

# HaCon, streamlining publishing.

Adobe FrameMaker enables transportation providers to publish relevant, accurate, easy-to-digest information on paper and electronically.



"When we developed our first print system over 20 years ago, there was no better single source publishing tool...than Adobe FrameMaker. Today, we are still very happy with Adobe products and use both FrameMaker and InDesign for publishing."

*Bernd Gründling, head of the HAFAS Print department, HaCon*



## SOLUTION

Adobe FrameMaker

## RESULTS



### INTEGRATION

Timetable publishing software and other transportation logistics software integrates seamlessly with large-scale IT infrastructures



### FLEXIBILITY

Keeping presentation layer separate from massive data sets enables end users to update information without compromising layouts



### OUTPUT VARIETY

Bound schedules, station signs, custom journey requests, pocket pals, and more stem from a single data source



### ACCESS

Helping transportation companies publish easy-to-understand timetables to provide travelers with timely, accurate information in relevant ways from print to web

## HaCon Ingenieurgesellschaft mbH

Established in 1984

Employees: 250

Hanover, Germany

[www.hacon.de](http://www.hacon.de)

### CHALLENGES

- Create flexible, customizable transportation publishing system
- Enable transportation providers to give travelers comprehensive information in relevant ways
- Help meet growing demand for efficient public transportation systems

### Perfecting travel timetables

With its timetable information system HAFAS, HaCon provides a one-stop suite of integrated journey planning and printing solutions for train and bus operators throughout Europe and beyond. HAFAS is used in 25 countries and handles more than 40 million requests every day for personalized journeys.

The publishing division of HaCon has developed a timetable printing system named HAFAS Print, which is used by major national transportation providers such as the German, Belgian, and Swiss federal railway systems, among others.

Using Adobe FrameMaker for automated typesetting and pre-press processes, customized HAFAS Print solutions help transportation companies publish timetables that are easy to understand and that enable passengers to visualize journeys. No longer limited to traditional print products such as routed timetable books, travelers can download specific information as a PDF file, making it possible to combine the advantages of a printed timetable with quick web access.

“Our goal is to help transportation companies provide travelers with timely, accurate information in relevant ways,” says Bernd Gründling, head of the HAFAS Print department and responsible for overseeing the development of systems, consulting, and production. “When we developed our first print system over 20 years ago, there was no better single-source publishing tool for transportation companies than Adobe FrameMaker. Today, we are still very happy with Adobe products and use both FrameMaker and InDesign for publishing.”

### Conquering publishing challenges

Integral to the HAFAS Print solution is Adobe FrameMaker, which formats and typesets enormous amounts of transportation data that helps conquer a myriad of publishing challenges. “With readability and comprehension as the ultimate goal, FrameMaker provides us with precise layout control without the complexity of creating our own layout engine. It enables us to rapidly create new layouts, reuse functionality, and customize the solution to suit the requirements of every customer,” says Gründling.

Before the HAFAS Print solution came on the market, publishing transportation timetables was a tedious and time-consuming process. Tools were slow, inflexible, and labor intensive. Layouts had to be hand coded. With HAFAS Print, manual work is virtually eliminated, the single-source publishing process is streamlined end to end, and the ability to rapidly adapt layouts during the typesetting stage in FrameMaker improves the accuracy and timeliness of information.

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Originating from a single data source, a wide variety of outputs are generated by HAFAS—online trip planners, mobile apps, printed timetables, large scale arrival/departure boards on station platforms, and pocketbooks. The main benefits of publishing software based on Adobe FrameMaker is the ability to maintain a well-defined separation between the data and presentation layer, the ability to automate and typeset highly complex timetables, and having the capacity to reliably and accurately create documents with hundreds of pages.

Train and bus tables can span dozens of pages with text typically spanning cells, rotating, or both. Layouts and symbols must align perfectly. Common requirements such as distributing tables over a number of pages while keeping footnotes intact is handled by a FrameMaker plug-in provided with HAFAS Print. FrameMaker also enables users to combine multiple documents in a book and to automate processes while enabling manual editing.

Users need no knowledge of graphic design to get professional results. Even if HAFAS Print has already loaded the timetable data into a template, data can be revised without compromising layouts. Relational capabilities governed by sets of rules dictate best connections between two places, and, once applied, the rules are automatically applied for each data update.

Output from the HAFAS Print solution benefits travelers across Europe. For example, the National Railway Company of Belgium continuously produces station boards at all stops and Deutsche Bahn (German Railways) prints more than five million leaflets monthly that show updated routes and connections for display in about 800 different long-distance trains. The Swiss Federal Railways print roughly 100 different pocketsize booklets comprised of up to 128 pages displaying essential timetables for cities and regions.

“As transportation companies stay on pace with Adobe FrameMaker releases, we will be able to further extend scripted functionality such as fine-tuning column breaks and heights,” says Gründling.

### End-to-end efficiency

Typically HaCon’s customers use dual-screen setups to work with HAFAS Print software on site. One screen shows the software’s data view and the other shows the layout view in Adobe FrameMaker, making it fast to visualize and compare timetables. “HaCon solutions have integrated seamlessly with existing IT infrastructures at all of our customer sites, where anywhere from 1 to 100 people use the software daily,” says Gründling.

The publishing workflow starts with complex data sets being manipulated to compute which trains, stations, and stops should be displayed for a particular printed piece. Flowing the data into a separate presentation layer in FrameMaker is the last stage of the workflow, where the selected information is formatted, typeset, and put into layout. From there, FrameMaker creates PDF files for printing or download.

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## SOLUTION AT A GLANCE

• Adobe FrameMaker

Several features in FrameMaker were of particular use to the HaCon developers when programming the print solution. The ExtendScript ToolKit (ESTK), a development and debugging tool, provided a great environment to quickly tailor HAFAS Print to the customers' individual processes and needs. Additionally, the developers typically saved files in MIF for fast import and export.

Moving forward, HAFAS Print customers will continue to benefit as new publishing processes emerge including innovative developments for mobile applications, web-based journey planners, and other printed materials. Internally, HaCon's Print department plans to switch from its self-made, structured FrameMaker environment to a structured Darwin Information Typing Architecture (DITA) authoring environment in FrameMaker to create user manuals.

For more information

[www.adobe.com/products/framemaker.html](http://www.adobe.com/products/framemaker.html)



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