

SofaPython plugin

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Abstract

The goal of this plugin is to provide python integration into Sofa.

Therefore, it is possible to add new features in Sofa without modifying Sofa codebase. Moreover, python scripts are stored in the same place as the corresponding scene, for a cleaner integration of scene-specific code without polluting the rest of Sofa codebase.

This plugin provides a Sofa module available from python scripts, to interact with Sofa.

1 Requirements

SOFA Packages: The following must be enabled in sofa-local.prf

- Any special things that need to be enabled

SOFA Plugins: The following must be loaded in your SOFA instance

- Any plugins that must be loaded

2 Scene Settings

2.1 Required Settings

RequiredExampleSetting

A description of what this setting controls, and any special information the user should know about it. Required settings are those that need to be specified by the user in order for the component to function. If your component doesn't have any required settings, leave this section blank. The below "value type" is the type that is expected by the component. "Aliases" are other strings that can be specified in the scene file for this setting. These are defined in the code using "addAlias()".

Value Type - **string**

Aliases - requiredexamplesetting

2.2 Optional Settings

OptionalExampleSetting

A description of what this setting controls, and any special information the user should know about it. Optional settings can be specified by the user in order to change the default behaviour of the component. The below "Default Value" is the value given to the setting if the user doesn't specify anything.

Value Type - **bool**

Default Value - false

Aliases - optionalexample, optionalsetting

3 Scene Data

3.1 Required Data

RequiredExampleData

Data is usually a link to something in another component. Required data

must be specified in order for the component to function.

Value Type - **ExampleType**

3.2 Optional Data

OptionalExampleData

Data is usually a link to something in another component.

Value Type - **ExampleType**

Aliases - OptData

3.3 Output data

Output data is generally not defined in the component, but is linked to by other components.

3.4 Example File

path/to/an/example/file.scn

4 "PythonScriptController" component

5 Sofa python API

5.1 The "Sofa" module

5.2 Module methods

5.3 Types hierarchy

5.4 Data members: the most important thing in Sofa Python API

6 Sofa "PythonScriptController" component

6.1 Component data

6.2 Python script entry points