

ITINERARIES

Tracking Your Wi-Fi Trail

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GENEVA — The scene at [Copenhagen](#) International Airport one recent day was much like that at any airport around the world: passengers hurrying through the terminal, waiting in security lines or lingering at the duty-free shops.



Nicolas Righetti for The New York Times

Stephane Cheikh, innovation manager at SITA, with a 3-D display of passengers at Copenhagen Airport.

But unlike other airports, the movement of the passengers was being observed in an office here in Geneva, 860 miles away. Stephane Cheikh, innovation manager for the aviation communications and technology company SITA, was using his laptop to demonstrate a new program that tracked travelers' movements based on the Wi-Fi-emitting devices they carried.

When Copenhagen Airport starts using the program in the next few weeks, airport officials will get a real-time picture of where travelers go and what they do. The officials can use this information to improve the design of the airport, direct the flow of passengers or shift employees to improve the efficiency of security or [immigration](#) checkpoints.

On Mr. Cheikh's laptop, the tracking program showed different colored dots to distinguish arriving from departing passengers. Travelers can download the associated Copenhagen Airport [iPhone](#) application to receive location-specific information on their devices about

things like where to find the shortest security line or special deals being offered by nearby stores.

SITA hopes to eventually extend the tracking program to other airports around the world.

“All airports are struggling with the same question — how to get the passenger to the boarding gate while having a pleasant journey,” said Dave Bakker, senior vice president for SITA Global Services.

He added that only devices were followed, not individuals, and so the program did not intrude on travelers’ privacy. “We do not know who is behind an individual dot other than that it is an inbound or an outbound passenger.”

SITA’s system of locating multiple Wi-Fi receivers at the airport means that passenger locations can be determined within about 10 feet or so of accuracy, company officials said. This is enough to see where passengers congregate, how much time they spend in stores and restaurants and where there may be bottlenecks. It will also enable airport retailers to communicate with travelers directly.

“Once the smartphone app has an accurate location, they’re going to prompt you with offers based on your location,” said Jim Peters, SITA’s chief technology officer. Increased retail sales theoretically would provide the airports with a financial incentive to buy the technology, because specialists said that installing Wi-Fi receivers and triangulating the signals — critical to producing accurate location information — was expensive.

“It’s the right message, at the right time, in the right place and that’s the whole story,” said Alex Romanov, whose interactive marketing company, iSign Media, offers Bluetooth tracking at stores and malls. While Bluetooth is available in some airports in the United States and Europe, it is less precise. “Airports are so important because of the amount of people that they handle. Any airport handles more people than the average mall.” Mr. Romanov said.

Airports Council International said its data showed that 2.5 billion people passed through airports in 2009. In North America, those air travelers spent an average of \$7.65 before they got off the ground, said Pauline Armbrust, president of Airport Revenue News.

“Concessions are a strong revenue generator,” she said. With a more accurate picture of where these passengers are and what they are doing in the airport, the spending could increase \$5 to \$10, according to several industry marketing specialists.

Anthony Hanseder, chief executive of iFly.com, a Web site that offers flight and airport information, said many companies would be eager to reach out to travelers through their devices. "You're going to get a slew of entrants trying to figure out how to make a mark in the space," he said. "It's a Wild West."

SITA said 100,000 people had already downloaded the iPhone app for the Copenhagen airport. "Obviously, it is SITA's ambition to have a scalable model in which a comprehensive solution can be productized and taken around the world," Mr. Bakker said.

The members of the Airports Council will be watching closely what happens in Copenhagen, said Arturo García-Alonso, the council's technology manager. "Our members want us to try and coordinate these implementations worldwide." They want to know that all new communication technology will work together since a traveler goes through several airports on every trip, Mr. Garcia said.

As many as 20 percent of air travelers have a device that emits Wi-Fi signals at the airport, according to Mr. Cheikh. He predicted that the number would quickly increase with the growing appetite for smartphones, which also allow users to pay for purchases and display bar codes to board the airplane.

Daniel Gellert, the chief executive of GateGuru, a hand-held app that encourages air travelers to share their experiences with others, said the SITA program was a big deal. "All of a sudden a traveler knows, 'Is the time at security 10 minutes or 75 minutes?'" he said. "To harness all that digital information within a single application is a huge improvement. Travelers finally have an intimate knowledge of their surroundings, which is a far different experience than it was even a year ago."

But if SITA's program takes off, passenger appreciation could turn to annoyance if their cellphones begin to beep and vibrate with marketers competing for their attention. "Anybody who runs this type of product or service needs to understand the benefit from the consumer's point of view," Mr. Gellert said. "And not just think about 'How can I monetize this person?' Travelers don't want to be a part of that."

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