

Issuing Problem Reports to Software Engineering WPI

March 4, 2008

1) Background

WSR-88D software baselines (RDA, RPG, and OPUP) are a collection of programs, configuration files, scripts and requirement specifications, etc. that are maintained by ROC's Software Engineering (SWE) and managed by ROC's Configuration Management (CM). To modify a software baseline, a Configuration Change Request (CCR) describing the proposed change must be submitted to the ROC CM. The CCR must then be reviewed and approved by the sponsoring agencies (National Weather Service (NWS), Federal Aviation Administration, and the Air Force Weather Agency (AFWA)) before a CCR is targeted for implementation in a particular build (release) of the software.

Modifications to the RDA, RPG and OPUP baselines for approved CCRs targeted to a build are made by SWE staff during the build development cycle. At the completion of the development cycle, an Integration Test is conducted by SWE staff to ensure all software modifications function as expected and the overall systems perform according to established requirements. After the completion of Integration Test, a period of formal and comprehensive System, Operations, and Beta testing is performed by the ROC Radar Support Team (RST) to ensure the release is stable and of the highest quality, and the documentation is accurate and complete.

Occasionally software defects and incomplete or inaccurate documentation are found during formal testing. Software defects and documentation deficiencies found during formal testing are documented to facilitate tracking of the defect/deficiency from detection to eventual correction. Documenting reduces the risk these defects/deficiencies go unresolved prior to the software release to the field.

2) Purpose

Currently only RST (and only during formal test periods) has an established policy and procedure to formally document software defects/documentation deficiencies. Outside of that used by RST during periods of formal testing, there is no formal process for ROC and government/contractors to inform SWE of software defects, unmet requirements or deficiencies with technical and requirements documents for the software baseline currently under development or baseline software already deployed to the field.

This shortcoming is being addressed by implementing a process to allow a wider audience to report to SWE software defects, unmet requirements, and deficiencies with technical documentation. This new process is designed to keep SWE better informed of software baseline problems encountered outside of formal tests and ultimately provide a vehicle for SWE to better track problems and associated corrective actions from submission to resolution.

This new process is in addition to (and not in lieu of) the current mechanism employed by RST. Only RST can submit a defect report (also called an “Issue”) for official adjudication by the Test Review Board (TRB) during periods of formal testing. This new process will be completely managed and maintained by SWE and is not tied to formal change requests (CCRs, Publication Change Requests (PCRs), etc.).

3) Scope

This WPI covers the process of submitting a problem report against one of the WSR-88D software/documentation baselines by government and contractor personnel outside of the SWE section. For these individuals, the problem reports are principally intended to document software defects and inaccurate/incomplete procedures, technical manuals and formal requirements specifications. Problem reports are not intended to replace the use of RST Issues submitted during formal build testing or supplant the CCR process. This WPI also does not specify how the RDA, RPG or OPUP groups use and manage the problem reports.

Problem reports can be submitted by any government or government contractor actively involved in the development, testing, documentation, or training of software integrated into the WSR-88D software baseline. This includes ROC personnel, members of the Warning Decision Training Branch (WDTB), Common Operational Development Environment (CODE) software developers at the Implementation Organizations (IO), and National Weather Service Training Center (NWSTC) staff. This WPI applies to those individuals at the aforementioned entities wishing to report software defects and/or documentation issues to SWE and the policy and procedure to be followed for this reporting.

4) Policy/Procedure

The following describes the policy and procedure to be followed by individuals wishing to report potential software defects, incorrect or incomplete information in Interface Control Documents (ICDs), a failure by the software baseline to meet approved requirements or pose questions related to procedures (e.g., installation) or technical manual content. This policy and procedure is not intended to suggest or recommend enhancements to the software baseline. Requests or suggestions for enhancements should be submitted using the normal CCR process.

Problems can be reported by emailing the appropriate address listed below. To report an RPG problem:

issuesintdbrpg@cmlnsvr.roc.noaa.gov

For RDA problems:

issuesintdbrda@cmlnsvr.roc.noaa.gov

For OPUP problems:

issuesintdbopup@cmlnsvr.roc.noaa.gov

After email submission, the email is transformed into a problem report where the email subject line becomes the title associated with the problem and the body of the email becomes the problem description.

The problem description should provide as much detail as possible. If known, the following information should be provided in the body of the email:

- The version of software used when the problem was noted, if applicable.
- Any procedures which were being executed when the problem was encountered. For Technical Manual procedures, note the technical manual and the procedure, including page number(s).
- The particular radar data being processed when the problem occurred, if applicable. If the problem occurred during playback of archived data, note the radar ICAO and data collection date/time.
- Indicate if the problem is reproducible.

ROC personnel can access to all previously created problem reports through their Razor™ Issues account. Personnel wishing an Issues account or e-mail notification when an Issue is submitted and subsequently modified should make a request to ROC CM. Non-ROC personnel can request periodic updates in the body of the e-mail used for initial submission. The updates will be the responsibility of the developer assigned to the Issue.