Chicago's Dynamic Passenger Info-tainment Impresses Commuters

Dynamic passenger information coupled with infotainment is a highly welcome service for bus and train passengers and is becoming a widely accepted and standardized piece of equipment in public transportation worldwide. VIANOVA Technologies offers ready-made complete off-the-shelf solutions.

It was with a veritable storm of inspiration in Instagram that Chicago's bus commuters welcomed the first dynamic passenger information and infotainment pilot systems. „Awesome" or "Please quickly equip all vehicles with the system" were typical passenger comments.

Following the successful integration in the New York buses, VIANOVA Technologies GmbH was commissioned to install the first pilot DPI (Dynamic Passenger Information) and Infotainment (Entertainment) systems in Chicago.

Although the public transport infrastructure of the US - roads, vehicles, depots, etc. - is far behind that of Europe, data management is usually very advanced there. This means that the modular infotainment systems developed over the past 20 years, especially in Germany, can be implemented very quickly in North American metropolises.

Modular Displays for Chicago Buses

The display unit, housed in its neat and elegant curvaceous enclosure, perfectly suits the interior decoration and corporate livery of the Chicago public transport company (see Figure 2). To ensure that passengers in all areas of the bus have visible access to the dynamic passenger information and infotainment, 2 displays per bus were installed, each connected to the APIX2 video bus of the VIANOVA remote infotainment server. Both display units could be attractively integrated into the vehicle's ceiling using VIANOVA's modular handrail concept.

The remote infotainment server is housed within the vehicle's own electronics cabinet and communicates with the central data hub such that passenger information, together with transfer and connection information, as well as warnings and alerts can all be issued dynamically and in real-time (with only a few seconds of delay.)

The server is modular and can be easily adapted to take on additional functionality including, for example, internal and external announcements or „text-to-speech" thereby ensuring system-wide extension flexibility for many years to come.

Nomenclature

AVL (Automatic Vehicle Location)
CAD (Computer Aided Dispatch)
CTA (Chicago Transit Authority)
GTFS (General Transit Feed Specification)

Figure 1. The shapely 28.6" VIANOVA ultra-wide display can be color-matched to suit the vehicle's livery (Image courtesy of VIANOVA).

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The System Software in Chicago

To display dynamic passenger information in all vehicles, VIANOVA uses the BitCtrl LISA DPI-Server package to extract the real-time information from the Bus Tracker (CAD / AVL system), link it with the position data (GTFS) and prepare the content 2 stops in advance for every vehicle.
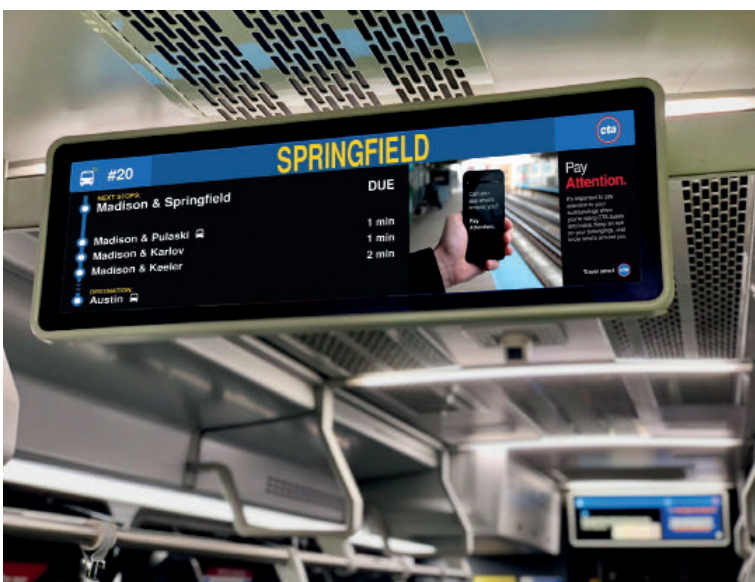

Figure 2. The 28.6" VIANOVA display unit with a height of just 25 cm ensures the prescribed passage clearance height in the Chicago buses is not compromised and which can be mounted on the ceiling using modular handrails. Two displays are installed per bus.

This ensures that, even with a temporary loss of bus communication, all important information - connection, transfer and special information etc. - are presented and displayed correctly in the vehicle in real-time.

Another key product is the LISA Content Management System, which allows Chicago's transport operators and CTA media partners to both create and manage entertainment content with minimal manpower.

The CMS system incorporates the work-flow of various media corporations such as print, TV, out-of-home advertisers, etc., so that the Chicago Transit Authority can put together an advertising campaign using material from various media partners - including their own marketing department.

Why VIANOVA Technologies?

Possibly due to the fact that because the New York transport authority, which is recognized as being a leading innovator in North America, has chosen VIANOVA as its main infotainment supplier for its vehicles opens all doors for the German product in the USA.

In addition, German quality and workmanship, especially in such challenging environments such as those found in buses and trains, can generally sell well. However, the really decisive criteria for VIANOVA were:

Off-the-shelf displays

Despite awkward installation conditions, VIANOVA was able to supply off-the-shelf display units from its portfolio, which perfectly matched the vehicle's interior and could be used universally in buses and trains.

The very same 28.6" display unit can be integrated in a wedge form, giving the possibility to display content back-to-back (see Figure 3). The use of the same display module as a single unit in buses and as a double display in this wedge format in trains leads to savings in maintenance, and helps promote a uniform display concept for buses and trains alike - an important selection criterion in Chicago.

Powerful software

BitCtrl's extensive LISA software, with its user-friendly content management, combined with VIANOVA's ruggedized server for dynamic passenger information was another criterion for selecting VIANOVA as a supplier.

Twelve-year operational and service lifetime

The VIANOVA products are designed to have a 10-year operational lifespan and, through warranty extensions or maintenance contracts (up to 12 years), customers can operate their equipment at a guaranteed price with guaranteed availability for 10-12 years.

Figure 3. The VIANOVA 28.6" display can also be mounted in a wedge-shaped enclosure on the ceiling for double-sided viewing (Image courtesy of VIANOVA).