

Task Management

This section gives more information on the task management features of the website. Creating Units and top level Objectives is relatively easy compared to creating detailed viable tasks with specifications that have a real possibility of being completed in a satisfactory manner.

Managing Tasks thus forms an important core function of the website and therefore the task management system has to be designed with care and detail.

Short Summary

Here's the short summary of how the task system works. It's a simple process that most people are familiar with.

A team of people work on creating and editing a task. After task editing is complete, people who are interested in completing the task can bid on it. After the bidding stage, the task is awarded to the chosen bidder and the work is completed by the bidder. The work is then evaluated for quality of work and the task reward (if any) is awarded.

Details of the task system are mentioned below.

Task Information

A task can have certain attributes. The goal is to have a task defined well so all the important information is present. Here is a list of attributes for tasks. Required fields that must be filled out by the task creator are in **Bold** (there are only a few).

1. Basic Task Information
 - a. **Name of Task** (shown in website hyperlinks)
 - b. Summary (optional)
 - c. **Description** (longer text giving detail)
2. Task Skills: (to make it easy for people searching for tasks that require those skills). This data is derived from the same database (it will be described later as 'Job Skills') that task workers use to list their job skills. A task can have multiple job skills associated with it.
3. Action Items (what needs to be done, presented in a quantifiable way). In bullet form. These items will also be tracked during task completion.
4. Estimated Completion Time (hours to months. Although the ideal target of a task completion time is from hours to days. Any longer and there's a probability that the task could be broken up into multiple tasks)
5. Reward or compensation: Monetary or points.
6. Other attributes:
 - a. Task ID: Every task has a unique task ID in the system.
 - b. Unit ID: Task belongs to which unit?
 - c. Objective ID Task belongs to which objective?
 - d. Issue ID (explained below in Issue Reporting section; there can be multiple Issue ID's for same task)
 - e. Task Status Task status. Explained in a section below.
 - f. User ID of Task creator: Person who created the task
 - g. File Attachments (safe file types only such as doc, docx, pdf, txt, jpg, png, ppt, pptx, etc)

Details on the above fields for task information structure:

Name: Short (200 characters). This field is used when a task is linked from Units or Objectives or other places. In other words, the text of the link will be the task Name.

Summary (optional): 1000 characters

Description (longer text giving detail). No limit (database limit is fine, such as 64kb)

Task Skills: These are hyper-linked categories, derived from the [Job Skills](#) table. For example, a person can create a task about “working in a hair salon” and the skills required may be: Haircutting, Customer service, Chemical Hair treatment.

That is how the skills will be listed for that task, as 3 separate skills. The Skills database is talked about in detail later.

Action Items (optional)

Action items are items in list form. They break the task down into smaller pieces so the Task Worker knows what key points need to be worked on for the task to be completed. Action items help clarify the task further and make it easier for the Task Worker to see the main points of the task or get an overview of the task.

A Task editor just needs options to add, delete or edit an Action item.

When submitting a completed task, the task worker makes a checkmark next to each item so it shows they have completed that action item.

Estimated Completion Time. Hours to months (Task Creator selects a double digit number and also the unit of time for hours, days or months). Although the ideal target of a task completion time is from hours to days. Any longer and there's a probability that the task could be broken up into smaller tasks).

Reward or compensation: Monetary or points. Task creator can set the numerical amount and also select one of two choices (dropdowns) for the unit, which is: \$ or just 'points'.

Secondary attributes

Internal attributes (not shown to user but used by the software):

Task ID: A unique number for each task (auto-increment)

Unit ID: Task belongs to which unit?

Objective ID: Task belongs to which objective?

Issue ID: A task can be linked to multiple issues. Issue reporting is explained later in a section.

User ID of Task creator: This is the User ID of person who created the task. The task item will show the user's name and link to their profile (using their user ID). In a separate field, you can also store the username if you like (it will reduce database queries).

Task Status: Explained in a section below.

Attachments: The task editors can attach files (as many as needed. Or allow for 10). You can do this anyway but please don't show 10 empty slots (waste of space). It can just say "add attachment". People can add more attachments by clicking "add another attachment". File types should be all safe types, such as: doc, docx, pdf, jpg, bmp, png, xls, xlsx, etc.

Task Status

Tasks can be in any of these states:

Task Status (#)	Explanation
Editable (1)	Anyone can edit the task and improve it.
Waiting for Approval (2)	Task cannot be edited anymore. It is now waiting to be approved for bidding.
Open for Bidding (3)	People can bid on it now.
Bid Selection (4)	Bidding period has ended. Waiting to assign to selected user.
Assigned (5)	Task is assigned to user.
In Progress (6)	Work in progress by the person to whom the task was assigned.
Work Evaluation (7)	User submits the completed task for evaluation.
Completed (8)	Task has been completed.
Cancelled (9)	Task was cancelled at some point e.g. it was later seen that it was not a valid or viable task or it was abandoned for some reason.

Anyone on the site can browse to a Unit's Objectives and create a task for that Unit. When a task is created, it will be in 'Editable' state.

A Unit Admin can change the state of a task in any way. As mentioned before, all actions on the site are logged so this action is also logged.

Process of Task management:

This section explains in more detail what happens during the task management process from start to finish.

- **Task Creation:** A user goes to a Unit or Objective, and clicks "Create Task". They are shown the task creation page where they can fill out all the fields for a task. They click the Submit button and task is created. The system automatically assigns it to the Unit and Objective for which the task was created. If no objective is selected, the system assigns "Miscellaneous Tasks".
Forum thread created: At the time a task is created, its forum entry for discussion is also created automatically. This is a thread dedicated to any discussion about that task. That forum discussion is displayed under the task description. This discussion is also available in the 'Tasks' section of the forum. An example of displaying the same

forum content in two different page views can be seen [here](#) and [here](#). The Forum section of the website is discussed separately in this document.

- **Task Editing:** Next people start editing the task and if they want to, they can leave comments in the forum thread. All edits are logged in the task history. This is similar to what happens in a wiki. These items are recorded: User who made the edit, time of edit, edit summary, links to old and new version of the task.

When people are working on a task, the task status is displayed like this:

“Task Status: Editable”

If a user has edited that task in the past, they will see the following instead:

“Task Status: Editable (Submit for Approval)”

“Submit for Approval” is a link for that user. If they click on that link, it means they are done editing the task and think its ready for the next stage. If they are the only editor of the task so far, the task status will change to ‘Awaiting Approval’.

If there are more than one editors of the task, the situation is different. After a user clicks the status change, a seven day timer will start and they will see:

“Task Status: Editable (You changed this task status to “Awaiting Approval”. Waiting for 2 other editors to do the same)” [2 is an example]

The other editors will see:

“Task Status: Editable (1 task editor submitted this task for Approval). Time left for editing: 7 days.”

At the end of 7 days, the system changes the task status to Approval.

If all task editors change to the status to Approval, the status is updated.

The task cannot be edited any further when the status changes to Approval. Only the Unit Admin can edit the task or change its status. Again, these actions are logged.

- **Approval:** Editing is now closed. Other users on the site can review the task, check its various parameters and make sure they are acceptable. Parameters include the bid price, how clear the task description is and so on. Only after the task is approved, it is considered a valid task and people can bid on it and later, work on it.
- **Task Bidding:** The task has been approved and is now open for bidding. People who are interested in completing a task can ‘bid’ in such tasks. “Tasks for Bidding” is a link accessible on the website in various places (Unit Home page, Objectives page) When a user clicks on that link they are shown the list of tasks that are ready for bidding. The task Title is shown in a table and some other task information. When they click on the task’s name, the link takes them to the bidding page. They can enter a comment, enter the amount of points or money they want for completing the task. “Bid now” is the link which submits their bid.
Tasks are bid for 7 days. Tasks that receive no bids, stay open for bidding. When the first bid is received, a timer for 7 days starts. At the end of the 7 days, the task status changes to “Awaiting assignment”.
- **Awaiting Assignment:** The task is now waiting for other users to assign the task to one of the bidders. When the task is assigned the task status becomes ...
- **Assigned:** The user who got the task awarded, is asked to confirm that they accept the task. They have a “My Tasks” link which shows them information about the tasks they are involved in (for creating, editing, bidding, work in progress, completed etc). ‘Assigned’ shows them the tasks they have been assigned. When a task has been

assigned, they are shown a prompt that asks them if they accept the assignment. If they do, the status is changed to:

- **In Progress:** The task worker starts working on the task. After they are done, they can attach files and write a comment explaining the task completion and change the status to:
- **Completion Evaluation:** Now the site's users can evaluate the task and decide on the quality of work done and the timeliness and release any funds reserved for the task. If the user thinks the task is complete, they can change the status to 'Completed.
If they think it needs more work, they can change the status back to "assigned" for the same user. They will need to add a comment for why they made that status change.
- **Complete:** The task is completed.

Cancelled: The option to change a task from state X to "Cancelled" is available in the following situation. Task Worker to whom task was assigned, has the task "in progress" but can change the status to "cancelled". They will be asked to confirm the cancellation and will need to give a reason for this status change.

Rewards for Task creators

It is challenging to create well-defined viable tasks so it is important to reward those who work on creating and editing tasks. Some reward will be given before tasks are completed and a larger portion of reward will be given if a task is completed.

For these reasons it is in the best interests of the task creators to make tasks that can be completed. Rewards could be 10% of the task's completion award amount given separately. So if the task completer gets \$100, the task creator will get \$10. In case of multiple task editors, the task completer can decide how to split their reward depending on who contributed the most to the creation of the task.