



# New Standards for

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The International Civil Aviation Organization (ICAO) has swept away standards and recommended practices for international general aviation airplane operations that it characterized as so woefully outdated, they were “in danger of becoming irrelevant.” They have been replaced by mostly performance-based standards developed by specialists from the business aviation community, and ICAO has given its 192 contracting states three years to implement them.

The new standards have been incorporated as Amendment 27 to Annex 6, Part II. The annex also covers international air transport (commercial) operations in Part I and international helicopter operations in Part III.

Part II now has three sections. The first two sections provide definitions of

terms and basic standards and recommended practices (SARPs) for all international general aviation airplane operations. Section 3, titled *Large and Turbojet Aeroplanes*, applies to jets and airplanes with maximum takeoff weights over 5,700 kg/12,500 lb. Section 3 applies mostly to corporate aviation management and includes requirements for a safety management system (SMS), a fatigue management system and an operations manual.

Documents produced throughout the nearly four-year development process have consistently referred to the safety record of corporate aviation operations. “Corporate aviation has heretofore been largely self-regulated and has enjoyed an excellent safety record,” said ICAO Secretary General Taïeb Chérif in an April letter announcing

the adoption of Amendment 27. “The industry best practices contributing to this record of success are extensively drawn upon in creating the provisions of Section 3.”

## Relic From the ‘60s

If corporate aviation has been doing such a good job with minimal regulation, why were new standards needed? Two reasons, one of which already has been mentioned: Although several other amendments had been made since Part II was introduced 40 years ago, “this part is still geared toward a general aviation environment prevalent in the 1960s — that is, light aircraft typically operated for recreational purposes, domestically as well as internationally,” Chérif said. “General aviation has changed significantly since then.”

Modernization of Annex 6, Part II, long had been on ICAO's task list but had been delayed by both a lack of resources to do the job properly and higher-priority tasks on the list. "We recognized that Part II was fast becoming a dinosaur," said Duncan Monaco, an operations officer at ICAO. "It was written back in 1968 and has not kept up with changes in the industry."

Another driving force for new standards was concern about various regulatory bodies that were taking it upon themselves to fill the void created by the dinosaur. "Annex 6, Part II was so out of date that it was resulting in organizations like the Joint Aviation Authorities [JAA] and oth-

was as good as the airlines; therefore, why impose the additional workload and burden of requiring an air operator certificate?

"We felt that ICAO needed to do something. And it wasn't that they disagreed; they were fully in accord with what we were saying."

### Performance-Based Goal

Ultimately, the ICAO Secretariat called on the business aviation community for help in rewriting Part II. "ICAO normally develops changes to its annexes with assistance from panels and study groups that are managed directly by the Air Navigation Commission and the Secretariat," Monaco explained.

Among the issues that sparked debate was to whom the higher standards of Section 3 should apply. For example, there was much discussion about including turboprops, Sheehan said. Consensus was reached on this and other issues. As a result, in addition to applying Section 3 to large airplanes and jets, Amendment 27 *recommends* that it also be applied to "corporate aviation operations involving three or more aircraft that are operated by pilots employed for the purpose of flying the aircraft." Use of the term "aircraft" indicates that the corporate fleet could include helicopters as well as airplanes.

A common objective among the advisory group members — and ICAO

**Safety and fatigue management systems are on the books for general aviation.**

# INTERNATIONAL GA

ers developing their own rules," said Donald Spruston, director general of the International Business Aviation Council (IBAC). "We were quite concerned, primarily with the work done in Europe by the JAA, because the intent initially was to develop rigid rules along the lines of the rules for commercial operations."

The efforts to "commercialize" international general aviation operations likely would have resulted in a requirement that corporate operators obtain an air operator certificate. "This would have a significant impact on the workload of the regulators, which would mean that the operators would be delayed trying to get certification or approval," Spruston said. "We also pointed out to the JAA, to ICAO and others that the safety record in corporate aviation

"This traditional approach can be time-consuming, so in this case we used a different approach by drawing more heavily on industry expertise to help us develop a proposal that could be considered by the Air Navigation Commission."

Accepting the invitation, IBAC and the International Council of Aircraft Owner and Pilot Associations (IAOPA) formed an ad hoc advisory group comprising about 10 business aviation specialists. "They were essentially the movers and shakers within their region of the world and very interested in regulations and standards," said John Sheehan, IAOPA's secretary general. "As you might expect, when we gathered these people together, there were some very strong opinions about what was required. Our discussions often engendered a lively exchange."

— was that *prescriptive* standards should be avoided. "We desired rules that were more *performance-based* — in other words, that would show how you meet the final result as opposed to a prescriptive methodology for meeting the final result," Spruston said.

Sheehan gave the following explanation of the difference: "Prescriptive rules say, 'You must do this. You must have this piece of equipment. You can only go this fast.' That sort of thing. A performance-based standard says, 'OK, here is the goal. You can get to that goal in any number of acceptable ways. You pick the way to do it.'"

The SMS standard is a good example. Section 3 simply says, "An operator shall establish and maintain a safety management system that is appropriate to the size and complexity of the



operation.” ICAO’s *Safety Management Manual* (Doc. 9859) and “industry codes of practice” are cited as guidance for developing an SMS.

*Industry codes of practice* is one of the new terms incorporated in Part II, defined as “guidance materials developed by an industry body for a particular sector of the aviation industry to comply with the requirements of ICAO SARPs, other aviation safety requirements and the best practices deemed appropriate.” IBAC’s *International Standard for Business Aviation Operations* (IS-BAO) is a good example of an industry code of practice.

### Collaborative Effort

The advisory group spent a year developing the proposed rewrite of Part II. “The proposal was sent to all

of our member associations, reviewed, assessed and reviewed again within the governing board of IBAC,” Spruston said. “Once we were comfortable that we had done the development well, we sent it to the ICAO Secretariat.

“From that point on, they took responsibility for further review, but we participated with them through all of that process. We conducted briefings to the Air Navigation Commission, prepared material for distribution to states and answered questions as they came up. It was a very collaborative process as well as a fairly long process from the time we submitted the proposal and the time it was finally accepted by the ICAO Council. But it was a good challenge, because it required that we continually go back and look at what we had written and ensure that we

were able to justify things that were questioned.”

The ICAO review resulted in mostly minor changes to the proposal developed by the advisory group. “The end result was that there was some restructuring and moving around,” Spruston said. He noted one exception that involved a standard that restricts the continuation of instrument approaches — commonly called an *approach ban*, although ICAO does not use the term.

Initially grafted onto Part II from Part I, the approach ban prohibits continuation of a precision approach beyond the outer marker or a nonprecision approach below 300 m/1,000 ft above airport elevation unless the reported visibility or controlling runway visual range is above the published minimum.



Most of ICAO's contracting states have implemented the approach ban for commercial operations, but none has implemented it for general aviation. So, the advisory group took it out of Part II. "Some of the issues considered during the discussion of the approach ban were the inaccuracy of weather reporting, the fact that runway end visibility can be considerably different than the weather report," Spruston said. "There was a whole list of things that we could show that made the existing provision a burden, which is why no country ever implemented it."

Nevertheless, the Air Navigation Commission was reluctant to remove a standard that had been on the books for so long. "There were many meetings and sessions devoted to the subject, and the discussion took many turns, but the final result was that they decided to keep the provision as it existed and to initiate a full review of the approach ban issue," Spruston said. "This approach ban issue was essentially the only part of the industry modernization proposal that was not accepted."

ICAO's review of the approach ban will include its applicability in all three parts of Annex 6. "After reviewing the proposal to modify the approach ban for general aviation in the Air Navigation Commission, we decided that the issue should apply to all three parts of Annex 6 — meaning commercial, general aviation and helicopter operations — and agreed to reopen the debate accordingly," Monaco said. "There are some good arguments for making some changes, and perhaps even doing away with it altogether. We expect that the Operations Panel will begin analyzing the approach ban issue for all of Annex 6 in the near future."

Meanwhile, the approach ban remains in Section 2 of Part II and,

thus, applies to all international general aviation operations.

Also on hold are standards for international fractional ownership operations. "We need to do more research before we, ICAO, make a decision on how to treat these operations," Monaco said. "The states are handling it individually well enough for the time being, but we do need to fold it into Annex 6 at some point, and we need to do it in a way that meets the needs of both regulators and industry; we don't want to implement something that turns out not to be a benefit."

Among the considerations is whether the standards should be included in Part I, Part II or in a new, fourth part devoted exclusively to fractional ownership operations.

### Stepping Up

Will state implementation of any of the provisions in Amendment 27 to Annex 6, Part II likely cause problems for operators? "I would guess that the most significant issue for operators that do not have well-established processes will be the need to establish a safety management system," Spruston said. "That is probably the biggest change."

An SMS is defined in the new Part II as "a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures."

Spruston and Sheehan noted that many corporate aviation departments that fly internationally in large airplanes and jets already have an SMS that will meet the new standard. For those that don't, IBAC soon will offer a tool kit that will go beyond the guidelines currently provided in the IS-BAO.

"That is the one part of the IS-BAO where we found that operators were seeking more help," Spruston said. "So,

we decided to develop more detailed guidance on SMS to help the operators that were struggling with the basic material in the standard. The tool kit provides a very detailed process for implementation — step-by-step guidance, checklists on how to do it — and a lot of supporting material." October is the target for production of the tool kit.

Incorporating a fatigue management system in the SMS might puzzle some corporate operators. Ray Rohr, director of regulatory affairs for IBAC and a member of the Part II modernization advisory group, said, "I think the states are going to have to put in some basic limits on flight and duty time, and then allow operators to work from there in developing a fatigue management system."

Rohr said that among existing industry codes of practice that can help in developing such a system are the fatigue countermeasures developed by a Flight Safety Foundation task force, based on research by the U.S. National Aeronautics and Space Administration (*Flight Safety Digest*, 2/97). He also noted that the ICAO Operations Panel currently is developing guidance material for fatigue risk management.

ICAO initially planned to make the new SARPs for international general aviation operations applicable this year. "There was some push-back about this because of the complexity of the changes, so we agreed that we would delay applicability until 2010 to give everybody plenty of time to implement the new standards," Monaco said. Amendment 27 will become applicable on Nov. 18, 2010, and ICAO has given the states until Oct. 18 of that year to provide notification of any "differences" — that is, to list the standards that will not be implemented or implemented differently than recommended by the new Part II. 🌀