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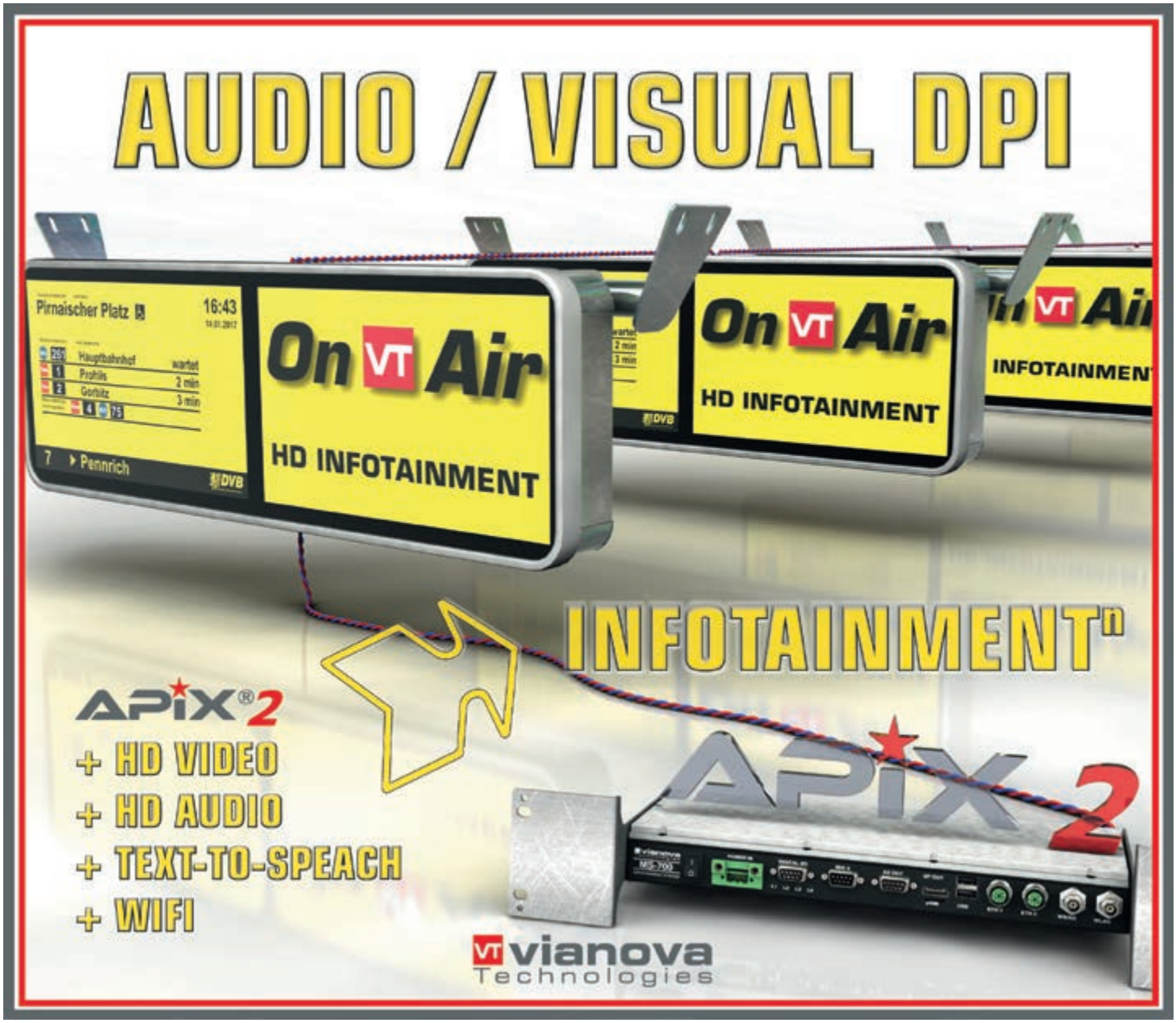

Main Theme
Innovative Mobility Concepts

Audio / Visual Dynamic Passenger Information

VIANOVA display systems for dynamic passenger information are now available with an automated speech output feature. By working together with public transport authorities at home and abroad, essential hardware and software components of the MS-700 infotainment system have been extended to enable a significant increase the availability of information to the "On Board" passenger. As a result, lead times and the infotainment system costs could be simultaneously shortened and optimized.

Josef Kreidl,
Chairman,
VIANOVA
Technologies,
Germaringen,
Germany

Automated audio communication "Text to Speech" for indoor and outdoor announcements

The automated audio announcement system from VIANOVA is comprised of an extension module for the MS-700 infotainment server that contains the audio amplifier for internal and/or external loud speakers as well as a relay controller for announcement prioritization.

The software necessary for the automatic conversion of text information is available in different languages and, if required, also in different dialects. The output volume can also be easily adjusted to suit the operational environment.

DPI server for versatile data access to the dynamic passenger information

The powerful BitCtrl-LISA DPI server software package can easily access, with minimal delay (max. a few seconds), the dynamic passenger information from a diverse range of Public Transport Authority data sources – regardless whether using an ITCS-System, a data hub, SIRI or a database solution – the LISA-DPI-Server can be cost-efficiently integrated within the PTO's IT infrastructure.

The collected data, in the form of current transfer and connection information, are distributed among the vehicle fleet in regular 30 second intervals. Many intelligent functions, such as a dynamic preview of the forthcoming stops, provide accurate information about the transfer possibilities at these locations even in the event of a communication failure. Because the features of the standard package are so comprehensive, the integration costs for its integration into the existing transport authority infrastructure can be kept to a minimum.

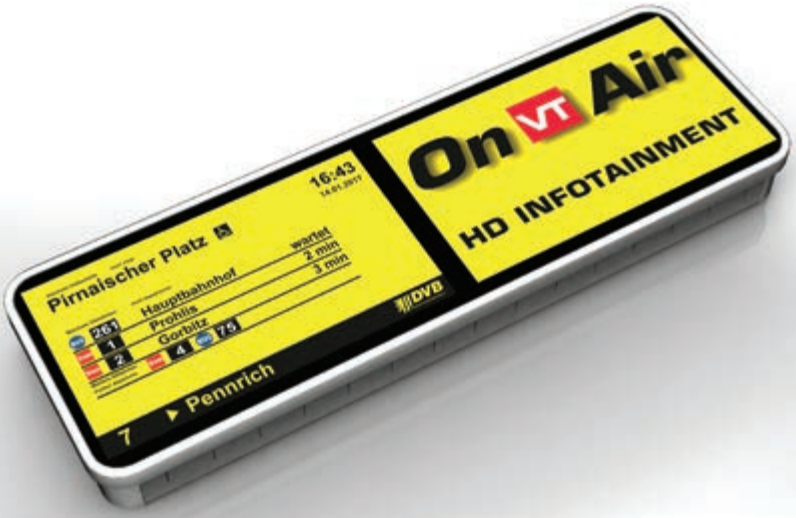

Fig.1. The VIANOVA Twin Display with 2x 720p HD screens showing left dynamic passenger info. and entertainment on the right. (Image source VIANOVA)

Fig.2. In the event of a disruption both screens of the TWIN display unit are used for passenger information purposes - left dynamic passenger info. and right the disruption notice!

Because the DPI server only distributes traffic condition changes to the vehicle fleet, the operational costs for the LTE connection can be kept to a minimum.

New IBIS-IP standard

In systems with modern on-board computers supporting the IBIS-IP protocol dynamic passenger information data is handled directly by the protocol.

Special announcements

Special announcements are broadcast to the selected vehicle within seconds by the LISA-DPI Server.

Greater presentational comfort via 2 screens, map depiction via OpenStreetMap

Figure 1 shows clearly the advantages of using two independent screens by separating the DPI in the left-hand screen from entertainment shown in the right-hand screen.

The same double display unit can be used to present passenger information as illustrated in figure 2. The example given in fig.2 shows dynamic passenger information in the left-hand screen and special announcements with high priority in the right-hand screen.

Naturally, different combinations are conceivable as the double display unit makes this possible.

As a special service to the travelling public the BitCtrl-LISA software can even display maps as real-time information using OpenStreetMap at stations (Figure 2)

APIX data highway as on-board video bus

The VIANOVA MS-700 systems use the APIX (Automotive Pixel Link) technology to transmit the on-board video information to any number of displays installed in the vehicles. Just one pair of wires is all that is needed to transfer two HD quality (720 p) signals error-free up to 30 metres and even through robust couplers. A second pair of wires is used as a feedback channel for service purposes.

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Self-configuring system with seamless diagnostics and redundancy

The VIANOVA middleware and firmware automatically configures complete systems comprising several display units when powering up so that each daisy-chained display unit understands its position within the infrastructure. The benefit of which presents itself in service cases since there is no longer need for time-consuming fault detection and subsequent module replacement because all the modules are the same.

The video bus feedback channel permits seamless system diagnosis including the creation of commercial log files containing actual content playback details.

DPI redundancy

Since both video channels are transmitted along the same pair of wires, it becomes quite a simple task to switch the primary DPI content, for example, to the secondary infotainment screen temporarily until the unit has been serviced. The important dynamic passenger information is preserved!

Summary

The latest modular additions to the VIANOVA infotainment systems can now address an even greater audience. The improved functionality in the DPI sector facilitates the swift deployment of the MS-700 systems, complete with the LISA software, within existing infrastructures of both large and small PTOs. In addition, the powerful BitCtrl LISA Content Management System simplifies content creation and administration. With this LISA CMS tool, the PTO is free to choose a media partner be it in print form, TV or out-of-home, the system creates the necessary workflow of the media company.

All in all, the technologically advanced hardware combined with the powerful standard software deliver an unbeatable price / performance ratio for the PTO – Affordable audio / visual DPI.

e-mail: josef.kreidl@vianova-tn.de