The New Wehrhahn-Line

DIVA and EFA at the Rheinbahn and VRR
Dear Reader,

In this issue of the magazine we pick up again the topic of door-to-door and seamless journeys. In Dusseldorf the new Wehrhahn-Line was opened together with six new underground stations. Wehrhahn is a suburb of Dusseldorf. The architectural design of the stations makes travelling there an enjoyment of art. All the stations are barrier-free, however routes through the stations must be laid out in an understandable way. We describe the working steps of doing this, from capturing data in OSM, via handling this in DIVA to the journey planner information using EFA.

A second report shows how to construct interactive route options on maps, in a way that the route follows the geometry of roads and tracks. This tool makes planning a lot easier.

Information about developments for mobile phones should not be missed. We speak about KiK (Kunden informieren Kunden = passengers inform passengers). Passengers of public transport are able to inform each other about disruptions.
The bicycle has evolved from a piece of leisure equipment to a mode of transport in urban areas with one of the highest growth rates. The current cycle planners from MENTZ support this trend. The navigation functions used are especially tailored to cyclists. Tachometer and tracking functions show the speed of the ride and allow the capturing and sharing of routes.

As always, we report on our user meetings. The spring user group took place in Linz (Austria) and the english speaking customers were invited by “Transport for London” to London.

The existing proven system of managing and planning school transport has been further developed. The region East Westphalia-Lippe has ordered this enhanced version.

Have fun reading this magazine,

Dr. Hans-Joachim Mentz
Cover Story
Use of DIVA and EFA by Rheinbahn and VRR, the new Wehrhahn-Line

Germany, Dusseldorf
Authority: Transport Association Rhein-Ruhr (VRR), Rheinbahn AG
Project Scope: Modelling Stations
Dusseldorf: Capital of North Rhine Westphalia
MENTZ Contact: Maren Sundermeier, sundermeier@mentz.net

Kirchplatz
Graf-Adolf-Platz
Benrather Straße
Heinrich-Heine-Allee
Schadowstraße
Pempelforter Straße
The Wehrhahn-Line is one of the main underground lines of the “Düsseldorfer Stadtbahn” suburban railway, which is operated by the “Rheinbahn” as part of the “Stadtbahn Rhein-Ruhr”.

The construction of the tunnel which is 3,4 kilometres long and has six new stations started on 28th November 2007. It was opened on the 20th February 2016, with regular train operation starting on the 21st February 2016.

At the same time, the tracks on the over ground were taken out of service. The name for the line comes from the light rail station Wehrhahn, which is the starting point of the line in the north-east and from the street “Am Wehrhahn”, under which a part of the underground track is situated. The vehicles used are modern low-floor units.
**Goals**

For MENTZ this was the motivation, together with Rheinbahn and VRR, to enter the new functional information for the new stations and to present this in the passenger information coming from DIVA and EFA. On Advent Sundays in 2015 the new stations were accessible to the public for the first time. An employee from MENTZ took advantage of this to inspect the stations and capture the necessary geographic data. It was possible to do all six stations within two Sundays.

**Fig. 1**

Circulating area with retail options
The Modelling of the Stations
In MENTZ MAGAZINE 2/15 we reported on the development of the methods of how to capture and model buildings as part of the research project DYNAMO (Dynamic Seamless Mobility Information, sponsored by the German Federal Ministry for Economic Affairs and Energy). This technique has now become part of the MENTZ product portfolio and is offered to all MENTZ customers. With DIVA release R16 a new technique for mapping is available. The new buildings of the Wehrhahn-Line offered an ideal demonstration platform for this. The first step was modelling the underground buildings in OSM. The Heinrich-Heine-Allee is the biggest station of the Wehrhahn-Line. It is a so-called tower station. At that place, the tracks of the lines U71, U72, U73 on level -3 are crossing the tracks of the lines U78, U79 on level -2. Level -1 is a connecting passage with several shops.

Heinrich-Heine-Allee
Escalators at level -3

“Art: Decorating the World”

Pempelforter Straße
Artist: Heike Klussmann
Subject: Surround
Subway station “Pempelforter Straße” opens up into the east end of one of the most important shopping streets in Dusseldorf. It is served by lines U71, U72, U73 and U83. Connection to other lines of Dusseldorf’s public transport system can be made at two above-ground tram/bus stops.

Gustav-Adolf-Platz
Artist: Manuel Franke
Subject: Agate

The New Wehrhahn-Line – DIVA and EFA at the Rheinbahn and VRR
The platform is linked with two sets of three escalators to level -1 and, at the western end to level -2. DIVA Web, the browser-based stop management system shows the structure (fig. 2). The important elements, the landmarks are the tracks, the stairs to the levels -2 and -1 and the lift (green rectangle). On the edges of the platform blue triangles show the stopping points, these are the points where the passenger enters the vehicle. Level -2 is similar. Level -1 is a connecting passage with shopping opportunities in its western area (p.6 fig. 1, p.8 fig. 3). The overground is shown in fig. 4. Please note the entrances.

This way of modelling allows the following goals to be achieved:

- It is possible to create network spiders on a geographic background.
- It is possible to create station maps that show barrier-free entrances.
- In addition, it is also possible to feed the EFA journey-planning system and to compute door-to-door journeys.

**Journey Planning using the new stations**

The new technique is available in the EFA system from version 10.2 onwards. User interfaces are the new EFA Standard layout 3 (responsive) and EFA Companion 4.2 for Smartphones.

The following figures 5 to 15 are showing three different ways of a journey through the new stations.

**Prospects**

The VRR plans to implement this quality standard all over the transport authority area. Soon it will be considered in real-time, should an escalator or an elevator be out of service.

**Cooperation with Rheinbahn**

The modelling of the train stations in DIVA was done by Rheinbahn Düsseldorf. Mr. Stepanek was responsible.

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Mr. Stepanek
Rheinbahn Düsseldorf
The Fastest Route

Fig. 5 The journey starts at Kirchfeldstraße 61, from St. Peter’s Church to Balkerstraße 69 in Dusseldorf’s old city center.

Fig. 6 The first footpath leads to the steps.

Fig. 7 There is a circulating area on level -1.

Fig. 8 Boarding for the subway is on level -2.

Fig. 9 Arrival at Heinrich-Heine-Allee is on level -3.

Fig. 10 The steps lead up to the circulating area and the escalators lead up to the surface.

The New Wehrhahn-Line – DIVA and EFA at the Rheinbahn and VRR
Route with Luggage or Baby Carriage

Fig. 11
If you have heavy luggage or a baby carriage, you can select an option that avoids steps.

Fig. 12
The system routes you to the elevator. The required time can increase with a two-way escalator.

Route with Wheelchair

Fig. 13
There is also an option to select a route that accounts for full accessibility.

Fig. 14
The system routes you to the elevators. Only appropriate vehicle access and other entrances/exits are offered.

Fig. 15
The elevator goes directly to the surface and a fully-accessible street-crossing with traffic lights is used.
Mr. Bachteler, head of the VRR’s technical group customer and sales system was so kind to answer MENTZ magazine’s questions about their experiences. During the project he was head of the technical group background systems and data management; in his role as project manager he coordinated and supervised the OSM migration.

MM: How was the changeover of the geographic data to OSM?

About one and a half years after the changeover we can say: good! The arguments for the companies and us, the authority, were the quality and the fact that the data is always up to date and also, the cost savings. These reasons were valid, however all involved had to invest a lot of time and effort to achieve the end result.

The basis for the success was a process of coordination and preparation before the changeover. We had discussions with all the people involved, we offered training, and last but not least we have had a lot of communication with the OSM community. The first visible success was the change of the journey planning together with the footpath-routing and the interactive maps.

A fundamental innovation and change is the fact that colleagues from the companies can take over the creation of the network plans. MENTZ did support us considerably by preparing the data as well as by designing and producing the maps. After six months, we were able to print the first maps. To see the first self-made maps was a great experience. We now import POIs from OSM too, which saves us a lot of maintenance work and provides us with a lot of detailed information.

MM: What are the next tasks?

The requirements for information and especially for detailed routing and navigation are always increasing. The VRR region has the most underground routes in the whole of Germany and more than a hundred tunnel stations and complex interchange buildings. Using OSM gives us the opportunity to capture the data of these buildings and to help our passengers as we can route them to the platforms and support the necessary interchanges.

Some companies in the VRR already have guidance systems in buildings without GPS reception. Such systems need a geographic base. The Company EVAG has already equipped the stop “Rüttenscheider Stern” in Essen with Bluetooth beacons to check the feasibility of indoor positioning. Positional data is needed to establish an “eTarif”, where in future the price of a ticket could be computed from a distance.

To provide information on barrier free routes is a target for us. This is not only for people in wheelchairs, but also for passengers with heavy luggage or with baby carriage or for elderly people. All transitions between levels are maintained in OSM, and will be checked when computing footpaths. In the medium-term we shall include real-time information to indicate whether lifts and escalators are operational.

Thank you very much Mr. Bachteler!
DIVA Schedule

With Release R16, working on the map is possible in DIVA Schedule too.

Deutschland, Dusseldorf

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<td>Liliane Abdul-Reda</td>
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<td><a href="mailto:abdul-reda@mentz.net">abdul-reda@mentz.net</a></td>
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Route planning on the map

IVA Web is a comprehensive tool for managing basic data, stops, routes, printouts, etc. The map is a key element of DIVA Web. Simple timetable management can be carried out in DIVA Web too. For advanced functionality, such as transfers or composite routes, then the DIVA Schedule module can be used.

With Release R16, working on the map is possible in DIVA Schedule too. This means that geographical route planning is possible as well. In DIVA Web, a route option is created on the map by selecting the single stop points. With the introduction of the map to DIVA Schedule, this is even easier. The user just needs to select the start and end points of the route option. The route path is then automatically created by collecting all the stops in between.

In the first step, a green line is displayed as a georeferenced connection between the start and end points, initially ignoring the intermediate stops. This line represents the shortest route between the start and the destination. Based on this line, the user can check if the routing is correct, or if re-routing is required (fig. 1).

In a second step, it is now possible to amend the path on screen. For this, the line is moved via drag & drop. The routed path is changed to match the user input (fig. 2).

In the same way, it is possible to move the start or the end point of the route option on the map as desired. Once the user is satisfied with the displayed route, he can select “save” to create the route option. This opens a dialog box showing all stops (or stop points) between the start and destination points (fig. 3).

The user can accept the proposed points or can exchange them for a different nearby point. The creation of route options is significantly faster. This is an advantage for everyday route planning. At the same time, authorities are able to create routes very quickly for rough capacity planning, without the need of using detailed planning by selecting single stop points.

Furthermore, it is possible to let the system determine the trip time automatically, based on the GIS distance. The system creates the trip time based on the route option, and the trips are set up accordingly.

Hans Kuehn from Karlsruhe’s Authority is excited about the integration of the map into DIVA Schedule. The planners daily work is faster, as they do not have to rely on the map in DIVA Web. This is very helpful for planners creating new routes. The creation of a new route option by selecting the start and end points on the map is for such purposes very useful. The automatic creation of trip times based on the GIS distance is a welcome quality assurance step which allows the planner to check trip times which may have been in existence for a long time and may need adjustment.
KiK

called “KiK” from the german translation “Kunden informieren Kunden”

Germany, Stuttgart

Customer
Stuttgart Transport and Tariff Association (VSS)

Project Scope
Integration of passengers, community approach, reporting of disruptions, damage and defilement

VVS Mobile downloads
about 900,000 downloads

Stuttgart
City area: 207.36 km²
Inhabitants: 612,441
Inhabitants metropolitan area: 5.2 Mio.
Passengers: about 366 Mio./year

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The time where passengers were just passive participants in public transport have past. By modern technology they get incorporated more and more and deliver feedback and suggestions. Services from other areas (e.g. Wikipedia) prove that users can contribute and create whole new information sources.

Since 2012 the MENTZ Companion features the “Mobile Community”. Its goal is to improve the integration of passengers, which continues to be ever more important. In the Münchner Verkehrs- und Tarifverbund (MVV) region the Mobile Community is known as “public transport jam detector” and has been running successfully for many years. For Verkehrs- und Tarifverbund Stuttgart (VVS) the Mobile Community has now been enhanced and released using the name “passengers inform passengers” (called “KiK” from the german translation “Kunden informieren Kunden”).

The project KiK enables passengers to report delays of certain lines, which are then shown to other users of the VVS app as hints. Those reports do not influence the EFA routing, but help other users to identify potential disruptions in the network. The system regulates itself by allowing users to vote on existing reports, with the votes influencing the report’s visibility: Down-voted reports will disappear quickly, while up-voted reports remain in the system for longer. Of course the VVS has administrative possibilities and can view all reports, statistics of all users and has possibilities to interfere if necessary.

Besides delays KiK also allows users to report damage to stops and failures of elevators and escalators. This is meant to involve passengers into improving the service quality and offers a useful source of information for transport authorities in order to more efficiently plan their repair schedule. All this is possible without any need for a registration from the user. This reduces the inhibition threshold and encourages users to participate more freely.

Fig. Stuttgart Transport and Tariff Association (VVS)
We had a quick conversation with the team lead for journey planner information at VVS, Mr. Torlach, who was responsible for the launch of KiK.

MM: VVS is often at the forefront with new services in public transport. Do passengers expect this nowadays? Mobility behaviour and information requirements permanently change. High quality and reliable information and services play a big role in using bus and trains. The passenger does no longer plan and book his trip a long time in advance but requires immediate information at all times in his current context. That's what we provide.

MM: Which services are most important to VVS passengers? Our figurehead is clearly the VVS mobile app. It offers many individual features about journey planning and is the prime product of all mobility platforms in the Stuttgart metropolitan area. Our customers are especially interested in large-scale real-time information for bus and trains, which we also present on the live map. Additionally we provide a lot of information in case of disruptions, including active push notifications. Services concerning tariffs and ticketing are a key success factor for the app, which is shown by the rapidly increasing mobile ticket sales.

MM: With the feature "passengers inform passengers" (KiK) the VVS enables passengers to create and share information themselves. What was the reason to launch the project KiK? Initially the idea was to enable passengers to report disruptions when there is no official message from the coordination centre of the transport authorities about the incident yet. The knowledge of our passenger onsite should be used to increase and enhance the information flow. The same goes for reporting failures of escalators and elevators, which is currently only covered sparsely by official authorities. And finally the overall quality in public transport was the main reason for adding reports of damage and defilement of stops, for which VVS wants to contribute with KiK.

MM: The VVS is very active with creating on-time disruption messages. How do you see the interaction between official messages and user-generated ones? We clearly distinguish between official message and messages from passengers, so the origin of the information is always obvious. Additionally we use different symbols for the respective hints. It is also important that the two types of messages do not exist in parallel, because this might confuse users. As soon as there is an official message, only this one will be shown.
MM: What are the risks and opportunities you see with integrating passengers actively?
Besides the large free user-powered platforms like Wikipedia and Open Street Map more and more apps are using the “crowd-sourcing” approach. Almost every passenger owns a mobile device nowadays and can therefore potentially contribute his observations and experience about the public transport and share it with the other passengers. And this is now as easy and as intuitive as possible and in real-time. We hope for a more favourable reception of public transport by our customers. Using technical procedures, like using GPS to determine the user’s location, we ensure the generated information is accurate and reliable.

MM: Do you moderate or check the user-generated messages?
During the launch period we monitor the amount and quality of the messages, which are directly shown to other users once created. Our backend system enables us to control duration of the publication for user-generated messages, as well as control whether the same incident needs to be reported multiple times before being published. Our goal is to have as little manual intervention as possible. Finally we do not publish free text messages, but convey them to the responsible transport authorities, e.g. for damage or defilement messages.

MM: Are there any plans to further enhance KiK?
The next step will be to enable user-generated messages to be delivered via push notifications. This way passengers can monitor e.g. their daily commuter route and will receive information about delays, damage or failure of escalators and elevators for the origin, destination or interchange stops directly to their mobile device.

Thank you very much Mr. Torlach!

“The knowledge of our passenger onsite should be used to increase and enhance the information flow.”
MENTZ Cycle Route Planner

at the center of new mobility

Application

Product
MENTZ Cycle Route Planner

Features
Intermodal routing, Bike navigation, OSM database, Offline-capable apps

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Bikes are one of the most important modes of transport in the field of mobility. Understood as “multimodality”, the ability to mix different means of transport has kept the industry busy for years. Bikes are particularly integral to urban mobility. In the past they were used mainly for leisure or sport, but now bikes represent a large percentage of the commute to work. The numbers from the modal mix, which is the volume which is the distribution for various types of transport, are rather conclusive. For example, as part of the “Bike Capital” initiative, the City of Munich was able to raise the percentage of bike use for commutes from 11% to 17% in only eight years.
MENTZ supported this development from the beginning by supplying multimodal journey planning. In fact, multimodal information has been part of EFA for more than 10 years (e.g. Bike & Ride, Kiss & Ride or Park & Ride) and other means of transport like car-sharing are continually being integrated into the system.

In addition, transport authorities like the Stuttgart Transport and Tariff Association (VVS) have been using the MENTZ cycle route planner (CRP) for some time. In conjunction with the state-wide platform “Bayernnetz für Radler” in Bavaria, such offerings were the beginning of a whole range of other projects like the CRP for Transport for Ireland and Transport for London, the CRP for the Munich Transport Authority (MVV) and the City of Munich as well as the CRP for the State of Baden-Wuerttemberg. These projects also contributed to the further development of the topic of cycle routing. Another important milestone was the introduction and implementation of Open Street Map (OSM) as a routing basis.

For a long time, the commercial GIS data, which are optimized for cars, had to be arduously refined to incorporate cycle attributes. With the implementation of OSM to DIVA GIS over the last three years, a real alternative can be offered to replace this cumbersome process. The OSM data is modelled correctly in urban areas with a number of cycle specific attributes. When changes need to be made, they are performed by a large number of activists from the OSM community, which results in data that are both detailed and up-to-date. MENTZ recognized these possibilities earlier on and is able to process the OSM GIS-data structures quickly and consistently in all routing modules.

Similar to EFA systems, the layouts of apps and desktop applications are customer-specific and provide functionally different options.
The decision how and which features should be offered to consumers is not always easy. As part of a collaboration between the City of Munich, the MVV and the University of the German Federal Armed Forces, the web portal of the MVV cycle route planner was analyzed. In addition to statistical evaluations, consumer surveys were conducted. The positive results of the study were presented to the public and will be fed into future enhancement of and upgrades to the cycle route planner. The study can be found at the following web address of the Sueddeutsche Zeitung (in German): http://www.sueddeutsche.de/muenchen/studie-was-muenchner-radler-bewegt-1.2920184.

MENTZ cycle route planners now navigate areas across Ireland, Greater London, Baden-Wuerttemberg and Bavaria and will be expanded to cover all of Germany. Part of this strategy is to continually develop the apps. The cycle route planning app is similar to the MENTZ Companion in the realm of public transport. As a licensed product, the option is provided to brand specific areas of the app to meet customer needs. The first expansion phase “Speedometer & Tracking” was released in May. Bikers can display core values on a speedometer and trace the travelled route and save it. The second phase is dedicated to the topic of “sharing” content, or the exchange of planned and travelled routes between users, and between desktop and app.
MENTS User Groups 2016

4th UK and International User Group, London, GB

Date: 21st / 22nd April 2016
Host: Transport for London (TfL)

58th User Group for EFA- und DIVA User, Linz, Austria

Date: 13th – 15th April 2016
Host: Linz Linien
Since 2013 the growing community of English speaking DIVA/EFA customers meets once per year for the international DIVA/EFA User Group. This year TfL hosted the event in their time-honoured offices above St. James’s Park Underground Station.

Not only visitors from the UK and the Republic of Ireland joined the event, but also from as far away as Sydney, Australia. The first day was opened by Shahzad Ashfaque, Planning, Performance & Operations Manager for TfL Online, followed by a session illustrating the latest new DIVA and EFA features. This was accompanied by reports from customers about how they use the MENTZ product portfolio to solve the latest challenges in their region.

Guest talks by Jacinta Hargan (TfNSW) about the current and future challenges of the port town Sydney, by Shahzad Ashfaque (TfL) on Open Data and by Chris Lane (Centro) on Mobility-as-a-Service were followed mindfully by the participants. At this point we would like to say thank you again to all participants for their contributions to the event that led to very interesting discussions.

MENTZ introduced the completely new designed Companion 4.0. A “Making-of” presentation showed the way in which the new usability concept evolved from the first ideas through to the implementation.

In Sheffield, we installed the first version of a combined AVM/Event Management user interface. The link between the two areas of vehicle monitoring and broadcasting information on various channels was the core message of the presentation and the live demo.

TfL’s DIVA/EFA systems are running in the Amazon Cloud since 2015. Current topics here are the new release and synchronisation process in the dynamic hosting environment that allows scaling the number of EFA servers up and down as required.

Multi-modality is worldwide still one of the hottest topics. Therefore, two presentations on the new multi modal EFA standard layout and interfaces with backend systems of sharing providers illustrated the potential in this field. A live demo showed use cases in Stuttgart, Mannheim and London.

Another topic dealt with the use of OSM for georeferencing, map production and routing. MENTZ supplies the users with tools that allow them to manage their GIS data for DIVA and EFA based on OSM.

Presentations on new DIVA and EFA projects and functions implemented around the world topped off the event.

In the evening, the participants had plenty of time for networking on a trip in a private capsule of the London Eye, followed by a meal on the river banks in the heart of the city and some cold refreshments at the legendary Wellington Pub.

The next UK & international user group will take place in April 2017. The location will be announced shortly.
Round about 70 EFA and DIVA users gathered on April 14th in Linz, the picturesque capital of upper Austria, for a get together at the German user group. Together with “Linz Linien” MENTZ hosted the event that was focused on passenger information. Mr. Ing. Mag. Waldhör, managing director of the “Linz Linien GmbH”, send a warm welcome to all visitors and gave an overview on the development of public transport in Linz. This also included impressions from Linz as industrial city on the river Danube and cultural capital in 2009.

The series of technical talks was started with an overview on latest projects and new systems functionalities. This was followed by the introduction of the EFA Companion re-design. The EFA companion is the passenger information app for many public transport authorities and operators and will soon be available as generation 4.0. Linking to the mobile platforms, a video highlighted how travel guidance can show passengers the way to go by means of modern smartphone-technology and the powerful EFA routing capabilities. How this can also work in disruption scenarios and how the optimum route is found in this case, was illustrated by the next presentation. Especially at times with disruptions, the number of requests for the passenger information systems rises significantly. For coping with those load peaks it can be worthwhile hosting the routing servers in an elastic cloud environment. Which benefits can be achieved by operating an entire EFA system in such virtual environment was demonstrated by looking at the EFA system of Transport of London.

The idea of large and complex networks was looked at in detail during the presentation on the DELF1plus project, which is funded by the ministry of transport and digital infrastructure. Part of this project is to collect all timetable data within Germany and make it available for the passenger information system in each state. DIVA 4 is the perfect tool for integrating large and heterogeneous data sets quickly and with high quality. The integrated data can then be used in the EFA high performance router. Beside mobile apps and real-time passenger information, the intermodal journey planner was another key aspect. Several projects with EFA systems in Abu Dhabi, Chicago, Hannover and other regions were showcased in which, beside the classic public transport, also make use of car-sharing, bike-sharing, Park & Ride and car-pooling offerings when calculating the optimum trip from A to B. This is also part of the new EFA web UI with responsive design that is able to show the intermodal mix intuitively and clear. Outside the meeting room the user group participants had the chance to test the new UI themselves and get a first-hand impression of the new usability concepts and its features. In addition, the AVM product showed a new user interface.
It is now also in service with Supertram in Sheffield (UK) for locating and monitoring vehicles. An impressing presentation showed based on live examples how the system works in Sheffield. Here the user-friendly system concept is brought to the next level, by allowing also the capturing of event and incident messages with the same system. With that, the control room operator can perform operations management and passenger information through one system.

After an intensive day, the participants could look forward to the evening event. It started with a ride on a historic tramcar to the Pöstling Mountain. There a museum led through the history of the famous mountain railway that leads to the top of the local mountain of Linz and is with and average incline of 10,5% the steepest conventional railway in the world. Certainly, the visitors were all invited to take a ride on these famous tracks up to the top of the mountain and enjoy the marvelous view over Linz and the Danube valley. Then a historic night watchman took the guests on a journey through the world of fairies and dwarfs in the Grottenbahn. After the ride in the wagon pulled by a very harmless dragon, the evening was concluded with a buffet of local dishes in one of the towers of Pöstlingberg Castle.

The second day had set its focus on DIVA 4. After an overview on the use of OpenStreetMap data in the production of interactive and printable maps, the DIVA timetable integrations system for the passenger information system in Austria was introduced. This system is used to integrate the entire timetable dataset for Austria. A similar task is fulfilled by the timetable management system of the public transport authority Westphalia-Lippe. This project was introduced in a very lively guest lecture by Mr. Atorf (public transport authority Paderborn/Höxter) and Mr Topp (westphalian transport operator Münster), which showed how good project management and good software can also under a tight timeline lead to success.

Presentations on the many new functions available with the latest DIVA Release, developments for print products as well as an overview of the latest operating system and database versions supported by DIVA and EFA ended the second day. The user group ended with a lunch, before everyone was heading for home.
FreeRide
MENTZ School Transport Management System

Application

Authority
OWL Verkehr GmbH, Authority for Public Transport of Westphalia-Lippe

Project Focus
- Management of student relations (start/destination/via)
- Preparatory revenue sharing
- Account data for transport authorities, school boards and schools

Data Volume
School Authorities: approx. 100
Schools: approx. 700
Students: approx. 75,000

Region
Inhabitants: 2,038,323
East-Westphalia-Lippe
Area: 6,519.97 km²

MENTZ Contact
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School transport makes up a large part of the passenger revenue for public transport and thus provides a solid economic basis for transport authorities and associations. Particularly in more rural regions, regular transport routes have to be supplemented with school bus routes and taxi companies in order to transport students to schools.

In a school catchment area with several thousand students, manual editing and organising of school transport is prone to error. In addition, the time and personnel costs associated with manual editing involve a great deal of resources. The completely web-based software packet “FreeRide”, developed by MENTZ, supports transport planning in this responsibility.

FreeRide is a database-supported solution to manage localities, school and students as a basis for school transport planning.

Essential functions at a glance:
- Application management with semi-automatic application check to approve reduced ticket prices or exemptions
- Connection to EFA to support the application check
- Creation of form letters and tickets using individually defined templates, issuance of e-tickets
- Administration of student tickets with co-payment
- Interface to accounting department for due dates and payment receipts
- Preliminary division of income; e.g. based on student relations
- Creation of statistics for costs reporting

The MENTZ School Transport Management System FreeRide is in successful live operation at the administration union of public transport Vogtland (ZVV) in Saxony since 2014. Now we are pleased with another customer in North-Rhine-Westphalia: The OWL Verkehr GmbH (OWL V), who commissioned us to provide a school transport management system for the region of East-Westphalia-Lippe. FreeRide will be customised in close cooperation with the customer to meet the requirements of OWL Verkehr.

The fundamental tasks are the management of 75,000 students from Lippe, Minden-Lübbecke, Herford, Gütersloh and the city Bielefeld as well as the issuance of student ticket subscriptions. One of the new challenges is working with student relations, which allow a preliminary division of income to the transport companies: Each student is assigned to a relation that consists of boarding, alighting and interchange stops on the way to school. By allocating the serving routes of this relation to the transport companies, the percentage share of each transport company can be calculated.

FreeRide School Transport Management
A success story continues
7 years after the introduction DEFAS plays an indispensable role in Bavarian public transport. More than 100 schedule and real-time data suppliers use the service to exchange especially real-time data via only one connection with all partners and use it for improving their service quality. The complete real-time information for travellers in Bavaria comes out of DEFAS. Only here real-time for train, underground, tram and bus are offered at that scale. Therefore, the Bavarian rail association decided to extend the cooperation with MENTZ by 10 more years. With that, the future of DEFAS Bavaria is set until 2027.

260,25 kilometres
Were covered by the members of Team MENTZ at this years Wings for Life World Run in Munich, Dublin, Vienna and Olten for a good cause. With a lot of sun and only little shade this year again the weather was the hardest opponent, but could not prevent that a good amount of donations were raised. Beside the complete entry fees, MENTZ also transferred a premium for every kilometre covered that goes 100% into the research for therapies curing spinal cord injuries.

DIVA 4 and EFA 10 now also in “The Windy City”
Chicago is on one of the most important railroads in America that connects the East- and the Westcoast. RTA (Regional Transport Authority) offers daily more than 2 million trips with bus and train. The RTA system is the second largest public transport system concerning kilometres travelled behind New York and the third largest with regards to passenger count behind New York and Los Angeles. Since 2008 the products DIVA and EFA are in use. The IT consulting company SAIC (Science Applications International Corporations) was until now the prime contractor of RTA responsible for operating the system. Recently a direct contract was signed between RTA and MENTZ. In order to have the latest technology available, RTA updated to DIVA 4 and EFA 10 and switched from a physical infrastructure into the Amazon Cloud. After the successful move into the cloud by Tfl (Transport for London) are we convinced that it was also for RTA the right choice to operate the system this way. The biggest advantages of the Amazon Cloud are flexibility, elasticity and efficiency. The go live of the new multi modal journey planner with EFA 10 and standard layout 3 took place on May 5th, 2016. Beside public transport trips, the user is also offered Park & Ride, Bik &Ride, Bike sharing and individual car, bike or walkways. The journey planner for Chicago can be accessed at http://tripplanner.rtachicago.org. Beside the multimodal web-journey planner, people in Chicago can also use the mobile apps (iOS and Android) to get the latest public transport information.

InnoTrans
20th – 23rd September 2016, Berlin
Hall 4.1 Stall 309

Bus & Coach
5th – 6th October 2016, Sydney, Australia
Stall 80

WhereCamp
3rd – 4th November 2016, Berlin