Multi-View Runner

user guide

version 1.0

ProModel®

VISUALIZE ANALYZE OPTIMIZE VAO

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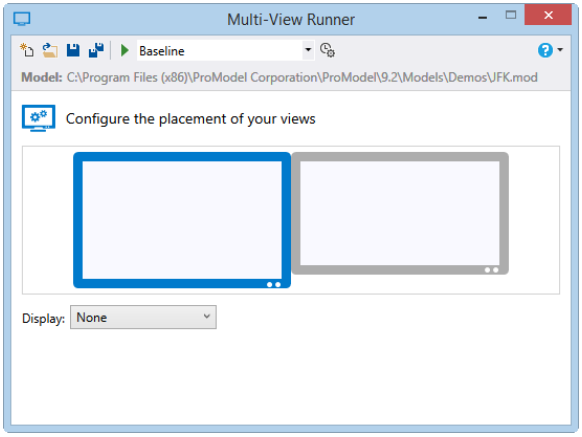
Introduction to Multi-View Runner

Once you have defined a process and built a model, you are ready to run simulations based on the constructed model. During construction of a model, you had the ability to define specific views of the model that allow you to define, then quickly and easily observe specific areas of the model layout. Selecting a view scrolls the layout window and adjusts the zoom so you see a specific region of the layout regardless of the size of the layout window. To help you view multiple sections of the model during your simulation, ProModel and MedModel come with Multi-View Runner, which is powerful and easy to use. The Multi-View Runner allows you to view simultaneously one, two, or four predefined views of your model during a simulation for each monitor connected to your computer system. It also allows you to determine the number of available monitors that you will use for displaying the available model views.

When you invoke Multi-View Runner from the modeling program, the **Multi-View Runner** dialog box appears. The dialog box contains three distinct sections from the top to the bottom of the dialog box: the toolbar with the name of the loaded model, the monitor selection controls, and the menus for selecting the configuration of the predefined model views as you would like them displayed in the available monitors.

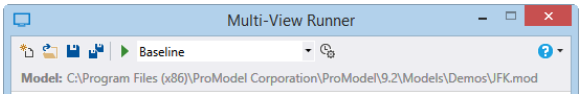


For details on the usage of the features of Multi-View Runner, refer to the relevant topic in the help documentation.

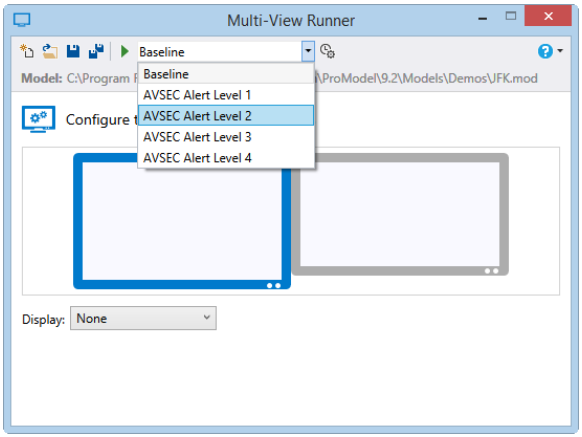
The Toolbar

The toolbar of the Multi-View Runner is near the top of the dialog box. It provides control over creating, changing, and saving different configurations for viewing the simulation. It contains six control buttons and two list boxes. From left to right, the buttons control (1) creation of a new configuration, (2) opening an existing configuration, (3) saving the configuration without changing its folder or name, (4) saving the configuration in a different folder or with a different file name, and (5) running the simulation. Immediately to the right of the buttons is the list for selection of the scenario that you want to simulate.

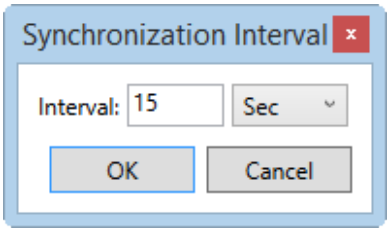
Immediately to the right of the scenario selection list is the button for the view synchronization interval. At the rightmost part of the toolbar is the information list, which can invoke the online help system for Multi-View Runner or provide information about the version of Multi-View Runner that you are using.



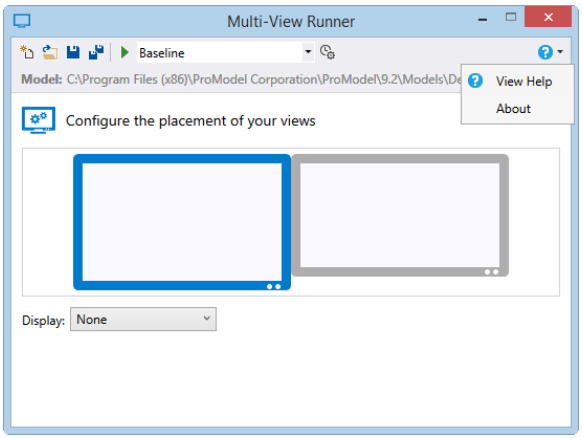
The green triangle (fifth button from the left in the toolbar) starts the simulation with a specific, pre-defined scenario and with a specific view configuration. The scenario selection list is immediately to the right of the green triangle. The scenario selection list displays the predefined simulation scenarios that have been constructed for the model. From this list, you can select a scenario that you want to run for the simulation.



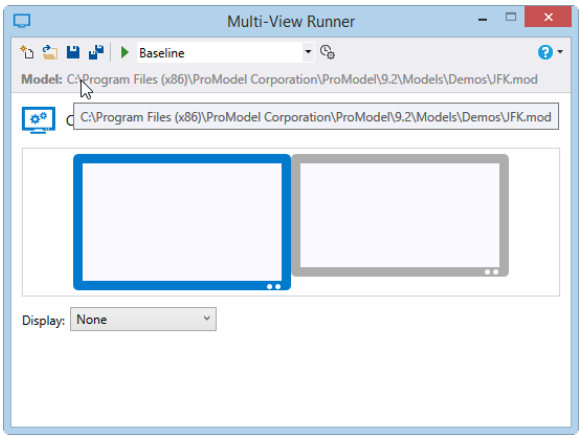
The button for selection of the view synchronization interval is immediately to the right of the scenario selection list. With the selection of an interval, you can control the time interval (in the time frame of the simulation itself) at which multiple views will be kept synchronized as the simulation runs. Note that the shorter the chosen interval, the slower the simulation will run in real time. When you click this button, the **Synchronization Interval** dialog box appears. From the dialog box you can select a time unit of measure from the unit list, and then type an integer value (from 1 through 999) for the desired interval.



At the far right of the toolbar is the information list. You can select **View Help** to activate the online help system for Multi-View Runner, or you can select **About** to obtain information about the version of Multi-View Runner that you are currently using.

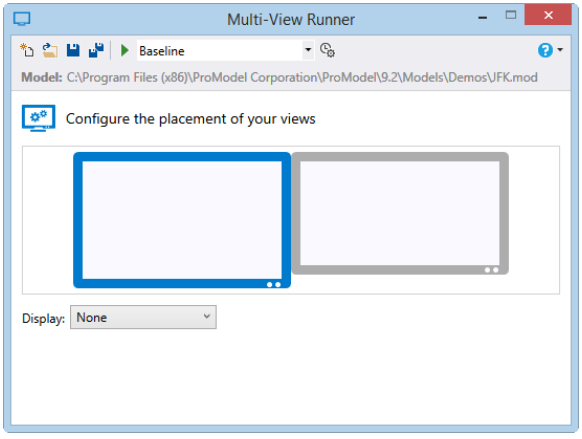


The full path of the model file is displayed just beneath the buttons and lists, and to the immediate right of **Model:**. The model name reflects currently loaded model, i.e., the model that you had loaded into the layout window of the modeling program. If the complete text for the full path of the model file is too long for the allotted space, in which case the leading portion of the full path may be truncated, you can hold the cursor over the partial text, and the full path will appear as a pop-up message. You can use this information to confirm that you are using the intended model for your simulation.



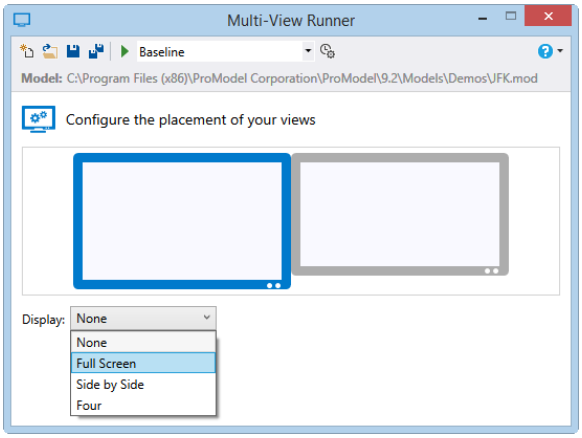
Monitor Selection

The monitor selection portion of the **Multi-View Runner** dialog box is just below the toolbar section. This section depicts the monitors connected to the computer system with their relative sizes and positions. The image below shows an example in which two monitors are connected to the system, and both can be configured to display simulations. The left monitor is the one currently selected for configuration of the model views. To select a monitor for configuration, click the corresponding screen icon.

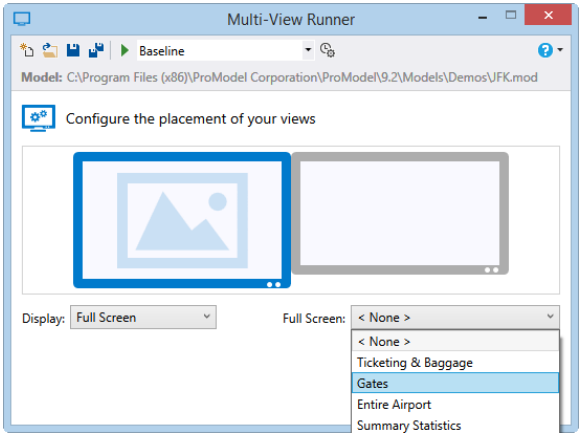


View Configurations

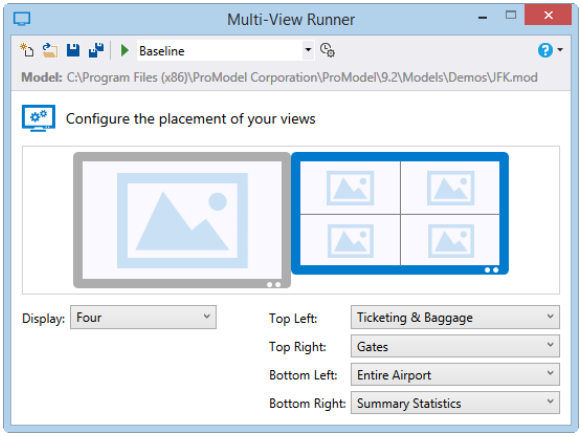
Near the bottom of the dialog box is the section for the set of menus that allow you to determine the configuration of the predefined model views as you would like them displayed in the available monitors. The number of menus that appear are determined initially by what you select from the **Display** list on the left half of this section.



When you make a selection from the **Display** list, a menu or set of menus will appear in the right half of this section. These menus are used to select a particular view to be displayed in a specific area of the selected monitor.



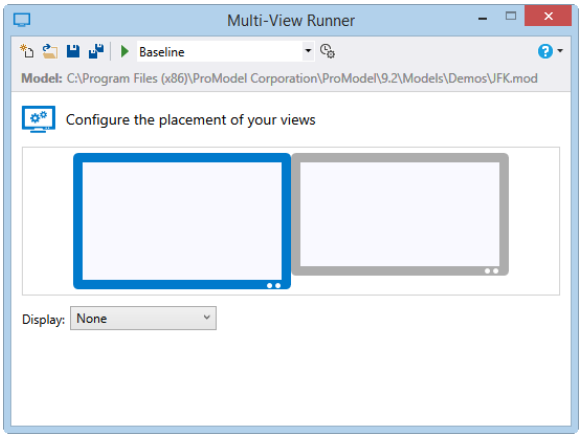
The image below shows the four views that have been assigned to the four quadrants of the right-hand monitor.


Multi-View Runner
Baseline
Model: C:\Program Files (x86)\ProModel Corporation\ProModel\9.2\Models\Demos\JFK.mod
Configure the placement of your views
Display: Four
Top Left: Ticketing & Baggage
Top Right: Gates
Bottom Left: Entire Airport
Bottom Right: Summary Statistics

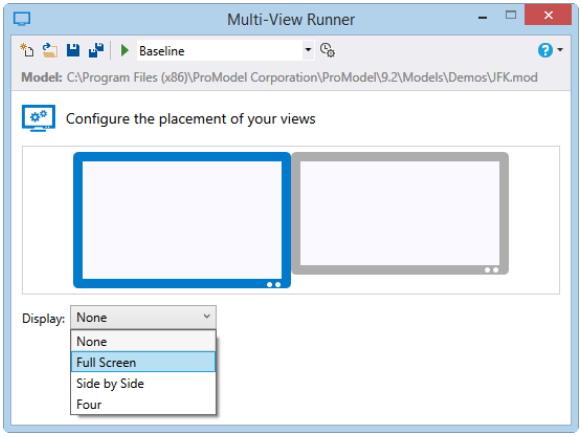
Configure the Views

The Multi-View Runner allows you to view simultaneously one, two, or four predefined views of your model during a simulation for each monitor connected to your computer system. It also allows you to determine the number of available monitors that you will use for displaying the available model views.

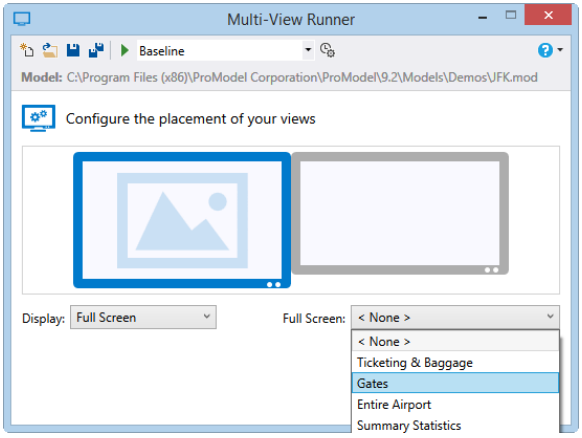
The monitor selection section of the **Multi-View Runner** dialog box is just below the toolbar section. This section displays a screen icon for each monitor that is configured for displaying information from your computer system. Note that the image below shows that a maximum of two monitors can be used to display the desired number of predefined model views with the current configuration of monitors. The left monitor is the one currently selected for configuration of the model views. To select a particular monitor for configuration of one or multiple views, click the corresponding screen icon.



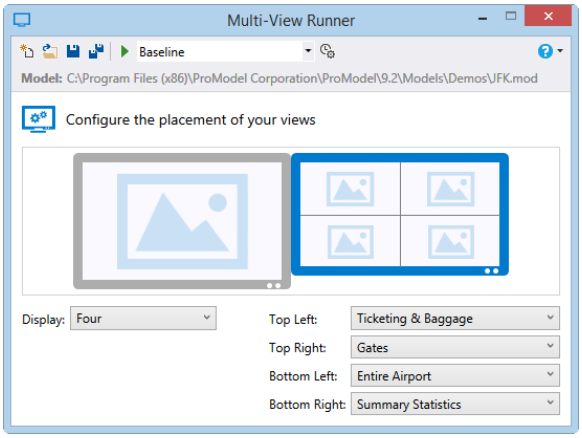
Below the monitor selection section is the section for the set of menus that allow you to determine the configuration of the predefined model views as you would like them displayed in the available monitors. The number and types of menus that appear are determined initially by what you select from the **Display** list, which is on the left half of this section. Click the **Display** list and select **Full Screen**, **Side by Side**, or **Four** depending on whether you want to fill the screen with one, two, or four of the model views, respectively.



When you make a selection from the **Display** list, a menu or set of menus will appear in the right half of this section. These menus are used to select a particular model view to be displayed in a specific area of the selected monitor. For instance, if you select **Full Screen** from the **Display** list, a single menu will appear and allow you to designate a model view that will occupy the entire area of the screen. If you select **Four** from the **Display** list, four menus will appear and allow you to designate a view for each of four quadrants that will occupy the entire area of the screen.



The image below shows the four views that have been assigned to the four quadrants of the right-hand monitor.

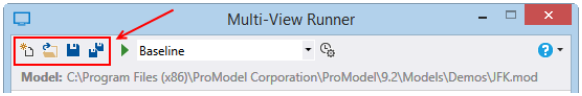


After you have completed the configuration of one monitors, or multiple monitors, you can save the configurations with the cluster of buttons on the left side of the toolbar. Note that you can change and save a current configuration, and you can change the current configuration and save it under a different name.

Saving View Configurations

The first four buttons on the left side of the toolbar enable you to create and save the view configurations for the model.

Note: View configurations are characteristics that are specific to the model that is currently loaded, and the configuration data is stored in a file with a file extension of *.pmvr* in the same folder as the *.mod* file by default.



To create a new configuration for the views, click the leftmost button. The Windows **Open** dialog box will appear so that you can provide a name for the model you want simulate with multiple views. After you have selected a model file, click **Open** on the dialog box.

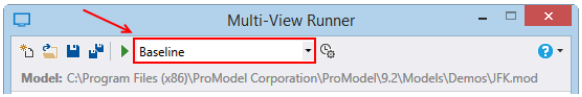
The next button to the right is used to retrieve a different, pre-existing view configuration. When you click this button, the Windows **Open** dialog box will appear so that you can navigate to, and select, a different configuration (i.e., a .pmvr file) that has been previously stored.

The next button to the right is used to save any changes you have made to the current configuration. The changes will be saved in the currently used configuration file.

The rightmost button in the group is used to save, under a different file name or folder, any changes you have made to the current configuration. When you click this button, the Windows **Save As** dialog box will appear so that you can type the name of a new file for the configuration.

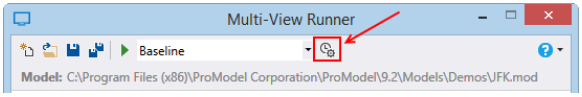
Running a Simulation

You can run the simulation of a model with particular view configuration, and with a selected scenario, from within the Multi-View Runner environment. To select a scenario for the simulation, click the scenario list near the middle of the toolbar, and select one of the available scenarios.

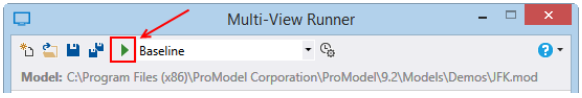


Next, select a view synchronization interval from the interval button, which is to the immediate right of the scenario list. With the selection of an interval, you can control the time interval (in the time frame of the simulation itself) at which multiple views will be kept synchronized with each other as the simulation runs. With a shorter interval, multiple views will be kept synchronized more frequently with each other as the simulation runs.

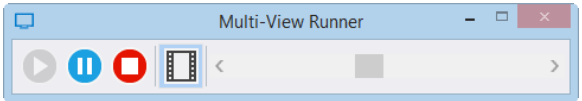
Note: The shorter the synchronization interval, the slower the simulation will run in real time. The longer the interval, the more asynchronous multiple views can get as the simulation progresses during the elapse of the interval.



After you have selected a scenario, synchronization interval, and view configuration, click the run button.

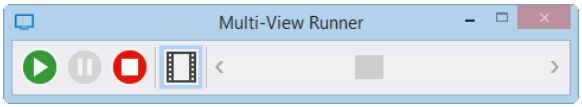


When the simulation starts, the selected view configurations will be displayed on the monitor, or monitors, according to the selected, defined view configuration. Additionally, the pop-up simulation control bar box will appear in the area, and on the monitor, where the Multi-View Runner dialog box was last positioned. The control bar can be used to pause, resume, stop, accelerate or decelerate the simulation. It can also be used to halt the animation while allowing the computational operations of the simulation to continue. Click the **Pause** button (two white bars within a blue dot) to temporarily halt the simulation and animation.

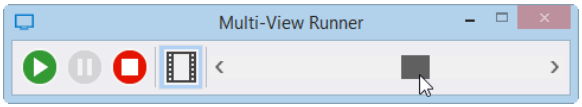


If the simulation has been paused, click the **Resume** button (a white triangle within a green dot) to resume the simulation and animation.
If you want to entirely stop the simulation and close the views in the monitors, click the **Stop** button (a white square within a red dot).
If you want the animation to halt, but allow the computations of the simulation to continue, click the **Toggle the Animation** button, which has the appearance of a movie film strip. To resume the animation, click the **Toggle the Animation** button again.

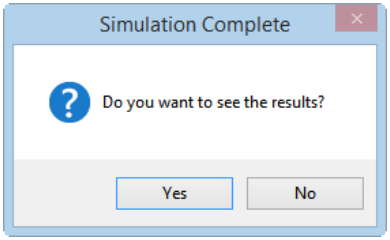
Note: The following is a known issue for Multi-View Runner, and it will be addressed in a future version. When you stop a simulation early within ProModel itself, the termination logic will not run; however, when you stop early using Mutli-View Runner, the termination logic will run. If you are doing any calculations in the termination logic that require values to have been set correctly, then you could get some run-time errors, such as dividing by a variable when its value still set to zero.



You can control the relative speed of the simulation with the slider control, which occupies the right half of the control bar. Use a click-and-drag motion to move the slider to the right to speed the simulation, and move the slider to the left to slow the simulation.



When the simulation has finished, or when you use the **Stop** button, the **Simulation Complete** dialog box appears to inquire whether you want to see the results of the simulation. Click **Yes** if you want to see the results immediately.



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