

Wireless technology ramps up

Wireless management of ramp assets could save time and money

Proof-of-concept trials of ramp management applications by SITA and Franco-Swedish mobile software provider Appear Networks are well underway at two European airports.

Their joint offering is being tested in connection with line maintenance at Lisbon Portela and with the units used to supply warm air to the cabins of aircraft parked at Stockholm Arlanda during the winter months.

Appear's IQ back-end wireless platform and Click & Run software for handheld devices support what the company describes as "context-aware service discovery" – short-range wireless delivery of selected information to mobile workers, depending on their location, personal profile and pre-set permissions.

SITA is working with Appear to offer this capability to airlines and airport operators on an application service provider (ASP) basis, with customers taking on monthly fee or pay-per-use contracts. It is also available as a standalone implementation – indeed, on 23 April the two companies announced a formal partnership to this effect.

Appear's software is designed to act as middleware between the existing SITA range of back-end ramp management applications and the mobile workforces and fleets of devices owned by airlines or airport operators.

The applications are hosted on dedicated servers at SITA's network operations centre in Atlanta and delivered to the user via local servers and a variety of mobile devices. "Our approach is relevant to any labour-intensive

operation carried out by numbers of mobile staff who need access to fixed IT systems," says Per Hagman, vice president of strategy and business development at Appear.

The trials involve two of the five potential customers with which the partners are in negotiations. "Both will see our software running on rugged personal digital assistants carried by selected ramp workers," says Hagman, who is managing the two campaigns. "In addition, the Arlanda ground units will be electronically tagged so that we can track their location and status."

The warm air units, belonging to SAS Ground Services, are fitted with WiFi location tags for use when they are within range of Arlanda's ramp WiFi network and a combination of GPS and GPRS cellular for when they are at remote parking stands. A total of 11 diesel-powered units have been equipped for the trial. "If all goes well, we will ultimately move on to the rest of the fleet, comprising 10 diesel-electric hybrids and around 30 all-electric units," says Hagman.

Apart from its location, the information automatically transmitted from each unit includes the exterior temperature and the temperature inside the air tube hooked to the aircraft.

"There is a service-level agreement between SAS Ground Services and each airline that dictates the amount of running time they pay for," Hagman explains. "At 5 degrees C external temperature it's typically 20 minutes; at -10 degrees C it could be 45 minutes."

Accurate information on the location and operating status of the warm air units offers a

number of benefits to both SAS Ground Services and its airline customers, according to Hagman.

"The company has only a small night team of three people at Arlanda," he says. "Their main function is towing the aircraft between ramp and hangar for maintenance, and this leaves them little time for the management of smaller units of equipment. The location function will help them find the units faster and deploy them more efficiently."

The status information will help to support more accurate billing for the airlines, while SAS Ground Handling will be better placed to save on diesel fuel by ensuring that the units are run for only as long as it takes to deliver the required service to each aircraft.

"Team leaders will know the location of both the deployed heaters and the night staff carrying the PDAs," observes Hagman. "This will lead to fuel savings and much better use of scarce manpower resources."

He believes that, fully implemented across the whole fleet of heating units at Arlanda, the solution could save tens of thousands of Euros each month in the winter.

"At present the actual operating hours greatly exceed the maximum specified in the service level agreement, resulting in heavy extra costs borne mainly by SAS Ground Services," says Hagman. "For example, in February 2008 the diesel heaters were deployed 212 times and run for a total of 1,200 hours – four times the maximum billable time."

■ *Brendan Gallagher, with additional reporting by Ben Vogel*