

*To stay at the forefront of technology, BVG were looking for a comprehensive graphics software tool—the right choice was Corel® DESIGNER™ 10*



## SPOTLIGHT

Integrated Public Transport  
Authority (BVG)  
[www.bvg.de](http://www.bvg.de)

## CHALLENGE

To have the ability to visualize the complex transit system based on the existing paper model, while reducing training costs.

## SOLUTION

Corel® DESIGNER™ 10

## BENEFITS

A comprehensive and user-friendly precision tool that allows users to create, manage and re-purpose complex technical illustrations, diagrams and schematics.

## The Customer

Berlin is teeming with activity. This is obvious not only to nocturnal revellers and visitors as they stroll by night along the Spree River, but also to the Integrated Public Transport Authority (BVG). Not surprisingly, Berlin's public transport system is an ongoing project: existing routes are improved, and new ones added. To stay at the forefront of technology, BVG was looking for graphic software tools equal to the task and selected Corel DESIGNER 10.

BVG is Germany's largest mass transit operator. With a growing fleet of buses, streetcars, subway trains and ships as well as 13,000 employees in customer service-related positions, BVG provides public transportation services to 800 million passengers a year.

## Background

Presently, the Berlin public transport system, a network covering almost 1600 km, is made up of 9 subway, 28 streetcar and 163 bus lines. Behind the scenes, countless technical drawings, train station surveys and safety protocols, as well as rail schematics, are required to manage and maintain existing and future facilities. In some cases, full-scale diagrams are a must. Until now, employees often created these network diagrams manually.

To represent various rail lines on the same page and still differentiate between them, color-coding was used as a last resort. Considering the fact that plans measure between 50 and 100 cm and that they could hardly be computerized, this very elaborate exercise proved time-consuming and inefficient.

Following the reunification of Germany and the restoration of Berlin's original rail network, BVG has been managing the S-Bahn (city and suburban railway). Since then, the transit operator had been searching for software that could help create technical illustrations for passenger traffic, network diagrams and signals. The ideal software would help visualize the complex transit system based on the existing paper model, while reducing training costs.

This software had to fulfill other requirements. Most importantly, it would have to be user-friendly. Users should be able to create object-oriented technical diagrams that could be color-coded and copied, thus making it an efficient mass production tool. Layering, which is the definition of different levels and subsections, was another important requirement because it was necessary to plot anticipated variations and compare them with real-life situations. The new design solution also had to provide precision tools to account for

***“On a daily basis, variations in the layout of complex traffic flows and signalling systems can now be quickly and easily designed”***

irregular curves and straight lines in horizontal and vertical arrangements. Likewise, a symbol library, as well as the ability to create and distinguish similar symbols, would result in increased efficiency, as symbol language is essential to traffic control systems. Since complex plans are mostly printed on plotters, support for large formats and the required plotters was a final criterion.

At the beginning of 1984, BVG's IT systems consisted of a simple single platform. Today, it has a multi-server cluster system, a fully backed-up computer centre and a 100 MB TokenRing network with 16 MB client linking. Windows® 2000 Server, NT® 4 Clients, UNIX systems and Mac OS® are used by almost all of the 3,500 employees working on data technology.

## **The Solution**

The choice was Corel DESIGNER 10, a technical illustration tool specifically designed to meet the needs of organizations in both the public and private sectors. Corel DESIGNER allows for precision and scalability without overwhelming the user. The software is centrally deployed and used over a network. Employees quickly became familiar with the basic functions, and to date BVG has acquired 660 licenses.

Corel DESIGNER 10 offers significant advantages. On a daily basis, variations in the layout of complex traffic flows and signalling systems can now be quickly and easily designed. Gone are the days of photocopies, glue and colored pencils. In particular, BVG has been relying on Corel DESIGNER to model the subway system. The use of technical drawings is by no means limited to BVG. The Berlin fire and police departments are making use of these surveys as well. Occasionally, architectural and engineering firms also require the technical illustrations.

Overall, Corel DESIGNER 10 has met all BVG's expectations. Aside from being comprehensive and user-friendly, it allows users to create, manage and re-purpose complex technical illustrations, diagrams and schematics.

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