WSR-88D Program Software Changes
That May Impact
Radar Product Central Collection Dissemination Service (RPCCDS) Users

Updated 13 November 2008

PURPOSE:
This summary is intended to assist RPCCDS users plan for WSR-88D changes which may impact data format, availability, uses, or data quality. This synopsis updates the 2 April 2008 summary posted on the RPCCDS home page. **The major change in this document is an update on the upcoming Build 11 and Build 12 software releases.**

CURRENT STATUS:
Build 10 Summary: As of 1 November, the Evansville radar (KEVX) has been upgraded to the WSR-88D hardware and software baseline configuration. All other sites, except for one, are operating on Build 10

FUTURE CHANGES:
Build 11: Deployment of RPG Build 11 software is scheduled to begin in May 2009 (after a Beta Test at selected sites beginning in March 2009). The software is in System Test.

(1) The Severe Weather Probability algorithm and product (Product # 47) will be removed from the WSR-88D software baseline in Build 11 and no longer be available. Surveys indicated very few NEXRAD agency users of this product.

(2) A new algorithm to control the application of clutter suppression, the Clutter Mitigation Decision (CMD) Algorithm, will be added in Build 11. The CMD Algorithm:

- Is only active on the split cuts, the Surveillance and Doppler scans in the lowest two segments.
- Contains new science to automate the application of clutter suppression on a bin-by-bin basis.
- Operates from the receiver time series data (Level 1) in the signal processor to compute the probability of clutter contamination in a given bin of radar data.
- Is particularly useful in addressing clutter contamination caused by anomalous beam propagation.

Data users should see reduced residual clutter in the base products. The product formats will not change.

Dual Polarization: Deployment of the Dual Polarization hardware/capability is planned to begin in late 2010. The deployment will likely span about two years. The addition of dual polarized products to the RPCCDS data stream has yet to be determined

Build 12: Deployment of RPG Build 12 software is scheduled to begin in October 2010. The major changes in the build are:

(1) Dual-polarization related algorithms and products will be activated.

(2) Remove Legacy Mesocyclone Algorithm (Product #60**).** A new-science version of this algorithm, the Mesocyclone Detection Algorithm, was implemented in the WSR-88D several years ago. The Combined Attributes association was transferred from the legacy algorithm product to the new product (Product #141). The NEXRAD agencies have rated the legacy Mesocyclone Algorithm as a low usage algorithm/product.

(3) Integration of Super Resolution Data into the Mesocyclone Detection Algorithm (MDA). The MDA will use Super Resolution data. Just as Super Resolution data can enable forecasters to detect rotations at longer distances and earlier, this algorithm can take advantage of the data too.

ADDITIONAL INFORMATION:
The ROC has a URL (https://www.roc.noaa.gov/ops/ssm.asp) for users to obtain:

(1) A list of sites and which RPG and RDA software build the site is using, and
(2) A list of sites and which volume coverage pattern the site is using, during the last automated hourly ROC call to the RPG.

Training Material: Warning Decision Training Branch (WDTB) Build 10 training materials prepared for NEXRAD agency operators are available at: http://www.wdtb.noaa.gov/buildTraining/Build10/index.html. While some of the changes discussed in the training materials are not available on the RPCCDS, the training materials provide information on new capabilities for NEXRAD Agency WSR-88D users and will help external users in regard to Build 10 changes. Build 11 training materials will be available for use starting during the Build 11 Beta Test.

RPG Software Available: The NWS has prepared a LINUX version of the WSR-88D RPG software called "The Common Operations and Development Environment" (CODE). The Build 10 software is available at: http://www.weather.gov/code88d/.

June 2008 Family of Service Presentation: The slides presented in the WSR-88D portion of the latest FOS meeting are at: http://www.roc.noaa.gov/NWS_Level_2/FOS0608_Rev2_mji.pdf.

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