



# React in real time with the new **DISRUPTION MANAGEMENT** Module for CleverCAD®

## Disruption Management Module for CleverCAD®

It happens every day. You publish a schedule, and some type of service disruption occurs that requires you to adjust it. Sometimes it is something big, like a major snowstorm that paralyzes your city or a water main break that clogs up a major roadway. However, often, it is just road congestion or a traffic accident that pushes your vehicles off schedule. While you cannot control these unexpected circumstances, you can control how you react to them.

However, if your response process is manual and parts of your organization are not in the loop on the new plan of



service, there can be confusion across departments. Most importantly, when your customers do not know what's going on; when they are waiting for a vehicle that doesn't come or even worse, one passes them right by, they get frustrated and angry. Schedule changes not only create a customer service problem, in the age of social media it often creates a public relations problem for you as well.

The **Disruption Management Module for CleverCAD®** reduces the manual nature of the actions taken when a disruption happens and ensures that all systems get updated at the same time. Everyone from your dispatchers, planners, and managers to your drivers and riders have the same service information. Your operation is unified, and everyone is aware of all the changes, as they occur, in real time.

### Real-Time Passenger Updates

Your customers need to get where they are going. They plan their schedule around yours. When your published timetable of service does not match the service you actually provide customers become annoyed. When this happens they may look for alternative means of transportation that they perceive to be more reliable and easier to use.

With the **Disruption Management module for CleverCAD®**, your riders are informed of service changes as they happen, in real time guaranteeing that the information you provide to your customers is always in sync with your operations. When you make a change to your schedule, the system automatically updates your onboard systems including your automated announcements and onboard signs. Digital wayside signage is also updated, so those waiting at a stop will know when a vehicle will arrive.



Your mobile app and your website are updated, so everyone understands what the new schedule is. With real-time information, customers have the accurate information to plan their journey and are less likely to be frustrated by unavoidable service disruptions.

## Improved Operator Information

Without an automated system designed to handle detours and other types of service interruptions, your dispatchers typically rely on a voice call or a text message to the driver of the affected vehicle. No one, except for these two individuals, knows what's happening. There is no formal record of the schedule change which means your reporting and metrics become skewed. The information on the Transit Control Head (TCH) is not updated which can cause confusion or perhaps, even distract the driver.

With the Disruption Management module the moment you deviate from the planned schedule, the driver is automatically informed. The Transit Control Head (TCH) gets updated with the new route path and explicit turn by turn directions, and Headway is updated to reflect the adjustments. On-time performance metrics are modified to reflect the change for more accurate historical reporting.

## ADDRESS LONG-TERM DISRUPTIONS THAT OCCUR EARLY IN A PICK

An unexpected disruption, such as an unplanned road closure can be very frustrating when it happens early in a pick after you've communicated the schedule to your riders. With the Disruption Management module, you can enact between-pick adjustments that can span until the next pick without the need to create a new schedule. Best of all – since your website, your app and your signage gets automatically updated your riders get the new schedule information in real time.



## Four Basic Elements

There are four main elements our solution uses to manage service disruptions. They include Bus Bridge/Shuttle Services, Same Day Service Changes, Detours and Service Restoration. Each element functions slightly differently to enable you to restore or create the services your ridership demands.

### **Bus Bridge/Shuttle Service**

With the Bus Bridge element, you can quickly create a brand new trip to accommodate a significant disruption situation such as a train breakdown or a large crowd condition such as a major sporting event. The new service is created in CleverCAD®. Stops can be added or moved to accommodate the situation and desired route. When the driver logs on, they see the new service and can view the route and turn by turn directions on the Transit Control Head (TCH). BusTime® will make predictions for the new service as it would for any other block and the route and stop information is displayed for the passenger to see on their devices and onboard the vehicle.

### **Service/Day Change**

In certain circumstances, dispatchers may need to modify the schedule in anticipation of fewer riders. The Service/Day Change element is particularly useful when a forecasted storm is likely to impact ridership, and your agency needs to reduce the number of vehicles on the road. Passengers are informed of the planned changes,

and all passenger-facing systems are updated with the new plan of service in real-time.

### **Detours**

Detours can happen for many reasons, and while they can be planned, too often they are unexpected. With the Detour element, you can re-route your vehicles to adjust for the road closure, creating an entirely new path for the bus. As with all other elements, your passengers (including those who may already be on-board) are notified of the unexpected change of service. The dispatcher enters the detour instructions and sends the driver the new route path and turn-by-turn directions.

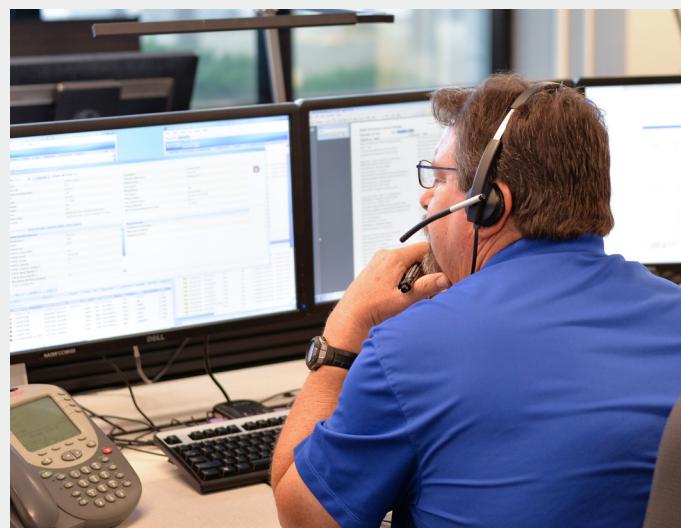
### **Service Restoration**

The Service Restoration element enables dispatchers to react to unplanned disruptions caused by traffic congestion or even an unexpected increases in ridership. Dispatchers can address these issues by canceling a piece of work, a specific trip or a block. They can then choose to fill or re-assign a different vehicle to perform that canceled work. They can issue a turn back to address severe gaps in service occurring in the opposite direction to get the bus back on schedule. Moreover, when a bus is overcrowded, dispatch can instruct the driver to Express past a stop or series of stops, skipping over stops and only discharging passengers which can help alleviate gapping and get the bus back on schedule.

## More Accurate Reporting and Historical Analysis

When your dispatchers are forced to deviate from the schedule in an ad/hoc manner, there is no way of tracking those changes, and it becomes difficult to determine the real effect they have on many of your agency's KPI's. However, with our Disruption Management module, the system is automatically updated with the new plan of service, recording the actual service performed which means that on-time performance, missed trips and other important metrics are captured for analysis.

You can flag adjustments to determine what the unplanned changes had on metrics like wait assessments or headway. Moreover, because all of these metrics get logged into a historical reporting tool, they can be used for more accurate, fact-based schedule planning.



## Everyone benefits from Disruption Management

### For Customers

Because your customers are getting real-time updates of service changes as they happen down to the specific route, bus and stop, they have the most updated information available and can plan accordingly

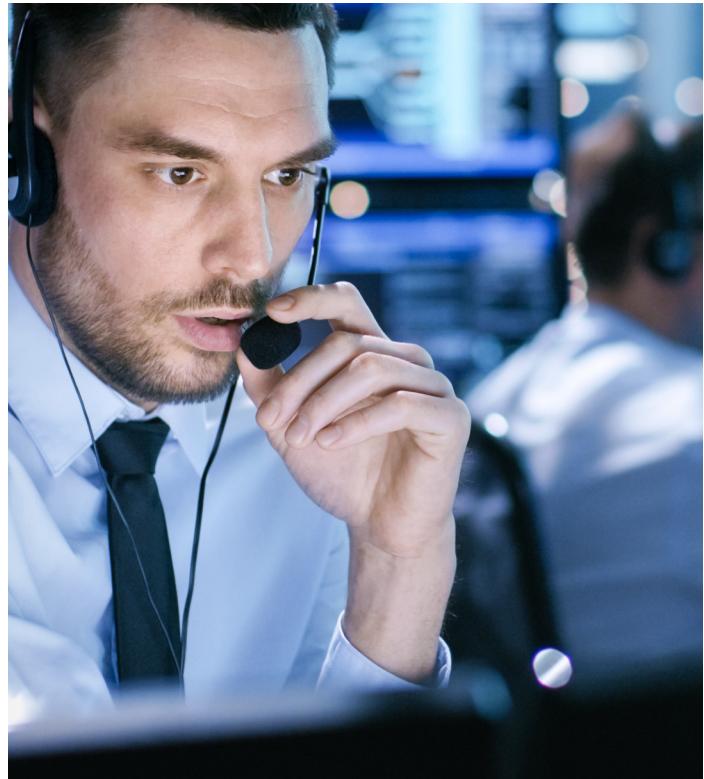
### For Planners and Managers

Because all adjustments are logged into the historical reporting tool, the information can be leveraged for more accurate planning based on historical data.

When there is a need to make long term adjustments between picks, Disruption Management makes it easy without the need to create a completely new schedule

### For Operators

Your drivers are automatically informed when the schedule changes. They are given specific instructions, a new route path if necessary and explicit directions right on the Transit Control Head (TCH). These tools also reduce radio traffic which can be distracting to your drivers.



## SCHEDULE YOUR DEMO FOR THE CLEVERCAD® DISRUPTION MANAGEMENT MODULE TODAY!

Contact your Account Manager or Contact us at [contactus@cleverdevices.com](mailto:contactus@cleverdevices.com)

Learn more at [www.cleverdevices.com/CleverCAD](http://www.cleverdevices.com/CleverCAD)