



EMPOWERING AVIATION
PLANNERS

Airport planning, design and operations software

AVIPLAN®, with renowned market-leading technology at its core, delivers a unique feature-set tailored to meet the specific challenges faced by today's airside planning, design and operations professionals. Analyze aircraft and support vehicle movements on airport aprons and taxiways, plan complex docking scenarios with multiple passenger boarding bridge -lead-in-line- airplane combinations, assess jet blast impacts and safety clearances, simulate complex pushback maneuvers and more.

- › Four tailored versions available
- › Extensive aircraft, bridge and vehicle libraries
- › Support for 3D surfaces and terrains
- › Path construction and analysis
- › Interactive data management
- › And much more...



The soft parade

How the addition of new equipment or the expansion of certain facilities at an airport will affect future operations is a complex undertaking. *Future Airport* talks to Michael Frost, senior product manager aviation at **Transoft Solutions**, about how the company provides simulation software to the industry to enhance airport throughput and ensure safe operations.

In many ways, an airport resembles a living organism. The hallways that criss-cross through the terminal space are like blood vessels, wherein thousands if not millions of passengers make their way to where they are needed: duty-free shops, departure lounges, and eventually the aircraft that will convey them to their destination. This organism grows and contracts in ways that often confound planners. It's Michael Frost's job to understand the various flows of passengers, baggage, cargo, and aircraft on the airport and how these processes can be simulated in a user friendly software to analyse capacity, space and safety. "Airports are constantly changing, constantly evolving," says Frost, senior product manager aviation at Transoft Solutions. "Think of any airport you've been to, and there's always some new shop opening, or building works taking place. To have such heavy demands on their utilisation means that operators always have to adapt to be lean, remain profitable, and provide services that allow their facilities to remain attractive and efficient."

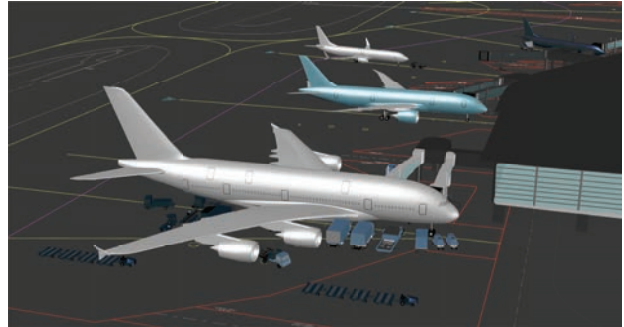
Brick by brick

Transoft Solutions specialises in providing simulation software that analyses, in minute detail, the impact passenger flows and aircraft have on the total operation of the airport. Part of the company's solutions are largely based on computer-aided design (CAD) software, an approach that has served the company well over its 27-year history.

A view of the future

Transoft Solutions provides operators with the ability to analyse the impact of changes to the airside space with its AviPLAN software. The program provides a comprehensive library of equipment for airside applications in graphical models. "This would be aircraft, passenger boarding bridges, ground support vehicles, or ground support equipment," explains Frost. The library is almost unique in this area of simulation modelling.

AviPLAN aids operators in making sense of how this equipment would cope in what is a very busy operating environment. The programme automatically takes into account whether any new additions are in compliance with existing legislation. "Under the American Disabilities Act, for example, a passenger boarding bridge is considered a permanent fixture," says Frost. "That means it must adhere to a slope limit no greater than 8.3%. AviPLAN does all of these calculations, and can simulate and test different strategies that will allow the operator to better understand if they're safely moving aircraft in and out of the hub."



Transoft Solutions builds software to visualise the specific impact that changes within the airport have on the overall operation.

This doesn't only apply to the prediction of slow-motion collisions. AviPLAN can help operators predict whether instances of FOD, or 'foreign objects debris' are putting airside crews in danger. "An FOD can be as small as a pebble, or a bolt, or a rivet," says Frost. "If an aircraft taxi's past it, that object can get picked up into the air and become a projectile, which then could potentially damage another piece of equipment or worse, injure a ground handler. AviPLAN allows planners to be able to test all of these scenarios, and determine the impact on subsequent operations."

Walk out to winter

What's more, larger software updates are released every four to six months. This is to ensure that operators never miss out on compatibility checks with the latest types of equipment or vehicles. "This is something that we feel is very critical, especially because a portion of what planners will take a look at is not just what's operating today, but what manufacturers indicate that they're going to be producing or taking orders on in the near future," says Frost.

The newest version of AviPLAN has just been released early December 2018, and accounts for new regulations, equipment, aircraft and any feedback from customers as to the previous version. Looking beyond Christmas, Transoft Solutions sees vast potential for a combination of airside and terminal fast-time capacity simulation software into one, coherent whole. "At Transoft Solutions, we want to take the best of what we have today to produce something new," Frost says. "We want to make sure that what we achieve here for capacity simulation is tied all the way through." ■

Further information

Transoft Solutions
www.transoftsolutions.com

