

# Aviation International News®

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## The News Inside

### • Weather in the NextGen era

Managing the effect of weather will be central to NextGen's success, and some of the tools are already flying with operators. **page 34**



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Operators have until late next month to tell the TSA how the proposed rule will affect them. **page 3**

### • Washington ADIZ made permanent

Established after 9/11 as a temporary measure, the zone is now a permanent fixture over the capital. **page 4**

### • TEB addresses noise

The voluntary noise-abatement program at the NJ hub is gaining traction with operators, but for some it is not enough. **page 6**

### • Burst tire prompts Global mods

Bombardier is modifying its Global series in the wake of an accident in which debris from a burst tire damaged hydraulic lines and a portion of the wing. **page 16**

## Avionics and ATC

### • Synthetic vision market

Would-be competitors are nearing certification of their answer to Garmin's SVT product. **page 10**

### • TAWS lawsuit settled

Sandel did not infringe on Honeywell's TAWS patent, ruled a jury. **page 58**

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## Backlogs shrinking at the major OEMs

by Kirby J. Harrison

Six months ago, business aircraft manufacturers were publicly confident that their backlog of new aircraft orders stretching well into the next decade would provide a buffer to ease the industry through what was already flagged as an economic crisis. Today, cancellations and delivery deferrals are eating into those backlogs, and the OEMs are making adjustments that were only being hinted at two months ago.

In the fall of last year, even with a U.S. economy feeling serious pain, life was good. Or that was at least the image OEMs were presenting.

Airbus was selling executive aircraft for delivery as far out as 2017 and competitor Boeing Business Jets was selling executive 787s into 2020. Bombardier's backlog was valued at more than \$26 billion, and Cessna's backlog for more than 1,500 airplanes was valued at \$15 billion. Dassault had a 500-aircraft backlog valued at about \$12.5 billion, and Gulfstream's backlog stood

to bring in some \$22 billion.

The General Aviation Manufacturers Association at the time released numbers that put the total value of the aircraft backlog for "the big six" OEMs—Bombardier, Cessna, Dassault, Embraer, Gulfstream and Hawker Beechcraft—at more than \$82 billion, a dramatic increase of \$23.9 billion from the same point in 2007.

Executives for the OEMs were publicly optimistic. Lewis Campbell, chairman and CEO of Cessna parent Textron, said last October, "We continue to have faith in a healthy, long-term systemic global demand and we have a robust new product pipeline over the next ten years as well."

And why not? At the time, Cessna was projecting delivery of 535 business jets this year and was looking at a backlog, including the new large-cabin Columbus, that extended into 2014.

Dassault Falcon president John Rosanvallon forecast tough

*Continues on page 42 ▶*



The Phenom 100 was certified by U.S. and Brazilian authorities last month.

KIRBY J. HARRISON

## Embraer Phenom 100 earns its license to fly

Christmas came early for Embraer. The Brazilian manufacturer's first clean-sheet business aircraft, the Phenom 100 light jet, was certified on December 9 by the Agência Nacional de Aviação Civil of Brazil and three days later by the FAA, bringing Embraer a step closer to its goal of becoming "a major player" in the business aviation market.

The announcement came a little more than three years after the program launch and 18 months after the first flight. Certification had originally been expected in the spring of last year but was delayed by compli-

ance issues related primarily to the anti-icing system and flap actuation software.

Customer deliveries began the week after FAA certification at Embraer's São Jose dos Campos facilities. Embraer anticipates European Aviation Safety Agency (EASA) approval in the spring, in time for initial deliveries to European customers.

Until certification of the Phenom 100, the company's only business aircraft was the Legacy 600, an executive variant of the ERJ 135 regional jet. Embraer was expecting certification and

*Continues on page 65 ▶*

## As distressed Detroit drops its jets, bizav ponders the fallout

by Jennifer Harrington

The news that General Motors and Ford are shutting their flight departments has rattled the business aviation community. Some attributed the actions to the sensational media coverage the "Big 3" (General Motors, Ford and Chrysler) executives faced after flying to Capitol Hill in private jets, while others blamed the subsequent \$14 billion House bill that called for the distressed companies to sell their aircraft as a condition of the bailout. But regardless of the reasons, the industry is now pondering how the closures—and the economic conditions that were to blame—will affect business aviation at large.

Both GM and Ford released statements on December 2, noting their intent to close the

flight departments. GM said the company's travel volume no longer justified the existence of a company flight department, while Ford simply said it had "made the decision to immediately sell all five of our company planes and to close our flight operations."

Both companies blamed the economy, rather than the increased media attention they received for flying to Washington, D.C. in private jets to request government financial assistance. In its statement, GM said it had suffered "significant cutbacks" and would be ceasing operations at Detroit Metro Airport as of January 1 and "pursuing sale of four of the [company's seven] aircraft." A Metro Airport

*Continues on page 74 ▶*



The founding economy earned its place as AIN's 2008 Newsmaker of the Year by leaving its mark on all facets of the business aviation industry. From charter and fractional operators, to finance houses, to FBOs, to established manufacturers and start-ups, no sector escaped unscathed. *See page 20.*

# Go Direct helps users achieve RNP approval

by Stephen Pope

For most flight department managers, the thought of navigating the maze of FAA rules to fly required navigation performance (RNP) approach procedures is enough to stop them dead in their tracks. That's the reason Honeywell has launched Go Direct Services, a turnkey consulting offering designed to help business jet operators take advantage of new RNP SAAAR (special aircraft and aircrew authorization required) procedures the FAA is adding at scores of airports around the U.S.

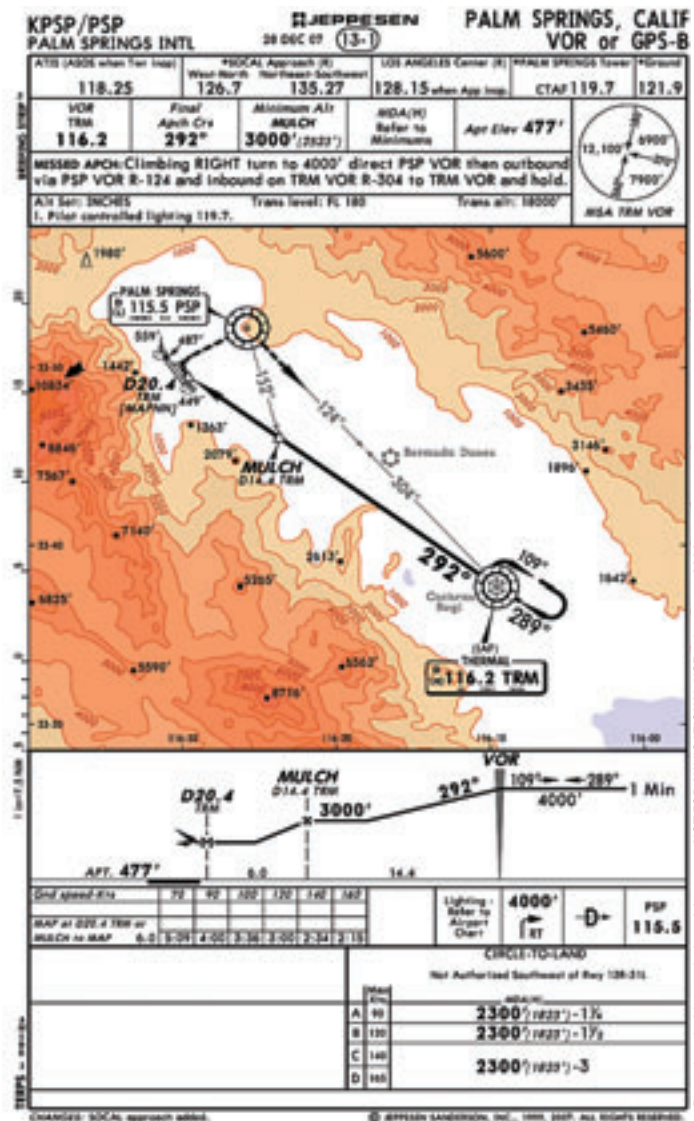
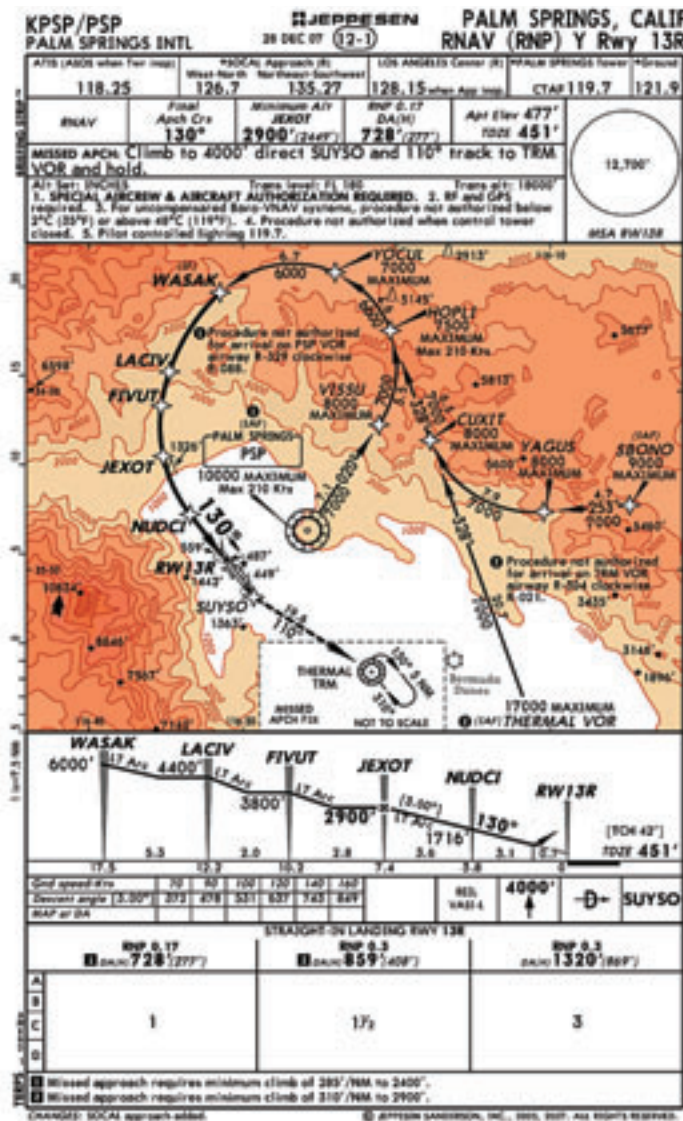
The benefit of an RNP SAAAR approach is that it can carve out a highly precise, curved path through the sky that usually results in lower landing minimums—sometimes much

lower. But getting approval is a costly and complex endeavor requiring submittal of monthly operational reports to the FAA, pilot simulator training and operations manual revisions. Considering that fewer than 100 RNP SAAAR approaches have been published so far, most operators probably won't go to the trouble of gaining approval until their home airport has an RNP approach. But as more RNP procedures are created, operators who forego such approvals will be at a disadvantage compared with those who are SAAAR compliant.

The FAA plans to publish 60 new RNP SAAAR procedures per year for the next two years. Some airports

scheduled to receive an RNP approach in the next 12 months include Teterboro, N.J.; Aspen and Eagle, Colo.; Monterey, Calif.; and Scottsdale, Ariz. If your airport or an airport you use often offers an RNP SAAAR approach, the approval can mean the difference between landing and having to execute the missed approach and consider other options.

Take, for example, the available approaches to Runway 31 at Sun Valley, Idaho. The normal decision altitude for the GPS approach is 1,790 feet versus 974 feet for the RNP SAAAR procedure. Even more dramatic is the case of Bishop, Calif., where a gently snaking RNP SAAAR flight path allows pro-



The RNP SAAAR approach to Palm Springs, Calif., left, allows for a gently curving descent path through a mountain valley that reduces the minimum descent altitude by at least 980 feet versus the airport's VOR/GPS-B circling approach.

perly trained crews flying properly equipped airplanes to descend to 323 feet versus being saddled with a 2,227-foot minimum descent altitude using the previous approach, an LDA DME procedure that avoids high terrain on both sides at Eastern Sierra Regional Airport.

The major advantage RNP procedures have over other types of approach is their tighter lateral boundaries, which allow the creation of curved pathways through mountain valleys or by using so-called radius-to-fix (RF) turns to avoid terrain or obstacles. The RNP SAAAR approach to Atlanta DeKalb-Peachtree Airport is a good example of the benefits RNP can provide. The approach to Runway 2R incorporates a continuous descending turn that is designed to avoid the tall towers that block the straight-in approach to the field. Due to the east-west flows at nearby Hartsfield-Jackson International, a straight-in ILS or WAAS LPV approach to this runway would be hard to implement, even if the obstacles southwest of the airport were removed.

While WAAS LPV approaches are excellent alternatives to traditional ILS procedures, they have performance limitations that prevent them from incorporating curved paths. The FAA's RNP program is aimed more at FMS-equipped operators who can fly curved RF legs. Honeywell's corporate flight department at Morristown Municipal Airport in New Jersey became one of the first in the country to obtain approval for RNP SAAAR operations, gaining certification for its own Gulfstream G450 and G550. Since then Honeywell has been named an RNP SAAAR designated consultant, giving the company the authority to assist other operators and providing the opportunity to create the Go Direct branded service package.

The service offering is split into three categories, the first dealing with aircraft equipage, the second with the operational approval documentation that must be submitted to the FAA and the third with database validation and ongoing RNP SAAAR recordkeeping. Installing RNP-compliant avionics and uploading the latest FMS software adds to the cost of RNP compliance, as does the database validation and monthly record-keeping program. Additional

simulator training is required as well, and all of the large training providers are offering RNP-specific courses. Although the process takes around three months to complete and requires additional pilot training, many operators can upgrade to RNP simply by loading new FMS software, according to Honeywell.

"RNP takes advantage of a lot of technology that has evolved over the last 30 years, such as inertial reference systems, GPS and FMS, but it sets a new performance standard here and now," said Chad Cundiff, vice president of crew interface products for Honeywell. "We want to help get more operators flying in the RNP environment because the capability is so amazing."

If your airport or an airport you use often offers an RNP SAAAR approach, the approval can mean the difference between landing or having to execute the missed approach and consider other options.

NBAA has provided the FAA with a list of RNP SAAAR procedures that would benefit business aircraft operators. Several of those approaches are in the process of being created now. Honeywell and Jeppesen worked with the FAA to create an RNP SAAAR approach to Morristown's Runway 5, primarily as an exercise aimed at showing what is involved in developing such procedures at an airport used predominantly by business aircraft operators. Honeywell never gained final approval for the approach, partly because the three major New York-area airports are undergoing a major traffic-flow redesign that may or may not fit with the RNP procedure as designed. After the New York airspace redesign is implemented, Honeywell

likely will amend the Morristown RNP procedure as needed to gain approval for it, Cundiff said.

Most newer business jets equipped with Honeywell flight management systems can be upgraded for RNP through a software upload to version 6.1 (for NZ-series FMS equipment) or 7.1 (for Primus Epic-equipped aircraft), both of which will be available next year. Older airplanes might require a new FMS and perhaps other equipment such as an inertial sensor and upgraded GPS receiver. A WAAS GPS receiver is not specifically required, but having one eliminates the need to do a pre-departure RAIM (receiver autonomous integrity monitoring) check. For an FMS to meet the requirements of RNP, it needs to be able to fly a curved path. Also, when the pilot presses the go-around button, the FMS should be able to remain in the nav mode. This latter capability is being addressed through software updates, Cundiff said.

Five Gulfstream operators so far have involved Honeywell in the RNP SAAAR approval process. An operator who is interested in gaining operational approval for RNP can call Honeywell and set up a meeting to determine all that's required to meet the FAA's requirements. Honeywell representatives assist the operator with the RNP application as part of a "turnkey" service package included in a \$90,000 upfront cost. For an additional cost Honeywell will also handle the database validation and monthly monitoring tasks that for an airline are normally handled by in-house personnel, as well as needed updates to the flight operations manual. □

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# eco-situational awareness



## Precision Guidance with Go Direct Services

Unlock your aircraft's capabilities with Required Navigation Performance (RNP). Honeywell's Go Direct Services helps you through the process of obtaining RNP approval as well as improve your operations for approaches and departures at terrain-challenged or congested airports. With authorization, your aircraft will be flying more direct routes and reducing fuel consumption. For operators, the bottom line is safety and better fuel efficiency. And the high ground in environmental responsibility. **Engage Safety.**

## Honeywell

For more information, please go to [www.honeywell.com/godirectservices](http://www.honeywell.com/godirectservices)

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