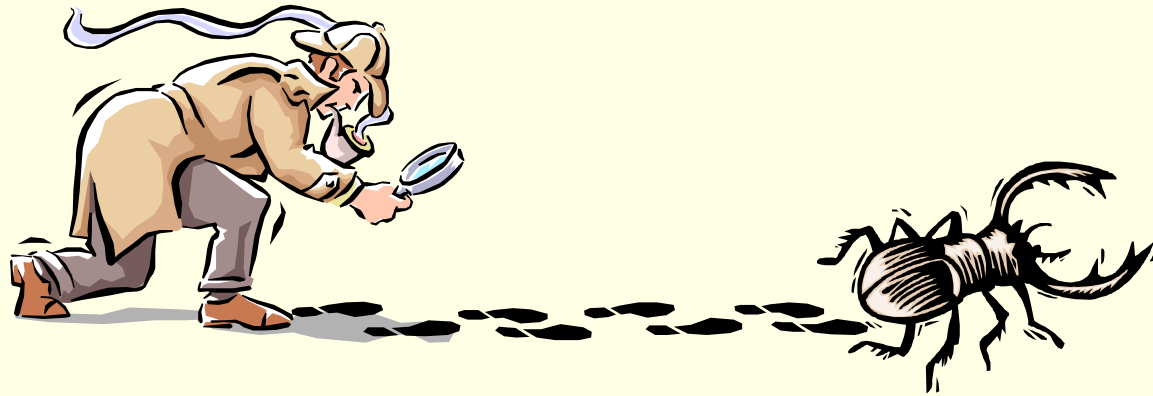


# A Bug Tracking Story



**Danny R. Faight**  
**Tejas Software Consulting**  
**[www.tejasconsulting.com](http://www.tejasconsulting.com)**

**ASEE Software Engineering**  
**Process Improvement Workshop**  
**2002**

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You know you are finished  
when the only bugs left  
are the ones that you decide you can live with  
at least for now!

–Robert Sabourin, *I am a Bug*



# Outline

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- ★ Background
- ★ Bug Reporting Skills
- ★ Bug Communication
- ★ The Bug Tracking Tool
- ★ Results and Current Status





# Background



# Background

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- The experiences related in this talk are from a real project, started last summer and expected to continue for at least another year
- I am a consultant on the project, and until recently, served as interim SQA manager
- We track bugs both for internally developed software and for software from an outsourced development team



# Credit

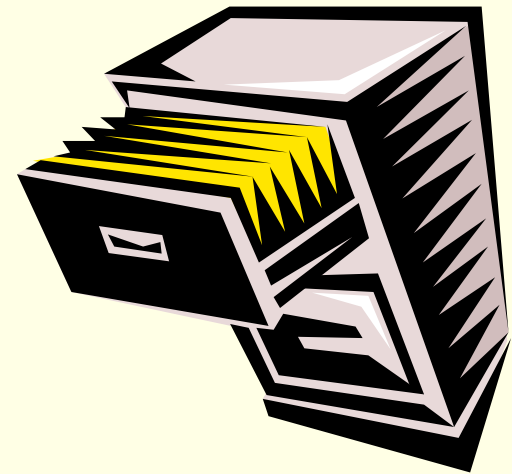
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- I will mention several process improvements...
- Some were my idea, others were conceived and/or implemented by the bugmeister who preceded me and the SQA director





# Bug Reporting Skills



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ASEE Software Engineering  
Process Improvement  
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Slide 7

# How we improved bug reporting

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- I wanted to improve the team's bug reporting skills
- Started with a 90 minute training session with the SQA team, taken from my introductory SQA training course
- Followed up with on-the-spot coaching



# Specific improvements

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- Reproduce/simplify/generalize
  - I advocated: reproducing the bug more than once, simplify the steps to reproduce, and generalize to find the worst possible consequence of the bug
- Step-by-step description
  - When there are more than a small handful of steps, we use a numbered list to describe exactly how to reproduce the bug



# Writing skills

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- Writing a good title
  - Each bug needs a good one-line title (also called the summary, headline, etc.)
  - This is a similar skill to writing a good attention-grabbing newspaper headline
- Rejecting bad bug reports
  - If a bug report is poorly written, I return it to the submitter for improvement (often a tough call if it's a high severity bug)





# Bug Communication



# Incoming bugs

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- Started using priorities (risk quantification)
  - The database of bugs for the outsourced vendor grew to an overwhelming size until we started prioritizing
- Identify functional area for each bug
  - Shared the database between the outsourced and internal components – started requiring that the component be clearly identified



# Triage

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- Stopped reviewing all bugs every week
  - Changed to a streamlined triage process for the prototype phase, to deal efficiently with the large volume of bug reports
- Project manager became the bugmeister (in addition to running triage meeting)
  - Managing bug reports gave me background information for the triage meeting that I needed to pick up anyway



# Assignments

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- Started using bug assignments more consistently
  - Whoever has the assignment is the person who should do something next – the critical path
- Don't assign for verification until build is ready
  - Stopped assigning fixed bugs for verification until the build with the fix was available



# Fixes

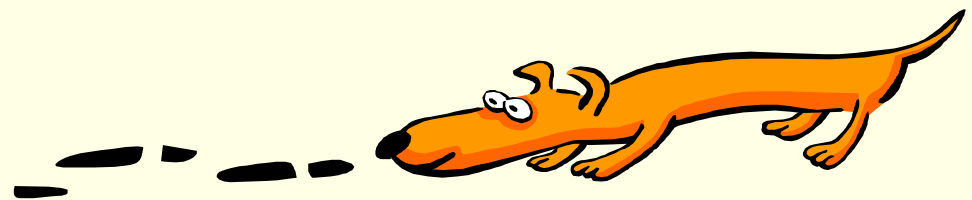
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- Make it clear when a bug is fixed
  - The outsourced vendor needed to make it clear when responding to a bug whether they had implemented a fix
- Asking for an explanation for each fix
  - For sanity's sake, we won't close a bug unless we have a brief description of how it was addressed





# The Bug Tracking Tool



# Bugs in the bug tracking tool

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- We encountered many bugs in the bug tracking tool itself
  - E.g., tool crashes, anomalies in summary reports, missing email notifications
- Reported these (using the same tool) to the local admin/vendor contact
- Note – I've never met a bug tracking tool I liked at first glance



# Bug submit screen

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- Added a severity field on the submit form
  - Severity is set by the submitter, priority is set by the bugmeister and reviewed during triage
- Used a pick list for version
  - Maintained a list of recent software versions for the version field



# Web access

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- Need direct access to the bug tracking tools for the outsourced vendor
  - Working on exporting the web interface to a secure extranet web server
- Found limitations in the web version of the tool
  - Still not resolved, otherwise we could have used web access for easier report automation





# Results and Current Status



# Status

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- Lots of bugs found so far, and the list is rapidly growing!
  - about a third of the bugs closed
- Planning to make improvements to the tool after the prototype release
- Small improvements to the process have reduced heartburn for all stakeholders



# Thanks for listening!

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Questions and war stories about your own bug tracking experiences are welcome...

Danny Faught,  
Software Quality Consultant  
Tejas Software Consulting

817-294-3998

[faught@tejasconsulting.com](mailto:faught@tejasconsulting.com)

[www.tejasconsulting.com](http://www.tejasconsulting.com)

