



STREAMLINING PASSENGER INFORMATION

Automated Efficiency with PA/PIS Solutions

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In today's fast-paced world, where convenience is paramount and transportation alternatives plenty, providing seamless and timely information to passengers is crucial. Public Address and Public Information Systems (PA/PIS) are vital for modern transportation networks, enhancing how passengers interact with public transit. These systems facilitate real-time communication, ensuring that riders are well-informed and not left uncertain about delays that could affect their travel.

Convenience and Accessibility

With automated announcements and digital signage working in sync, all passengers, including those with disabilities, can navigate the system effortlessly and with confidence. This integration makes public transport more convenient, accessible, and inclusive for everyone.

Making Transit More Attractive and Safe

However, there's more than just convenience at stake—it's about attracting riders who have other transportation options. Our innovative system consists of an ecosystem of automated communication solutions geared toward keeping riders informed, minimizing wait time frustration, and improving the overall travel experience for riders. Moreover, by automating passenger communications, our PA/PIS ecosystem enables operators to focus on safely operating vehicles, leading to a smoother and more secure transit experience for all.



YOUR ENTIRE PA/PIS SOLUTION FROM **ONE TRUSTED PROVIDER**

The Clever Devices PA/PIS ecosystem is comprised of ten main solutions, each uniquely designed with improving the overall rider experience in mind. Each solution helps your agency streamline passenger information and is available as a standalone solution or as part of a fully integrated system.

Public Address System

Our Public Address Systems enable you to seamlessly broadcast crucial information such as automated announcements, next-stop alerts, door opening notifications, as well as manual messages to passengers through overhead speakers. The system guarantees fast and controlled communication, ensuring that passengers are safe and well-informed.

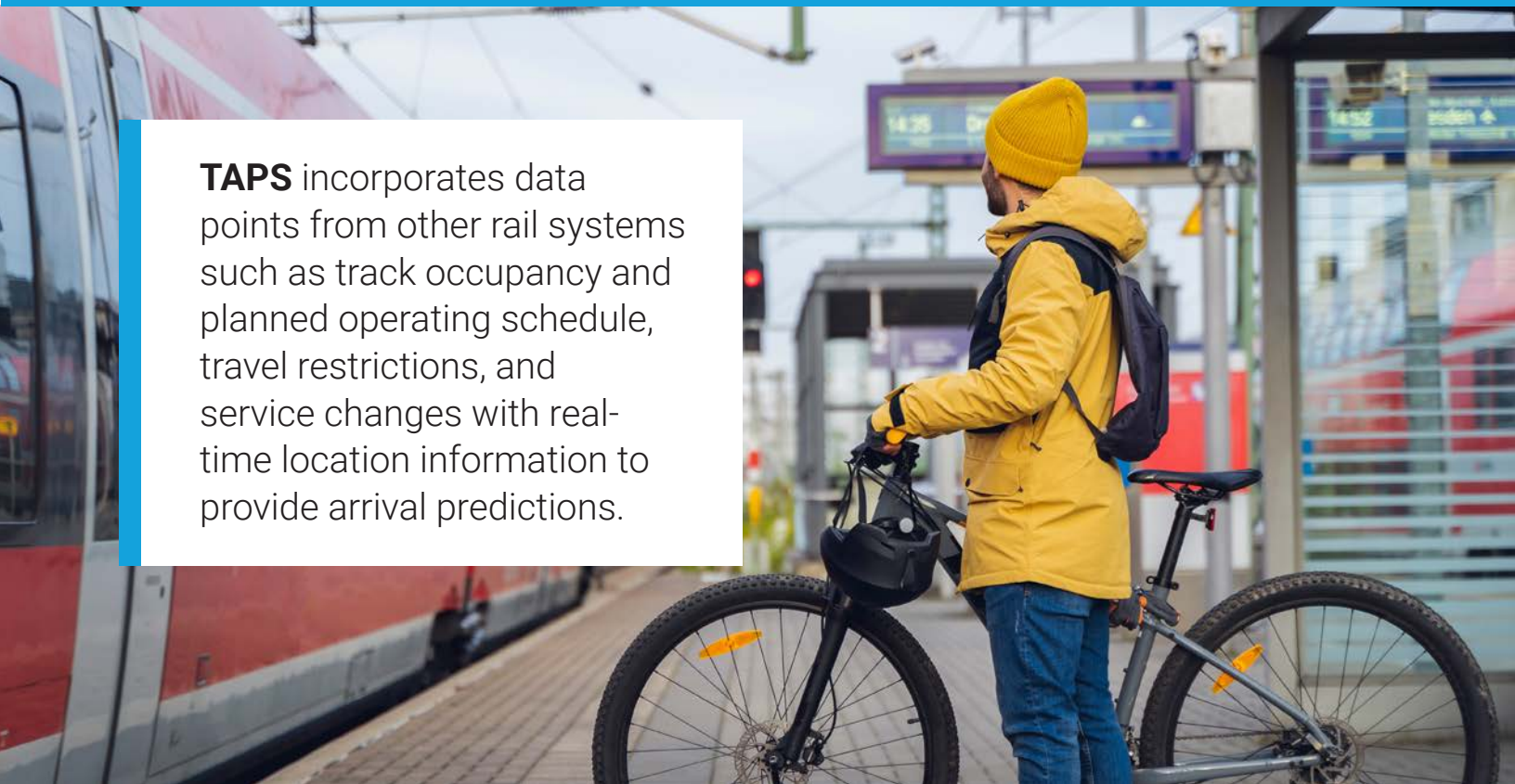
Train Arrival Prediction System (TAPS)

TAPS, our Train Arrival Prediction System, allows your agency to provide real-time updates on train arrival times, service disruptions, delays, and emergencies. Utilizing GPS technology and scheduling data, TAPS accurately predicts train arrivals for specific stops

and routes. This information can be shared with passengers via onboard and station signage, audio announcements, mobile apps, social media, and other communication channels.

Automated Voice Annunciation (AVA)

Navigating public transportation can be challenging for riders with disabilities. AVA, our automated voice annunciation solution, automates passenger announcements and syncs with LED signage to keep riders informed. AVA ensures that passengers with visual disabilities know when it's time to exit the vehicle and how long they have until their stop, making public transit a more accessible and safe option for all.



TAPS incorporates data points from other rail systems such as track occupancy and planned operating schedule, travel restrictions, and service changes with real-time location information to provide arrival predictions.



CleverVision Onboard Digital Signage and Infotainment

CleverVision, our onboard LCD digital signage and infotainment solution, delivers a fully immersive customer experience that enables you to engage with riders throughout their entire journey. Purpose-built, vandal-proof HD resolution screens provide real-time arrival predictions, infotainment content, public service announcements, and even hyper-local advertisements. The powerful cloud-based content management system (CMS) lets you easily configure and schedule static and dynamic messages and media programming to deliver the highest quality content.

Onboard LED Signage

Reliable and easy-to-read LED signage is critical in helping passengers navigate busy transit hubs and ensure they've boarded the correct train. A combination of interior and exterior sign options provide real-time, next stop, and final destination updates, keeping passengers informed throughout their journey.

Hearing Loop

Service broadcasts and emergency announcements are an integral part of rail system architecture. Our Hearing Loop system ensures that your hearing-impaired riders experience the same level of onboard audible clarity and comfort on their personal T-coil-

equipped devices, making public transit a more inclusive and accessible option.

Passenger Emergency Intercom

The Passenger Emergency Intercom enables communication between passengers and on-board personnel, facilitating quick responses and mitigated impact in emergency situations.

Cab Intercom

The Cab Intercom provides operators with a seamless and reliable line of communication with conductors, operators, and approved personnel in other vehicles of the same consist. This open line of communication ensures passengers and on-board personnel are safe and informed.

Warning Device

Our advanced warning devices designed specifically for passenger rail help you prioritize passenger safety. Interior warning devices keep passengers and pedestrians safe when crossing, boarding, and traveling.

Passenger WiFi

Improve your passengers' experience by offering WiFi that keeps them connected throughout the journey. Our onboard WiFi offers uninterrupted access to the Internet, making their time onboard enjoyable and seamless.

A TRUE **SYSTEM INTEGRATOR**

Clever Devices' PA/PIS solutions are designed for compatibility with a wide range of onboard systems, regardless of whether they are part of the Clever Devices ecosystem. As a system integrator specializing in PA/PIS solutions, we are best positioned to oversee and guarantee seamless integration across the system.

- Our **open API policy** gives developers access to real-time arrival information for the development of mobile apps and widgets, which helps you better serve your customers.
- TAPS, or train arrival prediction system, **interfaces with your onboard signage**, wayside signage, and audio announcement systems to ensure that passengers have all the information they need while onboard or waiting for a train.



IVN-R IS AT THE HEART OF OUR SYSTEM

Every solution serves an important function, but without a centralized system, your agency may not be operating at peak efficiency. The Intelligent Vehicle Network, or IVN-R, is our rail-certified (EN 50155, EN 50121, EN 45545) vehicle control unit with advanced technology that connects your Clever Devices rail system and allows you to integrate and manage onboard systems from one central system.



BENEFITS ACROSS THE BOARD

Passengers

- Informed and worry-free travel with consistent, real-time information about:
 - Next Stop
 - Final Destination
 - Service Changes and Interruptions
 - Public Service Announcements
 - Emergency Information
- A combination of audio and visual communications ensure hearing, or visually impaired passengers are informed and safe
- Infotainment and Passenger Wi-Fi provide a more enjoyable journey

Vehicle Operators and Onboard Personnel

- Reduced frustration from passengers seeking information that hasn't been made easily available to them
- Increased time to focus on the tasks at hand rather than relaying information to passengers
- Minimized need for manual announcements
- Seamless communication with operations and other onboard personnel

Operations and Management

- Automated updates and seamless integration remove strain on onboard personnel, making them available to carry out tasks and operations more efficiently
- Fully integrated system delivers consistent, controlled information to passengers, ensuring everyone has identical information at the same time
- Well informed passengers result in fewer incidents and customer service needs
- Intuitive content management system makes it easy to configure sign content including service information, important messages, and advertisements.