Experimental Graphical Airman's Meteorological Advisory (G-AIRMET)
Product Description Document
October 1, 2008

Part I – Mission Connection

The Aviation Weather Center issues Airman's Meteorological Advisories (AIRMETs) in support of the NOAA goal to support the Nation's commerce with information for the safe, efficient, and environmentally sound transportation (NOAA, 2005). The NWS develops and applies new technologies and methods to increase the capabilities, efficiencies, and accuracies of transportation-related products and services in order to promote the safe, secure, and seamless movement of goods and people in the U.S. transportation system (NWS, 2005b).

Escalating external demands continue to drive NOAA to improve the accuracy and frequency of its products and services geared toward safe and efficient movement of people and commerce in the air (NOAA, 2007).

a. Product Description – The experimental graphical Airman's Meteorological Advisory (G-AIRMET) is a BUFR-formatted time-series depiction of aviation hazards occurring with occasional or greater frequency and covering a minimum area of 3000 square miles over the conterminous U.S. and adjacent coastal waters (NWS, 2005a). The aviation hazards depicted in the experimental G-AIRMET are:

   (1) Cloud ceilings below 1000 feet above ground and/or visibility less than three statute miles plus the weather phenomena causing the reduction in visibility.

   (2) Widespread mountain obscurement. Mountain obscurement occurs when pilots can not maintain visual meteorological conditions or visual contact with mountains or mountain ridges along their route of flight.

b. Purpose – The experimental G-AIRMET:

   (1) Demonstrates a graphical depiction of a BUFR-encoded product currently available only in text format.

   (2) Displays instrument flight rules and mountain obscuration aviation hazards with better time and spatial resolution than the current text format allows.

   (3) Allows other government agencies (e.g., the Federal Aviation Administration) and user groups access to data with which usability, verification, and safety analyses can be conducted.

   (4) Provides users with data for use in developing products and displays.

   (5) Allows testing of internal production processes at the Aviation Weather Center and determine additional software requirements.

The experimental G-AIRMET is routinely produced and available for review. Operational use of G-AIRMET is dependent upon regulatory approval from the Federal Aviation Administration.

c. Audience – Primarily intended for end-users directly related to aviation flight planning and safety of flight, including pilots and personnel who provide weather information to pilots.

d. Presentation Format – Web graphic consisting of base map with choice of product overlays and forecast times, viewable at the following URL:

http://aviationweather.gov/products/gairmet/

This information can also be downloaded in BUFR format.

e. Feedback Method – User feedback is a critical part of the NWS assessment of experimental products. The experimental feed back period has been extended to September 30, 2009. Please submit comments and feedback on the experimental G-AIRMET web interface and on the BUFR-encoded forecast at the following URL:

http://www.weather.gov/survey/nws-survey.php?code=G-AIRMET

Additional comments may be provided to:

Clinton E. Wallace
Aviation Weather Center
7220 NW 101st Terrace
Kansas City, MO 64153
Phone: 816-584-7248
E-mail: Clinton.Wallace@noaa.gov

Part II – Technical Description

a. Format and Science Basis – BUFR-encoded data is generated from graphical objects depicting areas and attributes of AIRMET hazards. These objects are produced by forecasters at the Aviation Weather Center. G-AIRMET web graphics are displayable in modern browsers without the use of add-on software and are generated from the BUFR-encoded data. The website uses scripts to display the hazards and match each graphic to the appropriate valid time.

b. Availability – The experimental G-AIRMET is issued four times per day (0300, 0900, 1500, and 2100 UTC) valid out to 12 hours and with a time resolution of no more than three hours.

c. Additional information

(1) Click on the any of the forecast element buttons to see web graphics of experimental G-AIRMET.

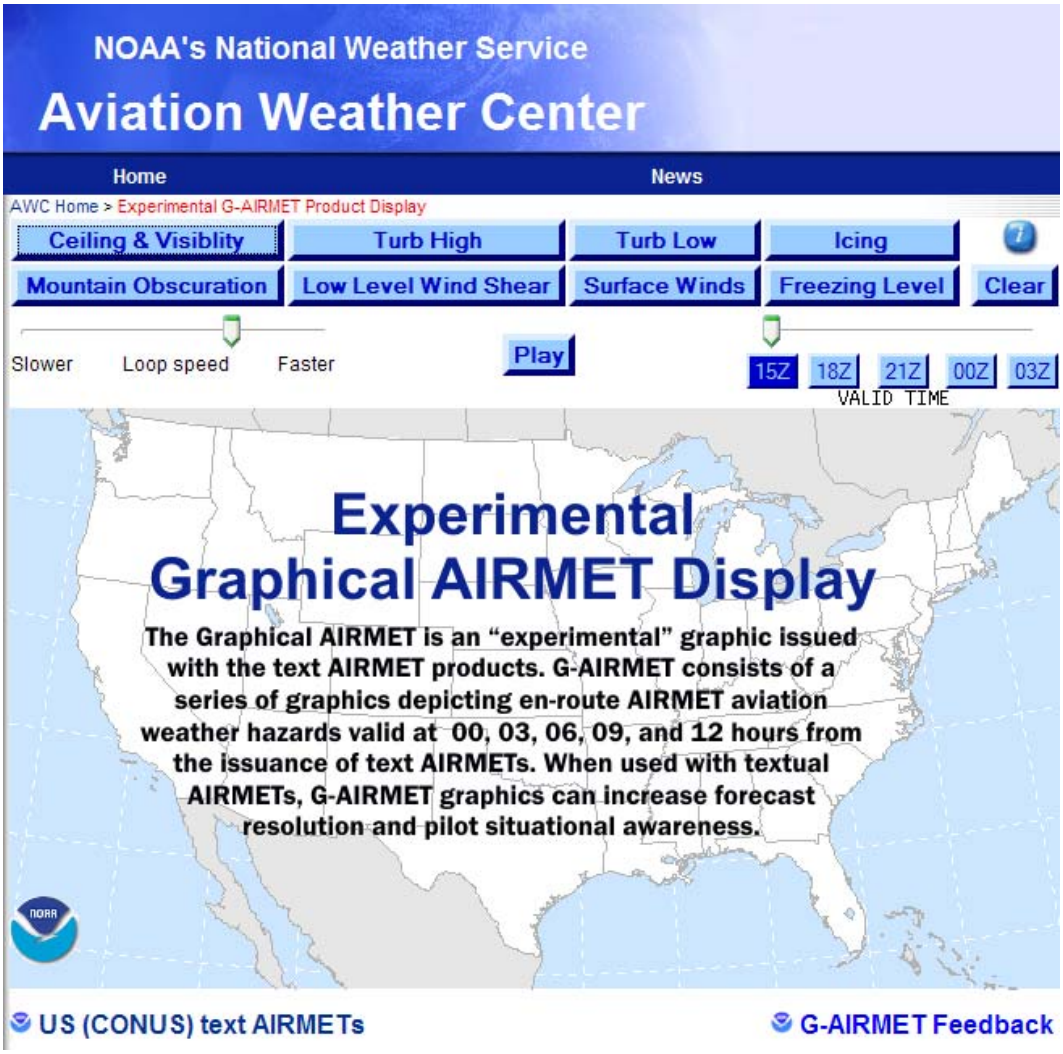

Figure 1. Screen capture of Graphical AIRMET experimental demonstration display

(2) Contact for access to BUFR data:

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Phone: 816-584-7241
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(3) References

National Oceanic and Atmospheric Administration, 2005: *New priorities for the 21st century – NOAA's strategic plan: Updated for FY2006-FY2011*. [Available online at http://www.ppi.noaa.gov/pdfs/STRATEGIC%20PLAN/ Strategic_Plan_2006_FINAL_04282005.pdf.]

National Oceanic and Atmospheric Administration, 2007: *NOAA Annual Guidance Memorandum for FY 2010 – 2014.* [Available online at http://www.ppi.noaa.gov/pdfs/ AGM.2010.FINAL.052107.pdf]

National Weather Service, 2005a: *National Weather Service Instruction 10-811: Enroute forecasts and advisories.* [Available online at http://www.nws.noaa.gov/ directives/sym/pd01008011curr.pdf.]

National Weather Service, 2005b: *National Weather Service Strategic Plan for 2005-2010: Working Together to Save Lives.* [Available online at http://www.weather.gov/sp/NWS_strategic_plan_01-03-05.pdf.]