Research Infusion: ODC for Microwave Subsystem Controller

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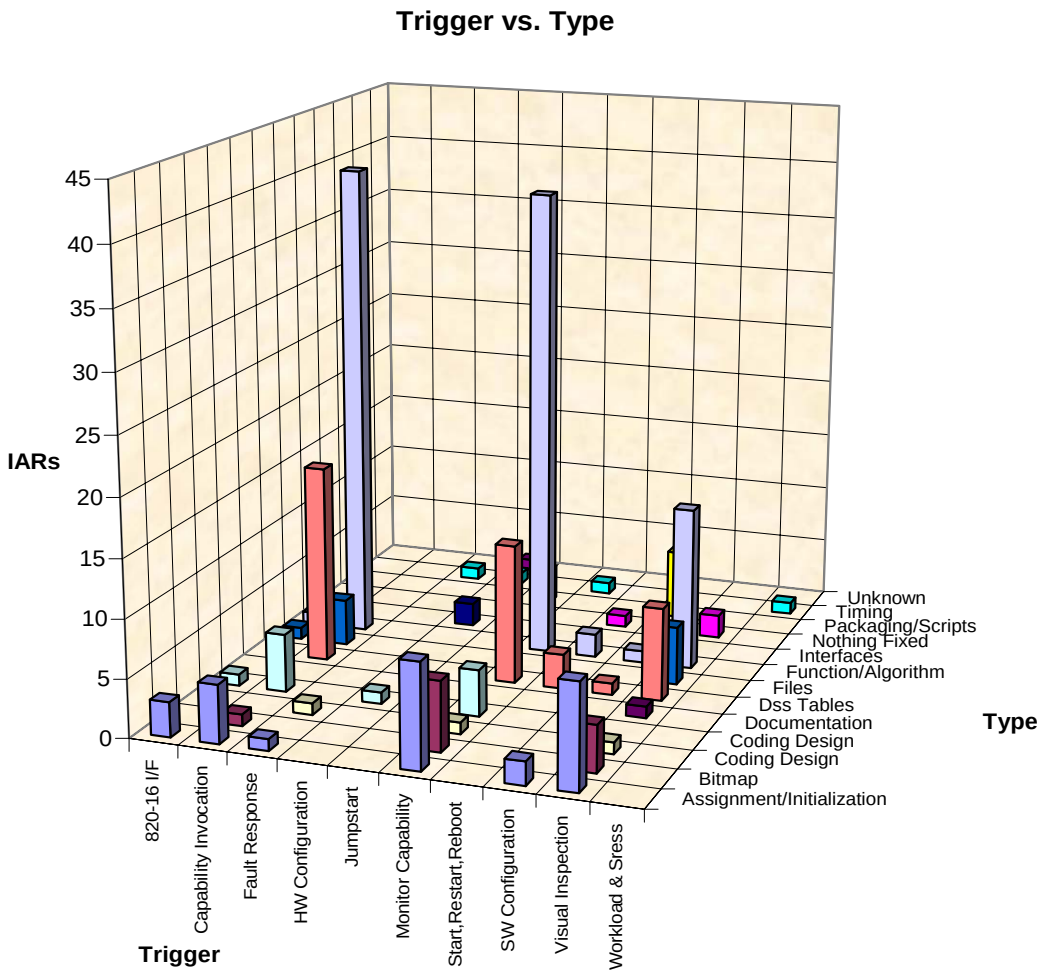
Overview: ODC for Microwave (UWV) Subsystem Controller (USC)

- **Controller automates monitoring and controlling of equipment for up/downlink operation and calibration of the Deep Space Network antennas**
- **224 Internal Anomaly Reports (IARs) generated during testing**
- **Four ODC attributes used: Activity, Trigger, Target, Type**

Process: ODC for Microwave (UWV) Subsystem Controller (USC)

- **ODC customization of definitions for Microwave (UWV) Subsystem Controller (USC) IARs**
  - **Customized by project (Leslie Manalo)**
  - **Materials, advice, review of draft provided by ODC researchers (Tuan Do & Robyn Lutz)**
- **ODC classification of anomalies**
  - **Classified by project**
  - **Feedback & questions answered by ODC researchers**
- **ODC analysis of anomalies**
  - **Pivot tables created by ODC researcher (Tuan Do)**
  - **Interpretation of results by all**
- **Report produced**
  - **Co-written by Leslie Manalo & Tuan Do**
  - **Reviewed by all**

Sample Results: ODC for Microwave (UWV) Subsystem Controller (USC)



Recommendations: ODC for Microwave (UWV) Subsystem Controller (USC)

- Do ODC on the next round of USC and compare against this year's analysis to use as a benchmark.
- Implement the ODC subsets described in APPENDIX 1 in Harvest so that testers and developers can classify the IARs themselves. This would allow a more effective means of using ODC at a later date.
- Expand on the information in the IARs so that it is easier to classify IARs using the ODC.
- Experiment with earlier review of the DSS tables (prior to testing) to see if this brings down the number of IARs.
- Examine how many IARs with Visual Inspection as their Trigger have "text/labels that need to be changed". If the number is high, review the text and labels prior to build testing.
- Examine the subset of IARs with Monitor Capability as the Trigger and either Assignment/Initialization or DSS Tables as the Type of the correction, to see if these can be prevented by earlier analysis/inspection.