

**CANADIAN AVIATION REGULATION ADVISORY COUNCIL
(CARAC)**

**FLIGHT CREW FATIGUE MANAGEMENT WORKING GROUP
TERMS OF REFERENCE**

BACKGROUND

Transport Canada's current flight time and duty time limitations and rest periods (FDT&RP) regulations were published in 1996. The requirements are based on an agreement made by the Commercial Air Service Operations Working Group in 1994. Since then, the International Civil Aviation Organization (ICAO) has amended Annex 6 to the *Convention on International Civil Aviation* to include a series of recommendations for developing FDT&RP requirements. While Transport Canada remains in compliance with the Annex, a review of the SARP and the latest science on fatigue is required to ensure that Transport Canada's regulatory framework for flight crew operating in accordance with CAR 705, 704, 703, 702 and 604 is current.

Since the FDT&RP requirements were published, Transport Canada along with the government of Canada has shifted its approach to regulatory development from being prescriptive to being performance-based. This shift has provided a more, output-based approach to rule making that has facilitated the development of a risk management-based approach to safety and compliance management. In addition, the ICAO and other regulatory authorities are looking beyond the prescriptive FDT&RP approach to the management of fatigue and are promoting a performance-based approach to managing fatigue-related hazards through a fatigue risk management system (FRMS). ICAO has developed a SARP entitled Fatigue Management that includes both flight time, flight duty period, duty period, and rest period limitations and proposed FRMS requirements

PURPOSE

The purpose of the Working Group is three-fold:

1. To review the existing FDT&RP regulatory scheme pertaining to flight crew with reference to and utilising current scientific data relating to fatigue.

2. To review the basic principles of the fatigue risk management system approach to fatigue management as it would apply to flight crew with reference to and utilising current scientific data relating to fatigue.
3. To determine the commonalities and differences with respect to the FDT &RP and FRMS approach to the management of fatigue in order to develop recommendations for regulatory proposals which might include:
 - a) identifying and analysing differences that consider the current Canadian operational environment and;
 - b) suggesting alternate recommendations in respect to, for example, fatigue and the operational environment.

This might include the formation of sub-working groups.

OBJECTIVES AND GOALS

The Working Group will make recommendations in the form of a report to the Technical Committee regarding the FDT&RP and the FRMS scientific reviews, as well as the recommendations for regulatory changes resulting from the review and identification of commonalities and differences.

The Working Group will base its work on scientific data that is defensible and readily available. In addition, the Working Group will consider the work already completed by Transport Canada in regards to FRMS, as well as the regulations and proposals of ICAO and other States in an effort to adopt and harmonize regulations and best practices with those States, where appropriate.

STANDARDS BRANCH ROLE

The Standards Branch will provide funding for a scientific advisor, chosen by the Working Group, to offer technical support to the Working Group. Where the Group cannot reach agreement on the scientific advisor Transport Canada will nominate this person. This service will be provided within the constraints of the contracting policies and procedures of the Government of Canada. In addition, the Standards Branch will provide appropriate subject matter expertise to support the Working Group's activities.

The Standards Branch is responsible for administering and organizing the Working Group and for providing appropriate facilities and equipment for Working Group meetings.

SCOPE

The Working Group will:

- Review the existing FDT&RP requirements in the CARs, the ICAO fatigue management SARPS, regulations and best practices employed by other regulatory authorities.
- Review the FRMS NPA to CARs Part V, ICAO's proposed FRMS SARP, and other States' FRMS regulations, as well as other fatigue risk management methodologies, to determine the basic components of the FRMS.
- Review the FDT&RP requirements and the FRMS with reference to and utilising current scientific data relating to fatigue.
- Identify commonalities and differences with respect to the CARs relating to FDT&RP requirements and the FRMS approach to fatigue management, including the identification of differences in respect to, for example, fatigue and the operational environment.
- Develop a set of recommendations, in the form of a report, for fatigue management and the supporting rationale for the recommendation, with respect to FDT, rest periods, reserve duty, trans-meridian flights, and any other considerations deemed necessary by the Working Group and for FRMS. Dissents will be included in the report.
- Any other work deemed necessary to adequately complete the project.

DELIVERABLES

The Working Group leaders will provide a bilingual final report in hardcopy and electronic format that contains:

- A set of recommendations for fatigue management that includes the supporting rationale for each recommendation. Where consensus is not achieved on a recommendation the dissenting party shall provide a written dissent and supporting rationale, which will be appended to the report.
- The Working Group's review of the existing FDT&RP requirements in the CARs, the ICAO fatigue management SARPS and regulations and best practices employed by other regulatory authorities.
- The Working Group's review of the FRMS NPA to CARs Part V, ICAO's proposed FRMS SARP, and other States' FRMS regulations, as well as alternate fatigue risk management methodologies, to determine the basic components of the FRMS.

- The Working Group's review of the FDT&RP requirements and the FRMS with reference to and utilising current scientific data relating to fatigue.
- The Working Group's review of the commonalities and differences with respect to the CARs relating to FDT&RP requirements and the FRMS approach to fatigue management, including the identification of differences in respect to, for example, fatigue and the operational environment.

COSTS

Costs incurred with the Working Group members travel, accommodations, meals and incidental expenses shall be borne by their respective organizations. TCCA - Standards Branch will be responsible for providing meeting facilities and secretarial functions in addition to all necessary administrative support.

DURATION OF PROJECT

This Working Group will have 12 months from the date the Terms of Reference are signed to complete the project. After that time, the Working Group may continue if the Technical Committee agrees to the extension.

WORKING GROUP MEMBERSHIP

Transport Canada will co-chair the subject Working Group with a co-chair from the industry. The Working Group will be comprised of members from Transport Canada Civil Aviation Headquarters and the Regions, as well as industry stakeholders. Members should be prepared to actively participate in the Working Group.

The Working Group leader's first task will be to submit a work plan to the Director, Standards. The work plan will include all activities and related costs. In addition, the Working Group leaders shall submit progress reports after each meeting of the Working Group to the Executive Director of the Technical Committee and the Secretariat regarding progress made, decisions reached, updates on schedules, and issues that remain unresolved.

Working Group members may be requested to provide supporting data to justify recommendations and should have data available during meetings.

The Working Group will strive to reach consensus; however, when this cannot be achieved, the dissenting opinions will be recorded in the Working Group's final report and reviewed by the Technical Committee and forwarded on to the Canadian Aviation Regulatory Committee (CARC).

WORKING GROUP LEADERS:

Jacqueline Booth

Captain Dan Adamus

WORKING GROUP MEMBERS:

1. ALPA – Martin Gauthier

2. ACPA – Doug Tweedlie

3. ATAC - Bill Boucher

4. HAC – Fred Jones

5. Manitoba Aviation Council - Dennis Lyons

6. NACC – Michel Chiasson

7. NATA – Stephen Nourse

8. CBAA – Art Laflamme

9. Transport Canada – Mark Laurence

10. WJPA – Daniel Glass

Don Sherritt, Director Standards

Date: _____