User Manual

for

PhysioMIST

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1 System Features

1.1 Import Existing Models

1.1.1 Description and Priority

The system will be able to import models that have been previously created in the JSim MML standard.
Priority = High.

1.1.2 Stimulus/Response Sequences

Stimulus: User locates a JSim MML file he or she wants to import.
Response: System converts the file to its preferred format for further use.

1.1.3 Functional Requirements

Import.check: Determine if the file is valid in the JSim MML format.
Import.parse: Read the contents of the file and parse according to the JSim MML standard.

1.2 Save Anatomical Information

1.2.1 Description and Priority

The system will save anatomical information associated with model components.
Priority = High.

1.2.2 Stimulus/Response Sequences

Stimulus: User requests to save anatomical information.
Response: Information is saved on user's hard drive.

1.2.3 Functional Requirements

Save.Request: Once the user has clicked the save button in the GUI, the system will save the anatomical information for the currently displayed model in a pre-determined location on the user's hard drive.

1.3 Integrate Model Components on a One-to-One Basis

1.3.1 Description and Priority

The system will provide a graphical interface for users to choose components from two models to integrate on a one-to-one basis.
Priority = High.

1.3.2 Stimulus/Response Sequences

Stimulus: User inputs two models to the system.
Response: System integrates the components of these models and displays the result.

1.3.3 Functional Requirements

OnetoOne.Integrate: The system will use the one-to-one algorithm to integrate the two models.

1.4 Query for Related Model Components

1.4.1 Description and Priority

The system will provide a graphical interface for users to search for related model components while integrating models, based on associated anatomical information.
Priority = High.

1.4.2 Stimulus/Response Sequences

Stimulus: User selects a model component with associated anatomical information and the type of query to perform.
Response: The system performs the query and displays the related model components.

1.4.3 Functional Requirements

Query.query: System selects related model components using the anatomical ontology. Query.results: System displays the selected results.

1.5 Integrate Model Components on a One-to-Many Basis

1.5.1 Description and Priority

The system will provide a graphical interface for users to choose components from two models to integrate on a one-to-many basis.
Priority = Low.

1.5.2 Stimulus/Response Sequences

Stimulus: User inputs two models to the system and specifies the manner in which components should be integrated.
Response: System integrates the components of these models as specified and displays the result.

1.5.3 Functional Requirements

Onetomany.Integrate: The system will use the one-to-many algorithm to integrate the models.

1.6 Integrate Model Components on a Many-to-One Basis

1.6.1 Description and Priority

The system will provide a graphical interface for users to choose components from two models to integrate on a many-to-one basis.
Priority = Low.

1.6.2 Stimulus/Response Sequences

Stimulus: User inputs two models to the system and specifies the manner in which components should be integrated.
Response: System integrates the components of these models as specified and displays the result.

1.6.3 Functional Requirements

ManytoOne.Integrate: The system will use the many-to-one algorithm to integrate the models.

1.7 Display Simulation Results

1.7.1 Description and Priority

The system will provide a robust representation of the information contained in simulation results.
Priority = Low.

1.7.2 Stimulus/Response Sequences

Stimulus: User specifies the simulation parameters for a model.
Response: Display the results of the simulation graphically and textually.

1.7.3 Functional Requirements

Display.graph: The system will graphically show the results of a simulation.
Display.text: The system will display the simulation results as text.