



KLM Flies High with JetCAPS Solutions

The Way Things Were

On the Move

Part of the responsibilities of KLM's Air Traffic Management department at Schiphol Airport is providing their pilots with the flight plans they need for navigating. When KLM re-equipped the department with HP LaserJet 8100 printers in 1998, they improved the quality of their service and increased their productivity, while solving their networking problems, thanks to the clever application of a simple JetCAPS solution.

The Air Traffic Management department uses a mainframe computer to store all the variable data that can affect a flight path, and calculates the best route based on the prevailing wind, weather and air traffic conditions.

Until recently, the flight plan was printed on a flat-bed plotter in the Operations room, where the calculated route was plotted together with the corresponding chart (image of the globe), in colour, on an A3 sheet: a process that would take up to 50 minutes. While this was happening, the pilots would wait in the Operations room to pick up their flight plans before going for the pre-flight briefing (the variability of the factors affecting the route means that the chart can only be printed shortly before take off).

As Marcel Planije, KLM's System Engineer explains "Time is a critical element in the production and printing of the route maps. Whilst the pilots are waiting for the charts to print, delays are costing the airline approximately \$750 per minute! And if the routes were incorrect once printed it would take up to 50 minutes to re-print – causing cost and time delays for the airline".

Thanks to an innovative solution from the JetCAPS partner, the plotters in the Air Traffic Management department were replaced with HP LaserJet 8100 printers as part of the department's re-location from the airport to an office 10kms away in 1998.

The move had prompted KLM to review the way in which the flight plans were being printed and distributed. The new location meant that they had to print the charts and routes remotely. It was also obvious that they needed to reduce the time that it was taking to produce the plans (Schiphol is Europe's fourth largest passenger airport and third largest for freight, productivity is always an issue!).



Printed on an HP Color LaserJet Printer





Initially KLM spent a couple of months trying to identify alternative ways of producing the plans. None of these were satisfactory. Eventually, they approached Datascan, the JetCAPS partner for the Netherlands, with whom they had worked in the past (to develop custom-made house-style cartridges).

"KLM approached us last September and explained the problem to us. We felt that it would be possible for us to store the complete chart on a DIMM as an overlay, so that the mainframe would then only have to download the route data. We also discussed which printer would best meet KLM's needs, and felt that the HP LaserJet 8100 printer would provide the best output quality and performance", explains Peter van der Vecht, General Manager of Datascan.

The JetCAPS Solution



The Flash DIMM is a pre-programmed memory that can be installed in a HP LaserJet printer. Normally it is used in office environments for storing electronic letterheads and forms on the printer, to reduce network traffic, enforce corporate guidelines and save on pre-printing and paper handling costs. Datascan realised that the principle could be adapted to create a solution ideally suited to KLM's situation. Keeping the static chart data on the DIMM in the LaserJet would reduce the network traffic (which was now an issue because of the distance between the computer and the printer), and would speed up the whole printing process.

The chart data was stored on the mainframe in an AutoCAD environment, so initially Datascan had to convert it to HPGL and reduce the file size from 6MB to 500K to fit it on the DIMM. Datascan also had to ensure that the chart produced from the DIMM would always match the dynamic route data downloaded from the mainframe (a significant issue with the plotter process was that, even coming from the same source, the route did not always correspond properly with the underlying chart, meaning the whole flight plan would have to be re-printed). Datascan also needed to ensure that the output quality would be excellent regardless of the print media used. Within 6 weeks Datascan had developed the DIMM solution and installed it into three of the HP LaserJet 8100 printers in the Operations Room.

Reduced Costs and Improved Productivity

The solution is now in every day use and the flight plans are now printed where the pilots are briefed. The time it takes to print the flight plan for a trans-Atlantic flight has been reduced from 50 minutes to 10 seconds, due to the speed of the printer and the fact that the mainframe no longer has to download the background data.

"The new solution developed by Datascan works perfectly, and we have been able to reduce costs and improve productivity", explains Marcel Planije. "Additionally, the pilots love the brilliant print quality, previously they had difficulty reading the colour charts because of the reflection caused by the cockpit lighting but they can read the new charts perfectly".

For further information please contact your local JetCAPS Partner at <http://www.jetcaps.com/partners.htm>

The UK Partner for JetCAPS Hewlett-Packard Corporate Printing Solutions



s.a.x. Limited
s.a.x. House, 3 Jenner Road, Crawley
West Sussex, RH10 9GA UK
Telephone: 0870 777 6496
Fax: 0870 777 6497
e-mail: info@sax.ltd.uk
Internet: <http://www.sax.ltd.uk>



The JetCAPS solutions mentioned in this brochure are developed by third-party companies in close co-operation with HP. The third-party company, who provided the specifications and descriptions in this document, is responsible for the performance of these third-party products.

All agreements, warranties or understandings take place between the respective vendors and the purchaser.

© Hewlett-Packard Company and Datascan bv, Wormer, Netherlands 2000

All designations and product names are trademarks or registered trademarks of the respective company.

Subject to change without notice.

August 15, 2000/ss_klm