User’s Manual – Track Model

Team Name: Bits Please

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**Introduction**

The Track Model user interface displays a visual representation of the complete track system. Using graphical interface, we will be able to show the map of the tracks, the stations, and the trains. Using the user interface the user will have the ability to create and modify different components of the track as well as modify the variables associated with these components.

**Setting up the User Interface**

The Track Model User Interface(UI) displays the track, the switches, the signals, the stations, and the railway crossings. The user interface displays status indicators that change from green to red when a failure of any of the modes occur. When a status indicator detects a failure, it’s corresponding ‘fix’ button will become activated which will give the user the ability to correct the issue at hand. The ‘Download Track Info.’ button will allow the user to use the appropriate Excel file to create the track image in the UI. The track that is built will be made up by a series of blocks with information about speed limit, elevation, size, direction, and grade. Each of the individual blocks will also identify whether it is a branch, station, or railway crossing. The user will be able to look up specific block information by clicking on the ‘View Block’ Button and also be able to update the size of the block using this procedure.

* Broken Rail (Status Indicator): If the status indicator for a Broken Rail is activated, it will change from green to red. It will remain red until the track is fixed.
* Track Circuit Failure (Status Indicator): If the status indicator for a Track Circuit Failure is activated, it will change from green to red. It will remain red until problem is fixed
* Power Failure (Status Indicator): If the status indicator for a Power Failure is activated, it will change from green to red. It will remain red until the problem with the power running through the track is fixed.
* Fix Broken Rail (Button): The button will be enabled when the Broken Rail status indicator changes from green to red.
* Fix Track Circuit Failure (Button): The button will be enabled when the Track Circuit Failure status indicator changes from green to red.
* Fix Power Failure (Button): The button will be enabled when the Power Failure status indicator changes from green to red.
* Download Track Info. (Button): This will open a prompt asking the user to enter a filename. The file must be an excel file which will be used to draw the map in the display.
* View Block (Button): This will ask the user for a block id. Once the user enters a valid id, it will display the track information for the corresponding block as well as allow the user to input a new block size.