ETA Management Platform

Reliable Predictions for Freight Transport

HaCon's ETA Management Platform is a new spin-off product in our large portfolio of IT systems for planning and managing rail infrastructure as well as rail and multimodal operations. It is designed to handle and evaluate ETA (Estimated Time of Arrival) figures calculated by different parties and was developed based on our extensive expertise regarding train monitoring systems.

The neutral ETA Management Platform is IM- (Infrastructure Manager), RU- (Railway Undertakings) and CTO- (Combined Train Operator) independent and includes state-of-the-art software components like HAFAS Smart VMS that is used all over Europe for smart vehicle and fleet management, train monitoring and last-mile truck information. The new platform is a central component within HaCon's ETA to CTA (Calculated Time of Arrival) strategy that strives to improve management decisions in traffic and transport, taking into account the actual network situation, the resource availability of all involved parties and a streamlined resource management. The ETA Management Platform can be easily adapted to the specific needs of IMs, RUs, CTOs, intermodal terminals, Logistic Service Providers and their partners for trucking as well as any other party involved in the logistics chain.

Real-Time Visibility Layer
allows for an easy overview of planned and real-time data on various aggregation levels

Accuracy & Quality Layer
allows to validate multiple ETA predictions from different sources over time frames or single points of analyses

Customizable Management Layer
puts your needs on center stage and allows for adapting reports and analyses in various orders and formats

ELETA

The current ELETA research project uses data solely from the RNE (RailNetEurope) system TIS (Train Information System). Nevertheless, as our ETA Management Platform is based on HAFAS Smart VMS for Freight, it is also capable of using data from other IM sources, from various interfaces to the RUs or CTOs as well as from all kinds of geo-tracking data. Within the ELETA project framework, our solution is focused on comparing various ETA calculation methods to create a better understanding of their accuracy. In addition, we enable a wide range of analyses on specific train runs up to aggregated levels covering full lines or entire networks. These analyses are complemented by graphics that allow for easy understanding and presentation.

ETA by HaCon

To evaluate within the ELETA project whether the usage of AI provides a significant benefit for the ETA accuracy, or if modern algorithmic approaches reach a similar quality level, it was agreed that the ETA presented by HaCon within ELETA is algorithmic-based. In addition to ELETA, HaCon and Siemens are working on two more streams of predictions: The first one is also AI-based, enriched with the massive experience of the Siemens family in the area of rail business as well as the analytical power that comes along with Siemens MindSphere. The other one is based on real-time simulations and decision support systems for the infrastructure managers, taking into account the actual network situation and other asset restrictions.
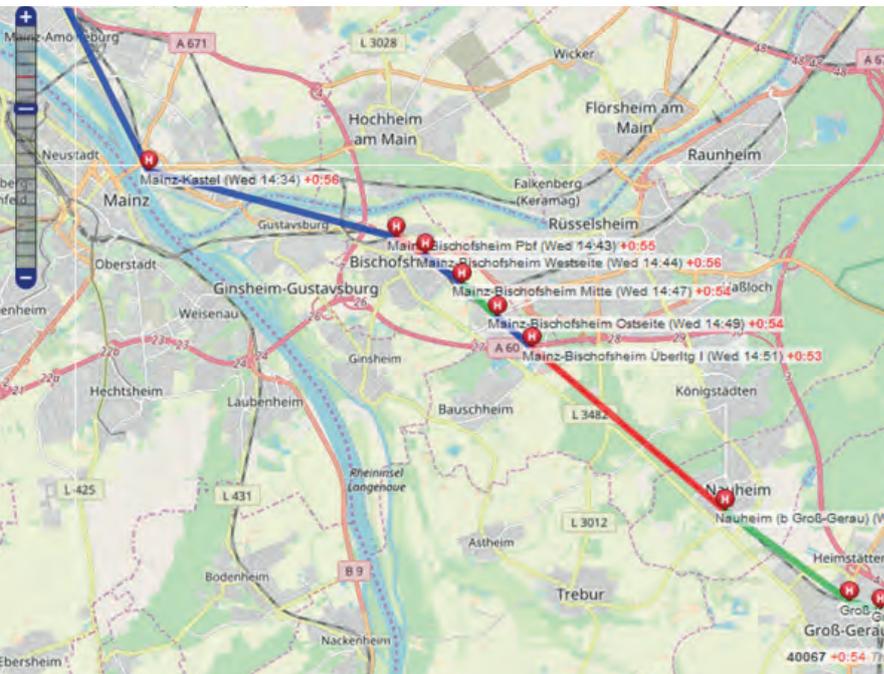
↓ In this example, a single train run is under analysis. With one click, users can extract valuable information such as the actual delay, ETA predictions and direct visual hints concerning its quality over time. This can be configured to individual needs, e.g. for dispatchers to take real-time decisions. (Example for illustration only)
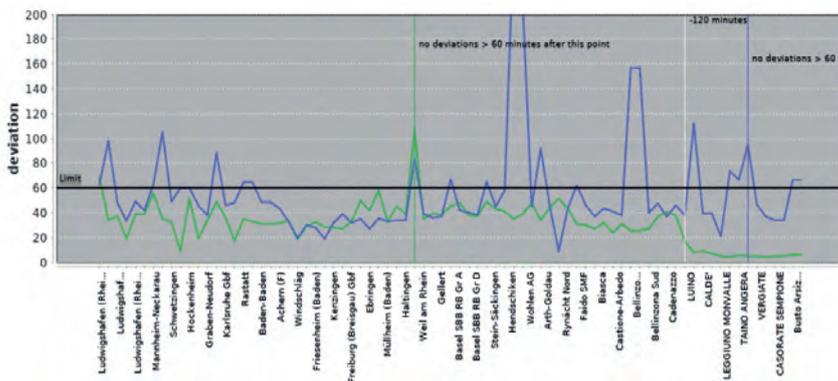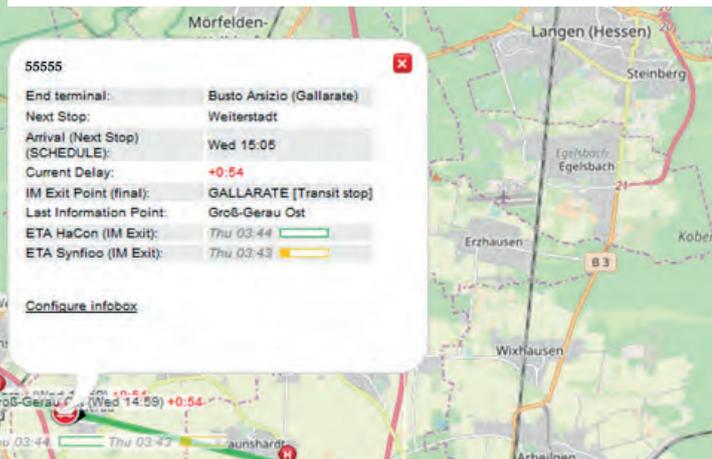
← The graph shows one of the options to compare the accuracy of different ETA calculations. The deviation development between estimated and actual time of arrival (ATA) is illustrated in this case for HaCon's ETA (green) and the ETA of the infrastructure managers (blue).

IM Exit Point Arrival (REALTIME):
IM Exit Point Arrival (SCHEDULE):

— Deviation ETA HaCon (Median absolute)
— Deviation ETA IM (Median absolute)

About HaCon: HaCon provides cutting-edge software solutions for public transportation, mobility and logistics. Our three business units, HAFAS, TPS and Consulting, provide more than 370 highly qualified specialists and 35 years of experience for your success. From trip planning to mobile ticketing and fleet management; our HAFAS product suite covers all aspects of Intelligent Transportation Systems and creates the ultimate end user experience. HaCon's TPS solutions for train planning and capacity management enable network providers and operators to make the most of their infrastructure. For more specialized projects, our consulting team empowers our clients to manage complexity with ease and offers customer-specific solutions for rail freight and combined transport. Since 2017, HaCon has been a member of the Siemens family. Headquartered in Hannover, Germany, HaCon also holds offices in Berlin, Paris, and London.