**Software Requirements Specification**

<<Company Name>>

<< Team Member >>

<< Team Member >>

<< Team Member >>

<< Team Member >>

<< Team Member >>

**1.** **Project Overview**

**1.1 Vision**

<< Provide a brief (i.e. a few sentences) description of the project vision. The project’s vision should provide a very high-level view of the projects purpose, without discussing technical details or describing how this will be accomplished. >>

<< **Example:** The purpose of this project is to provide a near real-time visualization of military vehicle locations, in an easy-to-understand fashion, allowing the military to have a significant intelligence advantage. Information such as the communication connectivity between vehicles (to provide a visual representation of lines of communication) and tracking information (where a vehicle has been, and where it is projected to go) will provide commanders and other personnel the ability to more effectively allocate resources on the battlefield. When completed, this project will be integrated into the company’s SKYNET system. >>

**1.2 Overall Description**

<< Provide a more detailed, two to three paragraph description of the project. This description may include more technical details to describe the purpose of the project. >>

<< **Example:** This software will allow the user to view a global 3D representation of Mobile Ad-Hoc Networks (MANETs). The individual nodes on the MANET will be represented by 3D models based on their type. For example, aerial vehicles will be represented by a model of a plane or helicopter, and ground vehicles by a Humvee or similar 3D model. These 3D models will move along the globe as their positions are updated, and the models will correctly orientate to face the direction they are moving. The software also features a record / rewind feature, allowing users to view where the nodes had been previously.

The software will show the lines of communication between the nodes of the MANET, allowing the user to monitor the state of the network and the status of the critical nodes. Users will be able to click on each node to zoom in on it, as well as view more detailed information about that specific node. Users will also be able to freely rotate the field of view, allowing them to customize the way they view the network. >>

**2. Software Requirements**

**2.1 High-Level Requirements**

<< This section lists the high-level requirements for the project and information about which of these requirements the team has committed to completed (as opposed to those which the team will not commit to, or is targeting for completion, but cannot guarantee) and when those requirements were added to the project.

The **ID** column provides a high-level ID for each requirement. This is useful for generating low-level requirement IDs which can be easily associated with a particular high-level requirement. The **Added** column lists when the requirement was added to the project as it is possible that not all requirements will be elicited or available at the project’s onset. The **Description** column gives a description of the high-level requirement. The **Status** column indicates whether these high-level requirements are committed (i.e. will be completed by the team), targeted (i.e. will be completed if the team has time after all committed requirements are completed), or not committed (i.e. will not be completed by the team). >>

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Added** | **Description** | **Status** |
| 100 | Onset | Users may view 3D representations of nodes on a globe | **C** |
| 200 | Onset | Users may view the movement of nodes over time | **C** |
| 300 | Onset | Users may view available data about a node | **C** |
| 400 | Onset | Lines of communication display relationships between nodes | **C** |
| 500 | Onset | On-click zoom functionality available to users | **C** |
| 600 | Onset | Rewind/Fast Forward/Pause/Play allows movement of nodes to be easily visualized over time | **C** |
| 700 | Onset | User interface is elegant and easy to use | **C** |
| 800 | Onset | Add halo effect around nodes | **T** |
| 900 | Onset | User may filter out different types of nodes | **C** |
| 1000 | Onset | Line segment denoting previous locations of nodes | **C** |
| 1100 | Sprint 1 | Design 3D models | **T** |
| 1200 | Sprint 2 | 3D models face the correct direction when moving | **T** |
| 1300 | Sprint 3 | 3D models are painted | **NC** |

**2.2 Low-Level Requirements**

<< This section lists low-level requirements for each of the high-level requirements. Requirements in this section should use the formal descriptive language for requirement specification (i.e. must/shall language). Additionally, some thought should be given to how these requirements will be verified and a brief description of how the requirement will be tested should be provided.

The **ID** column specifies the ID for the low-level requirement. This can be used to refer to the requirement in other documentation (e.g. the MS Project Plan or Design Document) and to provide traceability. The **Description** column specifies the requirement formally. The **Verification** column provides information about how the requirement will be tested.

Remember that not all requirements are necessarily functional. Requirements can also specify requirements for security (e.g. who can and cannot use a system), globalization (e.g. descriptions and other strings will not be hard coded so that the software can be translated into other languages more easily), portability (e.g. developing an iPhone to be compatible with other smart phone platforms like Android or Windows Phone) accessibility (e.g. the program complying with ADA guidelines), availability (e.g. the system will be able to reboot in under 2 minutes in the event of failure.), etc. >>

|  |  |  |
| --- | --- | --- |
| **ID** | **Description** | **Verification** |
| 110 | Nodes shall be represented in three-dimensional space. |  |
| 120 | Users shall be able to manipulate the map to view nodes from different perspectives. | Usability test to determine if map can be manipulated in all three dimensions. |
| 130 | Node positional information shall conform to guidelines established in IEEE 702.34 guidelines. | Create test cases to verify that node positional data is stored in accordance with given standards. |
| 210 | Node information shall be updated at an interval of at least 10 minutes. |  |
| 220 | Users shall be able to determine if new node information has not been updated. | Provide indication that node information is fresh for last ten minutes. Alert user when node information is not fresh. |
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| . |  |  |
| 710 | Strings for field descriptions in the user interface shall not be hard coded. |  |
| 720 | Alternative language packs shall be selectable by the user. | Create stub test data to simulate alternative languages. |

**3. Constraints and Limitations**

<< This section provides a list of constraints and limitations for the project. This provides additional information about any limitations that may exist in the project (e.g. will not work in versions of Internet Explorer prior to 8.0) that are not covered by requirements, but provide important information related to the project.

The **Constraint** field lists the constraint or limitation for the project. The **ID** field lists the related requirement ID (if any) that provides additional context for the constraint. >>

|  |  |
| --- | --- |
| **Constraint** | **ID** |
| Team will not provide alternative language pack files. | 720 |
| Provided 3D models will not be of professional-grade quality. | 1100 |
| Team will use Visual Studio 2007 for development as 2010 is not available. |  |
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**4. Definitions and Acronyms**

<< This section provides a definition for terms or acronyms used in this document which may not be familiar for all users. >>

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| --- | --- |
| **Term** | **Definition** |
| MANET | Mobile Ad-Hoc Network |
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**5. Requirements Review**

<< This section contains any relevant signatures necessary to indicate that the requirements document has been reviewed and approved. >>

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| --- | --- | --- | --- |
| Name: | <Name> | Date: | <Date> |
| Signature: | | | |

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| Name: | <Name> | Date: | <Date> |
| Signature: | | | |

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