

# USER NEWS

## ***AutoTURN Helps YVR Airport Win “Space War”***

*Transoft Solutions recently had the opportunity to talk with Peter Bianconi, an engineer with the Vancouver International Airport Authority, regarding his use of AutoTURN.*

### ***What are the goals of your engineering department?***

“What we try to do here is make the most of our space. To fit as many airplanes as we can per square metre. Ramp is expensive to build so we attempt to pack as many planes as possible, as near to the hold rooms as possible, in the most efficient way.”

### ***How has AutoTURN helped you achieve them?***

“A lot of the airport was designed for older planes such as DC8s. We need to check if newer craft, such as 747s and 777-300s can get around our taxi intersections. We’ve been able to take the new planes in the AutoTURN library and check our existing infrastructure to see if we need to develop new procedures, change paint markings, or add more pavement.

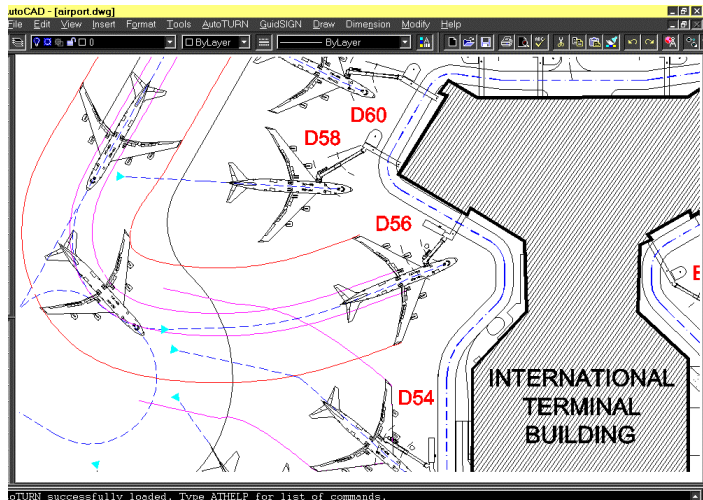
AutoTURN helps us evaluate our setups to determine the best approach. Then we can look ahead to the financial implications of different actions. So, for example, if there may be a problem we can use AutoTURN to determine which paths should be avoided by certain planes, when to re-route, and which alternate taxi routes to suggest.

Also, we have a lot of commuter planes that we’re creating special fingers for. But with lots of small planes stuck off the end of a finger, it throws them way out onto the ramp. We have various gates that are hard to get in or out of. With AutoTURN we are able to simulate how an aircraft enters a gate. In usually easy to solve the getting in problem, but when the plane is moving backwards, being pulled or pushed by a tractor, it’s harder to control the plane’s movement and therefore it’s necessary to check thoroughly for wing path clearance. Thankfully AutoTURN runs reverse turn simulations.”

### ***Airports require special design considerations. How does AutoTURN meet these?***

“We’ve used AutoTURN to look at jet blast. We’ve plotted the swept paths and then manually looked at jet blast contours. For example, at gate E 73-81 we used AutoTURN to plot how aircraft go into position and then manually checked for jet blast. Jet blast is an issue. We have to determine situations in advance, where blast might damage other aircraft or affect ground crew activities. With commuter airplanes way out on the ramp, we have people working around the planes that we need to consider. Humans can only withstand winds of 30 miles per hour, so we try to keep higher jet blasts out of the area.

Also, we help various airlines with their gate manoeuvring. For example, Northwest Airlines uses gate E73 regularly. They were having trouble getting in an out and called us for advice. We sent them our gate drawings showing our AutoTURN plotting of their plane’s wing swept path. Using the drawing they made changes resulting in easier access.”



### ***What do you like the best about AutoTURN?***

“The user-defined vehicle option. When we heard about the new Airbus 3XX we were eager to see how it would fit into our gates. With AutoTURN we had the option of going in and creating this aircraft ourselves to see how it would fit. Similarly, we have baggage trolleys and trains and a tractor that sometimes has three or four carts behind it. We needed to track how this vehicle manoeuvred around planes. In AutoTURN we entered its dimensions and were able to plot its paths within existing drawings.”

### ***So, you also use the highway vehicles provided with the program?***

“Definitely. It’s always a challenge in high density areas to access planes on the ground. We need to see how galley trucks (catering) can get right up beside the plane and out again. With AutoTURN we can check to see that we do have room for them.

We also used AutoTURN to design transit bays in front of the terminal. We’ve got a lot of bus parking and taxis pulling in and out. We used AutoTURN to plan the parking areas, we checked the designs for accuracy with AutoTURN, and then we re-designed for greater efficiency.

### ***Has the software been a good investment?***

“One of the great things about AutoTURN is that we continue to use it again and again. When we look at changing a configuration we use AutoTURN to check out all the possibilities. For example, we recently lost a parking area that was used for commuter planes. It was reassigned to the growing number of courier companies for their planes. We now have to find a way to accommodate the commuter planes elsewhere. The decisions on where we’ll park them will be based on analysis we do with AutoTURN.”

### ***How often do you use the software?***

“It gets used frequently. At YVR we will be in a constant expansion and change mode over the next ten years. A lot of airports are in the same boat. The challenge is not only increased capacity but also accommodating new aircraft mixes. The mix continues to change. As we react to changing traffic patterns and new vehicles we need to continuously examine our infrastructure. Whether we’re planning new areas, under construction or just checking wing swept path clearances and jet blast, we use AutoTURN.”

### ***How do you find Transoft's technical support?***

“We’ve never had to use it. In fact, AutoTURN is a very user friendly program. You just load it and away you go. We’ve got 3 or 4 people using it here that were up and running in no time.”