



NOAA Weather Wire Service (NWWWS) Partners Brief

Gregory Zwicker

NWWWS Program Manager

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NWWS-2 Status



- Revisit NWWS-2 Basic Information
 - Roll-out
 - Satellite (SBN/NOAAPORT)
 - Open Interface (OI)
 - End User Client (EUC) v0.1.7
 - Webpage Updates/Schedule
- Reported Issues
- FAQs
- Discussion



NWWS-2 Roll-out



- Began April 1, 2015
- 90-day transition/dual operation until 6/30/15
- Currently day 50 of 90



Satellite (SBN/NOAAPORT)



- Channel 101-105 - No Change in product dissemination (WMO format)
- Channel 201 - Added August 2014 (WMO format)
 - NWS Products only
 - Phase I testing indicated 100% product availability.
- SBN/NOAAPORT transponder changed October 2014
 - Loss of product availability noticed on 1.8m dish
 - Reported at October Partners Meeting.
 - Issue prevalent on all dish sizes.
 - Reported at AMS Partners Meeting January 2015
 - Solutions sought;
 - Filter testing – completed testing – minimal improvement
 - Software testing (NOVRA) – completed testing – no improvement
 - Software for high packet rate (NOVRA) – completed testing - 1% improvement on 3.7m+
 - L-Band Filter (TBD)- completed testing – *still performing data analysis*



SBN/NOAAPORT



- Satellite basics
 - Larger dish size has higher product availability.
 - FCC approved dish size is $\geq 3.7\text{m}$

Dish Size		Product Availability %
4.2m	FCC approved	99%*
3.7 m	FCC approved	98%*
2.4 m		97%
1.8 m		96%

Product availability also depends on site location within interference footprint.

NWWS-2 Design: Implementing Open Interface with SBN/NOAAPORT with any dish size provides the highest product availability at 99.8%

** Availability without high packet rate software correction.*



NWWS-2 Open Interface (OI)



- **Establish Account**
 - User Information
 - Contact information (e-mail, Company, Address, Telephone)
 - *NWS Provided information*
 - *User_id* and *password*
 - URL: nwws-oi.weather.gov
 - Port: 5223
 - Chat “nwws”
- **End User Client (EUC) Disclaimer (optional)**



NWWS-2 Open Interface (OI)



- **Software Clients**

- **NWS EUC (PC/Windows) – Disclaimer required**

1. Satellite (SBN/NOAAPORT Channel 201) ingest
2. Open Interface (OI) ingest
3. Both ingests with de-duplication of messages

- **Other XMPP clients***

- Pidgin (PC);
- Adium (Mac);
- Java chat
- Google

** These clients indicate WMO header only and will require additional software development to access message text.*



NWWS-2 End User Client (EUC)



- **End User Client v0.1.7**

- resolves issue with the OI connectivity monitor not properly initializing during a critical connection failure to the OI server.
- Upgrade SMACK (XMPP) API to version 4.1.0 to resolve memory leak issues during auto-reconnect scenarios.

- **EUC Standard Offering**

- Two types (32/64-bit)
- Both
 - Archive
 - Parse
 - Store
 - Provide message text
- EUC Manual (Initial Draft)



NOAA End User Client (EUC)



- Planned Enhancement(s)
- Planned Upgrade(s)
- Address issues on case-by-case basis
- Next release scheduled for end of May 2015



NWWS Webpage



- Continuing to Update
- Changed initial Webpage
 - Added schedule and count down clock



ISSUES



NWWS-2 Issues



- **Satellite reception issue of product availability**
 - Tested out-band and in-band filters.
 - Tested three (3) NOVRA software solutions.
 - Have ongoing test of NOVRA firmware solution to “High Packet Rate” and possible loss.
 - Tested “L-band” filters.



NWWS-2 Issues



- **OI *user_id* and *password* provisioning**
 - Timely
 - Not-timely
 1. *NWS undergoing a significant re-organization, re-alignment and shift of IT resources. System works well when it works.*
 2. *Critical “other” tasks delayed processing.*
 3. *Volume of e-mails on multiple tasks delayed applications.*
 4. *Embedded e-mails delayed applications.*
 5. *Typos in account information transfer took time to track.*
 6. *Goal is to complete process within 3-days of initial request. If you haven’t heard back from a NOAA representative in 3-days, contact Gregory Zwicker.*



NWWS-2 Issues



- **File won't unzip where I want it? Gives a name/extension too long error.**
 - *Unzipping closer to root or using small directory sub-directory names has resolved current unzipping issues.*



NWWS-2 Issues

- **The EUC message files (and data sent over XMPP) are not formatting correctly:**
 - CSC End-of-Line is **<CR><CR><LF>**.
 - The XMPP server is sending **<LF><LF>**.
 - Because the OI is XML-based, it will conform to XML End-of-Line handling.
 - The EUC does not modify products ingested.



NWWS-2 Issues



- There is a message difference with the OI.
- The OI is a XML based service which means that the output will conform to the following rule found within the XML RFC:
 - <http://www.w3.org/TR/REC-xml/#sec-line-ends>
 - *2.11 End-of-Line Handling*
 - *XML parsed entities are often stored in computer files which, for editing convenience, are organized into lines. These lines are typically separated by some combination of the characters CARRIAGE RETURN (#xD) and LINE FEED (#xA).*
 - *To simplify the tasks of applications, the XML processor must behave as if it normalized all line breaks in external parsed entities (including the document entity) on input, before parsing, by translating both the two-character sequence #xD #xA and any #xD that is not followed by #xA to a single #xA character.*



NWWS-2 Issues



- **I'm not recognized as a user though I have my *user_id, password* and my set-up with firewall is correct.**
 - User_id is case sensitive
- **The unzipped file will not work.**
 - See Appendix C of the EUC Manual



NWWS-2 Issues



- **Program halts after a period of time when running on two systems.**
 - Using the same *User_id* and *password* on two systems will cause one or both to go down. Request another account to resolve issue.



Issue Summary

ISSUE	STATUS	MITIGATION
1. Satellite Product Availability	Closed	SBN + OI per NWW5-2 design
2. OI Access Request Timeliness	OPEN	Weekly verification/validation (3-5 days)
3. Zip files won't unzip	Closed	Directory location name length or distance from root directory is the issue. Move location closer or use a shorter directory location/name.
4. Un-zipped file won't run	Closed	See Appendix C in EUC Manual for setup change.
5. EUC Message Format Variance	Closed	OI is in XML ; SBN is in WMO std
6. I'm not recognized as a user	Closed	<i>User_id</i> and <i>password</i> are case sensitive
7. EUC does not provide product alert capability.	Closed	Will be incorporated into EUC software upgrade.
8. We run on Linux not Windows.	Closed	This is a User developed interface.
9. Won't run on two systems using same user_id and password.	Closed	Don't do it. Request additional accounts as needed.



Frequently Asked Questions (FAQs)



NWWS-2 FAQ



- **What software do I use for OI ingest?**

- NWS End User Client (EUC) - Windows
- Other XMPP client software
 - Pidgin (PC)*
 - Adium (Mac)*
 - Google
 - ??????

** Additional software development will be needed to read the product ingest, archive selected products, and parse the information.*



NWWS-2 FAQ



- **What software do I use for Satellite ingest?**
 - NWS End User Client (EUC) – Windows
 - For Channel 201 (all dish sizes); a nominal DVB-S2 satellite receiver (similar to the Novra S300) software.
 - For larger dish users (3.7m+); satellite receiver software for Channel 101-105.

*EUC has three (3) ingest capabilities;
SBN/Channel 201, OI, or Both (201 & OI).*



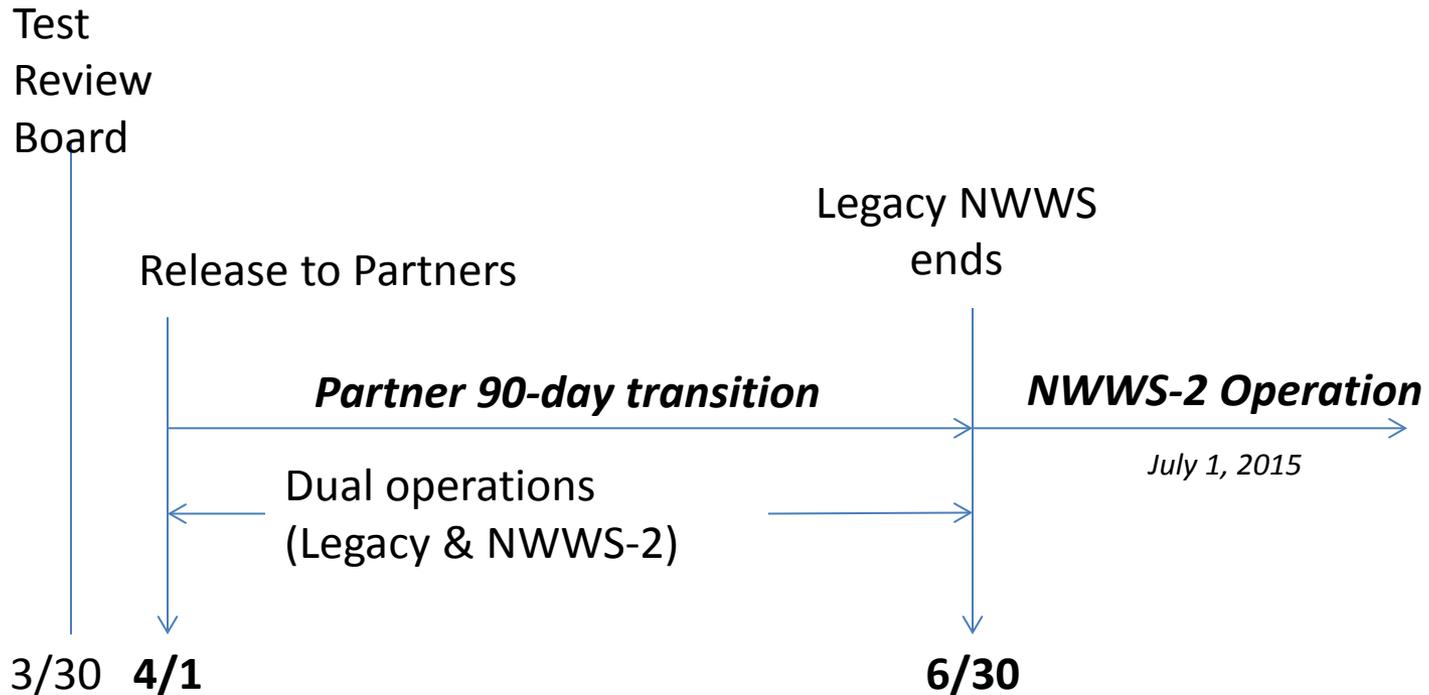
NWWS-2 FAQ



- **Which is best – Satellite or OI?**
 - OI provides the fastest product ingest capability.
 - OI provides the higher single ingest product availability.
 - Satellite still has the highest product availability when the Internet goes down.
 - Use of **BOTH** Satellite and OI provides the highest product availability for NWWS.



NWWS-2 Schedule





Discussion



How to direct your query

- First, check NWWS Webpage – <http://www.nws.noaa.gov/nwws>
- EUC Disclaimer request – <http://www.nws.noaa.gov/nwws/configuration.html>
- EUC Manual comments – Gregory.Zwicker@noaa.gov
- EUC Set-up Issue – NWWS.help@noaa.gov
- EUC Performance Issue(s) – NWWS.issue@noaa.gov
- EUC Updates – see NWWS webpage
- OI Access Request(s) – send POC information (p.6) to Gregory.Zwicker@noaa.gov
- OI Performance Issue(s) – NWWS.issue@noaa.gov
- Satellite receive configuration – see NWWS webpage (AWIPS NWWS-2) Interface Information Document (IDD)
- SBN Performance Issue(s) – NWWS.issue@noaa.gov
- Message format Issue(s) – NWWS.issue@noaa.gov
- Schedule – see NWWS webpage
- All other inquiries – Gregory.Zwicker@noaa.gov



Next Meeting

June 3, 2015



THANK YOU.