

Design Analysis: Jira

Background

Key word: Jira; project management tool; web application

I am working in SAP Shanghai Labs as a developer in a scrum team. About three months ago, our team decided to use Jira for project management. (Before this, we used Excel).

However, I heard many negative comments about Jira from other colleagues, yet the fact that it is a prevalent project management tool, which raised my interests in exploring its usability issue. Since I myself am a daily user of Jira, and I could be sufficiently exposed to the user base and context right in office, design analysis can be much in-depth and relevant.

The interface I analysed is a special cloud version of Jira cooperated with SAP, which is partially different from its official site.

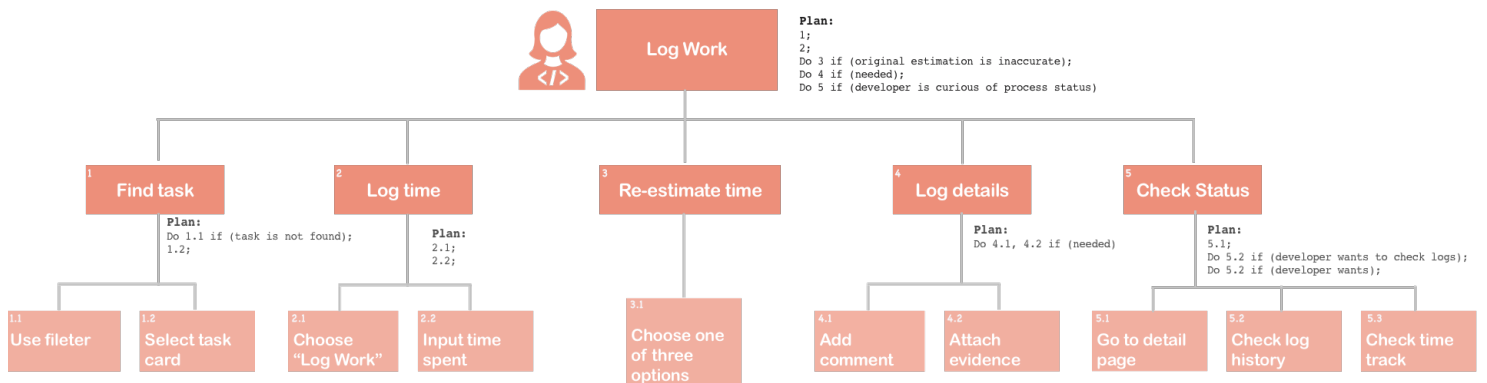
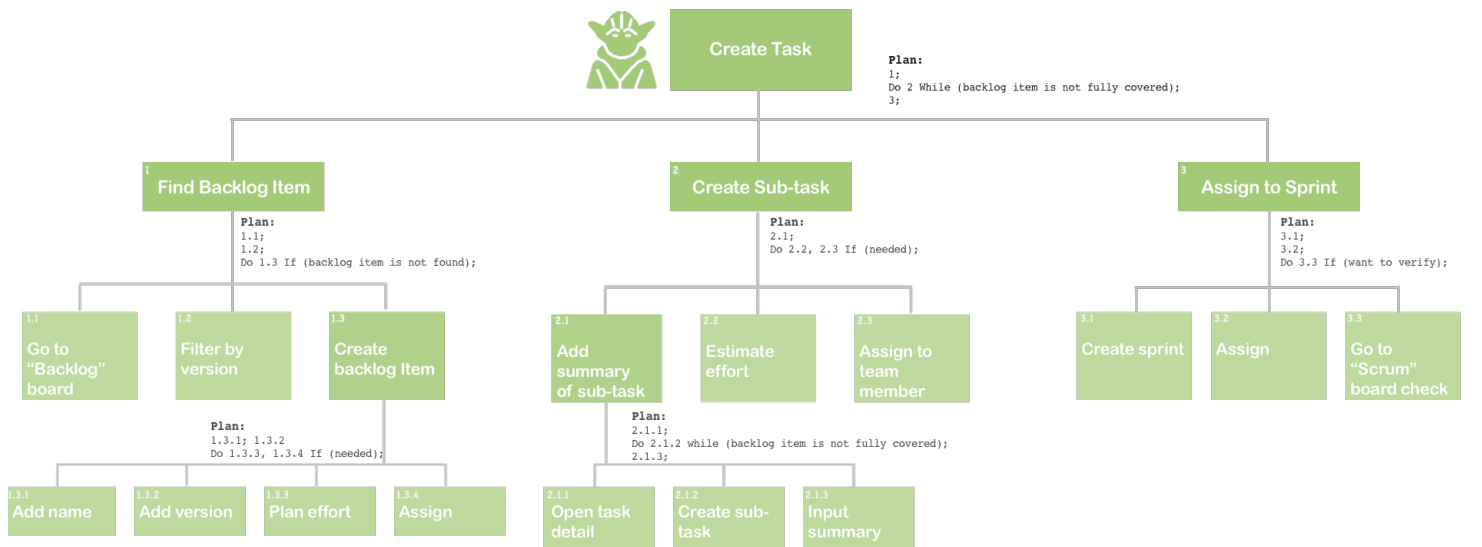
Procedure

1. First conducted [Task Analysis](#) to thoroughly understand system functions.
2. Concluded major user actions in interacting with Jira.
3. Communicated my understanding of Jira's usage with other users, via [Speed Interviewing](#).
4. Selected two most important tasks to focus on. (Log work & Create task)
5. Presented my diagram of [Hierarchical Task Analysis](#) to users in other teams for verification.
6. Performed [Heuristic Evaluation](#), alternated with Usability Testing; Used [Nielsen's Heuristics](#) as guideline, and supplemented with Donald Norman's design principles for usability in [The Design of Everyday Things](#).
7. Further proved Heuristic Evaluation results, by quantitative and qualitative information collected from Usability Testing.

Team members
logs their working time
into Jira system.

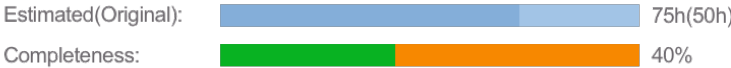


Scrum master
could track and adjust
tasks in Jira to ensure
project is on schedule.



Evaluations

Limitation-1: Sprint process is not visible

Heuristic Violated	Visibility of system status
Description	After developer updates the time he spent on a sub-task, the system doesn't show the process status of this sub-task or its parent task or the Sprint. User has to go to task detail page to check Time Tracking and History, and goes to "report" page see sprint burndown chart.
Severity	Major. It is a major issue, because it happens to every developer user in everyday work logging. Although the user could be aware of his success in logging, he also ought to track the degree of completeness. The invisibility causes negative consequences in time estimation and motivation effect, which may also get user lost with schedule.
Recommendation	Add process bar in scrum board, to show changes in individual task process and sprint process. Estimated(Original):  <i>Figure 1 An example of individual task process shown on scrum board</i>

Limitation-2: Header bar is confusing in navigating

Heuristic Violated	Consistency and standards Recognition rather than recall
Description	The semantic meaning of "Agile" and "Agile@SAP" is unobvious, and the content of those options are disorganized. In fact, "Agile@SAP" offers three different views to plan backlogs, maintaining high-level issues, such as epic. The dropdown list for "Agile" provides options – "Recent Boards" "Manage Boards" "Getting Start". "Recent Boards" is where the team plan tasks and log work. Besides, the content view has no indicator shows which header tab it links to.
Severity	Minor. Errors can happen easily due to the ambiguous text. It takes user's memory to choose target view correctly. However, role-based users don't switch between views often, and such errors can be fixed immediately.
Recommendation	Change the texts to "Boards" and "Hierarchy", and emphasize the tab of current view. In order to avoid individual bias, I performed Card Sorting for Jira's header bar. According to the result of card sorting, the navigation

	menu doesn't follow user's thinking. The result also suggests changes to a larger extent: move "settings" from navigation bar to page content.
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Limitation-3: Linkage to detail page of one task is hidden

Heuristic Violated	Recognition rather than recall Visibility
Description	When user wants to check log of one task, he has to first click the task card, find a hyperlink in an expended side view, then navigate to the detail page. The hyperlink is display as task code in dark blue plain text which is undiscoverable.
Severity	Major. Detail page is where user checks task progress and corresponding issues frequently. Observation & Interview showed that the link is indeed important but hidden. In the test, when I asked interviewees to find task log, only 4/14 users were able to find the hidden link. 8/14 users claimed they desire the information which was exclusively displayed on that page, but have no idea where to find it.
Recommendation	The entrance link to detail page, as a common function, could be displayed as an emphasized button – "Details", or triggered by double-clicking task card.

Limitation-4: "Log Work" action is undiscoverable

Heuristic Violated	Visibility
Description	As the "Log Work" action is displayed in dark blue plain text in side view, user is more likely to use another ineffective entrance which locates in a dropdown list to trigger log-work dialogue.
Severity	Major. "Log Work" is one of the most common task user performs on daily basis. Locating on existing entrances takes unnecessary time. In usability test, 9/14 users never recognized the button, while one another user used the button once, yet didn't continue using because of its undiscoverable.
Recommendation	Make this importation action button more obvious is the easiest way. To further simplify frequent process, log-work dialogue could be triggered by clicking one part of hovered task card.

Benefit-1: Scrum board matched user's mental model

Heuristic Favored	Match between system and the real world; Affordance
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Description	The “scrum board” page inherited the layout of physical scrum board. User could perceive operations, like moving task card from “To Do” column to “In Progress” by drag and drop.
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Benefit-2: Identification icons and tiles

Heuristic Favored	Aesthetic and minimalist design
Description	User could identify priority and item category (“story” or “task” or “sub-task”) from the displayed icons.

Heuristic Favored	Recognition rather than recall
Description	If user couldn’t remember the meaning, he could move the cursor on the icon and check its tile, which saved user’s memory load.

Benefit-3: Personalized display fields

Heuristic Favored	Flexibility and efficiency of use
Description	In task edit dialogue, individual user could configure to hide unwanted fields, which makes the view neat and focus.

Benefit-4: Scrum master is able to set filters

Heuristic Favored	Flexibility and efficiency of use
Description	There are default filters for issues such as “Only My Issues”. The scrum master, who has the administrative rights, could configure specialized filter for the team, in order to speed up task searching process.

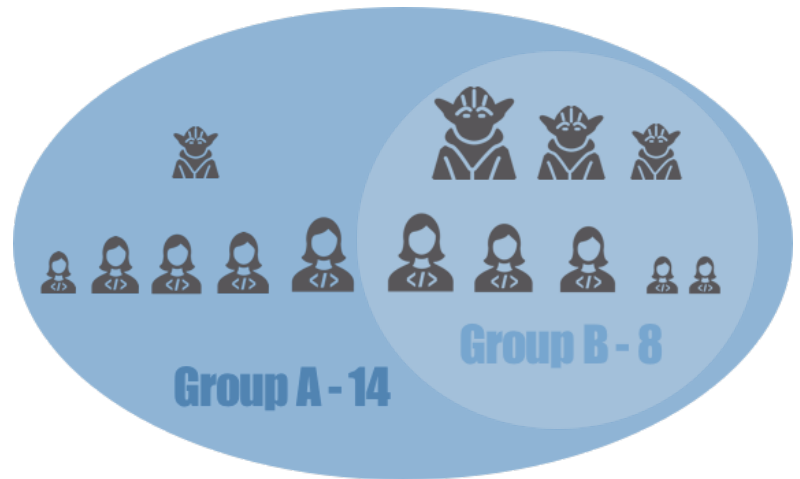
Usability Test

Card Sorting

I prepared cards with names of each item in navigation menu, invited 8 users to cluster content and label category. In case that user doesn’t perceive the function by merely reading text, I also printed screenshots to show what would happen after clicking the item, but I would only show to the user when he asks.

Interview & Observation

I interviewed 14 users from group A, observed 8 users from group B walking me through how they use Jira record their works.
(User's experience with Jira ranges from 0 to 3 years, which is illustrated by avatar size in graph)



Appendix 1 :

The screenshot shows the Jira Board SH interface. The top navigation bar includes 'SAP JIRA', 'Dashboards', 'Projects', 'Issues', 'Agile', 'Agile@SAP', and 'Create'. The main area displays a backlog of issues, with a 'Create Sprint' button highlighted. The right sidebar shows details for a selected issue, including status, component, labels, version, and people. Annotations highlight specific elements: 'Backlog' (1.1), 'Active sprints' (3.3), 'D_EWM 9.5' (1.2), 'Create Sprint' (3.1), and 'Select, drag and drop' (3.2).

Appendix 2:

The screenshot shows the Jira Board SH interface. The top navigation bar includes 'SAP JIRA', 'Dashboards', 'Projects', 'Issues', 'Agile', 'Agile@SAP', and 'Create'. The main area displays a backlog of issues, with a 'Performance Test on odata service' issue highlighted. The right sidebar shows details for a selected issue, including status, component, labels, version, and people. Annotations highlight specific elements: 'Only My Issues' (1.1), 'Performance Test on odata service' (1.2), 'EWM95' (5.1), and 'Log Work' (2.1).

Appendix 3:

The screenshot shows the SAP JIRA interface with two main windows. The background window is the 'Board SH' showing a list of issues. The foreground window is the 'Create Subtask : EWM95S014-331' dialog. A second 'Log Work' modal is open over the dialog.

Annotations in the 'Create Subtask' dialog:

- 2.1.1:** Points to the 'Issue Type' dropdown menu.
- 2.1.2:** Points to the 'Create Sub-Task' button in the 'Sub-Tasks' section of the background board.
- 2.1.3:** Points to the 'Summary' text input field.

Annotations in the 'Log Work' modal:

- 2.2:** Points to the 'Time Spent' input field.
- 3.1:** Points to the 'Use existing estimate of 3h' radio button option.
- 4.1:** Points to the 'Work Description' text area.
- 4.2:** Points to the 'Attach Files' button in the 'Attachments' section of the background board.

Appendix 5:

The screenshot shows the SAP JIRA issue details page for 'Further investigation' (EWM95S014-331). The issue is in 'IN PROGRESS' status.

Annotations:

- 5.2:** Points to the 'Time Tracking' section, which shows a bar chart for 'Estimated' (40h), 'Remaining' (35h), and 'Logged' (5h) time.
- 5.3:** Points to the 'History' tab in the 'Activity' section.

Activity History Table:

Field	Original Value	New Value
Version / Delivery	Sprint6 [142215]	

Appendix 6: (Original Jira)

SCRUM board

Sample Sprint 2

QUICK FILTERS: Only My Issues Recently Updated

To Do

In Progress

Done

SCRUM-10

IN PROGRESS

2 sub-tasks

As a developer, I can update story and task status with drag and drop (click the triangle at far left of this story to show sub-task:

When the last task is done, the story can be automatically closed >> Drag this task to "Done" too

SCRUM-12

Other Issues

5 issues

As a developer, I can update details on an item using the Detail View >> Click the "SCRUM-13" link at the top of this card to open the detail view

SCRUM-13

As a user, I can find important items on the board by using the customisable "Quick Filters" above >> Try clicking the "Only My Issues" Quick Filter...

SCRUM-14

As a scrum master, I can see the progress of a sprint via the Burndown Chart >> Click "Reports" to view the Burndown Chart

SCRUM-15

As a team, we can finish the sprint by clicking the cog icon next to the sprint name above the "To Do" column then selecting "Complete Sprint" >> Try...

SCRUM-16

Instructions for deleting this sample board and project are in the description for this issue >> Click the "SCRUM-17" link and read the description...

SCRUM-17

4 days remaining

Complete sprint

...

scrum / SCRUM-13

...

As a developer, I can update details on an item using the Detail View >> Click the "SCRUM-13" link at the top of this card to open the detail view

Details

Status: **TO DO** (View workflow)

Priority: Medium

Component/s: None

Labels: None

Affects Version/s: None

Fix Version/s: Version 2.0

Epic Link: None

People

Reporter: Puhe Liang [Administrator]

Assignee: Puhe Liang [Administrator]

Dates

Created: 1 week ago

Updated: 1 week ago