Vienna, March 14, 2013

Siemens in Vienna

Where urban mobility is concerned, Vienna is at the top of its game. Siemens have supplied the Austrian capital with an array of products and solutions, including 300 ultra-low-floor (ULF) trams, 40 metro trains with control systems, and road traffic management to control the flow of cars around the city. With around 2.5 million inhabitants, the Greater Vienna area has one of the biggest tram networks in the world, extending to 227 kilometers. The network run by the city's Wiener Linien public transport operator currently covers more than 960 kilometers and comprises 116 metro, tram and bus routes with 4,559 stops, none of which is located further than 15 minutes on foot from any location in the city.

Wiener Linien

Around 1,000 employees at the Siemens factory in Simmering make state-of-the-art mass transit vehicles for the Wiener Linien public transport operator.

ULF Trams

The innovative and tried-and-tested tram highlight which has run for more than ten years in Vienna is the 100% ultra-low-floor tram featuring the world's lowest entrance height of 19.5 centimeters. The Wiener Linien have ordered more than 300 vehicles from Siemens of which over 250 have been delivered.

The ULF makes mass transit in Vienna a barrier-free, attractive, comfortable and efficient experience, especially in view of the energy savings produced by the recovery of traction power. A recovery value of up to 28 percent is currently possible. The figure for metro trains is between 30 and 35 percent as traction conditions are more homogeneous during metro train operation.

Fully electric city buses for low-impact mass transit

The electric buses Siemens have supplied to Vienna's public transport operator make the company the first manufacturer in Europe to put fully electric buses into regular urban service. The first of twelve all-electric buses has been in regular service on routes 2A and 3A since the fall of 2012. Each route is six to seven kilometers long. The energy stores are recharged quickly during the day from the existing tram power supply at the terminal stops, and recharged slowly in the depot during the night. The bus won the "EBUS Award" from the German Forum for Transportation and Logistics in October 2012 thanks to the close dovetailing of eco-friendly propulsion and integration into the route network that is unique in the whole of Europe. The concept was put into practice in cooperation with the bus manufacturer Rampini.

Control and rail electrification systems

Besides the vehicles, Siemens are also supplying the control and rail electrification equipment to the Wiener Linien: for example, all of the metro's interlockings and train control systems, and since 2003 the U1 and U2 lines have successively moved over to the electronic interlocking system Sicas ECC (Siemens Computer Aided Signaling Element Control Computer). This enables optimized train sequencing in line with passenger volumes and maximizes the subway's operating safety, reliability and availability.

Siemens supplied the control and signaling systems for the line extension on the U2 section between Schottenring and Stadion (2008) and the further extension from Stadion to Aspernstrasse (under construction), as well as the extension to the U1 section from Kagran to Leopoldau (2006); i.e. in addition to the electronic interlockings Siemens also provided continuous automatic train control to maximize the level of safety and automation in operation.

Since 2006 Siemens have been providing Wiener Linien with depot and rail substations that supply energy to the tram network.

IT solution improves business processes in sales

Siemens' sales core system PTnova enables Wiener Linien to manage all sales processes centrally and supports the standardization of workflows. PTnova controls

all sales-related business processes, such as ticket sales, season ticket and customer management, electronic fare management or offense prosecution, and automates the flow of data from sales through billing to the settlement of accounts. PTnova was developed jointly with Wiener Linien, Münchner Verkehrsgesellschaft, VAG Nürnberg, Hamburger Hochbahn AG and Rhein-Neckar Verkehrsgesellschaft and was piloted with Wiener Linien.

Vienna traffic control center

As well as an appealing range of options for rail traffic, the efficient management of road traffic is of course a key component in end-to-end mobility. Siemens supplied Vienna with road traffic management solutions to control the flow of cars around the city center, and thus significantly improved and optimized the flow of traffic in the vicinity of the city. As well as providing monitoring and control for more than 1,200 traffic signals, the traffic control computer system also serves as the cornerstone for the implementation of traffic management, direction, guidance and information strategies for Vienna's road traffic. The situation on the roads is represented visually by means of a multimedia wall four meters wide and 2.40 meters tall. Cologne and Vienna were jointly the second major European cities to deploy this technology.

Freeway control center

Wien-Inzersdorf (Vienna) is home, for example, to the traffic management and information system of ASFINAG (Autobahn und Schnellstraßen Finanzierungs AG), which is responsible for active traffic management systems that cover all freeway and expressway traffic throughout Austria. Siemens provided both the hardware infrastructure and the software for the traffic control computer. Twelve workstations with six screens each are operated around the clock to track traffic flows along freeways and expressways, monitor construction sites and detect traffic congestion at an early stage. The traffic control center helps to reduce emissions and improve safety on the roads:

- energy consumption down by 40 percent
- efficient mobility management
- reduced travel times
- intelligent linking and processing of data from different sources

Since the crossroads between several important European transport corridors are located in Austria, ASFINAG also coordinates its traffic management strategies on an international basis to ensure that traffic flows are optimized across the wider region. For this purpose it maintains contact with other European traffic control centers, for example in Bavaria, South Tyrol, Slovakia, Slovenia and Hungary.

Austrian Federal Railways (ÖBB)

Railjet high-speed train

The railjet high-speed train is a further important element in the traffic concept of the Austrian capital. The ÖBB railjet links up all of Austria and reaches beyond its borders. From Vienna via Salzburg to Innsbruck, Bregenz and Zürich (Switzerland), as well as from Munich (Germany) via Vienna to Budapest (Hungary). The ÖBB railjet has also been running from Vienna to Graz, Klagenfurt and Villach since the fall of 2011. You can also use the ÖBB railjet to travel to the German cities of Stuttgart, Mannheim and Frankfurt.

With a maximum speed of 230 km/h, 185 meters in length and 330 tonnes in weight, railjet boasts 408 seats, seven cars and a Taurus locomotive. For ÖBB, the deployment of railjet marks a new era in long-distance passenger traffic. Today ÖBB operates 51 seven-car railjet units.

100 Desiro ML mass transit and regional trains

Austrian Federal Railways (ÖBB) is calling up the first 100 Desiro ML-type regional trainsets under a master agreement with Siemens. Siemens was awarded the contract in April 2010 after one of the largest pan-European invitations to tender for electric regional trains. The three-unit electric trainsets are to be delivered from late 2015 onwards. Final manufacture of the trainsets is due to take place at the ÖBB's Jedlersdorf factory (Technical Services). The bogies will be supplied from the Siemens works in Graz. Desiro ML-type trainsets are flexible and reliable vehicles which, thanks to their conception as single-car trains, can be individually adapted to passenger volumes. With their improved drive systems, allowing further reductions in energy consumption compared with predecessor models, they are especially kind to the environment.

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All information about the Siemens presentation at the UITP 2013 can be found at http://www.siemens.com/press/uitp2013

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