

# Fault Finder

Airports International looks at a new resource management and fault detection system due to be launched in May.



## DHF Airport Fault Detection System

DHF Airport System is a Swedish software company developing optimisation systems that not only deal with airport resource planning/allocation tasks but also provide a unique method for fault detection and management of airport systems.

The company claims that its Airport Fault Detection System (AFDS) – an artificial intelligence or 'fuzzy logic'-based system – is the world's most advanced tool for airport fault detection.

Fuzzy logic, I hear you say? Well, this is something which is often used in 'rule-based' systems to provide some human-like 'reasoning' behind command inputs, in order to make transitions a little easier. For example, if your car had computer-controlled brakes designed to be activated at 75mph, a traditional logic design would simply apply the brakes at 75mph. On the other hand, a 'fuzzy logic' version would start to brake gently at perhaps 70mph, but then gradually increase the pressure.

This type of system is designed for complex industrial plants and complex operational industries, such as those found in the aviation business. There are many possible aviation applications, including gate operations, baggage handling, and the airport's operational database.

As you would expect, the DHF AFDS is designed to support its operators in the fastest and most efficient way, enabling the user to control unexpected – and possibly dangerous – situations as they arise. The aim is to find solutions, minimise the downtime of your system, and reduce the risks of accidents. The system is already in operation with customers in the medical world and in the nuclear power and conventional power industries.

Following considerable interest from the airport industry,

ABOVE: The DHF resource-planning tool deals with such tasks as stand and gate allocation. (KEY - CHRIS PENNEY)

BELOW: Planning and real-time allocation of baggage belts, piers and carousels is also within the scope of the DHF system. (KEY-ARCHIVE)

it will be launched for our sector in May 2004. DHF says its AFDS is capable of detecting all kind of faults and is generic, which means it can be used by operators large or small who need purchase only the modules their airport requires.

The company lists the system's benefits as:

- Less downtime
- More efficient diagnosis and repair
- Process optimisation
- Reduced risk of accidents

The modular resource management system is designed to offer operational cost savings and covers the following modules:

### Stand Allocation System

As the name suggests, this provides airport operations, airlines or ground handling agents with a flexible high performance tool for planning and analysing optimum stand allocation. It is a configurable, generic system easily adaptable for the various requirements of different airports. It consists of two modules, DHF Stand Planning and DHF Stand Allocation. The stand planning component, individually tailored to an airport's requirements, carries out the long, medium and short term planning of aircraft stands, while the stand allocation component handles the real-time allocation of stands throughout the day.

### GATE ALLOCATION SYSTEM

Optimised gate planning and real-time gate allocation to meet flight schedule requirements.

### BELT ALLOCATION SYSTEM

Optimised planning and real-time allocation of baggage belts, piers and carousels.

### CHECK-IN ALLOCATION SYSTEM

Optimised planning and real-time allocation of check-in counters.

The manufacturer also offers customers the chance to benefit from the experience it has gained over many years in the medical and nuclear power industry by providing feasibility studies, business analyses, consultancy, workshops, project management and turnkey implementations.

DHF will officially launch its suite of Airport IT Systems at GSE EXPO in Las Vegas in May 2004.

