

WORLD METEOROLOGICAL ORGANIZATION

ET-AIR-3 and AMDAR Panel-14/Doc 3.4.1(2)

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**JOINT MEETING:
CBS EXPERT TEAM ON AIRCRAFT BASED
OBSERVATIONS
(Third Session)
AND
AMDAR PANEL
(Fourteenth Session)**

ITEM: 3.4.1

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AMDAR PROGRAMME STATUS

Status Reports on National and Regional AMDAR Programmes

Established AMDAR Programmes

Canadian AMDAR Implementation Progress Report

(Submitted by Canada)

Summary and purpose of document

This document provides information on the activities and plans for the Canadian AMDAR Programme.

ACTION PROPOSED

1. The Panel is invited to note the information contained in the document.
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PROGRESS/ACTIVITY REPORT

Current Status:

1. NAV CANADA and Jazz Air continue to be the only active data contributors to the Canadian AMDAR Programme. Beginning in mid-2009, Jazz Air requested to be fully compensated for AMDAR data, resulting in a reduction of 56% in the number of reporting CRJ aircraft in order to keep the cost within the currently allocated budget
2. The situation with Jazz Air resulted in a requirement to change the type of agreement between Jazz Air and the Meteorological Service of Canada in order to properly address the data cost increase. As of mid-September 2011, a bridge contract is near completion after very difficult negotiations mainly associated with the level of responsibility of Jazz Air and the status of a potential binding liability as it regards 3rd party users of the data. Indeed no statement waiving the liability of the data provider could be found in the available domestic and international legal-type documentation. The bridge contract should lead to a 3-year term regular contract with Jazz Air starting on April 1st, 2012 for the provision of AMDAR data from their entire fleet of CRJ-100/200 aircraft.
3. The current Canadian operational AMDAR fleet consists of 27 CRJ-100/200 Jazz Air-operated aircraft (out of a potential of 48) and 2 CRJ-200 NAV CANADA Flight Inspection aircraft. The Canadian AMDAR fleet contributes approximately 11,000 observations per day to the Global AMDAR Programme. These observations translate into roughly 2,600 weekly soundings from 34 Canadian airports located coast-to-coast, the majority of which are south of 55N and 18 US airports; in addition to observations from 2 flight inspection aircraft from NAV CANADA which basically visit all Canadian airports at least once a year. Currently the Canadian AMDAR Programme is not sustainable with Jazz Air gradually replacing their AMDAR-capable CRJ-100 aircraft with non AMDAR-capable Q400 aircraft.

Model	Number	Operation
CRJ-100/200	27	Regional/Domestic with a few US sites
CRJ-200	2	Unscheduled Flight Inspection at most Canadian airports
Total		29

4. The Sabre-based AMDAR data Command and Control (C&C) system on the Jazz Air fleet is not yet operational and there is no indication if the C&C function of the AMDAR data will ever work.
5. To this point, attempts to engage or develop capacity with airlines such as Air Canada, WestJet, First Air and Canadian North have all failed for various reasons, some technical in nature. Historically, only NAV CANADA and Jazz Air have actively participated in the Canadian AMDAR Programme.

Development and other Activities:

1. An internal report entitled 'Canadian AMDAR Program – A Report in Support of a Workshop to Develop a Strategy for its Sustainability and Further Development in the Decade 2011-2020' was delivered in August 2011. The report builds from the experience gained in the development and operation of the Canadian AMDAR programme in the decade 2000-2010, describes a number of programmatic and technical challenges, and examines some potential options for way-forward.
2. The findings of the report will be used as the basis for a 1-day workshop with Environment Canada's AMDAR stakeholders, including users, network operators, and managers, in mid-October to help develop a strategy for the decade 2011-2020. The main objectives of the Workshop are to discuss the use, benefits, status and issues associated with the current Canadian AMDAR programme, and to evaluate and discuss options for the sustainability and further development of the programme in the decade 2011-2020, including programme leadership. The end goal is the development of options and recommendations for consideration by Senior Management of the Meteorological Service of Canada. The new strategy for AMDAR will be used in the development of a wider strategy for the Canadian Upper Air Programme.
3. NAV CANADA has not yet developed an AMDAR reporting capacity out of their unique flight inspection DHC-8-100 aircraft because the upgrade to UniLink 80.x software is now planned later in the fall of 2011. It is expected that this upgrade will resolve the artificial bias introduced by the temperature smoothing algorithm. It is noted that NAV CANADA's DHC-8 emulates those from Jazz Air, including the additional dual Spirent T probes, with the exception that it uses an Inertial Reference System (IRS) like the CRJs, such that the wind measurements are likely to be better than the Jazz Air DHC-8's that are equipped with the Attitude Heading Reference System (AHRS). Once the NAV CANADA DHC-8 produces data, CMC will test it and, depending on the results, the Meteorological Service of Canada may be able to provide an analysis in support of upgrading Jazz Air's software so that AMDAR can be resumed on their DHC-8 fleet.

Future Plans:

1. Future plans will depend on the recommendations emanating from the new strategy for the sustainability and further development of the Canadian AMDAR Programme and on the level of acceptance by the Senior Management of the Meteorological Service of Canada. It is reasonable to expect that new innovative ways to sustain and expand the Canadian AMDAR Programme to other carriers operating in Canada will be recommended.
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