



Formalizing New Approaches to Fatigue Risk Management Systems

Following closely on new Fatigue Risk Management Systems (FRMS) Standards and Recommended Practices (SARPs) approved by the ICAO Council this past June, ICAO will be convening its first ever FRMS Symposium in late August of this year. Immediately after the Symposium, ICAO will host the Third Annual Meeting of the FRMS Forum in early September.

Together, these FRMS events will provide a unique 4-day opportunity where participants and experts will be able to share experiences and develop a deeper understanding of the sometimes complex concepts that support FRMS risk-based approaches and their practical application for operators and flight crewmembers.

The timing of the ICAO 2011 Fatigue Risk Management Systems (FRMS) Symposium and Forum capitalizes on the significant collaborative momentum that the Organization has helped to nurture around this important safety issue.

ICAO has worked closely with IATA and IFALPA and additional experts and stakeholders in past months to ensure that the new FRMS guidance recently approved by the ICAO Council provides realistic solutions based on comprehensive operator and crewmember feedback.

“Current flight and duty time regulations are a ‘one size fits all’ solution,” stressed Nancy Graham, Director of ICAO’s Air Navigation Bureau. “In contrast, FRMS recognize the growing complexity of crew fatigue and offer multi-layered, comprehensive approaches to fatigue-related hazards in varying operational contexts. We look forward to widespread acceptance of the concept and its systematic application around the world.”

Crew fatigue is often cited as a factor in aircraft accidents. To better address applicable safety risks, the ICAO Council

officially adopted the new international Standards recommended for FRMS as of June 2011. These will become applicable as of 15 December of this year.

The new guidance has been developed through a comprehensive and collaborative process and will serve as an alternative to current prescriptive flight and duty limitations. Two of the key stakeholders consulted throughout the build-up to the new FRMS guidance have been operator and flight crewmember organizations.

“As an operator, Delta is very interested in hearing first-hand from stakeholders such as the FAA now that ICAO is bringing this issue to the international level,” commented Delta Air Lines Captain, Jim Mangie. “It’s one thing to discuss these issues with State regulators at the local level but when we start talking international standards it’s crucial from the operator standpoint that we end up with a truly level playing field.”

Mangie stressed that Delta has been engaged with the consultative process that has led up to the coming FRMS event through his role as a technical advisor to IATA. He noted that ICAO has

“Current flight and duty time regulations are a ‘one size fits all’ solution. In contrast, FRMS recognize the growing complexity of crew fatigue and offer multi-layered, comprehensive approaches to fatigue-related hazards in varying operational contexts.”

done an excellent job coordinating the experts and air transport stakeholders who needed to provide the at times very complex input that the FRMS issues require.

“With respect to the FRMS Forum, for instance, we’ve never really had the opportunity to have the full range of bio-mathematical modelling input presented to us within the context of a single event. I and many of my colleagues are looking forward to what these presenters and the follow-on discussions will be bringing to the table under an international spotlight.”



Captain Jim Mangie, Delta Air Lines

Operators already using FRMS have reported benefitting from greater operational flexibility while maintaining and even improving on current safety levels. The new Standards will facilitate the development and globally-harmonized

implementation of the systems while making it easier for regulators to assess and monitor their use.

Operators represent one key stakeholder in the FRMS process but perhaps the most important input and buy-in to the FRMS approach needs to come from flight crewmembers themselves. This point was



highlighted strongly by International Federation of Air Line Pilots’ Associations (IFALPA) President, Captain Don Wykoff.

“As we move forward, one of the most important considerations for crewmembers is involvement,” began Wykoff. “With FRMS, which by definition are a non-prescriptive approach to pilot fatigue, it’s very important that flight crewmembers be included as stakeholders and fully accept their roles and responsibilities with respect to the reporting and data they need to input over

the long-term. Their confidence in FRMS ultimately derives from the extent of their participation in the total process.”

Wykoff went on to note that pilots will need to be assured that the data they’ll be required to input under the FRMS approach is used for non-punitive FRMS benefits and not for other purposes. This basic trust is an essential component not only of a successful FRMS programme but of all non-prescriptive Safety Management Systems (SMS).



Guenther Matschnigg, IATA’s Senior Vice President, Safety, Operations and Infrastructure (left), ICAO Air Navigation Bureau Director, Nancy Graham (centre) and Don Wykoff, President of IFALPA (right) at their joint announcement of the release of the new Fatigue Risk Management Systems (FRMS) Implementation Guide for commercial aircraft operators.

“These types of safety advances require change and there’s always a certain level of resistance to change, but this is true not only for crewmembers but for operators and regulators as well,” emphasized



Captain
Don Wykoff,
IFALPA President

Wykoff. “Safety isn’t an on-and-off switch. It’s a complex collaborative process and any time we make an advance like FRMS we just need to respect the process and take a methodical, building block approach rather than doing everything at once. ICAO, IATA and IFALPA have structured the FRMS process to engineer the level of bottom-up buy-ins from the various stakeholders and in the end participation is the name of the game when seeking consensus on any safety improvement.

IFALPA is very much looking forward to further participation through ICAO’s Symposium and Forum in September and to seeing what has been agreed at the international level now finding its way down to local pilot groups, operators and State regulators. These events should help to move that process along.”

The new FRMS Standards are supported by extensive guidance material based on the input of an FRMS Task Force comprised of State regulators, operators, scientists and industry representatives. This includes an FRMS implementation guide for operators, jointly produced by ICAO, IATA and IFALPA. ICAO has also developed an FRMS guide for regulators, an unedited version of which has been posted on the ICAO web site along with the operators guide.

“The fact that regulators, airlines and pilots all contributed to this effort ensures that the appropriate technical, operational and economic issues have been thoroughly covered,” ICAO ANB Director Nancy Graham commented. “The input of internationally-recognized scientists further ensures that the FRMS approach has a solid scientific and mathematical basis—an important consideration when developing risk-based guidance.”

The new fatigue management standards allow States to choose whether to establish FRMS regulations. The provision of prescriptive flight and duty time limitations regulations remain mandatory for all States.

One regulator which was an active member of the ICAO FRMS Task Force and which has been closely involved with a number of FRMS advances and programmes over the past eight years is the UK CAA. This is thanks, in part, to its very close and productive collaboration in associated research with UK operator easyJet.

“As a State regulator, it can’t be over-emphasized how important it is to be able to get a clearer picture of where other States are with respect to their level of understanding and implementation for new initiatives,” commented Flight Times Limitations Specialist for the UK CAA, Kathryn Jones. “This is very much the case at this stage in the development of practical FRMS approaches. It’s great to get everyone together at ICAO, as we will be this fall, as everyone



“Operators and regulators already have access to 80 percent of the information that they need in order to design an effective FRMS—it’s just a question of how they collate and categorize their data. It is a change in approach and requirements but the degree of change we’re talking about is not an insurmountable leap by any means.”

gets to come away with a much better perspective on the progress being made by both the Task Force and by the sector as a whole.”



Kathryn Jones,
UK CAA

Jones stressed that education will be high on the UK’s list of FRMS priorities in the near-term. She’s additionally looking forward to the coming ICAO events not only to improve her own understanding of where the global picture now stands, but also to help stress to the assembled stakeholders that FRMS is not an overly complex approach to managing crew fatigue and that it fits very much into the overall SMS culture and methodology.

“Getting that point across will be key to effective adoption,” she remarked. “Operators and regulators already have access to 80 percent of the information that they need in order to design an effective FRMS—it’s just a question of how they collate and categorize their data. It is a change in approach and requirements but the degree of change we’re talking about is not an insurmountable leap by any means.” ■