID2): RouteId port File Selection Import	m for drivers to use as their login identifie Secondary Login ID (WorkID1): TripNumber	ers in the onboard

CleverWorks® supports schedule imports from Hastus Standard, TSDE, and Sched21. The user will

select the scheduling system used to ensure the system is configured with the correct format. Once all selections have been made the user will simply select the file folder containing the schedule files created by the Schedule Extraction Tool. As the import process takes place the user will receive step-by-step updates of the import process.

Processing Schedule Data	_		
CleverWorks is currently importing schedule data. Because scheduling data is critica to the operation of CleverWorks no other work can be performed until processing is completed.			
During import you can exit without interrupting the import or cancel the import using the button below.			
The current import status is: Executing phase 5 of 7.			
	Cancel		



### 1.3.1.1 BusTools<sup>®</sup> Data Import

Once the schedule has been imported, the user may begin to configure their ITS system or if previous configurations are available but resides in BusTools<sup>®</sup> the user may import all BusTools data by clicking on the "Import BusTools Data" tab in the side navigation bar. By navigating to this page the user will have the ability to import a BusTools<sup>®</sup> Microsoft Access Database file or perform an import of data storing in SQL.

pgrade from Bustools	
CleverWorks allows Bustools databases to be imported into the system for upg Prior to importing Bustools data, import the latest signup into the system.	rade purposes.
From MS Access From MS SQL	
Bustools MDB Directory:	
Browse	
	Import

When importing previous BusTools<sup>®</sup> Microsoft Access Database files the user only needs to specify the file folder where the files are stored then proceed with the import process. The user will receive status updates throughout the import process and will be alerted if any errors occur during or post import.

From MS Access	From MS SQL
Server Name\In	stance Name (if applicable):
IROYTBERG-D	т
Initial Catalog:	
NIAGARA_VTS	
Connect using:	
Windows	authentication credentials of current user
Server aut	hentication using the Login ID and password below
Login ID:	
Password:	

To import BusTools<sup>®</sup> SQL data the user will be required to enter the server name, database name, and method of connecting to the server.

If any of the required fields are not populated or the credentials are incorrect, the user will receive an error message explaining the issue so corrective action can be taken to complete the import process.

### **1.3.2 Data Integrity**



CleverWorks<sup>®</sup> possess the ability to provide data integrity updates to ensure a complete and accurate dataset is compiled. The integrity of each feature's data within the system is monitored based on the assigned module. This provides PSTA system administrators with detailed information to quickly identify where errors exist within the data set at a glance.

Sched	ule Data	55% Schedule	27%) True	High Mediam Low	9 9 9	Statistics Peints 3202 Active Stops 625 Timepoints 11625 Weypoints
xport I	Data Integrity					Trips 25 Rovies 115 Variations 2 Services 15 Exception Trips
						Blacks
irror	Description			Ignore		66 Blocks Dullar Tang 18530
	Block 200 does not have a pull in assigned			Ignore	~	11625 Waypoints
	Block 201 does not have a pull in assigned			Ignore	~	Bas
	Block 202 does not have a pull in assigned			Ignore	~	Recent Activity
	Route Variation 23 is missing audio for 6 stops			Ignore	~	Changed By: Jon Smith
	Run 5 does not have a day map assigned			Ignore	*	Added:20
	Stop 231 does not have a lat/Ing association			Ignore	*	Updated:20 Removed:0
	Stop 232 does not have a lat/Ing association			Ignore	*	© 6 hours ago
	Stop 236 does not have a lat/Ing association			Ignore	*	
	No interline time exists between route 10 and route 5			Ignore	*	Changed By: Jon Smith
	No interline time exists between route 15 and route 12			Ignore	*	Added:20 Updated:20 Removed:0
						O 6 hours ago
						Changed By: Jon Smith Addel 20 Updated 20 Removed 3

Figure 2 Data Integrity Dashboard

As edits are made, the respective meter will dynamically change to reflect the level of completion achieved within the module. These meters will be displayed on the Home Screen and the summary page of each module. When multiple features exist within a module, the meters will be displayed as a carousel to efficiently allow the user to view and access multiple meters with just a click.



### Figure 3 Data Integrity Meters

In addition to providing the user with visual aids to ensure a comprehensive schedule database, CleverWorks<sup>®</sup> will alert PSTA's system administrator with text descriptions of errors that exist within the respective module. Each of the errors is flagged with a priority level to denote the severity of the error. In addition to displaying the priority levels on the errors, they are also displayed at the top of each summary page so the user may filter the errors to view a specific



set of errors quickly without extensive analysis. To accurately display the completion percentage, weighting is applied to specific error categories with priority levels to ensure the level of completeness displayed to the user is based on PSTA's business rules. Moreover, users will have the ability to ignore

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negligible error messages that reoccur within the system by design to enhance the effectiveness of error reporting.

### **1.3.3** Intuitive Screen Navigation

A side navigation bar is presented to PSTA's users on each screen which will provide the ability to efficiently move between sections within the selected module. The utilization of a side navigation bar increases the viewable area allotted to PSTA's users for preforming map and grid edits. The screen being viewed within the module prior to navigating away will be temporarily saved to increase the ease of making adjustments dependent upon data created in separate modules. Once the user has selected a section such as "Routes", a drawer will expand to provide further navigation to the variation of interest. Once a route variation has been selected the attribute displayed on the map will be reflected in the drawer along with in-line details selected in the drawer or on the map. Moreover, a set of buttons will be displayed to the user at the top of the drawer to provide the ability to perform actions on the selected section or navigate back to the previously displayed details.

### **1.3.4** Route management

Within the "Schedule" module PSTA's users will have the ability to configure, edit, and validate route paths to ensure the most efficient route geo-path is created. CleverWorks<sup>®</sup> utilizes Google's maps to display the route's geo-path to ensure the most recent geographic spatial data is available to PSTA's users.

### 1.3.4.1 Route Validation

To begin validating/creating path for routes within PSTA's schedule the user will select "Routes"

As a result of utilizing Google's mapping component, PSTA's users will have the ability to review route geo-path using the standard or hybrid map views to ensure the accuracy of stop placement and their categorization.





modifying geo-paths to optimize how route variations are operated. The ability to make edits on a map and actually recollect the paths to support changes will drastically improve PSTA's ability to verify the accuracy of routes and take corrective action in a timely cost effective manner.



### Adding New Stops

CleverWorks<sup>®</sup> provides PSTA's users with the ability to add new stops within a specific route variation. As a result of adding stops directly on the map, stops are assigned corresponding latitude and longitude values based on the position on the map. To add a new stop the user will click on the "Add New" button which will enable a floating point that can be place anywhere on the map. Once the stop has been placed it will be highlight in an alternate color to signify it is a new addition to

the preexisting route. Once the stop has been placed on the map the user will be able to define the stop's description, and whether or not the stop will be a transfer point within the assigned route variation.



With CleverWorks<sup>®</sup> PSTA's users will have the ability to intelligently and efficiently add existing stops to route paths. To add a stop which already exists, the user will click on "Add

Existing" and the map will display all stops within the viewable area of the map. If the stop of interest is not displayed, panning or zooming out will display the

rest of the stops in the selected viewing area. By clicking one of the stop or stops of interest, the user will be presented with the option of adding the stops to the route variation. The user will have the ability to add the stop on the map or with the list presented in the drawer expanded from the side navigation bar.

Add 7526 49TH ST S & TANGERINE AVE Add 7525 49TH ST 5 & 18tH AVE 5 7523 49TH ST 5 & 20TH AVE 5 Add Add 7236 18TH AVE 5 & 49TH ST 5 Add 7524 49TH ST S & 20TH AVE S 7446 49TH ST S & 24TH AVE S Add Add 7521 49TH ST S & 21ST AVE S

Clever Devices

Geo-Path Modification

Once a stop has been added, tracing of the path to the stop will be required. To edit a route in CleverWorks<sup>®</sup> the user will click on "Edit Route" which will allow the user to select the path they would like to edit. To create a new path the previous one will have to be deleted. When selecting the path that will be deleted, the area where alterations are taking place will be highlighted in red with an arrow at both ends. Once the path has been selected, clicking "Delete Selected" will remove the preexisting path. The user will then use Data Tracing to define routes modified route.

# Aves S

### 1.3.4.3 Route Data Tracing

**Data Tracing** refers to how geo-spatial data is defined and managed using CleverWorks<sup>®</sup>. CleverWorks<sup>®</sup> provides the ability to make various modifications to routes such as adding new stops, existing stops, and modifying geo-paths to optimize how route variations are operated using map-base tools.

### 1.3.4.3.1 RouteTrack Option



To improve the efficiency of performing edits to attributes within a route, the RouteTrack module/stand-

alone tool can be employed. This tool provides users with the ability to trace a path between route stops using mapbased tools. This utility is powered by Google Maps which helps to ensure the most up to date maps are displayed. As a result of utilizing Google Maps most features supported by Google Maps are accessible such as hybrid view.

This module possesses the ability to automatically collect a route based on the path the user has roughly defined and validated with the aid of Google.

In the event the path received from

Google is not sufficient for the





### Figure 5 RouteTrack

respective mode of transportation, RouteTrack provides the ability to override Google and utilize the path defined by the user as the final path, populating the manually defined path with waypoints. PSTA user will be empowered with the ability to perform map based data tracing for specific path segments or an entire route. Once a path has been removed the user will have the ability to draw a new path on the map which will be displayed in green. Once the new path has been drawn, clicking "Generate" will render a new path which is compiled intelligently base on traffic rules to ensure the accuracy and validity of the route alteration by RouteTrack.

### 1.4 Audio Management



CleverWorks<sup>®</sup> has employed a segmented audio management scheme to efficiently present only what is necessary to PSTA's users. This system consists of an Inventory where all audio can be viewed and previewed. Once a record exists within the Inventory, the record can be assigned to a specific category to serve a unique urpose. An audio record can be assign as a Public Service, Route, Stop, Transfer, ocation Based, Bay, or Route Prefix announcement. Audio within the system is used

to provide automatic vehicle announcements as PSTA's vehicles complete their day to day services.

### 1.4.1 Inventory

When PSTA's users navigate to the audio inventory, a grid will be displayed with all audio records within the existing database. At a glance, users will be able to identify audio records within the grid or search based on the assigned ID or description. Once a record of interest has been found from the existing view the record's status, type, and language can be reviewed.



$\subseteq$	Search P ID C Description			Request Rep	Add	Audio
ID	Description	Status	Туре	Language	Preview	
8480	PLEASE KEEP YOUR FEET OFF THE SEATS	Unverified	Recorded	English	*	×
8478	PLEASE FOLD STROLLERS AND CARTS AFTER YOU BOARD TH	Unverified	Recorded	English		*
8476	WANT TO COMPLIMENT YOUR BUS DRIVER? CALL THE INFOL	Unverified	Recorded	English	•	*

### **Figure 6 Audio Inventory**

Additionally, users will have the ability to preview the audio record by clicking on the ▶ play icon. Once the preview icon is clicked the audio player will appear which will display the audio description with controls to advance or rewind the audio file.

PLEASE FOLD STROLLERS AND CARTS AFTER YOU BO		AFTER YOU BOARD TH
Ш		00:00 / 00:09

📰 Request Report

+ Add Audio

To preform further actions such as approving the audio, clicking on the chevron will display all the attributes that are applicable to the audio record. Within this view PSTA's users will have the ability to determine whether or not the audio should be approved for service, flagged to be recorded or re-recorded, assign frequently used records as a sequence hot key,

478	PLEASE FOLD STROLLERS AND CARTS AFTER	R YOU BO	OARD TH	
	Attribute	Setting		
	Approved		OFF	
	Audio Request		OFF	
	Sequence Hot Key		OFF	
	Language	Englis	h -	
	Save Cancel			

and define the language of the audio record. Once the review process is complete, clicking save will commit the changes and cancelling will revert the record to its previous setting, and delete will remove the record permanently.

If the record has been flagged for recording, the user will click "Request Report" button. This will produce a report of the audio records flagged for recording. This report can then be printed or emailed.

To add an audio record PSTA's users would simply click on the "Add Audio" button. Clicking this button will display a window with fields for assigning the

audio record's description, type, language, and enable or disable the sequence hot key. The type section will allow the user to define the audio record as text-to-speech. The text-to-speech option will provide PSTA with a means of expediting the development of new audio records in a more timely and cost efficient manner because voice talent is not required.

### **1.4.2 Public Service Announcements**

Inventory PSA Selecting the PSA tab allows PSTA's users to access all public service announcements within the database. Similar to the inventory, all public service announcements are visualized in a grid that displays the record's ID, description, assigned routes, a preview icon, and a chevron to

expand the record. Once the record is expanded all attributes specific to Public Service Announcements is displayed.



3756	PROPER ID IS REQUIRED FOR REDUCED FARE	S ON PSTA
	Attribute	Setting
	Random	ON
	Random Frequency	60
	Enable Schedule	ON
	Enable Date/Time	6/1/2012 12:30:00 AM
	Disable Date/Time	6/1/2013 11:59:00 PM
	Enable TCH	ON
	All Routes	ON
English		
	SignText	PROPER ID 11
	Assigned Audio	PROPER ID IS REQUIRED FOR REDUCED FAF
	Save	

**Figure 7 Public Service Announcements** 

PSTA's users will have the ability to define whether or not the audio will be played randomly and the frequency at which the audio record is played. Each audio record will also have the ability to be scheduled to play only on certain dates at specific times. Each of the PSA records will also have the ability to be displayed to the operator on the mobile data terminal (MDT) so the operator can choose to play the announcement manually. Typically, most PSA's are assigned to all routes but in the event the announcement is specific to particular routes, the user will have the ability to define a group of routes or individual routes

the announcement is to be played. Moreover, PSTA's users will have the ability to define the sign text associated with the PSA. To the right of the text a counter is displayed that lets the user know when they have reached the length limitation of the sign text.

If a new PSA is required, PSTA's users can effortlessly add a new public service announcement by click the "Add PSA" button. This will display a dialog window were the user will be able to define the basic attributes of the public service announcement displayed in the drop down drawer. Once all attributes have been defined, the new public service announcement record will be created and final alterations can be made.



### **1.4.3** Route Announcements

To configure and update audio associated with specific routes, PSTA's users will navigate to the route tab which will display a grid with all of the routes and variations within the database. The audio records listed in this section typically consist of the destination audio specific to the route. Additionally to provide PSTA with enhanced abilities to customize route announcements, the user will have the ability to

enable or disable the destination and/or route audio separately.

Enable Route Audio	ON	Enable Prefix : False
Enable Dest Audio	ON	Enable Prefix : False

Likewise, CleverWorks<sup>®</sup> provides the same level of control to determine whether or not individual prefixes are played for route and/or the destination portion of audio announcements. Within the grid, the route ID, variation assigned, and description is displayed along with a control to preview the audio record.

Clicking the chevron will produce all details for the audio record. Each audio record has the ability to support multiple languages. If multiple languages are utilized for the audio record, multiple tabs will be displayed across the top of the details. When the route audio is enabled, the route sequence audio will be displayed first in the details section. The audio assigned to the record is based on the audio stored in the inventory. Clicking "+ Sequence" will allow the user to add additional existing audio to the

1	N1	GATEWAY MALL/TYRONE SQUARE MALL		
English				
	Route Sequenc	e Audio		
	🔗 Sequence		ROUTE 1	
	+ Sequence	+ Delay		
	Destination Sec	quence Audio		
	🔗 Sequence		GATEWAY MALL VIA 22ND AVE NORTH	
	🔗 Delay (s)		0.225	
	🖉 Sequence		WELCOME ABOARD PSTA	
	+ Sequence	+ Delay		
	Save Ca	ancel		

announcement. When a new sequence line has been added, beginning to type will produce a list of results returned based what exist within the inventory. Delays can also be added by clicking "+ Delay" and defining the length of the delay in seconds. If a user is not pleased with the sequence of the audio file, the audio can be adjusted by clicking and dragging a sequence or delay line to the desired position. Once alteration are complete the user can simply save the record by clicking the save button in the drawer.

If specific route or variation does not have audio associate with it an error will appear on the data integrity "Summary" page.



### 1.4.4 Stops

To manage stop audio PSTA's users will navigate the grid where all stops are displayed by clicking on the "Stops" tab. This will display a grid with all stops available within the database. The grid will display the Stop ID, Stop Description, controls to preview the audio record, and a chevron to expand the record to view details.

Stop ID	Stop Description		
1044	CENTRAL AVE & 56TH ST S		
English			
A	Attribute	Setting	
5	SignText	56TH ST S	11
2	Sequence Audio		
	Ø Sequence	CENTRAL AVE	
	Ø Sequence	+	
	Sequence	56TH ST S	
	+ Sequence + Delay		
	Save Cancel		

Figure 8 Stops Audio Management

All stops can be configured to support multiple language sign text and audio. When a stop is configured to support multiple languages there will be a tab displayed above the details identifying the configuration section for the language. Within each tab PSTA's users will have the ability to define the sign text and audio for the stop. As a user defines the sign text a countdown will be displayed to the right of the text to ensure the user does not exceed the sign's maximum character limit ensuring optimal displaying of the text. Once the sign text has been defined, PSTA's users can proceed to

define the audio for the specific stop. Stop audio is defined with the same methods used to define route audio by adding delays and audio files from the inventory using the "Sequences Audio" section. If after previewing, the audio is not in an acceptable order; PSTA's users will have the ability to reorder the announcement by dragging and dropping the individual sequences in the desired order. Once the editing is complete simply click "save" to commit the changes to the database.

If a stop does not already have audio and sign text defined, an error will appear for the specific record on the data integrity "Summary" screen.

### 1.4.5 Audio Import

CleverWorks<sup>®</sup> provides extensive audio management capabilities but newly created audio which is not assigned as text-to-speech will require an audio file. As a result, PSTA's users will have the ability to import audio files based on audio requests created while making alterations to audio records. The import process for audio is similar to all the other CleverWorks<sup>®</sup> import procedures. The user will specify the directory where the audio file is located and click "Import". This will allow PSTA to manage audio recorded by an external voice talent. The imported audio files are associated with their respective records based on identifiers within the file's name.



### 1.5 Canned Message Management



CleverWorks<sup>®</sup> provides an enhanced user friendly interface for managing predefined text messages utilized on vehicles and by dispatchers. When PSTA's users navigate to "Messages" the default tab displayed is the data integrity summary screen which will provide status updates of whether or not any errors exist specific to messages. The existence of errors will directly affect the percent complete displayed to the user by the er at the top of the page. Additionally, a user audit trail specific to messages will be

displayed in the right column of the "Summary" page to provide a comprehensive overview of the canned messages status.

### 1.5.1 Inventory

Groups

All predefined messages are stored and managed in the inventory section of the "Messages" screens. Clicking on the "Inventory" tab will visualize a grid with all canned messages displayed. PSTA's users will have the ability to search this grid based on the description, group, or service type each message is assigned.

### 1.5.1.1 Groups & Service Types

Service Types

Messages are assigned to groups based on the product and mode of service. Furthermore,

messages can be assigned to a "Service Type" to provide only the messages a vehicle's operator will need to complete their day-to-day duties. Clicking the "Groups" or "Service Types" button will display the current message groups or service types and provide the ability to add new groups. Messages are easily assigned to a group or service type via click and drag control which will cause the assignee tab to highlight when it is selected. Subsequently the cell on the grid that displayed the group or service type for the message will be updated to reflect the change.

Message Groups	Add
CAD	
Busware	
REQUESTS	0 \$
EMERGENCY	0 00
Maintenance	

### 1.5.1.2 Message Details

This will display the message's rank, caption displayed on the mobile data terminal, an alternative caption, the assigned group, service type, and a chevron to view the records complete details.

Attribute	Setting	
Rank	1	
Priority	1	
Description	RESTROOM BREAK	
Alternate Description	RESTROOM BREAK	
Group	Busware - REQUESTS	•
Туре	Bus	-
Save Cancel		Delete

### **Figure 9 Message Details**

When the details are displayed PSTA's users will have the ability to edit the message's rank, priority, description, alternative description, group, and type. The ability to edit the fields will provide PSTA's users with the ability to update unused messages to a message that will be highly utilized or from this view the message could be deleted.

### 1.5.1.3 Add Message



Adding a new message can be completed by clicking the "Add Message" button at the top of the grid. A dialog box will appear on top of the grid with all basic message attribute fields. Once the dialog box has been filled out with the required information the message can be saved. This will result in the message appearing in the grid with the rest of the existing messages and any further edits to the message can be completed in the expandable message drawer.

Attribute	Setting	
Rank	1	
Priority	1	
Description	Schedule Adjustment	
Alternate Description	Schedule Adjustment	
Group	Busware - REQUESTS	•
Service Type	Commuter	•

### **1.6 Geofences**

CleverWorks<sup>®</sup> provides the ability to configure and define geofences. A geofence is a virtual perimeter of a real-world geographical area. This perimeter is defined by a series of coordinates containing latitude and longitude values. Geofences can be used in many ways. A geofence could warn a driver of a low bridge ahead, initiate diesel particulate filter (DPF) regeneration, trigger public service announcements, and trigger location based announcements such as stops, transit centers, stadiums, etc...



Figure 10 Geofence Map View

The ability to define geofences on a map provides PSTA's users with the ability to confirm the selected area is accurately defined. Additionally, as a result of the map being powered by Google,

PSTA's users will have the ability to toggle between Map, Satellite and Hybrid views to obtain the highest level of detail to ensure the desire area is defined correctly. Furthermore, the map is accompanied by filters with the ability to display GTFS information and stops that currently exist within the scheduling database. When scheduled stops are the displayed,

the user will have the ability to select them on the map to receive further details and display the stop



window to ensure the geofence's function will not conflict with the stop's configuration unless this is the desired results.

### 1.6.1 Inventory

GeoFences

OPF Roof	+
O Low Object W	arning +
Ulmerton & Rt	19
	-
Name:	Ulmerton & Rt 19
Name: Send Options:	Ulmerton & Rt 19 On Both Entry and Exit
Name: Send Options: Heading:	Ulmerton & Rt 19 On Both Entry and Exit

Clicking on the "Inventory" tab will display all geofence types and a map. Each of the geofence types are designed to perform a specific operation once enabled. Selecting any of the fence types will display all of its respective geofences. Clicking on any of the geofences will expand the details for the fence and display it on the map. The controls displayed under the geofence will allow the user to edit, save, cancel or delete the selected fence. To add a new geofence simply click the plus displayed towards the right of the geofence type which will assign the new fence to the selected type. A record will be created that will need be completed and the fence will be defined bighest level of accuracy.

using the map to ensure the highest level of accuracy.



### **1.6.2 Geofences Data Integrity**



By navigating to the "Geofences" tab in the main menu bar PSTA's users will be taken to the geofence data integrity "Summary" screen. This screen will provide users with detailed error reporting for all geofences within the database. Each error message is tagged with a high, medium, and low priority level so at a glance a user can determine whether or not the specified error is severe or a negligible issue. If the issue is negligible, the user will have the ability to ignore the error so it does not have a negative impact on the overall completion status provide by the "Geofence Meter" displayed at the top of the screen.

### **1.7 Data Export**

Once a database has been configured with all required settings, the database can be exported so it can be distributed to the intended fleet. The data integrity dashboards provide a clear indication of when the schedule is ready to be exported.

Export cdu and mdb fil adjustments, you must deployment.	es for use by Clever Device also publish the database	es products. Note: If you ar once the export has been	e using dynamic tested and is ready for
Select the directory to	download Bustools Compa	itible Data Files.	
Output Directory:			
		Browse	

Once a satisfactory point of completion has been achieved the user can simply havigue

to the "Export Data" tab in the side navigation bar, select an output directory, and click "Begin Export". Exporting the database will produce a series of files which will be utilized by all Clever Devices solutions to support PSTA's intelligent transportation system.



### **1.8 Route Simulator**

Route Simulator is designed to display and simulate a virtual bus running routes or schedules. Route Simulation provides PSTA the ability to simulate and visualize the prepared route data prior to distribution to the fleet. PSTA will be able to verify stops, announcements, signs, and geofences perform as planned. This quality check will provide PSTA with the ability to distribute new and/or modified routes and trips with confidence.

### 1.8.1 **Plotting a Route**

Once the user has selected a route from a list of all routes found in the database, the user sees a Google map display of the routes stops, time points, waypoints, and TSP receiver locations.



Figure 11 Route Simulator

Certain markers, such as stop names and waypoints, are only visible at closer zoom levels. If you do not see these markers, increase the map zoom level until they appear.

The ability to *Simulate* a bus on the selected route is provided. *Navigation Control* displays information for all buses that are actively simulating a route, and provides controls for the user to control the virtual bus. *Simulating a Schedule* allows the user to simulate a bus running a trip, or a series of trips within a schedule.





### **1.9 Dynamic Scheduling Option**



If PSTA selects this optionally priced module, Dynamic Scheduling will provide PSTA with the ability to dynamically adjust scheduled routes to supports changes during a sign-up. The dynamic adjustment module provides the ability to clone or cancel existing work, reassign the service type of a route, and publish updates to the fleet in real-time including detour management. Providing the ability to make such

changes will provide PSTA with an unprecedented amount of control to ensure efficient operation of the agency.

### **1.9.1 Publish Dynamic**

Prior to making dynamic adjustments the user will have to publish the signup so all changes will be reflected in the current data set. Once the schedule and BusTools data has been imported, the data is stored in the staging database to ensure the highest level of data integrity within the live database. As a result, once the signup is initially imported it is placed in the staging database until published. Prior to

publishing the imported schedule, all dynamic adjustment will only impact the cached schedule data. To complete this action the user will simply navigate to the "Publish Dynamic" tab and click "Publish".

Publishing Database	_
CleverWorks is currently publishing the schedule to the lip process you can exit the application and the publish will of The current publishing status is: Executing phase 3 of 4.	ve database. During this continue uninterrupted.
	Cancel

### 1.9.2 Cloning Work

Within the dynamic scheduling module PSTA's users will be presented with a graphical depiction of the

selected piece of work along with individual trips and timepoints. Additionally, each piece is displayed with the scheduled time so a user will be able to make intelligent modifications based on projected runtimes. Once a user decides on a piece of work to clone, rightclicking on the grid will allow the user to select the clone option. To clone a piece of work a user will define the effective start and end date of the clone. If a block has been selected, the user will have the ability to clone specific trips within the block. All affected trips will be displayed with their start and end times displayed so the user can clearly see what trips are selected and will be able to effortlessly determine the effects of applying an offset to the clone.

101					x c
Effective Dat	es				
Start Date: 2/1	11/2014 15	Enc	i Date:	2/11/2014	
Select Trips					
Start Trip:	14985 (07:15	5:00 To 07:38:00)		•	
End Trip:	14990 (10:25	5:00 To 11:00:00)		•	
Affected Trips:	Trip	Start Time	End Tim	ne	
	14985	7:15:00 AM	7:38:00	AM	
	14996	7:50:00 AM	8:15:00	AM	
	14986	8:15:00 AM	8:38:00	AM	
Offset					
Offset in minutes (	can be positive or	negative):			
LogOn Value	es				
Primary LogOn (W	orkId2):	TripNumber			
Secondary LogOn	(WorkId1):	TripID			
			C	ancel Ok	



### **1.9.3** Cancelling Work

Start Date: 2/	11/2014 15	) En	d Date: 2/11/2014	15
Select Trips				
Start Trip:	16493 (05:0	)5:00 To 05:20:00)	•	
End Trip:	2108 (07:40	):00 To 08:20:00)	•	
Affected Trips:	Trip	Start Time	End Time	
	16493	5:05:00 AM	5:20:00 AM	
	1025	5:20:00 AM	6:05:00 AM	
	2093	6:05:00 AM	6:50:00 AM	
	16494	6:50:00 AM	7:35:00 AM	
	2108	7:40:00 AM	8:20:00 AM	

PSTA's users will have the ability to cancel trips from a specific block if necessary. Similar to cloning, cancelled trips will have a start and end date. Rather than cancelling an entire block CleverWorks<sup>®</sup> will provide PSTA's users with the ability to cancel specific trips which will be displayed in the grid below the trip selection control. All selected trips are displayed with their start and end time to ensure the user is aware of the effect of cancelling the trips from the block.



### 2 Cost Benefit Analysis

Working with PSTA, Clever Devices is providing this Cost Benefit Analysis (CBA) that shows a Return on Investment (ROI) of 5 years. This ROI is a realistic number based upon expenditure data associated with route management using BusTools<sup>®</sup> verses cost savings verified by customers in the field. Empirical data collected shows that for every 28 hours expended in data collection and using BusTools<sup>®</sup>, 23.5 hours are saved using CleverWorks<sup>®</sup> Data Tracing.

Included in the BusTools<sup>®</sup> analysis is the existing cost of software maintenance, data collection hardware warranty, database support contracted to Clever Devices, PSTA labor cost provided by PSTA which included Data Collection, working with BusTools<sup>®</sup>, annunciations, and voice talent.

CleverWorks® cost includes PSTA's initial investment and software maintenance cost.

Purchasing CleverWorks<sup>®</sup> provides many intangible benefits not available using BusTools<sup>®</sup> that Clever Devices has demonstrated. These include the ability to create or modify your routes from a computer workstation without the need for a data collection vehicle. Use Google's street view to see the bus stop and verify its location, features, and accessibility. Simulate a route, seeing what is displayed on the signs and what announcements are made as the vehicles travels along the simulated route. Graphical geofence definition for prompting businesses and attractions along a route verified with route simulation. These features will redefine how PSTA manages routes, stops, announcements, signs, and more.





### **3** Implementation Plan

Clever Devices implementation plan will provide the following:

- A project plan to address milestones, dependencies and expectations
- A project manager will be assigned to this project and will be the single point of contact for Clever Devices.
- Bi-Weekly or Monthly project conference calls will be held throughout the project

### 3.1 **PSTA Responsibilities**

One of the many key aspects to a successful project is a clear definition of roles and responsibilities. It is very important that there is a clear communication between Clever Devices and PSTA to ensure a successful deployment of the project in an on-time and within budget manner. To that end, listed below are PSTA's responsibilities to help ensure this success. Depending on the final contract Statement of Work, this list may change to meet additional project requirements.

- 1. Assign a project manager who will have the ability to coordinate on behalf of PSTA
- 2. Provide basic infrastructure (power, work space, access to facilities, equipment storage area, suitably equipped training room) required at each facility for installation of the system and provide support in coordinating logistical arrangements.
- 3. Ensure all relevant team members participate in project status conference calls and attend all project
- 4. Provide support in the scheduling of training and related logistics and ensure that necessary staff participates in training sessions
- 5. Provide timely review, comment, and approval of all requisite documentation
- 6. Provide Clever Devices and its subcontractors with remote access to work stations and servers for central system deployment as well as support and troubleshooting.
- 7. Report problems using standard format agreed at the onset of the project
- 8. Our proposal is based on the fact that all existing or 3<sup>rd</sup> party software, systems, components and equipment are functioning properly and to manufacturers' specifications during all phases of the project. If this is not the case, it is presumed that PSTA will work directly with its provider to resolve any issues
- Purchase and maintain licenses for Microsoft MapPoint 2013 or later, SQL Server 2008 and MS Office 2003 or later.



## 4 CleverWorks<sup>®</sup> Server Requirements

**CPU**: 4 x Virtual CPUs (3 GHz or greater) **Memory**: 16 GB

### HDD: Total space: 700 GB

Drive Letter	Label	Size	Allocation Unit
С	Windows	100 GB	Default
D	DataFiles	25 GB	Default
E	SQL Data	200GB	64K
F	SQL Logs	75GB	64K
G	Temp DB	75GB	64K
Н	Temp Logs	75GB	64K
Ι	Log Files	150 GB	Default

**Operating System**: Windows 2008 R2 (x64) with Service Pack 1 **COTS:** 

- Antivirus Utility
- Adobe Acrobat Reader
- BGInfo Utility
- PA Monitor

- BareTail
- WireShark
- WinZip

### 4.1 SQL Standard Server

Clever Devices CleverWorks<sup>®</sup> solution will utilize Microsoft SQL 2008 R2 Standard technologies. SQL Server Standard Edition includes both the core database engine and add-on services, with a range of tools for creating and managing a SQL Server solution. It can manage databases as large as 524 petabytes and address 64 GB of memory and supports 4 physical processors or 16 cores. SQL Server 2008 R2 Edition will sufficiently power the CleverWorks<sup>®</sup> solution and any additional expansion that may be realized over the next several years.

### 4.2 Server Hardware Requirements

- Windows, AVM Data and Application Log partitions should be installed on SAS 10k or faster drives configured for RAID 1 or RAID 5
- Databases and Database Log partitions should be installed on SAS 15k or faster drives. Database partitions should provide at least 3500 IOPs
- Java runtime will be disabled during system configuration
  - Java 6, update 26 is installed with AVM
  - Clever Devices to verify newer builds
- Software Versions:
  - IIS, Enable FTP, disable all other components
  - o JSP
  - o .Net Framework 3.5 SP1, 4.0

Apache Tomcat 6.0



### 5 Service and Warranty

Clever Devices prides itself on providing the best service and support in the industry. In order to ensure that our hardware and software, which are designed to be free from defects, continue to function properly Clever Devices has developed a maintenance plan for PSTA. Clever Devices' commercial off-the-shelf (COTS) system solution is highly reliable, which minimizes warranty and results in a low total cost of ownership. PSTA can confidently deliver improved service to its ridership and derive maximum return on its investment in technology.

During the warranty period, Clever Devices will furnish the labor, equipment, software, and documentation detailing the operation and maintenance of the system hardware and software necessary to maintain the system in accordance with the warranty. Clever Devices will also provide any software updates and patches, at no cost, while under the warranty period. In addition, the periodic updates may include enhancements to the software that are implemented at the sole discretion of Clever Devices.

The warranty period will commence upon final acceptance. During the warranty period, Technical Support department is available by phone 24 hours a day, 7 days a week, and 365 days a year to assist our customers with issue resolution and to answer any questions.

PSTA will be able to report incidents to Clever Devices' Technical Support department via phone or email:

- Toll-free Technical Support Service: 1-888-478-3359
- E-mail: TechnicalSupport@CleverDevices.com

Once an issue is reported to Clever Devices by PSTA, our Technical Support department will provide remote support through a PSTA approved and authorized network access to assess issues, diagnose problems, update software and data, and retrieve log files.



### 5.1 Basic CleverWorks<sup>®</sup> Warranty

During the maintenance term, Clever Devices agrees to provide basic maintenance services in support of the licensed Software Products. Maintenance services shall consist of the following:

- Software Updates: Customers with valid Software Maintenance Agreements will be entitled to Software Updates for all licensed products. Software Updates may incorporate corrections of any substantial defects, or fixes of any minor malfunction. In addition, Software updates may include enhancements to the Software that are implemented at the sole discretion of Clever Devices. Software updates does not cover Clever Devices' labor, training, hardware upgrades, data, or data backups.
- **Software Upgrades:** Customers with valid Software Maintenance Agreements will be entitled to Software upgrades for all licensed products. Software Upgrades do not cover Clever Devices' labor, training, hardware upgrades, data, or data backups.
- Software Error and Defect Corrections: Clever Devices shall be responsible for using all reasonable diligence to correct verifiable and reproducible errors when reported by the maintenance team to Clever Devices in accordance with its standard reporting procedures. Reported defects will be reviewed by Clever Devices. Reported defects will be defined as:
  - **Defect:** To be corrected by the next maintenance release.
  - Enhancement: Desirable enhancement which will be reviewed for inclusion in the next maintenance release
- **Error and Release Testing**: Error and release testing will be performed at Clever Devices' offices. Errors reported will be tested on a test platform in a controlled environment. If applicable, the Customer will supply Clever Devices with a copy of the most current database associated with the version of software for which errors have been reported.
- **Technical Support:** Clever Devices shall provide technical phone support during the maintenance period for software issues. Clever Devices will escalate issues to third party vendors for Clever Devices' Products running third party application software.



### 6 Training

Effective training is essential to the successful operation of the system. Clever Devices provides professional on-site and on-line WebEx based training that will transfer the appropriate level of technical and system operations knowledge to the appropriate PSTA personnel. Our proposed training plan includes all labor, instruction, materials, and services necessary to provide PSTA personnel with the means to transition to and operate the new system with minimal or no impact to PSTA operating procedures.

Clever Devices will schedule the training to accommodate PSTA and the deployment schedule. It is ideal to schedule training within a short time prior to usage, so that PSTA personnel are familiar with the system. Clever Devices offers CleverWorks<sup>®</sup> training for the managers, planners, and administrators.

Included in this proposal are two courses essential to the successful implementation of CleverWorks<sup>®</sup> user training and administrator training.

CleverWorks <sup>®</sup> User Training Syllabus			
Audience	Personnel responsible for PSTA scheduling and planning.		
Prerequisites	Basic to advanced knowledge of Microsoft Windows; knowledge of PSTA		
	schedule and operations		
General objective	To enable users to understand, operate and manage all functionalities of		
	CleverWorks <sup>®</sup> systems that work collaboratively with the IVN and all system		
	components.		
Overview	Clever Devices will provide PSTA with the ability to configure and manage their		
	own database through CleverWorks <sup>®</sup> database configuration training. These		
	essential tools empower an agency to make changes to announcements, schedules,		
	routes, stops, etc. The training will cover the topics below which are essential to		
	configuring a database for a new sign up and maintenance going forward.		
Format	Standard individual on-site user instruction		
Topics	Performing route and stop edits within CleverWorks <sup>®</sup>		
	<ul> <li>Assignment of route variations to export depot</li> </ul>		
	Performing a pre-export review		
	<ul> <li>Performing export from CleverWorks<sup>®</sup> and reviewing export files</li> </ul>		
	• Re-verify all items in fourth bullet above		
	CD Simulator (if purchased)		
Frequency	Once upon initial installation of system		
Manuals utilized	Handouts include CleverWorks <sup>®</sup> System Guide		
Location	PSTA provided centralized training facility		



	CleverWorks <sup>®</sup> Administrator Training Syllabus		
Audience	Personnel responsible for the administration of PSTA scheduling and planning.		
Prerequisites	Basic to advanced knowledge of Microsoft Windows; knowledge of PSTA		
	schedule and operations		
General objective	To enable users to understand, manage, administer and operate all functions of		
	the CleverWorks <sup>®</sup> system that work collaboratively with the IVN and all system		
	components.		
Overview	Clever Devices will provide PSTA with the ability to manage and administer the		
	CleverWorks <sup>®</sup> application. This includes setting up the system, importing and		
	exporting databases, setting up users and how to administer the configuration of		
	the system. It will include the CleverWorks <sup>®</sup> User training course as well. The		
	training will cover the topics below which are essential to configuring a database		
	for a new sign up and maintenance going forward.		
Format	Standard individual on-site user instruction		
Topics	System Setup		
	Import and Export schedule databases		
	• Performing route and stop edits within CleverWorks <sup>®</sup>		
	Assignment of route variations to export depot		
	• Performing a pre-export review		
	<ul> <li>Performing export from CleverWorks<sup>®</sup> and reviewing export files</li> </ul>		
	• Re-verify all items in fourth bullet above		
Frequency	Once upon initial installation of system		
Manuals utilized	Handouts include CleverWorks <sup>®</sup> System Guide		
Location(s)	PSTA provided centralized training facility		



## 7 Pricing

Clever Devices' pricing has been provided on the following unnumbered pages. This pricing is confidential and proprietary to Clever Devices.



Fax: (516) 433-5088

**CONFIDENTIAL QUOTATION** 

ATTN:	Debra Woodward	DATE:	12/5/2014
COMPANY:	PSTA	FAX:	
EMAIL:	dwoodward@psta.net	CD QUOTE #	014ZZ007 RevB
ADDRESS: PHONE:	3201 Scherer Dr. St. Petersburg, FL 33716 (727) 540-1814	RE:	CleverWorks, RouteTrack, Route Simulator and Dynamic Scheduling

Clever Devices is pleased to submit the following quotation, subject to the terms and conditions listed below.

Item	Qtv	Description	Unit Price	Extended Price
1	1	CleverWorks, RouteTrack and Route Simulator Software License	\$110,000.00	\$110,000.00
2	1	Labor	\$111,530.00	\$111,530.00
		Includes: - BusTools to CleverWorks Database Conversion		
		- Quality Assurance Testing		
		- Deployment Services		
		- Project Management		
		- Training Session		
		- Travel Expenses		
			Subtotal	\$221,530.00
		Clever Devices Manage	ment Discount	\$(11,076.00)
			Total	\$210,454.00
Optio	n Item		<u> </u>	<u> </u>
1	1	CleverWorks, Route I rack and Route Simulator SW maintenance year 2	\$14,850.00	\$14,850.00
2	1	CleverWorks, RouteTrack and Route Simulator SW maintenance	\$15,296.00	\$15,296.00
		year 3	<b>\$75 405 00</b>	
3	1	Dynamic Scheduling	\$75,465.00	\$75,465.00
		- DCC upgrade		
		- Deployment		
4	1	Dynamic Scheduling SW Maintenance year 2	\$6,835.00	\$6,835.00
5	1	Dynamic Scheduling SW Maintenance year 3	\$7,040.00	\$7,040.00
6	1	Text to Speech Functionality (up to 5 seats)	\$6,512.00	\$6,512.00
		CleverWorks generated announcement - Text converted to audio and an audio file is created for DB export		
7	1	Text to Speech License SW Maintenance year 2	\$879.00	\$879.00
8	1	Text to Speech License SW Maintenance year 3	\$905.00	\$905.00

Page 1 of 6



Note:

• Post Contract award, PSTA and Clever Devices will establish a schedule for deployment.

### **Payment Milestones:**

- Base:
  - o 25% Upon Receipt of Order
  - o 25% Upon Installation of Software at PSTA
  - o 40% Upon Deployment of CleverWorks Database
- Database
  - 10% Upon Completion of Training
- Options
  - o 40% Upon Issuance of PO
  - o 50% Upon Installation of Software
  - 10% Upon Completion of Training

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# Clever Devices

### **CLEVER DEVICES' STANDARD TERMS AND CONDITIONS OF SALE**

### 1.1 Software License

### REQUIREMENT FOR END-USER LICENSE AGREEMENT

• Any entity procuring Clever Devices Ltd ("Clever Devices") licensed products which is not the end-user of the licensed product ("Non End-User"), such as but not limited to an Original Equipment Manufacturer to which Clever Devices is a supplier, is obligated to provide Clever Devices with the End-User License Agreement (covering the software licenses associated with the contents of this quotation/proposal) signed by an authorized official of the End-User. Failure by a Non End-User to provide such a properly executed Clever Devices End-User License Agreement to Clever Devices shall make the Non End-User liable for any misappropriation or misuse of Clever Devices' products.

### OBLIGATIONS OF NON END-USER PROCURING ENTITIES

• Non End-Users are granted the right to install the licensed products and to test their functionality in the End-User designated space or equipment. Non End-Users do not have licenses to otherwise use or operate Clever Devices' products and no other licenses or rights to use are provided or implied by this Agreement.

### 1.2 General

- Prices are quoted in US\$ unless otherwise specified.
- Prices do not include shipping, sales tax or duties, which will be added if applicable.
- Unit Prices are good only for the total number of units quoted. Lesser quantities may command a higher per unit cost because of certain fixed costs contained in the quote.
- Prices quoted herein are valid for ninety (90) days from the date of quotation or proposal, and are applicable to the quantities covered by this quotation; any change in quantity, delivery or elimination of one or more items may require a revision to the prices quoted.
- Orders for one bus set (i.e. pilot bus) must be part of a complete quantity order or must be accompanied by a Letter of Intent to order the entire quoted quantity.
- Three percent (3%) Annual Escalation will apply for shipments and services beyond 2014.
- Clever Devices shall be paid for the items quoted above as follows:
- Base:
  - o 25% Upon Receipt of Order
  - 25% Upon Installation of Software at PSTA
  - o 40% Upon Deployment of CleverWorks Database
- Database
  - 10% Upon Completion of Training
- Options
  - 40% Upon Issuance of PO
  - 50% Upon Installation of Software
  - 10% Upon Completion of Training
  - No customer account shall be credited for parts returned without prior written authorization from Clever Devices and receipt of such goods.
  - o Clever Devices' General Terms and Limits of Liability apply.
- Unless specifically advised in the quote, lead time for Hardware and Services will be as advised by Clever Devices upon receipt of order. Standard lead time for hardware is sixteen (16) weeks from receipt of order, but Clever Devices stocks standard parts and if



available will be shipped earlier. Delivery is F.O.B. Clever Devices Ltd., 300 Crossways Park Drive, Woodbury, NY 11797

- Clever Devices reserves the right, without advance notice, to make engineering or production changes, to include substitution of part numbers and/or vendor sources for components that may affect the design or specifications of its products, provided said modifications will not materially affect the performance of the product.
- Unless negotiated and agreed to otherwise in writing, in no event is Clever Devices liable for consequential damage from late or non-delivery, malfunction or failure of its products, nor is Clever Devices liable for damage resulting from faulty installation. If Clever Devices performs repairs resulting from damage caused by installation, it will invoice the original installer for the cost of such repair.

### 1.3 CLEVER DEVICES' WARRANTY POLICY

Clever Devices' warranty obligations are limited to the terms set forth below:

- 1) <u>NEW MANUFACTURED PRODUCTS LIMITED WARRANTY</u>
  - a) Clever Devices guarantees for a period of one (1) year from original factory shipment that each product is free from defects in material and workmanship.
  - b) If the product fails to operate as specified and has not been tampered with or abused during this warranty period, Clever Devices or its authorized service agents shall either repair or replace any defective part or the product free of charge. Clever Devices will supply new replacement products for items found to be defective during the original warranty period.
  - c) Bench fees will apply to any product received by Clever Devices with no-trouble-found. Products returned with failures caused by improper use or installation will be repaired and the appropriate charges will apply. Such services by Clever Devices shall be the original purchaser's sole and exclusive remedy. Clever Devices shall not be responsible for the cost of removal or installation of warranted products unless a prior written agreement has been reached at the time of the original purchase contract. Clever Devices' labor rate table will apply for all product replacement time.
  - d) Clever Devices will repair or replace, at Clever Devices' option, any defective product under warranty. Clever Devices will not honor credit requests on any defective used product. Product repair or replacement will be the only option available to the original Purchaser. At the discretion of Clever Devices, limited quantities of restockable, unused product may be returned for credit. The product must be unused and in the original unopened containers. A 30% restocking fee will be charged and a credit will be issued only after the product has been received and inspected.
  - e) This warranty does not apply: (a) to damage caused by accident, abuse, misuse, misapplication or improper installation (b) to damage caused by conditions outside Clever Devices specifications including but not limited to vandalism, fire, water, temperature, humidity, dust or other perils (c) to damage caused by service (including upgrades) performed by anyone who is not a Clever Devices Authorized Technician (d) to a product or a part that has been modified without the written permission of Clever Devices or (e) if any of Clever Devices' serial number has been removed or defaced.
  - f) Clever Devices shall not be liable for any special, incidental or consequential damages for loss, damage directly or indirectly arising from customer's use or inability to use the equipment either separately or in combination with other equipment, or for personal injury or loss or destruction of other property, or from any other cause.

### 2) WARRANTY REPAIR POLICY

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a) A replacement or repaired product assumes the remaining warranty of the original product or 90 days, whichever provides longer coverage for the original purchaser.
 When a product is exchanged, any replacement product becomes the original purchaser's property and the replaced product becomes Clever Devices' property.

### 3) OBTAINING WARRANTY SERVICE

- a) The original purchaser is responsible for returning any defective products to Clever Devices after obtaining a Returned Merchandise Authorization (RMA) number from Clever Devices' Customer Service Department at 888-478-3359. No products will be accepted without an RMA number. When requesting an RMA number, be sure to have the serial number of the equipment available.
- b) The original purchaser must package the product properly for return shipment. Clever Devices is not responsible for any damage to the product caused during transit or for any package lost by the shipping company.
- c) The original purchaser assumes all cost in shipping the defective product to Clever Devices and Clever Devices will assume the cost in shipping back to the customer. All replacement/repaired products are shipped UPS Ground unless a rush is requested. The cost of shipping using any mode other than UPS Ground is to be paid by the original purchaser.

### Ship to:

Clever Devices Ltd. Attn: Service Department RMA # \_\_\_\_\_ 300 Crossways Park Drive Woodbury, NY 11797

### 1.4 CLEVER DEVICES RETURN AND EXCHANGE POLICY

### **RETURNS**

Clever Devices does not accept returns without a Returned Material Authorization. Custom-built equipment or merchandise specifically ordered for you is not returnable. Where return of unused merchandise is at the request or convenience of the customer, a 25% restocking fee will be charged. No unused merchandise will be accepted for return later than thirty (30) days after shipment. All returned merchandise shall be sent freight prepaid and properly insured by the customer. Clever Devices reserves the right to select the method of shipment. Should you receive merchandise damaged in shipment, it is your responsibility to file a damage claim immediately with the delivery carrier.

### 1.5 CLEVER DEVICES NON-WARRANTY SERVICE POLICY

### 1) NON-WARRANTY REPAIR POLICY

a) Non-warranty repairs made by Clever Devices carry a limited repair warranty of 90 days on services and replacement parts only. Defects in our repair work or any parts replaced will be corrected at no charge if the defect occurs within 90 days from shipment from our facility.

### 2) <u>FIELD SERVICE</u>

a) Field service calls will be made to customer's facility upon request. Time, expenses, and materials will be charged, as outlined below, unless other arrangements are made in advance. Field Service is treated as any repair. All travel must be pre-approved and is based upon actual prevailing airfare, hotel/motel rooms and Per Diem rates. Contact Clever Devices for current Per Diem rates.

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GENERAL FIELD SERVICE RATES:			
Transp	ortation	Actual cost* using commercial coach or business class	
_		air, first class rail, bus, rental car, and cab facilities as	
		applicable, including transportation to and from the	
		airport.	
Mileag	e Allowance	IRS allowable rates + Clever Devices' allowable	
C C		burdens.	
Personal Expenses		Per Diem rates	
Basic Rates		150.00** per hour for actual time in customer's plant,	
		plus a flat rate for round-trip travel time.	
Miscellaneous		Actual charges for other necessary items such as tolls,	
		parking and freight charges*.	
*	Charges may be subject to a 12% administrative fee.		
**	Rates may vary because of weekend/holiday rates, the type of service required, a		
	previously negotiated r	ate and/or personnel involved.	

### 3) NON-CLEVER DEVICES PRODUCT RECEIVED FOR REPAIR

Product received for repair that were not manufactured or supplied by Clever Devices will be logged in and Clever Devices will require that the customer supply us with their shipper number in order to return the product. Such product will be held for a period of up to 90 days and will then be subject to discard, unless alternative arrangements have been agreed to in advance.

Thank you,

Chris Cates Strategic Account manager Transit Matters Here 919-622-8505

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