

**Agenda Item 4: Other Matters****CURRENT STATUS OF THE WAFS INTERNET FILE SERVICE (WIFS)**

(Presented by the United States of America)

This working paper conveys updated information on the current status of the World Area Forecast System (WAFS) Internet File Service (WIFS).

**1 Introduction**

1.1 International Satellite Communications System (ISCS) provides World Area Forecast System (WAFS) products to authorized users. The National Weather Service (NWS), in collaboration with the Federal Aviation Administration (FAA), has now deployed the replacement service to ISCS, the **WAFS Internet File Service (WIFS)**. This new service provides secure access over the public Internet to multiple file servers that host all of the products that are currently available on the ISCS broadcast.

1.2 In August 2010 both of the ICAO Offices in Mexico and Lima issued a State Letter to all of its respective members stating that the ISCS users should start the transition process off ISCS immediately with the understanding that this transition process must be completed by no later than March 2010.

**2 Discussion****2.1 ISCS-G2 Contract extension**

2.1.1 To avoid any disruption in the WAFS services via satellite broadcast, the FAA has extended the exiting ISCS-G2 contract until June 2012.

**2.2 WIFS Provider**

2.2.1 As a WAFS-provider State, the United States provides aviation weather forecast data in accordance with Annex 3 to the Convention on International Civil Aviation via the **ISCS** to WAFS work stations around the world. However, the need now is for the United States to offer this service to the WAFS workstations over the public Internet.

2.2.2 WIFS is supported by the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS). WIFS has access to all products from the National Weather Service Telecommunication Gateway which currently supports the ISCS.

2.2.3 WIFS has been certified as a Qualified Internet Communication Provider (QICP) using the HTTPS protocol to deliver WAFS data products. This is in accordance with the Federal Aviation Administration's (FAA) Advisory Circular (AC) 00-62 Internet Communications of Aviation Weather and NOTAMs, which is similar to the ICAO Doc 9855, Guidelines on the Use of the Public Internet for Aeronautical Applications.

2.2.4 ISCS currently supports two separate user communities, the WAFS users and the Regional Meteorological Telecommunications Network (RMTN) users. Although the purpose of WIFS is to support the WAFS user community, the FAA and NWS have agreed that WIFS will continue to host the products needed by the RMTN user community until further notice.

## 2.3 WIFS Infrastructure

2.3.1 WIFS is deployed as a distributed architecture designed to minimize the likelihood of failure to ensure compliance with FAA AC 00-62. It has been implemented as part of an existing NWS infrastructure that consists of three geographically-separate web farms) all located within the U.S. Products are hosted on files servers located at each of these farms and these products are replicated by NWS across all of the file servers.

2.3.2 The WIFS file servers host the products that are stored in folders, grouped by type. Information provided on the WAFS broadcasts is defined in ICAO Annex 3, Meteorological Service for International Air Navigation, Chapter 3. WIFS hosts the same categories of products that are currently broadcast over ISCS WAFS broadcasts, and this information is in one of the following formats:

- **GRIdded Binary (GRIB)** encoded wind, temperature and humidity information Grid point information in both GRIB1 and GRIB2 formats
- **Significant Weather (SIGWX)** information in Portable Network Graphics (PNG) format
- **SIGWX** information in Binary Universal Form for the Representation of meteorological data (BUFR) format
- **OPMET** information in character-oriented format.

## 2.4 WIFS Access

2.4.1 WIFS does not push out WAFS products as is done under the current configuration of the ICSC satellite broadcast. Instead, users must utilize browsers or scripts (such as supported by GNU "wget") to retrieve products (from the WIFS files servers), that utilize the widely-used Hypertext Transfer Protocol Secure (HTTPS) over the Public Internet.

2.4.2 Users of WAFS work stations will have to make some modifications to their work stations to access the WIFS via the Internet. In discussion with selected WAFS workstation vendors, there will be a cost to make the changes to the workstation. It is our understanding that some vendor may not charge users who have existing maintenance contracts. We encourage users to contact their vendor for more information on maintenance and costs associated with upgrading the WAFS work station to ensure they will be able to access the WIFS via the Internet.

2.4.3 All users must register via the WIFS Support web-site (<http://aviationweather.gov/wifs>) in order to obtain a user identifier and password, which is required to access the WIFS file servers.

2.4.4 All approved WIFS users may also register for SADIS FTP service but only for backup/contingency planning purposes. If a user wishes to take advantage of this option, they may apply directly to SADIS for a user account.

2.4.5 Further information can be found in the World Area Forecast Systems (WAFS) Internet File Service Users Guide that is available on the Documents page on the WIFS Support web-site.

3 **Action by the meeting**

3.1 The Meeting is invited to:

- a) Take note the information provided in this paper; and
- b) Take immediate action to start the process to transition off ISCS to WIFS.

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