

# Back to the Drawing Board

BY PATRICK CHILES

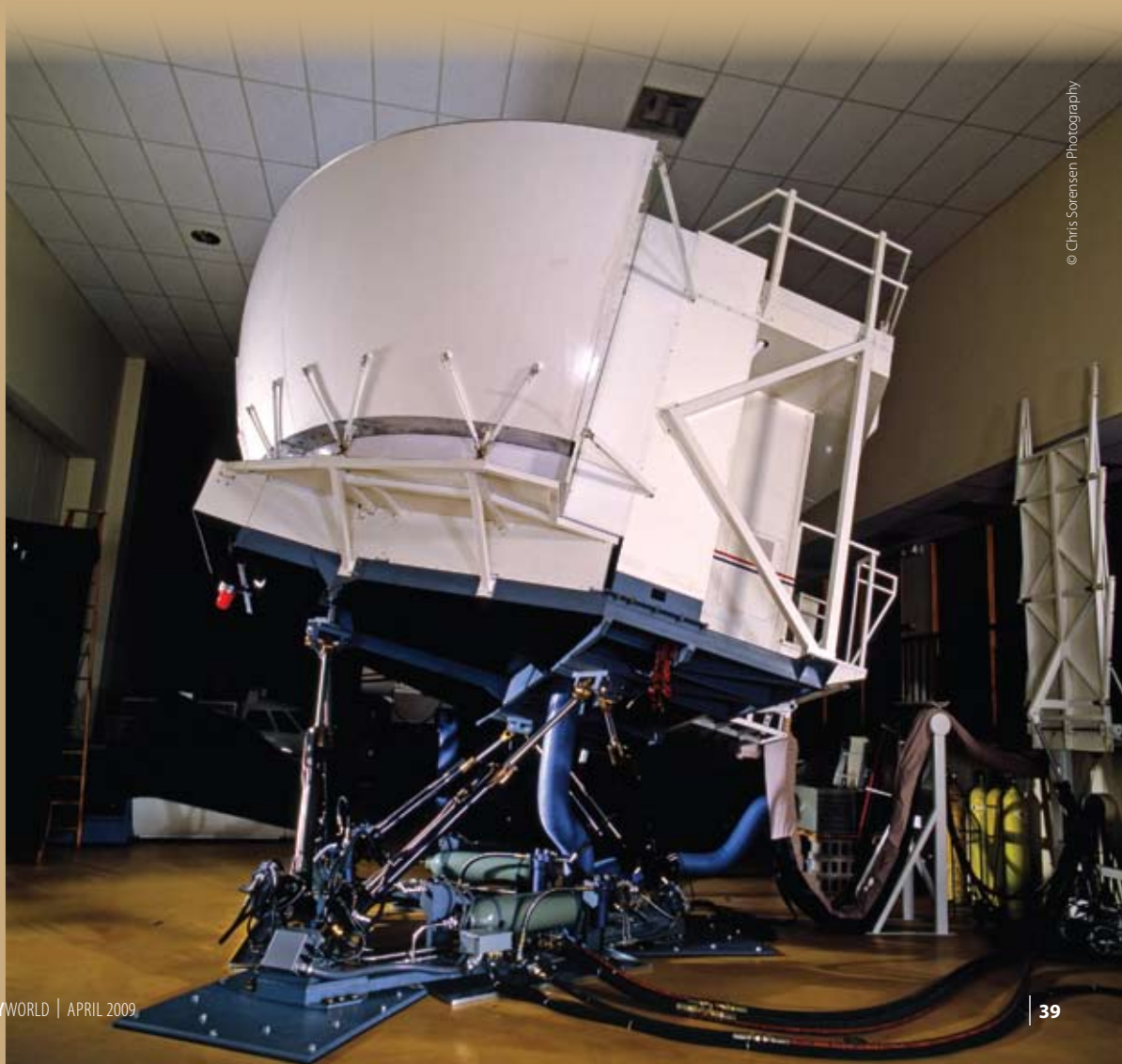
The FAA wants sweeping changes to airline crewmember and dispatcher training.

Fundamental changes to how commercial airlines conduct their flight crew, flight attendant and dispatcher training programs have been proposed by the U.S. Federal Aviation Administration (FAA) based on input by an industry/government working group.<sup>1</sup> If the changes are adopted, U.S. air carriers will have five years to bring their respective programs into compliance.

Many carriers may find that they are already partway there. The proposed rule making has been in development since 2004, when an Aviation Rulemaking Committee (ARC) was formed specifically to address changes to Subparts N and O — respectively, *Training Programs* and *Crewmember Qualifications* — of U.S. Federal Aviation Regulations Part 121. Composed of representatives from airlines, manufacturers, training organizations and professional organizations, the ARC produced a final product that describes

training philosophies that presently are considered “best practices.” Some highlights include:

- Line-oriented flight training (LOFT) conducted in full-motion simulators;
- Special training in hazards such as controlled flight into terrain;
- Additional practical training in crew resource management (CRM), integrated with dispatch resource management (DRM);
- Nine-month cycle of recurrent pilot training replacing the current six- and 12-month cycles;
- Special training for specific qualifications or equipment such as reduced vertical separation minimum, extended operations and automatic external defibrillators;
- Annual hands-on emergency equipment drills for flight attendants;



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- Supervised operating experience (SOE) for dispatchers, similar to flight crew initial operating experience (IOE);
- Requalification training for flight crewmembers and dispatchers; and,
- Uniform terminology applied to all training programs and associated manuals.

The FAA wants to reorganize qualification and training requirements across the board. The U.S. National Transportation Safety Board (NTSB) has identified inadequate training as the probable cause of 169 accidents over the 20 years preceding the ARC's formation. The desired effect of the proposed regulations is to reduce the likelihood of human error leading to an accident.

## New Performance Standards

The proposed rule making is wide-ranging, and carriers must evaluate the impact on their programs of all the proposed changes. However, the following changes are significant.

Probably the most fundamental change is the concept of qualification performance standards (QPS), which would become new appendixes to Part 121. They are meant to be uniform, objective performance standards that can be updated routinely as the operating environment dictates. In addition to setting minimum standards for training and evaluation, QPS would drive procedures for the qualification of crewmembers and dispatchers. Much of this will be familiar, as the standards are based on existing content in Subparts N, O and P (*Aircraft Dispatcher Qualification and Duty Time*), all of which would be replaced. Each QPS appendix would be composed of a regulatory "Requirements" section and an advisory "Information" section.

Unlike other regulations, QPS standards have been designed to be responsive and flexible. The authority for issuing revisions would be delegated from the FAA administrator to the director of flight standards. This alteration of the normal rule-making review process would allow timely adjustments

addressing such things as accident trends and technological advances. Affected carriers should consider this carefully; while rapid response to the environment is welcome, it simultaneously leaves the door open for surprises.

## Simulation Required

All flight crewmember training would have to be conducted in approved flight simulator training devices, which currently are *required* only for wind shear training. The benefits of training for critical tasks such as rejected/continued takeoffs in a benign environment, rather than in an airplane, are obvious. However, carriers might be able to request deviations on a limited basis. The FAA admits that flight simulators might not be immediately available for critical-task training or for some older aircraft.

There is a driving focus on keeping training programs closely aligned with the daily operating environment. To this end, flight crew recurrent training would have to include a full cockpit crew performing their actual duties in a typical flight environment. Otherwise known as LOFT, this is already common practice.

Among the proposed changes to U.S. airline crew training is periodic instruction in the use of lifesaving equipment such as automatic external defibrillators.



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## 'Full-Featured' Manuals

Proposed requirements for flight crew operating manual (FCOM) content have the apparent goal of making the manual a sole-source document. What was once a basic aircraft operating manual would become a "thorough and accurate compilation" of required operating tasks that typically are found in a carrier's general operations manual. Carriers need to carefully consider how they would meet these requirements. Incorporating procedures that typically occupy dedicated manuals in each model's FCOM could be a daunting task, to say the least. If not done judiciously, the operating manuals

could become cumbersome to the point of being ineffective.

Another proposed requirement driven by NTSB recommendations is the integration of CRM/DRM into a “team management” concept encompassing team interaction and decision making, information management and problem solving. For example, LOFT will evaluate CRM in addition to each crewmember’s performance, and DRM will be evaluated during dispatcher proficiency checks. Similarly, flight attendant performance drills will include CRM proficiencies.

### Dispatcher Qualifications

Reflecting a longstanding need to codify industry practices and FAA policies, the proposed rule contains the new positions of dispatch instructors and check dispatchers, curriculum standards and SOE. There also is an interesting allowance for a carrier to combine a new dispatcher licensing course with its initial-training curriculum.

Dispatch instructors would have to hold an aircraft dispatcher certificate, maintain currency and meet specific instructor training requirements. An exception would be made for subject matter experts who provide instruction on specific FAA-approved topics — for example, a meteorologist might be allowed to teach weather.

Check dispatchers — currently called “supervisors” or “ground instructors” — would have to meet similar requirements in addition to new “recency of experience” standards. This would correct a present flaw that could allow a dispatcher with no recent work experience to perform competency checks.

SOE, like pilot IOE, would ensure that a dispatcher is thoroughly familiar with his or her company’s operating practices and has the opportunity to demonstrate practical knowledge under

direct supervision in the actual work environment. It likewise would set specific criteria for those overseeing dispatchers undergoing SOE, including assignment of only one student at a time.

The common-sense intent here is to ensure that dispatch instructors are current and knowledgeable in the carrier’s specific procedures, equipment and facilities. However, this could impact some third-party training vendors: A “generic” program, possibly taught by otherwise well-qualified individuals without dispatcher licenses, may no longer be acceptable.

### Flight Attendants

As with dispatchers, flight attendant training and instructor standards would become much more specific. Standards for eligibility, qualifications and approval would be codified for instructors and check flight attendants.

Significantly, flight attendants would have to complete operating experience in the specific aircraft types to which they are assigned. Currently, they must complete IOE on one aircraft “group” — for example, propeller-driven or turbojet — appropriate to their company.

Flight attendants also would have to accomplish emergency equipment drills every 12 months, instead of the current 24 months. This would ensure recent practice with critical equipment in potential lifesaving situations and is responsive to both NTSB and International Civil Aviation Organization recommendations.

### Continuous Analysis

Carriers also would have to implement a continuous analysis program similar to those already in effect for maintenance and inspection. Each airline would have to create procedures to maintain and validate both their

training program and the continuous analysis process itself. They also would have to analyze crew and dispatcher evaluations to determine if any weaknesses exist, and revise their training programs to address the weaknesses.

In its full context, these are sweeping changes and a clear response by the FAA to some diverse trends in aircraft accidents that NTSB has clearly laid at the feet of training programs. With such things as incomplete manuals, inadequate procedures and poor CRM identified as contributing to so many accidents, the time is ripe.

The proposed rules are open for public comment until May 12. A public meeting was scheduled to be held early in April at the NTSB Training Center in Ashburn, Virginia, to give affected parties an opportunity to pose questions directly to the FAA before submitting their comments on the proposed rule.

While many carriers may be relieved to find that their programs are already well along the road to compliance with the proposed requirements, the proposed rule would bring fundamental changes to how U.S. airlines conduct training and evaluation. So many carriers utilize full-motion simulators and LOFT that it hardly seems like a stretch for those to now be required. But many smaller airlines and niche carriers with unusual equipment might have to rethink their programs. ➔

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### Note

1. FAA. *Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers; Proposed Rule*. Docket no. FAA-2008-0677. January 2007. <<http://edocket.access.gpo.gov/2009/pdf/E8-29584.pdf>>.