Problem Reporting is not a Problem, It’s an Opportunity

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Georgia Tech Research Institute (GTRI) Overview

- Unit of the Georgia Institute of Technology
- 1200+ employees
- 70% of research employees hold advanced degrees
- Wide variety of products
- Customers include federal and state government; and industry
- Competitively bid projects range greatly in size and duration
- More Info:  http://www.gtri.gatech.edu/
Topics to Cover

• What is a problem report
• What a problem report is not
• Why problem reports are a good thing
• How problem reports fit into your process
• Problem report lifecycle
• Types of information to collect
• Problem report metrics
• Tools and techniques
What is a Problem Report?

- PR, SPCR, Bug, OCR, CR, EPR, ECR…
- Project requirement
- CMMI CM SP (2.1-1) Track Change Requests
- Creates a paper trail
- Documents changes at any point in development cycle
- Easy PM tool (How are we doing?)
- Part of release documentation
- Business development tool
What a Problem Report is Not

• Not optional
• Not a personal performance indicator
• Not a singular project tool
• Not a contest
• Not only for S/W
  • Documentation
  • Systems/Hardware
  • COTS
  • Subcontractors
  • Process
Why Problem Reports are a Good Thing

• Great communications tool
• Provide a status snapshot
• Manage clients and subcontractors
• Issues don’t get lost
• Help control the product
• Bring new hires up to speed
• Business development
• Help make informed decisions
How Problem Reports Fit Into the Development Cycle

• At what point during the process should problem reports be written

• Who should see problem reports
Problem Report Lifecycle

- Submit
- Hold
- Review
- Reject
- Research
- Fix or Implement
- Verify
- Close
Some Problem Report Information to Collect

- Unique ID
- Description
- State of problem report
- Functionality or application
- Where in the process it was written
- Severity
- Priority
- Dates
- Estimations
Problem Report Metrics

- Open vs. closed
- Where defects are introduced
- Closure rate
- Days to verify
- Open per function or application
- When defects are found
Problem Report Graphs - Where Found

- **Requirements**
- **Design**
- **Unit Test**
- **Integration**
- **System Test**
- **Acceptance**
- **Operational**
Problem Report Graphs - Where Found
Problem Report Graphs – Status

- Submitted: 25%
- Hold: 20%
- Reject: 8%
- Research: 12%
- Fix: 10%
- Verify: 5%
- Closed: 20%
Problem Report Graphs – Status

- Submitted: 35%
- Hold: 8%
- Reject: 10%
- Research: 7%
- Fix: 5%
- Verify: 5%
- Closed: 30%
Problem Report Graphs – Severity

- 5-Enhancement
- 4-Inconvenience
- 3-Moderate
- 2-Severe
- 1-Critical
Problem Report Graphs – Priority
Excuses

• Takes more time to document the change than to actually make it.

• This will reflect poorly on my work.

• I don’t want the customer to know what our problems are.

• Stop writing problem reports so we can release.
Summary

- Simple way to gain project insight and make informed decisions throughout
- Good project communications tool
- Helps keep things under control
- Don’t misuse
- “Tool” should support your process and needs. Consider things like web interface, queries, report generation, customization or integration
Questions?
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