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Mobile Communication App

***MoCap***



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# Management Summary

## What is MoCap

MoCap is a windows form based application serving the purpose of managing small projects and simplifying communication. Besides typical chat functions, like self-destructing messages etc., the goal is to create an app that allows you to chat with people, setup simple projects, where you invite people to contribute to, distribute tasks among people who joined your project and track expenses of your endeavor.

Tasks created can be assigned manually, automatically or ever through a poll, where project members vote for the owner of the task.

To track costs, you can attach bills and invoices to a task. To avoid overspending, a certain budget can be set for each task to be accomplished.

Another focus of the app is security, thus any communication is encrypted before it leaves the device, ensuring that secured content only is being transmitted and persisted eventually.

Finally, the integration to the operating system allows alerts and notifications popping up in time anytime.

MoCap is the next generation of communication, helping people to stay connected and get projects going without a massive planning overhead. Try it now and see how MoCap will help you ease your day.

## System Context



## License addendum

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# Requirements Engineering (Technology)

1. The application must run on Windows 8 or higher and may interact with the operating system in order to generate alarms and / or notifications.
2. The application must be maintainable through a single IDE, regardless of task, device type (application) or platform. This means that any work throughout the product lifecycle must be handled within one single application regardless on target device or its platform
3. Data must be made persistent outside of the application
4. Payload must be secured at the point of leaving the device until it’s on the device again
5. Programming language must be versatile with regards to platform
6. View component must be diverted from business logic and persistence (offline activity may represent an exception)
7. Logging must be implemented to ease troubleshooting of code during runtime
8. IDE to provide code documentation techniques

## Requirements Matrix

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Requirement |  |  |  |  |  |  |  |
| Technology |  |  |  |  |  |  |  |  |
|  | Runs on Win 8+ | Single Tool | Data Persistence | Secure Payload | Versatile PL | MVC Pattern | Tracing | Code Doc |
| Java JSF | x/o | o | x/o | x | x | x/o | x | x |
| Java | x/o | o | x/o | x | x | x | x | x |
| C# | x | x | x | x | x | x | x | x |
| WinForms | x | x | x | x | n/a | x | n/a | x |
| Asp.net | x | x | x/o | x | n/a | x | n/a | x |
| VS2015 | x | x | n/a | n/a | n/a | n/a | n/a | x |
| Visual Paradigm | x | o | n/a | n/a | n/a | n/a | n/a | o |
| NetBeans | x | o | n/a | n/a | n/a | n/a | n/a | x |

## Descision Matrix

# Solution Documentation

## Interaction Components

### Interfaces

### Chat

### Project

### Task

A task represents a piece of work one has to accomplish, typically until a date specified. It can consist out of many other subtasks which, as a whole, represent specific work.

As an Example:

The task “Go Shopping” consists, of subtasks  
1. “Get milk, honey and wheat”   
2. “Fill-up Gas”

The task then is assigned to a project. In case a task contains subtasks, they automatically belong to the same project. You can enrich the task with a description and estimate its duration and cost. Additionally, you can specify alarms to be created if the due date is in danger. Once the alarm is raised, the owner can reassign the tasks to someone else or react on it by initiating a chat.

#### Manually assigning a task

Once a task is created and assigned to a project you can delegate it to any member of the project group. Manually assigned tasks do not consider the hours a person has dedicated to the project. Hence you need to make sure the task is assigned to a person dedicating enough time to this project or have the person to dedicate more time.

#### Poll assigning a task

You can assign a task through the result of a poll you created. To do that you create a project poll, through which members vote for the person to complete the task. Remember, that this method of assigning a task does not consider the hours, the person that got assigned to the task, has dedicated to this project.

#### Auto assigning a task

When selecting to auto assign the task, the due date and a priority define which person gets assigned to the task. The priority is used to determine the importance compared to other tasks this person may has been assigned to. The system then tries to find a project member that contributes enough time towards this project and has enough capacity to complete the task on time. In other words, if a task will take 5 hours to complete and has to be completed within 2 days, a project member contributing 1 hour a day will not be assigned to this task.

When completing the task, the person is requested to enter the time and money (if at any) spent on the task. The project owner is then notified of the completion and the project balance is updated accordingly.

#### Use Cases

The following Use Cases were identified:

### Poll

A poll allows users in your project to vote for one or multiple pre-defined option(-s), based on your configuration. In some scenarios it might be useful to allow user specifying an individual option, besides the ones pre-defined. The vote can be limited to a specific time / date range and the users eligible can be specified individually.

Once the poll has ended, which happens either after the date / time range specified elapsed or when every eligible user has voted, the results are being sent to either all, a specific group or the creator only.

If the poll was to vote for a task owner, both the current task owner as well as the future owner are notified together with the users specified and the owner of the poll. The task is then taken off the current user and assigned to the new user.

#### Use Cases

The following Use Cases were identified:

### Reporting

### Accounting

#### Balance

#### Bills

## Backend Components

### Database Module

#### Programmability

##### Stored Procedures

##### Views

##### Triggers

## WebService

### Functions

### Bindings

## Security Components

## Logging Components

# Technical Specification

## Interaction Components

### Interfaces

#### IComponent (Interface)

#### Task (Class)

##### Class Diagram

