

Transportation Communications Newsletter

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Case Study

Washington Metropolitan Area Transit Authority

D.C. Transit System Weatherproofs New Passenger Travel Alert System with 110 Ciil® Xtreme™ Outdoor Displays

In late 2012, the Washington Metropolitan Area Transit Authority (WMATA) rolled out a new digital signage project designed to inform riders on its Metrorail system about track work, weekend closures and other travel issues before they pass through the fare gate at any of the system's 88 stations. The project required displays that could withstand rain, snow, dust, dirt, pressure washing and other ravages unavoidable in the transit environment.

With a patented, fully-sealed design that is unique in the industry, Ciil® Xtreme™ 47" displays from the Peerless-AV® Technologies Division proved to be just the ticket. These outdoor flat panels have a ► seamless design with no external vents, filters or exhaust fans, ► can operate at temperature ranges from -40° to +140°, and ► are the only displays to achieve IP 68 and NEMA 6 protection ratings signifying their resistance to dust, snow, moisture, brake dust, insects and even temporary submersion in water.

Today, 110 Ciil Xtreme displays are mounted on station manager kiosks both inside and outside all Washington Metro stations, with digital media players inside the booths feeding content to each display. For the more than 700,000 commuters who ride the local rails every day, the Metro's Kiosk Information Display System (KIDS) delivers vital information ranging from elevator outages, problems on a particular train line, and track maintenance that may affect service to travel advice for special events like D.C.'s annual Cherry Blossom Festival.

All Aboard for Signage

The Washington, D.C. Metro is the second largest rail transit system in the U.S. with 88 stations, 106 miles of track, and 1,116 rail cars serving customers in Virginia, Maryland and the District of Columbia. WMATA utilizes multiple channels of communication to keep riders apprised of emergencies and service disruptions, from home-page notices on its website to a free alert service that delivers advisory and station-specific information to desktops or mobile devices.

Based on customer surveys conducted in 2011, WMATA decided to create an additional 'know before you go' mechanism enabling riders to learn about issues affecting their planned route as they arrive at their station. The plan was to post digital advisories on real-time issues, as well as advance notice of upcoming planned outages and service changes, on octagonal kiosks located near each station entrance for immediate visibility.

Doing triple duty as customer service booths, literature holders and equipment facilities, the kiosks serve as the unofficial demarcation point between the service area where passengers purchase fare cards and the fare gates they must cross to board their train. Using these structures to convey information on train delays, cancellations and service disruptions would give riders the option to select alternate routes or modes of transportation before paying for a train trip.

Since the displays would be hung outside the kiosks, the challenge was to find a weatherproof, waterproof, everything-else-proof solution that would be as impervious to the elements as the Metrorail cars themselves.

Sealed to the Xtreme

Ciil Xtreme fully sealed displays met WMATA's requirements for keeping Mother Nature at bay with a unique design and manufacturing process that leaves no openings anywhere in the housing. A patented Dynamic Thermal Transfer™ system removes the need for external vents, filters and exhaust fans, while also shielding internal components against water, smoke, dust, chemical clouds, fuel exhaust, brake dust, micro-particles, acid base and ice.

This completely sealed aluminum design acts as an impermeable barrier against everything from ice and insects to the grime created by train traffic and hordes of riders patronizing the Metro 365 days a year... The Dynamic Thermal Transfer system also enables internal components to be safely warmed in extreme cold and properly cooled in extreme heat, yielding the industry-first ability to operate at temperatures from -40° to +140° without causing damage to the LCD or electronics. These features are complemented by triple-protected body construction that safeguards display housings against even the worst weather conditions.

The success of this advanced engineering is validated by Ciil's status as the only environmental display to achieve IP 68 and NEMA 6 ratings. The IP 68 (Ingress Protection) rating means that Ciil displays are completely protected against dust and capable of operating while immersed in 4 meters of water for 60 minutes. The NEMA 6 (National Electrical Manufacturers Association) rating means that the displays are protected against dirt, temporary submersion, ice formation and high pressure hose-directed water like that used by WMATA for pressure washing various areas of its rail stations. No other display on the market has met these standards.

Ciil systems also feature impact-resistant safety glass that protects both the TV screen and Metro passengers, an ambient light sensor that automatically adjusts the brightness to lighting conditions, and a sealed cable entry that guards signal connections as well as internal components against water, dust, ice and harsh airborne contaminants..

"We evaluated sealed displays from several vendors, and Ciil stood out right away," said WMATA design engineer Robert DelCoco. "They gave us the IP rating, size, brightness, weight, warranty, expected lifetime and overall weather protection we were looking for."

Keeping Riders on Track

With a choice of models from 42" to 55", the WMATA team selected the 47" Ciil Xtreme display that perfectly matched the width of each face of Metro's kiosks. Installers hung the units near the top of each kiosk for easy viewing using Peerless-AV EPT650 outdoor flat panel mounts – part of a full line of environmental mounting solutions constructed with stainless steel hardware and a corrosion-resistant coating for outdoor and harsh indoor applications.

Each display is connected to a Cisco digital media player inside the booth via HDMI cable. Web-based digital signage management software from X-Factor Communications aggregates outage information, service status on each of WMATA's five rail lines, and other content from existing WMATA data feeds as well as advisories created by the transit authority's communications staff. X-Factor's Digital Screen Control Portal DSCP:// platform distributes the aggregated information in real time over the authority's wide area network and delivers it to each Ciil display over the HDMI connection.

Messages are localized for each station and tailored to special events when relevant. During the 2013 Presidential Inauguration, for example, kiosk screens recommended destination stations for the four key inauguration locations. During the Cherry Blossom Festival, messages suggested alternate stations to deal with higher-than-normal ridership. And for opening day of the 2013 Washington Nationals season, the system provided route guidance and reminded riders to purchase round-trip fare at the start of their trip.

"This project is all about customer service. We want to equip Metro riders with all the information they need to get to their destinations on time," said DelCoco. "Providing that information at the station before customers swipe their fare card is an important addition to our other communications outreach, and having all-weather displays allows us to deliver that data in the most efficient way possible: digitally."

Sidebar 1

Deployment Highlights

- 110 Ciil® Xtreme™ 47” outdoor displays
- Located on outdoor and indoor kiosks
- Peerless-AV EPT650 outdoor mounts
- All 88 Metro stations included
- Real-time information on service disruptions
- Advance notice of planned outages or service changes
- Travel advice for special events
- Messages localized for each station
- Helps riders adjust travel plans when needed

Sidebar 2

Ciil Xtreme Displays for Xtreme Applications

Ciil Technologies’ all-weather indoor/outdoor displays from Peerless-AV have been deployed everywhere from stadiums, public transit, marinas, cruise ships, yachts and factory floors to residential backyards and poolside patios. Features include:

- Patented, fully-sealed design
- No external vents, filters or exhaust fans
- Patented Dynamic Thermal Transfer control system
- Robust all-aluminum body construction
- IP 68 and NEMA 6 ratings
- Industry’s widest operating range (-40° to +140°)
- Sealed cable entry
- Impact-resistant safety glass
- Full 1080p HD
- Models from 26” to 55”