Ramp control: directing the action at our hubs

In a continuing series in the *Piedmonitor*, we have featured several of the success stories and outstanding efforts that have been made across the system to provide a safe, reliable, on-time operation.

Many of these stories have exposed simpler, more efficient ways of working with the old tools of the trade, while others have shown how a totally new and innovative idea can be put to the test and succeed.

Some ideas succeed simply by trimming time off a portion of the operation as a whole. Others revise an entire procedure.

Ramp control did just that.

It is an idea that is not new to the industry. Rather, it is a function that an airline assumes from the FAA when its operation becomes so complex that it is in the company's best interest to directly control the ground movement of aircraft at its most time-critical centers of passenger operations—typically at its hubs.

As a result of the rapid growth we have experienced at our two largest hub cities, Piedmont recently took over the responsibility to provide ramp control for all jet and commuter operations at Charlotte/Douglas International Airport and likewise for all of Pier D at Baltimore/Washington International Airport.

Under the direction of station performance managers Doyle Keever at CLT and Mike Willis at BWI, specially trained agents posted at Piedmont's control towers at both facilities are charged with coordinating the efficient movement of each and every aircraft on our ramps. From the point when a flight crew calls from the gate for push back clearance and taxi position, to a spot at a taxiway where the aircraft is turned over to FAA ground control to proceed for takeoff, Piedmont's ramp controllers direct the action.

objective the same

Some of the tracking methods and communications procedures may vary between CLT and BWI, based on differences in the facilities layout at each hub and the geographical location of the airport itself. But, the objective to maintain Piedmont's schedule reliability is one and the same.

After months of planning and intense training sessions with the FAA, Piedmont first introduced ramp control this past April at the BWI hub. Later, in July, Charlotte's ramp control program was implemented. Shortly thereafter, one of CLT's parallel runways suffered a two-week shutdown for resurfacing.

"That period of limited runway use actually helped us out a little," Keever said. "It gave us an opportunity to slowly gear up and grow accustomed to handling the ramp activity in a limited capacity."

But, now that everything is open and fully operational, Keever says his staff hasn't missed a beat. Piedmont's CLT controllers are responsible for more than 440 departing flights each day: 257 Piedmont jets, 130 commuters, and 53 other-carrier aircraft—and a like number of daily arrivals.

"We're just now coming out of a learning curve and have had nothing but good results. Most important though, we've noticeably started getting the aircraft to the gates a little faster," he said.

Back in BWI, time has proven that ramp control does in fact make an impressive difference in reliability, not only at the hub, but at its downline stations. A comparison between June 1987 and June 1988 reveals dramatic improvements that can only be attributed to the effectiveness of ramp control on system performance.

According to Tim Spangler, system performance analyst, Piedmont lost only three performance points this June due to air traffic control (ATC) and airport ground delays, as compared to 10 points for the same period last year. He measures the difference in outbound on-time departures against on-time downline arrivals—from the hub to the spoke cities. An on-time operation is one which arrives or departs within 14 minutes of schedule.

"We now have the capability to better control many of the delays that occur during this part of the operation," Willis said. "The majority of the difference between outbound and downline performance is primarily with the taxi time at the hub."

Piedmont's BWI ramp control oversees more than 260 departure operations per day, 131 of which are Piedmont jets and 87 are commuters, also with an equal number of arrivals.

"Just by implementing ramp control we've seen a great improvement," Willis said. "You don't see the long lines of aircraft at the runways wasting precious time and fuel waiting for clearance. And ramp congestion is almost nonexistent.

"Overall, it is well-orchestrated, safe, and very efficient. And the passengers are getting what they deserve—on-time service," he said.

how it all works

Ramp control allows us to do much more than move aircraft around a ramp. It provides us with an opportunity to prepare ahead of time with the big picture in mind and to maximize on efficiency. It gives us an edge on time, before any possible delays caused by weather, maintenance, passengers or servicing can take it away.

By assuming ramp control coordination at CLT and BWI, Piedmont relieved the FAA of a service it has been providing at both airports. The FAA's policy on ramp control was very simple: first come, first served. The first aircraft to call FAA ground control for push back clearance and taxi, was the first aircraft to the runway. The next aircraft to call was the second in line, and so on, despite which runway the aircraft would use or its ultimate destination.

This approach works well at airports where airline operations are not quite as braided together and time-sensitive as at CLT and BWI.

But, as Willis pointed out, if he has a CLT-bound flight that is running 30 minutes late, sitting at the gate in BWI with more than 100 downline connections in jeopardy, the company cannot afford to allow that aircraft to wait in line behind five or six other, less-critical operations just because they had called first for push back.

"Now we're in control, and that aircraft is given priority clearance to the taxiway," he said. "It's simple. We're looking out for the passengers, which is in our best interest."

Willis cautioned, however, that Piedmont's determination to utilize ramp control to run a safe, on-time hub operation need not be misconstrued as a license to disadvantage the competition.

"In fact, it often appears as though we're lending the other carriers preferential treatment, simply in our efforts to get them out of the picture and on their way, so we can better concentrate on our own operations," he said.

'spacers'

Other airlines' aircraft are also frequently used as "spacers" at BWI, he added, which often results in a seemingly preferential position in the taxiway queue.

For instance, if Piedmont has two or more aircraft in a complex that will be departing in the same general direction—say to Boston, New York and Philadelphia—each aircraft must be sequenced for takeoff so that once they are airborne they will not run nose-to-tail across the same fix or departure transition area (a navigational intersection in the sky). The FAA requires a 15-mile space between aircraft departing to the same fix, which translates into three to five minutes, which creates taxi delays if the departing operation is not well sequenced with this restriction in mind. So, by placing other carriers and commuters with different fixes between our northbound departures, we can achieve a smoother, safer and more equitable departure line-up.

As mentioned earlier, there are fundamental differences between CLT and BWI when it comes to ramp management of aircraft. That is, CLT is primarily concerned with handling heavy volumes of aircraft and the congestion caused by an overlapping ebb and flow of activity, while BWI's primary focus is on efficient sequencing of aircraft into the crowded skies of the Northeast corridor.

ramp control desk

The ramp control desk at CLT is manned by an inbound agent and an outbound agent who work side by side, monitoring their respective radio frequencies, to assure that the aircraft are properly guided and positioned at their predetermined gates, with the least possible ramp congestion.

According to Steve Yancy, senior supervisor-CLT, this is where CLT ramp control will focus its energies, at least for the present.

"Baltimore has only one runway at any given time for jet departures, while we are able to simultaneously utilize two," Yancy said. "To the extent that we prearrange the assignment of inbound operations on each concourse based on its outbound direction, sequencing based on the fixes is of secondary importance now.

The noon-hour complex is one of the busiest times at Piedmont's CLT control tower as ramp control agents Don Abernathy (left), Bill Howell (right), and senior supervisor Steve Yancy (center) gear up for the activity.

system performance

July performance began well, but declined considerably under the influence of weather, associated air traffic control, and the "echo" effect of these lengthy delays on turnaround performance. Air traffic control/airport delays alone accounted for more delay than all departure delays in July of last year.

DAILY ON-TIME PERFORMANCE - JULY 1988

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