



## *WHAT'S NEW?*

*FLEXSIM 2017*

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# INTRODUCTION

This is an overview of the notable features found in FlexSim 2017, the latest version of FlexSim's flagship simulation modeling package. FlexSim 2017 reflects our commitment to regularly develop and improve our software, and this version includes useful improvements to scripting (performance and usability), graphical compatibility, and the Process Flow tool.

Anyone can download FlexSim 2017 at [www.flexsim.com](http://www.flexsim.com) and try it out under the free Express license. Users with current maintenance can upgrade their license through their FlexSim Account or within the FlexSim 2017 software.



# DOT SYNTAX

Dot Syntax is a significant (and highly beneficial) update to FlexScript. This new scripting syntax is streamlined, more intuitive, and adds important benefits to FlexSim users at all skill levels.

You'll want to have a basic understanding of how to interpret the new dot syntax expressions. FlexScript is used throughout the software, such as in property fields and picklist options. Over time, we think you'll come to appreciate this update because it reflects contemporary standards and best practices in scripting.

## Introduction

In FlexSim 2017, FlexScript is more object-oriented than previous versions. It's centered around a variety of entities—most commonly **item**, **token**, and “current.” These entities have two major components:

- **Properties**, or the data that controls aspects such as location, size, and color.
- **Methods**, or the commands that do something or change a property value (set speed, change location, etc.).

Additionally, in FlexSim we use **Labels** to add dynamic, user-defined custom data that can be changed frequently during a simulation run.

## How Does it Work?

The “dot” in the new syntax always means “access,” so it allows you to access those

properties and methods. You can include multiple property, method, or label actions in a single expression.

```
current.name.startsWith("Processor");
```

In this example, “current” is a reference to a 3D object we're currently working with. A dot signifies a property we're trying to access: the object's name. Another dot calls a method to check if that name starts with the string “Processor.”

## What are the Benefits?

The dot syntax update carries three important benefits:

- **Simulation speed increase.** Dot syntax expressions are executed directly as machine code and don't require additional interpretation. This can have a significant impact on the speed of a simulation run.
- **Intuitive and understandable.** Expressions are easier to read and follow a logical structure. Also, labels and other dynamic properties that do their work during a simulation run can be set and modified just as easily as static properties.
- **Better Autocomplete.** Thanks to the “dot” always accessing a property or method, FlexSim's Autocomplete feature can provide an immediate list of these options.

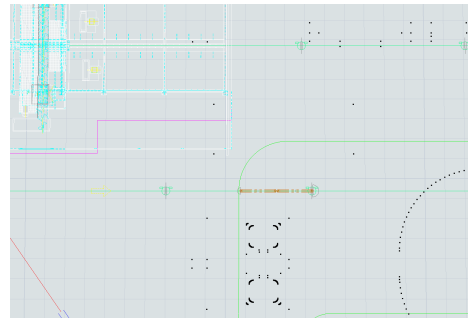


# VISUALS

## Snap to Drawing

This is a useful feature that requires experience with CAD applications and some pre-configuration of a CAD drawing. There is now an option for *Snap to Background* in the Background Drawing Wizard, available only to the DWG file format.

Once it's set up (and the *Snap to Background box* is checked in the View Settings), FlexSim objects will snap to the vertices in your CAD drawing. It takes a little extra effort in the CAD application to make useful vertices to snap to, but the payoff is much less time putting objects in the right place.



Mode or sacrificing visual effects like shadows and shaders.

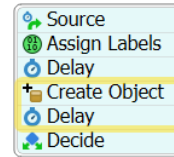
## Better VM Support

The actual feature is **improved OpenGL compatibility**, but the impact will be felt most by Apple users or anyone who wants to run FlexSim in a virtual machine. By removing deprecated function calls and adding support for the OpenGL Core Profile, FlexSim will be able to run in more virtual environments without requiring Compatibility



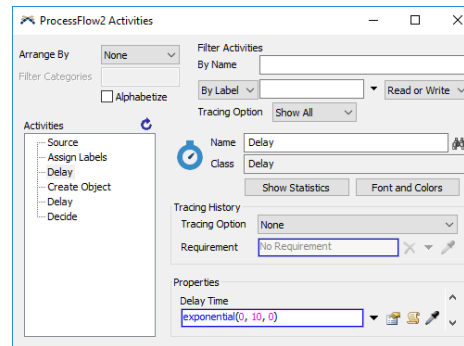
# PROCESS FLOW

## Better Activity Snapping



Process Flow activities can now snap *within* a block of activities, instead of being forced to attach to the beginning or end of a block. In addition, a block of two or more activities can snap within another block, making it much faster to re-arrange activities in the model.

## Improved Activities Window



The Process Flow Activities window (found in the Quick Properties by clicking “View Activities”) has received a few helpful improvements:

- You can now search for activities by label, which is tremendously useful in large models. You have the option to search for places where the label is being read, written to, or both.

- Once you find the activity you’re looking for, click the binoculars icon (🔍) to show that object in the Process Flow View. Again, this is useful in large or complex models.
- You can also rename activities directly from this window.

## Billboard Text

A new checkbox has been added for billboard text. When you select this option on a text box, the text will stay in the same place and at the same font size as you pan and zoom in the Process Flow View.

## Other

- The **Create Object** activity can now create an object *at* a location instead of just *in* a location.
- The **Schedule Source** activity has had the “Arrivals” table in its Quick Properties updated to quickly add labels and even see them in a pop-out window.

# OTHER UPDATES

## Dashboard Quick Library

The Dashboard now has the same “Quick Library” feature that we added to the 3D View and Process Flow in previous updates. Simply double-click in your Dashboard View to bring it up. It’s a convenient way to add charts and graphs to the model.

## Experiment Results to CSV

While FlexSim has been able to export Experimenter data and graphs to HTML for some time, results from the Experimenter can now be exported to a CSV file. You can find this option in the *Advanced* tab of the Experimenter, as an “End of Experiment” trigger option.

## Travel to Location

We’ve added a **Travel to X, Y, Z Location** picklist option to the OnResourceAvailable trigger. You can now specify a specific location for an operator to travel to, instead of only a home location.

