

# A 20 Year History of Successful Bookings at DSB

## Capgemini ensures reservation system at the Danish State Railway remains one of the most advanced in the world

When customers call the Danish State Railway (DSB) or go online to reserve a ticket with them, they have no idea that the reservation system handling their order is one of oldest Scandinavian IT systems around or that it is still considered one of the best in its class. It handles over six million reservations and over 40 million requests annually.

For 20 years, DSB has been using the same IT system for reservations. Called Plads90, it was developed and has been maintained by Capgemini through all the years of its existence. While Capgemini Account Manager Peter Engman acknowledges that it has been a challenge to keep the same system up to date in a world where technology is changing so rapidly, he goes on to say that, “The system is still running very smoothly, which is certainly proof of our success.”

Since day one Plads90 has been based on a Tandem mainframe, now HP NonStop, and an SQL database. Encoding is based on Cobol85 but in a client/server application, which was relatively new technology at the time it was implemented.

The core of the reservation system uses algorithms developed by Danish programmers in the late 80s. “The heart of Plads90 is undoubtedly the allocation algorithm that helps customers find the seat they want, whether it is a seat by the window not far from the coffee machine in the Quiet Zone car or seats for a group of 15 with a completely different take on their train trip,” says Senior Project Manager at DSB IT,



Thomas Hammelboe. He continues, “It is also the algorithm that makes sure seating space is not sold twice on the same train and route. Customers have no direct contact with Plads90 but it is responsible for reservation availability, whether the request comes from a salesperson at Nyborg Station or from a customer in Skørping via the website.”

Reservations via the Internet were offered at DSB for the first time in mid-2002 and since then customer self-service has exploded. Today 42 percent of all reservations are made online. But Internet access has not required fundamental changes to the reservation system. Customers booking online get access to the same seats as they would if they were in the station. The only change has been an upscaling and increase in computing power to accommodate the higher online demand.

So even though Plads90, as seen through the lens of IT history, has reached an advanced age, its fundamental data structure and stability continue to prove that it can live up to the requirements of a modern reservation system.

And there are no plans to send Plads90 into retirement. The system is adaptable enough that it could handle other customer requests, such as a hot meal - although DSB stresses there are no plans to develop such an offering. But twenty years from now, regardless of the technology and personal devices customers will be using, it could very well still be the allocation algorithms developed and maintained by Capgemini over two decades ago that finds the right seat for passengers when they want to take the high-speed train from Copenhagen to Aarhus.



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DSB carries some 168 million passengers every year and operates approx. 80% of passenger train services in Denmark. DSB provides rail services within Denmark and across international borders. Passenger

train km totalled 57 million in 2007. The DSB Group has a turnover of DKK 9.5bn and employs a staff of 9,200. In 2007, DSB recorded a profit of DKK 850m.

For more information, please visit: [www.dsb.dk](http://www.dsb.dk)