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## DYNAMIC PASSENGER INFORMATION



Live in **NEW YORK**

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# Dynamic Passenger Information Live in New York



Image 1. With three double displays on the ceiling in the articulated buses in New York, both passenger information services as well as infotainment are viewable by every passenger from all internal locations. (Image source: VIANOVA)

Dynamic passenger information installed in a huge fleet comprising 5,710 buses, serving 16,350 bus stops and in which every bus can be used on all 325 routes is a huge requirement for any system. If special announcements as well as Public Transport Authority (PTA) marketing information or commercials of any media partner are to be presented in real-time and yet separate to the passenger information, then only a few of the infotainment systems available worldwide are able to compete with the VIANOVA Technologies solution!

## The selection process for a system in New York

The New York transport operator, unlike many US public transport authorities, is completely free of protectionist restrictions when selecting its suppliers - the „Buy America“ obligation is completely bypassed as the transport authority is 100% self-financed. As such, NYCT (New York City Transit) is free to select the world's best provider in open, commercial competitive procedures, including infotainment systems.

This positive situation, coupled with the fact that New York is anyway the largest and most modern metropolis in North America, means that NYCT can act as a public transport trendsetter for new technologies in the US and Canada.

## The scope of the New York infotainment system

Besides the sheer size of the fleet, even some hard-to-meet premises were overcome.

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### 1. General requirements of the passenger info. system

All seated passengers in the buses must be able to receive the information at all times in both video and audio form (passenger information and special announcements). Thus, for a certain number of displays - namely two in the midi-bus and three in the articulated bus - a minimum reading distance of 6m to 8 m is necessary. The audio component, which feeds into the electro-acoustic public-address system of existing buses or new buses with priority switching (passenger information & and special announcements, without advertising!), was required by the New York authorities to have perfect audio reproduction and delivered in the local New York dialect.

The VIANOVA solution for general use:

By integrating the VIANOVA double display (2x 18.5") unit, the visual challenges concerning reading distance and the parallel display of either passenger information and special announcements or passenger information and entertainment with advertising can be overcome perfectly (see Image 1).

To satisfy the audio requirement, VIANOVA's MS-700 Infotainment Server is combined with an audio amplifier with installation optimization that provides the adaptation to the existing electro-acoustic public-address system with separate indoor and outdoor announcements (see Image 2).

## 2. Aesthetic and integration requirements for new and existing bus interiors

The interior of existing buses in the US is usually not very sophisticated. However, for the approximate 1,000 new buses within the current order, a visually appealing interior has been designed, and the new infotainment displays also have to



Image 2. The PD-PAAMP audio amplifier is connected to the VIANOVA infotainment server and, at the same time, facilitates bus wiring, including the integration with existing electroacoustics. (Image source: VIANOVA)

do this justice. Brushed aluminum or black metal boxes no longer fit the requirement. Besides functionality, the attractive design of the VIANOVA displays, with their curved and color-adjustable designer-frames, was a contributing factor in the decision to equip all of the approx. 1000 newly ordered buses exclusively with the VIANOVA infotainment systems.

## 3. Dynamic passenger information requirements

To overcome certain challenges, especially in Manhattan where distances between bus stops are short and a great number of interconnection possibilities exist together with their timetable variations, some prerequisites for high-class passenger information had to be newly implemented or were already in place with the New York transport authority:

**3.1** General Transit Feed Specification (GTFS) data is available throughout the route network, meaning that the operator has

all the required timetables and route information available in Google Standard and updates it as necessary. Up-to-the-minute service disruptions are entered by the transport authority.

## 3.2 SIRI – Service-Interface for Real Time Information

NYCT provides up-to-the-minute information on all of its vehicle fleet data via the open source OneBusAway.org platform, which uses the SIRI data format.

## 3.3 Route visualization

NYCT provides excellent route data for all its routes. The VIANOVA display units give passengers an accurate visual representation of the areas surrounding the stops in OpenStreetMap, which is based on up-to-the-second GPS data.

**3.4** The VIANOVA infotainment system is based on a high-performance server and the powerful BitCtrl LISA (Live Infotainment System & Advertisement) software suite which converts the supplied information into up-to-the-second dynamic passenger information including audio output. The GPS data is processed continuously so that up-to-date information is always being presented - including maps.

The second screen provides passenger entertainment with, if necessary, location-based advertising (see also Image 1).

## 4. Content Management System requirements

The public transport authority needs a convenient working platform for self-marketing and special announcements, as well as provide multiple options for various media partners to create and administer optimized entertainment and advertising content. The BitCtrl LISA CMS supports the various workflows of different media companies such as print, TV and out-of-home operations. NYCT decided to host VIANOVA's web-based and cloud-enabled CMS to optimize maintenance and support. In addition, this solution gives all media partners easy access to the medium.

## Summary

By using the modular VIANOVA infotainment systems, both new buses (about 500 p.a) and existing units can be equipped in the best possible manner. The adaptation to the vehicle's own electro-acoustic public-address system, with priority-based switching for both internal and external announcements, has also been elegantly resolved.



Image Gallery  
VIANOVA Products