Wouter Swinkels, Adrián Pacera, Vladislav Stefanov, Tim van Kol, Iskren Zhechev

sprint 4 – sprint planning

# Sprint planning

## Part I: Realization of robust design, programming

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| Task | Identified subtasks | Task assignee | Due date |
| Revision of the current system | 1. Revision of the multiple state machines  2. Class diagrams (SOLID approach)  3. Revision of current scenarios to the new system approach | 1. Wouter, Tim  2. Wouter, Adrián  3. Tim | 2023-11-29 |
| Documentation for use case 2 (three lanes -> three directions) | 1. Requirements  2. Scenarios | 1. Iskren, Vladi  2. Iskren, Vladi | 2023-11-29 |
| Programming solution | 1. Classes  1.1 First node namespace (light)  1.2 Second node namespace (lane)  1.3 Third node namespace (msg)  1.4 Connecting the system  2. Algorithmics | 1.1 Vladi  1.2 Tim, Wouter  1.3 Iskren, Adrian  1.4 Adrian  2. Wouter | 2023-12-06 |

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| Task | Completion criteria |
| Revision of the current system | 1. The system will have been revised whenever the following has been completed, with the abiding feedback:  - Complete state machines, with correct state namings, correct triggers, correct messaging, correct functions (in states and for triggers).  - Completion that every individual group member is aware of the changes made from the design and is able to understand it.  - Completion of the class diagram, with the correct naming of classes, interfaces, namespaces, inner variables and functions, for use case 1.  - The use case scenarios, and their accompanying sequence diagrams, will have been rewritten to correctly depict the revised system functionality.  - The class diagram(s), sequence diagrams, communication protocol (in System Structure description) should all match the same characteristics, of which, messaging behaviorism consistency and consistency of programmatic flow (this can be tested by reflecting any scenario and follow it through to see all consistencies through all communication protocols and diagrams). |
| Documentation for use case 2 (three lanes -> three directions) | - For the second use case that will have been constructed, all individual scenarios will have been defined. There are several points to consider when these use cases are well defined:  1. Explicit scenarios have been defined for the use case, of which, they are qualitative in covering the scope of the use case’s usability.  2. The scenarios are not overly quantitative, in that they are not excessive in trying to cover redundant scenarios that would have been covered by any previous scenarios.  3. Proper user requirements have been constructed from the use case. These are not overly redundant in that some of multiple use cases’ coverage to the user is covered in all use cases. (i.e., crossing an intersection safely is only one user requirement).  4. The functional- and non-functional requirements that are defined from the new use case, telling what the system must be able to do (this also maps onto the communication protocol, and class management!). These requirements make sure that the system will be able to properly execute the desired behavior that is requested in the use case.  5. The second use case, that will have been defined properly, will not be implemented concretely in this phase; this will happen in the second phase of this sprint. Only the needed documentation will be written (basic use case explaintation, requirements and scenarios). |
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## Part II: Testing procedures and proof-of-concept realization

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| Task | Identified subtasks | Task assignee | Due date |
| Testing procedures of revised traffic light system | 1.1 Test plan for each use case  1.2 Test case for each use case scenario. | Tim | 2023-12-06 |
| Unit tests of application | 1. First node (light)  2. Second node (lane)  3. Third node (msg) | Wouter | 2023-12-13 |
| Testing procedures | 1. testing the use cases  2. bug fixing on test cases  3. final review. | Tim, Wouter, Adrian, Iskern, Vladi | 2023-12-20 |

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| Task | Completion criteria |
| Testing procedures of revised traffic light system |  |
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