

KANDOU BUS CONFIDENTIAL



# Bug and Issues Tracking Process

Version 00.02

Revision History

Date	Author	Description
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1 PURPOSE

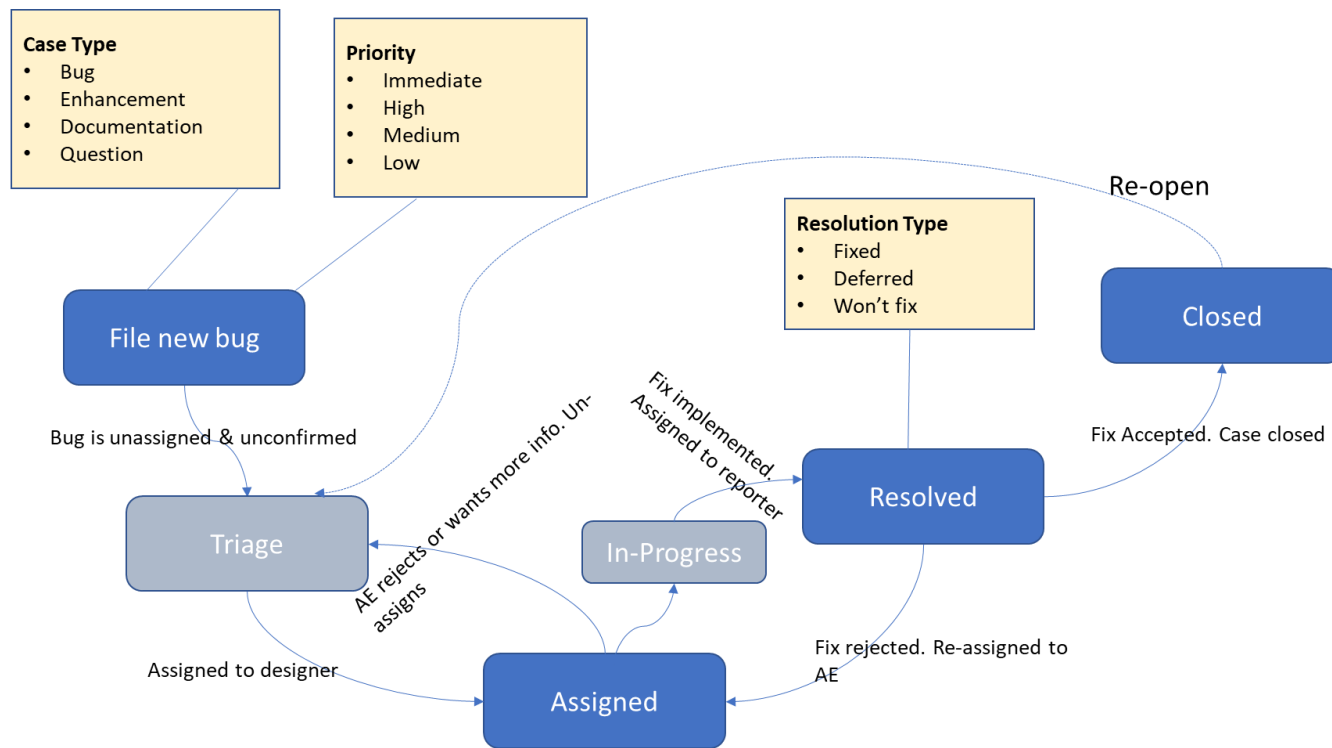
Bug tracking is a very important in the design cycle. It helps to keep track on current issues, provides accountability and allows agility in project planning, status audit, resource management and prioritizing. It also ensures that issues are not forgotten as well as create historical data which can be used to improve future designs and processes.

The process is intended to be used by every stakeholder in the project, PM, designers, verification engineers, architects etc. To make it efficient, the process should be used from the very first inception of the project. The methodology has been streamlined and kept simple to ensure that it does not create any additional overhead and encourage users to use the system all the time.

This document describes Kandou’s procedure for recording, tracking and managing issues/bugs throughout the project cycle.

## 2 BUG/ISSUES TRACKING PROCESS

### 2.1 Overview / Workflow



#### 2.1.1 Steps

- Step 1: Case is filed.
  - Priority has to be defined.
  - Case type should be defined. Defaults to bug.
  - Area of design where issue persists should be specified if known.
  - The revision/version number of design should be specified if known. Defaults to most current otherwise.
- Step 2: Triage
  - Decides if priority is appropriate. Can change if required but reasons have to be provided.
  - Decides the correct AE.
  - May decide to ask more questions before assigning.
- Step 3: Assigned State
  - AE decides first whether to fix or not.
    - May un-assign (back to triage) giving reasons; Want more info, not the right assignee etc.

- If a fix is needed
    - An estimate of the time required should be provided.
    - Sets status to in-progress.
- Step 3.1: In-Progress
  - Continuously update on progress.
  - AE may ask for more information.
    - May re-assign to reported whilst waiting for information.
- Step 4: Resolved State
  - After fix is implemented or no further action is required presently (won't fix or deferring), AE moves status to resolved and re-assigns it back to original filer to confirm the fix.
  - If original filer accepts and confirms the fix, case is closed.
  - If fix is not accepted, original poster re-assigns back to AE for further action.

### 2.1.2 Case Categories

- **Bug** – Issue found in design.
- **Enhancement** – Suggestion for design improvement, feature or process.
- **Documentation** – Bug in document or update in documentation is needed.
- **Question** – General design question. E.g. Interface protocol etc.

### 2.1.3 Priorities

- **Immediate**
  - Production stop. This is a showstopper item that needs immediate attention.
  - Must be assigned within 24 hrs. Workaround required within a day after assignment.
- **High**
  - This is not a show-stopper item but it's impacting/blocking you.
- **Medium**
  - Issue should be resolved in time to meet milestone.
  - Most bugs fall under this category. Should be default.
- **Low**
  - Least priority and does not currently gate you.
  - Should be reviewed at phase exits or project planning milestones.

### 2.1.4 Resolution Status

- **In progress**

- AE working towards a resolution.
  - Estimate to completion is provided
  - % progress is provided
- **Fixed**
  - Once fix is implemented, AE sets status to fixed and re-assigns to filer to confirm fix.
- **Won't Fix**
  - AE opts not to fix issue providing details and reassigns it back to filer.
- **Deferred**
  - Issue acknowledged but decision not to be fixed for the current revision. Remains assigned to AE.
  - Version to be deferred to should be provided if available. Defaults to next version.
- **Closed**
  - Once reporter accepts and confirms the fix. Ticket can be closed.
  - Only reporter can close ticked or project bug tracking admin.

2.1.5 Notifications

- Email notification are sent to reporter, AE, PM and admins whenever there's a change in status. Members of projects can add themselves to email notification list.
- Reminder emails on status will be sent to AE when close to due dates.
- Reminder emails will be sent to triage team for any unassigned ticket if it's close to expiry based on priority.

2.2 Tool

The tool of choice to be used is Redmine.

Advantages:

- Open source.
- Fully customizable to suit desired workflow.
- Can be used for project planning and milestone planning.
- Easy enough to use.
- Has hooks to link to various repositories. Sadly, currently no SOS support.
- Allows various plugins e.g. SLA

### 3 MILESTONES

Main project milestones such as CP0, CP1, RTL freeze etc, should also be clearly defined and tracked using Redmine.

Sub-tasks should be entered on each milestone and assigned to relevant owners who should regularly update on progress and %completion. Where a bug needs to be addressed before milestone exit, it should be linked to the milestone.

Example Milestones:

- CP0
- Sub tasks
  - Initial floor plan defined
  - PDK installed
  - Digital library installed.
  - Product Requirement document available.
- Future revision milestones.
  - An issue may be deferred to a future revision in order to preserve a date, if there isn't the time (or value) to add that feature into the current release.

## 4 SUMMARY

- Bug tracking/issue tracking aims to the way we record and manage issues in order to improve quality of our designs.
- Allows sharing of issues between project.
- Concise and streamlined states in order to make the process easy and encourage use.
- Should be used from the very beginning/conceptual stages of the project.
- It is not intended for finger pointing.
- It is certainly not a replacement of communication between team members!