Controls Request Tracker

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What is Controls Request Tracker?

• Tool to manage work requests, used by SNS Controls Group
• Based on CPM (Cosy Project Manager) a task tracking system developed and used by Cosylab
• Built on top of Request Tracker (RT) open source software and an RDB (MySQL or Oracle)
• We contracted with Cosylab to customize for our needs
• Captures requests, along with other relevant information, from multiple sources in a central database
• Each task is called a “ticket”
• Supports grouping tickets and hierarchy
Why CRT?

• DOE Order 413.3A Program and Project Management for the Acquisition of Capital Assets establishes a formal process for DOE construction projects
  – 5 Critical Decisions
  – Budget and schedule carefully managed
  – Support from Project Management professionals
  – Project milestones
  – Semi-annual reviews
  – Phased funding
DOE Critical Decision Process

Source www.directives.doe.gov
Operations

• Successful completion of CD-4 triggers the start of “Project Operations”

• Formal project schedules and milestones replaced with metrics for production hours and availability

• Annual or less frequent reviews of technical achievements

• Groups manage their work less formally and without PM support

• Work includes commissioning, operational support, upgrades, improvements, smaller scale construction
Nature of the Work

• During Operations, work is driven by:
  – Meeting design goals that exceed CD-4
  – Addressing emerging availability issues
  – Building systems and features that were “descoped” during construction
  – Machine support
  – New features
Nature of the Work

• Frequent customer requests from many sources
  – In response to operational issues
  – Verbally, in meetings, hallways
  – By e-mail

• Requests made to Group Leader, Team Leader, Engineers

• Very high volume of requests exceeds available resources

• Important to carefully prioritize
Without CRT

• Task management varied by team or individual
• Work managed via strings of e-mails, spreadsheets, personal databases, other distributed files
• Difficult to get complete picture of any project all in one place
• No common way to communicate
• Getting current status information meant contacting someone for each project
• Impossible to prioritize work without an accurate, complete list of all requests
Tickets

- Tickets have many fields: Status, Type, System, Subsystem, Requestor, Developer, Dependencies, Dates, Effort
- Complete history of ticket is saved
- Accept updated through web interface or e-mail
- Supports attachments
## Ticket Types and Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Ticket Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>New - Unassigned</td>
<td>Problem</td>
</tr>
<tr>
<td>Open – Work In Progress</td>
<td>Maintenance</td>
</tr>
<tr>
<td>Stalled – Work can’t proceed</td>
<td>Configuration</td>
</tr>
<tr>
<td>Resolved – Completed</td>
<td>Documentation</td>
</tr>
<tr>
<td>Rejected – Won’t be completed</td>
<td>Improvement</td>
</tr>
<tr>
<td>Deleted – Won’t show in reports</td>
<td>Idea</td>
</tr>
<tr>
<td></td>
<td>Management</td>
</tr>
<tr>
<td></td>
<td>Milestone</td>
</tr>
</tbody>
</table>
How do we use CRT? – Phase I

• Controls Group/Team Leaders enter tickets and assign to developers based on requests from customers or problems reported in e-log

• Developers can enter, grab (volunteer), reply to, resolve, reassign, update tickets and add more information

• Tickets can be linked to predefined milestones such as “July 2010 Outage” and/or grouped to form projects

• Individuals use to manage work load, report status

• Group/Team Leaders get data to prioritize, balance work loads, track progress, justify requests for resources
CRT Interfaces and Reports

• Dashboard for each user that can be customized according to user preferences
• Predefined reports and an interface for user designed reports
• Simple and complex searches
• We have added custom reports
Create a Ticket
## Searches

**Found 8 tickets**

<table>
<thead>
<tr>
<th>#</th>
<th>Subject Requests</th>
<th>Status</th>
<th>Queue Created</th>
<th>Queue Last Updated</th>
<th>Owner Due</th>
<th>Priority</th>
<th>Ticket Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>124</td>
<td>Develop Chipmunk IV b prototype</td>
<td>new</td>
<td>7 months ago</td>
<td>SNS-CNTRLS-Protection,Systems-Radiation,Protection-Chipmunk</td>
<td>9 months 3 days</td>
<td>0</td>
<td>Improvement</td>
</tr>
<tr>
<td>127</td>
<td>Chipmunk IV b prototype RSC presentation</td>
<td>new</td>
<td>7 months ago</td>
<td>SNS-CNTRLS-Protection,Systems-Radiation,Protection-Chipmunk</td>
<td>9 months 3 days</td>
<td>0</td>
<td>Improvement</td>
</tr>
<tr>
<td>173</td>
<td>LIION development</td>
<td>open</td>
<td>2 days ago</td>
<td>SNS-CNTRLS-Protection,Systems</td>
<td>9 months 3 days</td>
<td>0</td>
<td>New</td>
</tr>
<tr>
<td>175</td>
<td>APPS spare parts</td>
<td>open</td>
<td>2 days ago</td>
<td>SNS-CNTRLS-Protection,Systems-Apps</td>
<td>9 months 3 days</td>
<td>0</td>
<td>Improvement</td>
</tr>
<tr>
<td>233</td>
<td>Improve EPICS screens for RMS III units in target building</td>
<td>new</td>
<td>7 months ago</td>
<td>SNS-CNTRLS-Protection,Systems-Radiation,Protection-RMSIII</td>
<td>9 months 3 months</td>
<td>0</td>
<td>Improvement</td>
</tr>
<tr>
<td>956</td>
<td>Update Chipmunk EPICS detail screens</td>
<td>new</td>
<td>7 weeks ago</td>
<td>SNS-CNTRLS-Protection,Systems-Radiation,Protection-Chipmunk</td>
<td>9 months 4 weeks</td>
<td>0</td>
<td>Configuration</td>
</tr>
<tr>
<td>1836</td>
<td>Clean up RMS installations</td>
<td>new</td>
<td>2 weeks ago</td>
<td>SNS-CNTRLS-Protection,Systems-Radiation,Protection-RMSIII</td>
<td>9 months 4 weeks</td>
<td>0</td>
<td>Maintenance</td>
</tr>
<tr>
<td>1864</td>
<td>Revise Chipmunk OPM 1.6</td>
<td>new</td>
<td>8 hours ago</td>
<td>SNS-CNTRLS-Protection,Systems-Radiation,Protection-Chipmunk</td>
<td>9 months 8 hours</td>
<td>0</td>
<td>Documentation</td>
</tr>
<tr>
<td>#</td>
<td>Id</td>
<td>Queue</td>
<td>Owner</td>
<td>Subject</td>
<td>Status</td>
<td>Last Update</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>--------------------------------------------</td>
<td>-----------------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------</td>
<td>-----------------------</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>203</td>
<td>SNS-CNTRLS-Protection_Systems-APPs</td>
<td>Dennis Bryan Moss</td>
<td>Spare parts training for APPS equipment</td>
<td>resolved</td>
<td>2009-09-29 18:32:00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>628</td>
<td>SNS-CNTRLS-Protection_Systems-Radiation Protec_RMS3</td>
<td>Dennis Bryan Moss</td>
<td>Install RMS III in target cask cart room</td>
<td>resolved</td>
<td>2009-09-29 18:31:01</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>991</td>
<td>SNS-CNTRLS-Global-Computer-OPIs</td>
<td>Shaun N. Cooper</td>
<td>Target moderator OPI replacement</td>
<td>resolved</td>
<td>2009-09-30 14:07:31</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>829</td>
<td>SNS-CNTRLS-Device_Control-Cryogenics</td>
<td>Steven M. Hartman</td>
<td>Cryo controls maintenance tasks -- 2009 Summer</td>
<td>resolved</td>
<td>2009-09-28 15:54:20</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>356</td>
<td>SNS-CNTRLS-Device_Control-Cryogenics</td>
<td>Steven M. Hartman</td>
<td>Add new Cryo alarms</td>
<td>resolved</td>
<td>2009-09-28 15:53:07</td>
<td></td>
</tr>
</tbody>
</table>
Report – Tickets By Status

Ticket Status

- **deleted**
- **new**
- **open**
- **rejected**
- **stalled**

- **deleted** - 3%
- **new** - 45%
- **open** - 45%
- **rejected** - 1%
- **stalled** - 6%
# Report - Summary of All Tickets

<table>
<thead>
<tr>
<th>Status</th>
<th>Ticket Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rejected</td>
<td>3</td>
</tr>
<tr>
<td>Deleted</td>
<td>15</td>
</tr>
<tr>
<td>Stalled</td>
<td>28</td>
</tr>
<tr>
<td>Open</td>
<td>196</td>
</tr>
<tr>
<td>New</td>
<td>198</td>
</tr>
<tr>
<td>Active (new, open, stalled)</td>
<td>422</td>
</tr>
<tr>
<td>Resolved</td>
<td>563</td>
</tr>
<tr>
<td>Total</td>
<td>1003</td>
</tr>
</tbody>
</table>
Status and Future Plans

• Using CRT since May 2009
• Over 1000 tickets entered
• Easy to use, has already been very useful
• We use a fraction of CPM features
• SNS uses a Work Order system built on DataStream to manage maintenance, repair and outage work on the machine

• We plan to develop CRT functions
  – To turn a ticket into a DataStream work order
  – To turn an e-log entry and turn it into a CRT ticket