MotionDesk

Project and Experiment Management

For MotionDesk 4.8

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About This Document

Contents

This document introduces you to project and experiment management in MotionDesk.

Symbols

dSPACE user documentation uses the following symbols:

Symbol	Description
▲ DANGER	Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
▲ WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
▲ CAUTION	Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a hazard that, if not avoided, could result in property damage.
Note	Indicates important information that you should take into account to avoid malfunctions.
Tip	Indicates tips that can make your work easier.
?	Indicates a link that refers to a definition in the glossary, which you can find at the end of the document unless stated otherwise.
	Precedes the document title in a link that refers to another document.

Naming conventions

dSPACE user documentation uses the following naming conventions:

%name% Names enclosed in percent signs refer to environment variables for file and path names.

< > Angle brackets contain wildcard characters or placeholders for variable file and path names, etc.

Special folders

Common Program Data folder A standard folder for application-specific configuration data that is used by all users.

%PROGRAMDATA%\dSPACE\<InstallationGUID>\<ProductName>

%PROGRAMDATA%\dSPACE\<ProductName>\<VersionNumber>

Documents folder A standard folder for user-specific documents.

%USERPROFILE%\Documents\dSPACE\<ProductName>\
<VersionNumber>

Accessing dSPACE Help and PDF Files

After you install and decrypt dSPACE software, the documentation for the installed products is available in dSPACE Help and as PDF files.

dSPACE Help (local) You can open your local installation of dSPACE Help:

- On its home page via Windows Start Menu
- On specific content using context-sensitive help via F1

dSPACE Help (Web) You can access the Web version of dSPACE Help at www.dspace.com/go/help.

To access the Web version, you must have a mydSPACE account.

PDF files You can access PDF files via the \square icon in dSPACE Help. The PDF opens on the first page.

Basics and Instructions

Where to go from here

Information in this section

Basics of Projects and Experiments	
Creating and Opening Projects and Experiments	

Basics of Projects and Experiments

Introduction

An experiment is the basis for carrying out a specific visualization task. A project manages different experiments belonging together. The representation of a project in MotionDesk's Project Manager reflects the hierarchical structure of projects.

Where to go from here

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Migrating from MotionDesk 2.2.1 and Lower Starting with MotionDesk 3.0, COLLADA objects are used to build a scene. If you have used your own 3-D objects in previous versions of MotionDesk, you must convert them to COLLADA format. Otherwise you can skip the migration of the library.	10

Projects and Experiments

Introduction

In MotionDesk, an experiment is the basis for a visualization task and a project is a container for experiments. You can handle experiments and projects with MotionDesk's Project Manager.

Experiment as the basis for a visualization task

An experiment is the basis for carrying out a specific visualization task. An experiment allows you to manage all the documents related to the task, such as

- Scene for visualizing variables
- Motion Data MDF file for replaying an animation offline

Project as the container for experiments

A project manages different experiments belonging together, such as the different tasks for visualizing a specific car variant. It holds the experiments related to these tasks and items relevant for the entire project.

Handling projects with the Project Manager

To handle projects and experiments, MotionDesk provides the Project Manager. The Project Manager gives you easy and intuitive access to all the experiments

and project-global items of a project. The illustration below shows the Project Manager with a project and the items managed by the project.

To handle projects, the Project Manager provides a context menu with commands for copying, renaming, adding and removing items. The commands for handling individual items depend on the type of item.

Project root directories for grouping projects

Each MotionDesk project is related to a project root directory. This is a folder on your file system to which MotionDesk saves all project-relevant data, such as the experiments and documents of a project. Several projects can use the same project root directory.

Default project root directory MotionDesk will use the Documents folder as the default project root directory unless you specify a different one. MotionDesk saves all projects to the project root directory.

Specifying further project root directories You can specify further project root directories in addition to the default project root directory. This allows you to specify different destination directories for your projects, and to group projects.

Related topics

Basics

Creating and Opening Projects and Experiments.....

12

Project Structure and File Storage

Introduction

In MotionDesk, projects and experiments are structured hierarchically.

Hierarchical project structure

The structure displayed in MotionDesk's Project Manager reflects the hierarchical project structure. The hierarchy helps you to organize visualization tasks.

A project contains:

Experiments A project contains one or more experiments. Only one experiment can be active at a time. An experiment contains the scene containing information on all the objects in the 3-D world and the motion data.



Active items

Items that are written in bold or marked by a checkmark are active.

Symbol	Description
Experiment_001	Active experiment

Filing according to the project structure

MotionDesk creates a folder structure for each project on your file system. The root of the folder structure is the project root directory. The project structure defines where MotionDesk stores the documents belonging to a project.

Backup and export

You can back up projects and export experiments.

- Backing up a project allows you to save and transfer the whole content of a project in one ZIP file. Refer to Backup Project + Experiment on page 24.
- Exporting an experiment allows you to save and transfer the content of an experiment in one DSA (dSPACE archive) file. Refer to Export Experiment on page 27.

Related topics

Basics

Projects and Experiments.

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Migrating from MotionDesk 2.2.1 and Lower

Introduction

Starting with MotionDesk 3.0, COLLADA objects are used to build a scene. This makes 3-D objects more realistic than in previous releases. If you have used your own 3-D objects in previous versions of MotionDesk, you must convert them to COLLADA format. Otherwise you can skip the migration of the library.

Migration

Basics Since MotionDesk 3.0, MotionDesk comes with a 3-D Library in COLLADA (COLLAborative Design Activity) format. COLLADA is an XML-based open interchange format for exchanging data between 3-D programs.

Note

MotionDesk supports COLLADA files of the 1.4 specification.

Requirements on graphical system Note that you need a more advanced graphics board to display advanced 3-D objects properly. For further information, refer to Additional Requirements for 3-D Online Animation via MotionDesk (Installing dSPACE Software (1)).

Filing system With the current version of MotionDesk, all the files of one project are stored in one project folder. This simplifies the exchange of project files.

Scene files Scenes are stored in an <Experiment>.xml file. The <Experiment>.xml files are stored in an experiment folder in the file system. You can use these experiment files as templates for scene creation.

Note

When you have migrated a scene from the VRML format to the COLLADA format, you cannot use the migrated scene in previous MotionDesk versions.

Migrating 3-D custom objects

If you want to use 3-D custom objects in VRML2 format which you used in MotionDesk 2.2.1 or earlier, you have to convert the VRML2 files into COLLADA format files. You can convert the files in the Import Objects Dialog of the Library Manager Tool the first time you run MotionDesk. You can also convert the files at any time, by using the Library Manager.

Migrating from MotionDesk version 2.2.1 and earlier

The current MotionDesk version cannot read MotionDesk experiments in the MDX file format (used in MotionDesk 2.1.6 and earlier) or scenes stored in the ESD format (used in MotionDesk 2.2.1 and earlier). It is therefore not possible to migrate from MotionDesk projects and experiments of these versions.

If you want to use older projects and experiments, you must migrate them using MotionDesk 3.0 up to and including MotionDesk 3.6 and then open them in the current MotionDesk version.

Creating and Opening Projects and Experiments

Introduction	You create and open projects and experiments to structure your visualization
	tasks for a simulation.
Where to go from here	Information in this section
	How to Specify a Project Root Directory
	Root directories allows you to group MotionDesk projects on the file system.
	How to Create a Project and Experiment
	How to Open a Project and Experiment
	How to Activate an Experiment

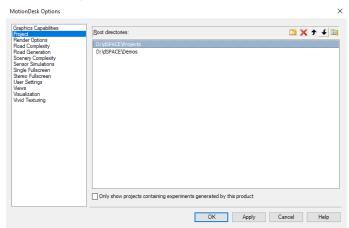
How to Specify a Project Root Directory

Objective	Root directories allows you to group MotionDesk projects on the file system.
Grouping projects in root folders	Each MotionDesk project is related to a project root directory. This is a physical directory on your file system. MotionDesk creates a folder structure beneath the project root directory and stores all the files of a project to it. Specifying different project root directories therefore allows you to group MotionDesk projects on your file system.
Default project root directory	MotionDesk uses the Documents folder as default root directory unless you specify a new project root directory.

Method

To specify a project root directory

1 On the File ribbon, click General Properties to open the MotionDesk Options dialog.



2 On the Project page of the MotionDesk Options dialog, click [™], then click [™].

The Browse for Folder dialog opens.

- 3 In the dialog, select the new project root directory and click OK. The MotionDesk Options dialog displays the new entry. The new project root directory now is at the top of the list. Whenever you need to specify a project root directory, the entry at the top of this list is preselected.
- **4** If you want to change the order, select an entry in the list and click **→** to move it to the top of the list.
- 5 To modify a project root directory, double-click it on the list and edit it.
- **6** Click **OK** to confirm your setting.

Result

You specified a new project root directory.

Related topics

How to Create a Project and Experiment

Objective

You create a project and an experiment to work with MotionDesk scene visualizations and animations in the 3-D View.

You can create multiple experiments in a project to group together similar MotionDesk experiments. For example you can group the different experiments to visualize a specific car variant. Each experiment allows you to manage all the files and data related to the scene visualization and animation.

- To create a new project and new experiment, refer to Part 1 on page 14.
- To create a new experiment to an existing project, refer to Part 2 on page 15.

Preconditions

To define a new project, the following preconditions apply:

- At least one project root directory must be specified. For instructions, refer to How to Specify a Project Root Directory on page 12.
- No other project must be open.

Part 1

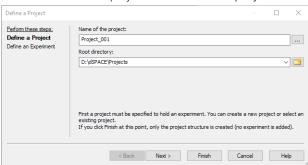
To create a project and experiment

1 On the File ribbon, click New - Project + Experiment.



MotionDesk opens the Define a Project dialog.

2 Edit the name of the project in Name of the project.

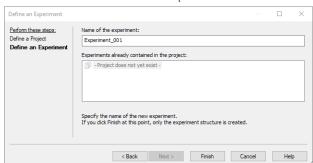


- 3 Select the Root directory from the list to store the project in.

 The list contains the folders added in the MotionDesk Options Project dialog. If you want to specify a new project root directory, click .

 If you click Finish, MotionDesk creates the project without an experiment. You can create an experiment later.
- 4 Click Next >.

MotionDesk creates a project and opens the Define an Experiment dialog to define an experiment for the new project.



Edit the name in Name of the experiment.

5 Click Finish to create the new project and experiment.
MotionDesk displays the project structure and an empty 3-D View.

Result

You created a new project and a new experiment.

Part 2

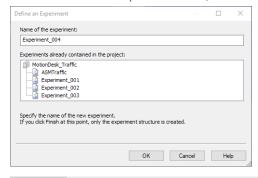
To create a new experiment in a project

- 1 On the File ribbon, click Open Project + Experiment and select an existing project and experiment to open. For more information, refer to How to Open a Project and Experiment on page 16.
- 2 On the File ribbon, click New Experiment.



MotionDesk opens the Define an Experiment dialog.

3 In the Name of the experiment field, enter the experiment name.



Note

If the project contains existing experiments, they are shown in the list.

4 Click Finish to create the new experiment and add it to the project. MotionDesk displays the project structure and an empty in the 3-D View for the new experiment.

Result	You created a new experiment for an existing project.
Related topics	HowTos
	How to Open a Project and Experiment
	References
	Project Wizard34

How to Open a Project and Experiment

Objective

You must open a project and an experiment to work with MotionDesk scene visualizations and animations in the 3-D View.

Overview

On the File - Open menu there are the following options to open and manage projects.

- Project + Experiment: Open an existing project and experiment stored in a root folder specified in the MotionDesk Options - Project. Refer to Part 1 on page 17.
- Project + Experiment from Backup: Open an existing project and experiment from a ZIP file in a folder location on the PC or network. Refer to Part 2 on page 17.
- Import Experiment: Import an experiment that is stored in a folder on the PC or network in DSA format.

Tip

In the Manage Projects, you can delete projects.

Click on a project or on multiple projects by pressing Ctrl or Shift and then click Delete.

MotionDesk deletes project associated files only. The folder might remain if it contains unrelated files. You must manually delete the project to create a new project with the same name.

You can also open a recently used project and experiment that are displayed in File - Recently Used. For information, refer to Recent Projects and Experiments.

Note

You can open and work with the demo projects in MotionDesk that are provided with the installation.

The demos are installed in the

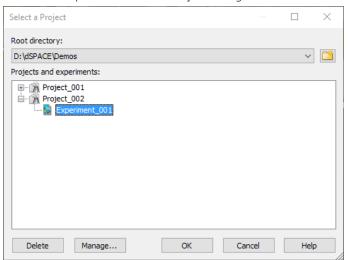
 $< MotionDesk_InstallationPath > \backslash Demos \backslash MotionDesk \ folder.$

For an overview of the MotionDesk demos provided with the installation, refer to Working with the MotionDesk Demos (MotionDesk Basics 🚇).

Part 1

To open a project and experiment

1 On the File ribbon, click Open – Project + Experiment. MotionDesk opens the Select a Project dialog.



- **2** From the Root directory list, select the project root directory containing the project and experiment you want to open, or click to define a new one.
- **3** In the Projects and experiments list, select the experiment you want to open.
- **4** Click OK.

 MotionDesk displays the project structure and the 3-D View.

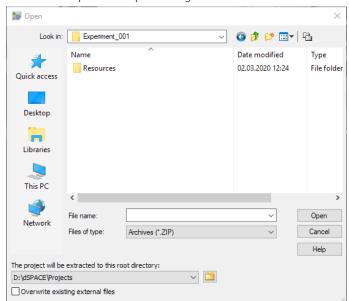
Result

You opened a project from a root folder.

Part 2

To open a project and experiment from backup

1 On the File ribbon, click Open – Project + Experiment from Backup.



MotionDesk opens the Open dialog.

- 2 In the Look in field, select a folder that contains the ZIP file of an existing backed up project and experiment.
- 3 Select the folder to store the project and experiment in The project will be exported to this root directory folder. You can select and existing root folder or click (iii) to define a new one.
- 4 Click Open. MotionDesk closes the current project and displays the project structure and the 3-D View of the most recently activated experiment in the project.

Result

You opened a project and experiment from a backup. The most recent experiment in the project is activated.

Related topics

HowTos



How to Activate an Experiment

Objective	A MotionDesk project usually contains several experiments, each representing a visualization and animation task. You can work with only one experiment at a time. This is the <i>active</i> experiment.
	All the other experiments of the project are inactive. To work with another experiment in the project, you must first activate it.
Preconditions	A project must be open.
Viethod	To activate an experiment
	1 In the Project Manager, right-click the inactive experiment you want to activate.
	2 From the context menu, select Activate.
	MotionDesk activates the selected experiment and displays the scene in the 3-D View.
Result	You activated an experiment.
Related topics	HowTos
	How to Open a Project and Experiment16
	References

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Commands

Where to go from here

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Explore Folder
Export Experiment
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Manage Projects. 28 To delete projects.
New Project + Experiment/New Experiment
Open (Backstage View)
Open Project + Experiment
Open Project + Experiment from Backup
Project Manager
Project Wizard
Recent Projects and Experiments
Remove (from Project)

Rename (Project / Experiment)	38
Save As (Backstage View) To provide access to commands that allow you to save a project under a new name, for example.	39
Save Project + Experiment / Save To save the loaded project and the active experiment.	39
Save Project As/Save As To save a project or an experiment under a new name.	40

Activate Experiment

Access	This command is available only for inactive experiments. You can access it via:		
	Ribbon	None	
	Context menu of	Project Manager – experiments	
	Shortcut key	None	
	Icon	None	
Purpose	To activate an experim	nent.	
Description	Within a MotionDesk the other experiments	project, only one experiment can be active at a time. All s are inactive. To work with an experiment, it must be	
	active.		
Related topics	HowTos		
	How to Activate an Expe	eriment	

Backup Project + Experiment

Access

This command is available only if a project is open. You can access it via:

Ribbon Fi
Context menu of Pi

Shortcut key

lcon

File - Save As

Project Manager – project

None



Purpose

To save either the loaded project and all experiments or the project and just the active experiment as a ZIP archive.

Result

Opens a standard Save As dialog that allows you to zip the loaded project. See Save As Dialog on page 44.

Description

ZIP archives contain only files that are stored within the project tree. The files are archived with relative paths. They can thus be extracted anywhere. To load a project, either it should be located below a defined root directory, or a suitable root directory should be specified in the General Properties. If a ZIP archive contains a file from a different file system, the absolute path is stored.

If the scene of the experiment contains 3-D object of the custom object library, they are stored in the ZIP archive including their path information. When you restore the ZIP archive, MotionDesk restores the 3-D objects at the path as included in the ZIP archive.

Related topics

HowTos

How to Open a Project and Experiment...

. 16

Clear Recent Projects + Experiments List

Access

You can access this command via:

Ribbon	None
	Item in the Recent Projects + Experiments listContext menu of item on Start page.

	Shortcut key Icon	None None
Purpose	To clear the list of recentl	y opened projects and experiments.
Result		d projects/experiments, which is displayed when you ects and Experiments, is cleared.
Related topics	References	
	Recent Projects and Experim	ents36

Close Project + Experiment / Close

Access	You can access this command via:		
	Ribbon	File – Close Project	
	Context menu of	Project Manager – project	
	Shortcut key	None	
	Icon	None	
Durnoso	To close the currently	loaded project and all experiments belonging to it	
Purpose	To close the currently	loaded project and all experiments belonging to it.	

Create Shortcut

Access	You can access this comm	nand via:
	Ribbon	None
	Context menu of	Project Manager – experiment

	Shortcut key Icon	None None
Purpose	To create a desktop	shortcut to an experiment.
Result	A shortcut to the ex	speriment is created on your desktop.
Description	you to open Motion	sktop shortcut for each MotionDesk experiment. This allows iDesk and quickly load a specific experiment. e closed if you want to open an experiment via desktop
Related topics	HowTos How to Start and Shu	rt Down MotionDesk (MotionDesk Basics ♀)

Explore Folder

Access	You can access this command via:		
	Ribbon	None	
	Context menu of	Project Manager – items	
	Shortcut key	None	
	Icon		
Purpose	To open the folder of the	he selected item in the File Explorer.	
Result	A file explorer window	opens showing the folder of the selected item.	

Export Experiment

Access

You can access this command via:

Ribbon File – Save As

Context menu of Project Manager – active experiment

Shortcut key None



Purpose

To export an experiment as a dSPACE archive (DSA) file.

Result

MotionDesk opens the **Save As Dialog** on page 44 to save the selected experiment and all the files belonging to it as one unit in a dSPACE archive file. The archive's file name extension is DSA.

Related topics

References

lcon

Icon

Import Experiment

Access

You can access this command via:

Ribbon File – Open

Context menu of Project Manager – project

Shortcut key None



Purpose

To import an experiment saved as a dSPACE archive.

Result

A standard Open dialog is displayed to import the selected experiment. It is extracted below the selected project path. The imported files are added to the project. The imported experiment is not activated.

Manage Projects

Access You can access this command via: Ribbon Context menu of Shortcut key Icon File – Open None None

Purpose To delete projects.

Result Opens the Manage Projects dialog, which lets you select a project to delete.

Manage Projects dialog

Root directory Lets you select the project root directory.

Projects and experiments Lets you browse in the list of projects and experiments available in the selected project root directory. The currently active project is not listed.

The context menu of a project provides the Delete command to delete the selected project(s) from the file system.

Manage Opens the MotionDesk Options dialog with the Project page to specify further project root directories.

Delete Deletes the selected project(s) from the file system. Multiple selection is possible by pressing **Ctrl** or **Shift** when clicking a project. MotionDesk only deletes those files that are associated with the project. Other files located in the folders of the deleted project are left untouched. This may result in folders remaining on your hard-disk. As a consequence, MotionDesk will refuse to create

a new project with the name of the deleted project because the folder name is already in use.

Related topics

HowTos

New Project + Experiment/New Experiment

Access

You can access this command via:

Ribbon

Context menu of

Project Manager – project
Project Manager

Shortcut key

None

Icon

Others

Start page

Purpose

To define a new project or a new experiment.

Description

No project is currently open In this case, MotionDesk opens the Define a Project dialog. You have to define a new project or open an existing one before you can define a new experiment.

A project is currently open In this case, MotionDesk opens the Define an Experiment dialog. This lets you define a new experiment within the open project.

Define a Project dialog

To define a new MotionDesk project.

Name of the project Enter a new project name in the edit field, or select an existing project via the Browse button. The name you enter must not contain a point or dot as the first or last character. By default, the project is

named 'Project_nnn', where 'nnn' stands for a number that will be increased if the name already exists as a file or folder name in the project root directory.

Root directory Select a project root directory.

Opens the Project Page of the MotionDesk Options dialog. You can specify further project root directories on this page.

Next > Opens the next dialog. This button is disabled as long as the Name of the project edit field is empty or invalid.

Finish Lets you finish project creation without having to define an experiment. This button is disabled as long as the Name of the project edit field is empty or invalid.

Cancel Closes the dialog without saving any of your settings.

Define an Experiment dialog

To define a new experiment within the current project.

Name of the experiment Enter the desired experiment name. The name you enter must not contain a dot or whitespace as the first or last character. By default, the experiment is named 'Experiment_nnn', where 'nnn' stands for a number that will be increased if the name already exists as file name in the directory of the project.

Experiments already contained in the project If your project already contains experiments, they are displayed here (no changes possible).

< **Back** Opens the previous dialog. This button is disabled if a project is currently loaded.

Next > Opens the next dialog. This button is disabled or invalid as long as the Name of the experiment edit field is empty or invalid.

Finish Lets you finish experiment creation without having to add a platform/device to the experiment. This button is disabled or invalid as long as the Name of the experiment edit field is empty or invalid.

Cancel Closes the dialog without saving any of your settings.

Related topics

HowTos

Open (Backstage View)

Access You can access this command via: Ribbon Context menu of Shortcut key None Icon None Purpose To provide access to commands that allow you to open a project, for example.

Description

You have access to commands such as:

- Open Project + Experiment on page 31
- Open Project + Experiment from Backup on page 33
- Import Experiment on page 27
- Manage Projects on page 28

Related topics

HowTos

Open Project + Experiment

Access

You can access this command via:

Ribbon

Context menu of

Project Manager

Shortcut key

Ctrl+Shift+0

Ctrl+0

Icon

Others

Start page

Purpose

To open an experiment and the project it belongs to.

Result

Opens the Select an Experiment dialog that allows you to select an existing experiment to be opened.

Tip

The eight experiments opened last are available from the File – Recent Projects + Experiments submenu.

Description

If another experiment is already open, and the project it belongs to is closed. Then the experiment you have selected opens and is activated. If you are opening projects or experiments created in MotionDesk version 2.2 or earlier, MotionDesk migrates the project into the new format.

Select an Experiment dialog

To select an experiment to be opened.

Tip

If you want to get an overview of the project structure, the fastest way is to select a project instead of an experiment. You can activate an experiment later on.

Root directory Lets you select the project root directory.

Opens the Project Page of the MotionDesk Options dialog. On this page you can specify further project root directories.

Projects and experiments Lets you browse in the list of projects and experiments available in the selected project root directory.

Delete Deletes the selected project(s) from the file system. Multiple selection is possible by pressing **Ctr1** or **Shift** when clicking a project. MotionDesk cannot delete files that are used by other applications. This may result in folders remaining on your hard disk. As a consequence, MotionDesk will refuse to create a new project with the name of the deleted project because the folder name is already in use.

OK Opens the selected experiment and the project it belongs to. This button is disabled as long as no experiment is selected in the Projects and experiments list.

Cancel Stops the experiment from being loaded.

Open Project + Experiment from Backup

Access	You can access this co	mmand via:	
	Ribbon	File – Open	
	Context menu of	Project Manager	
	Shortcut key	None	
	Icon		

Purpose	To open a project and experiment(s) from a backup file.		
Result	Opens a dialog that lets you load a project and experiment(s) from a backup file		
Open dialog	Look in Lets you specify the directory where the backup file to be opened is stored.		
	File name Lets you specify the name of the backup file.		
	Files of type Lets you specify the file type of the backup file.		
	The project will be extracted in this root directory Lets you specify the root directory in which the project and experiment(s) are extracted. The project will be loaded from this root directory.		
	Overwrite existing external files Allows MotionDesk to overwrite files outside the project without a confirmation prompt.		
Related topics	HowTos		
	How to Open a Project and Experiment		

Project Manager

Access

You can access this command via:

Ribbon View – Controlbar – Switch Controlbars
Context menu of None
Shortcut key Ctrl+Alt+2
Icon



Purpose

To show or hide the Project Manager.

Description

Project Manager A software component represented by a controlbar. It provides access to projects and experiments and all the files they contain.

Management of a MotionDesk project Within the Project Manager, you can manage the items belonging to the currently open project. Depending on the selected item, the Project Manager provides a context menu, which allows you to carry out tasks.

Item type and status The Project Manager displays each item together with a symbol giving information on the item type and status:

Symbol	Meaning
g)	Project (only one project can be loaded at a time)
	Folder with files belonging to the project or experiment
	Active and inactive experiments

Project Wizard

Purpose	To define a new project or experiment.
Access	MotionDesk's Project Wizard consists of a sequence of 3 dialogs. You access the wizard by the following commands (depending on whether a project is currently open):
	 New Project + Experiment

- ... -
- New Experiment

Description

You get only the wizard dialogs relevant to the command that you selected. The following description shows the commands, and the relevant dialogs in the order in which they appear.

For details on the dialogs, refer to

- Define a project dialog on page 35
- Define an Experiment dialog on page 35
- Configure Experiment dialog on page 36

Note

Do not use Asian characters, diacritic marks (such as \ddot{o} or \acute{o}), and special characters (such as &:<>'") in the file path. MotionDesk does not support these characters.

Define a project dialog

To define a new MotionDesk project.

Name of the project Enter a new project name in the edit field, or select an existing project via the Browse button. The name you enter must not contain a point or dot as the first or last character. By default, the project is named 'Project_nnn', where 'nnn' stands for a number that will be increased if the name already exists as a file or folder name in the project root directory.

Root directory Select a project root directory.

Opens the Project Page of the MotionDesk Options dialog. You can specify further project root directories on this page.

Next > Opens the next dialog. This button is disabled as long as the Name of the project edit field is empty or invalid.

Finish Lets you finish project creation without having to define an experiment. This button is disabled as long as the Name of the project edit field is empty or invalid.

Cancel Closes the dialog without saving any of your settings.

Define an Experiment dialog

To define a new experiment within the current project.

Name of the experiment Enter the desired experiment name. The name you enter must not contain a dot or whitespace as the first or last character. By default, the experiment is named 'Experiment_nnn', where 'nnn' stands for a number that will be increased if the name already exists as file name in the directory of the project.

Experiments already contained in the project If your project already contains experiments, they are displayed here (no changes possible).

< **Back** Opens the previous dialog. This button is disabled if a project is currently loaded.

Next > Opens the next dialog. This button is disabled or invalid as long as the Name of the experiment edit field is empty or invalid.

Finish Lets you finish experiment creation. This button is disabled or invalid as long as the Name of the experiment edit field is empty or invalid.

Configure Experiment dialog

To select a scene and to create default observer for an experiment.

Select Scene Config Lets you select a scene for the experiment. You can select an XML file that contains the description of the scene from another project. When a scene is selected, the movable objects in it are listed in the dialog.

Create default observers Indicates whether default observer are created. If the option is selected, select a movable object from the list. The default observers are attached to this object.

Related topics

HowTos

References

Recent Projects and Experiments

Access

You can access this command via:

Ribbon	File – Recently Used
Context menu of	None
Shortcut key	None
Icon	None
Others	Start page

Purpose

To open one of the most recent experiments that were open in MotionDesk.

Description

If another experiment is already open, this experiment and the project it belongs to are closed. Then the experiment you selected is opened and activated.

Recent Projects and Experiments

List of experiments Lets you select one of the most recent experiments that were opened in MotionDesk.

Open (Available from the context menu of list items) To open the selected experiment. You can also simply open an experiment by left-clicking it in the list.

Clear Recent Projects + Experiments List (Available from the context menu of list items) To clear the list of recently opened projects and experiments.

Remove from List (Available from the context menu of list items) To remove the selected experiment from the list of recently opened projects and experiments.

Size of recent experiments list Lets you specify the maximum number of list entries. You can specify a value in the range 4 ... 100.

Reset Sort Direction (Available from the context menu of the column header of the list of experiments) You can click the column headers to sort the experiments in ascending or descending order according to a column. To remove this sorting you can reset the sort direction to its default, which sorting based on the time the experiments were last opened, starting with the most recently opened experiment.

Visible Columns - Path/Opened/Modified/Version (Available from the context menu of the column header of the list of experiments) Lets you specify whether to display:

- The path to the experiment folder
- The point in time when the experiment was opened last
- The point in time when the experiment was modified last

Related topics

HowTos

Remove (from Project)

Access

You can access this command via:

Ribbon	None
Context menu of	Project Manager – inactive experiments
Shortcut key	Delete
Icon	None

Purpose

To remove an item from the currently loaded project.

Description

The item is removed irretrievably from the project.

Tip

You cannot remove a whole project this way. You can delete a whole project via the context menu of the Select an Experiment dialog when you open a project.

Rename (Project / Experiment)

Access	You can access this command via:		
	Ribbon	None	
	Context menu of	Project Manager – projectProject Manager – experiment	
	Shortcut key	None	
	Icon	None	
Purpose	To rename the selected project or experiment.		
Description	If you select a project or an active experiment, MotionDesk closes it, before it is renamed. Afterwards, it is reloaded.		
Result	The Rename Project / Experiment dialog opens that lets you rename the selected project or experiment. The name you enter must not contain any of the following characters: * ? < > : / \ ".		
Rename Project / Experiment dialog	To specify another name for the selected project or experiment. Enter a new name for Lets you enter another project or experiment name. The experiment name must be unique for each project and must not cause conflicts with existing folders.		

Save As (Backstage View)

Access You can access this command via:

Ribbon	File
Context menu of	None
Shortcut key	None
Icon	None

Purpose

To provide access to commands that allow you to save a project under a new name, for example.

Description

You have access to commands such as:

- Save Project As/Save As on page 40
- Backup Project + Experiment on page 24
- Export Experiment on page 27

Save Project + Experiment / Save

Access

This command is available only if a project is open. You can access it via:

Ribbon	File – Save Project
Context menu of	Project Manager – projectProject Manager – active experiment
Shortcut key	Ctrl+Shift+S Ctrl+S
Icon	El .

Purpose

To save the loaded project and the active experiment.

Related topics

References

Save Project As/Save As

Access You can access this command via: Ribbon Context menu of Project Manager – project Project Manager – experiment Shortcut key Icon In the state of the sta

Purpose	To save a project or an experiment under a new name.
Description	If you save a project or an active experiment, MotionDesk reloads it, then saves it under a new name.
Result	A Save As dialog opens for you to save the selected project or experiment under a new name. The experiment name must be unique within the project.

Save Project/Experiment As dialog

To specify another name for the selected project or experiment.

Enter a new name for Lets you enter another project or experiment name. The name must be unique within the project and must not cause conflicts with existing folders.

Note

Do not use Asian characters, diacritic marks (such as \ddot{o} or \acute{o}), and special characters (such as &:<>'") in the file path. MotionDesk does not support these characters.

Dialogs and Pages

Where to go from here

Information in this section

Manage Projects / Select an Experiment Dialog To delete projects.	.41
Project Options Page	.42
Save As Dialog To specify the data to be exported.	.44

Manage Projects / Select an Experiment Dialog

Access

- The Manage Projects dialog opens when Manage Projects is invoked.
- The Select an Experiment opens when Open Project + Experiment command is invoked.

Manage Projects dialog

To delete projects or manage the version control of projects.

Root directory Lets you select the project root directory. Click to select a new folder.

Projects and experiments Lets you browse in the list of projects and experiments available in the selected project root directory. The currently active project is not listed.

The context menu of a project provides the Delete command to delete the selected project(s) from the file system.

Delete Deletes the selected project(s) from the file system. Multiple selection is possible by pressing **Ctrl** or **Shift** when clicking a project. MotionDesk only deletes those files that are associated with the project. Other files located in the folders of the deleted project are left untouched. This may result in folders remaining on your hard-disk. As a consequence, MotionDesk will refuse to create a new project with the name of the deleted project because the folder name is already in use.

Manage Lets you opens the MotionDesk Properties dialog with the Project page to specify further project root directories.

Select an Experiment dialog

To select an experiment to be opened.

Tip

If you want to get an overview of the project structure, the fastest way is to select a project instead of an experiment. You can activate an experiment later on.

Root directory Lets you select the project root directory. Click !!! to select a new folder.

Projects and experiments Lets you browse in the list of projects and experiments available in the selected project root directory.

Delete Deletes the selected project(s) from the file system. Multiple selection is possible by pressing **Ctr1** or **Shift** when clicking a project. MotionDesk cannot delete files that are used by other applications. This may result in folders remaining on your hard disk. As a consequence, MotionDesk will refuse to create a new project with the name of the deleted project because the folder name is already in use.

Manage Lets you open the Project page of the MotionDesk Options dialog. On this page you can specify further project root directories.

OK Opens the selected experiment and the project it belongs to. This button is disabled as long as no experiment is selected in the Projects and experiments list.

Cancel Stops the experiment from being loaded.

Related topics

References

Manage Projects2	8
Open Project + Experiment	1

Project Options Page

Access

This page is part of the MotionDesk Options dialog.

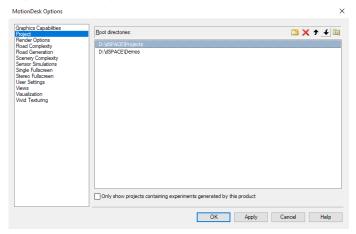
You can also access it via the Manage Projects dialog.

Purpose

To specify project root directories.

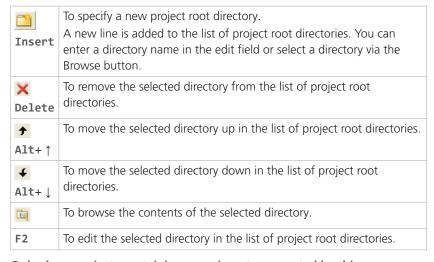
Description

To define and work with projects and experiments in MotionDesk, at least one project root directory must be specified.



Dialog settings

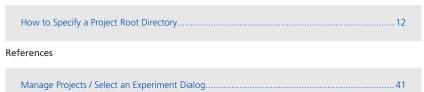
Root directories Lets you specify one or more project root directories.



Only show projects containing experiments generated by this product Activates a filter when you browse for projects/experiments via Open Project + Experiment.

Related topics

HowTos



MotionDesk Options (MotionDesk Basics ♀)	
Open Project + Experiment	1

Save As Dialog

Access	This dialog opens when one of the following commands is invoked: Export Experiment
	■ Backup Project + Experiment
Purpose	To specify the data to export, back up or save.
Description	The dialog is a standard Save As dialog. Depending on the purpose, it might have additional options.
Additional options	Advanced Lets you select items to be included in the export. You can exclude memory-intensive or obsolete items from being exported.
	Note If you exclude items from being exported, MotionDesk does not check the rest of the experiment for consistency. You have to ensure experiment consistency yourself.
	Backup only the active experiment Lets you specify that only the currently active experiment will be backed up.
Related topics	References
	Backup Project + Experiment

Automation

Where to go from here

Information in this section

Information in other sections

Introduction to the MotionDesk Automation Interface (MotionDesk Automation (M))

Introduces the MotionDesk automation interface and the required user experience.

Features of MotionDesk Automation Interface (MotionDesk Automation (M))

Describes the features of the MotionDesk automation interface.

Overview of the Object Model (MotionDesk Automation (III)

Shows you the object dependencies, object attributes and methods in the MotionDesk object model at a glance.

Example of Automating MotionDesk with a Python Script (MotionDesk Automation (1911))

Code examples demonstrate how you can automate MotionDesk with a Python script.

Classes for Project and Experiment Management

Where to go from here

Information in this section

ActiveExperiment To access an active MotionDesk experiment.	46
ActiveProject	47
Experiments To handle the experiments of a project.	52

Active Experiment

Purpose

To access an active MotionDesk experiment.

Class Description (ActiveExperiment)

Syntax	<pre>ActiveExperiment = ActiveProject.ActiveExperiment</pre>
	<pre>ActiveExperiment = ActiveProject.ActivateExperiment(ExperimentName)</pre>
	<pre>ActiveExperiment = ActiveProject.AddExperiment(ExperimentName)</pre>

Purpose To access an active MotionDesk experiment.

Attributes

The class contains the following attributes:

Attributes	Туре	Purpose
FullName	String	To get the path and name of the experiment.
Name	String	To get the name of the experiment.
SavedWithMotionDesk	String	To get the version number of MotionDesk which has saved the experiment.

Attributes	Туре	Purpose
SceneManagement	SceneManager ¹⁾	To access scene management to update the scene.
VisualizationManagement	Visualization Manager ²⁾	To access visualization management to handle movable and static objects).

 $^{^{1)}}$ Refer to SceneManager (MotionDesk Scene Creation $oldsymbol{\square}$).

Methods

_

Related topics

References

ActiveProject

Purpose

To access the active MotionDesk project.

Where to go from here

Information in this section

Class Description (ActiveProject) To describe the class and its attributes.	48
ActivateExperiment To activate an experiment of the MotionDesk project.	49
AddExperiment	49
Close To close the MotionDesk project.	50
RemoveExperiment To remove an experiment from the MotionDesk project.	50
Save To save the MotionDesk project.	51

²⁾ Refer to VisualizationManager (MotionDesk Scene Animation \square).

Class Description (ActiveProject)

Syntax

ActiveProject = Application.ActiveProject

ActiveProject = Application.OpenProject(ProjectPath, ProjectName, SaveActive)
ActiveProject = Application.NewProject(ProjectPath, InitialExperiment, SaveActive)

Purpose

To access an active MotionDesk project.

Attributes

The class contains the following attributes:

Attributes	Туре	Purpose
ActiveExperiment	ActiveExperiment ¹⁾	To access the active MotionDesk experiment.
Experiments	Experiments ²⁾	To get all the experiments of the current project.
Fullname	string	To get the path and name of the project.
Name	string	To get the name of the project.

¹⁾ Refer to ActiveExperiment on page 46.

Methods

The class contains the following methods:

Method	Purpose
ActivateExperiment	To activate an experiment of the MotionDesk project. Refer to ActivateExperiment on page 49.
AddExperiment	To add an experiment to the MotionDesk project. Refer to AddExperiment on page 49.
Close	To close the MotionDesk project. Refer to Close on page 50.
RemoveExperiment	To remove an experiment from the MotionDesk project. Refer to RemoveExperiment on page 50.
Save	To save the MotionDesk project. Refer to Save on page 51.

Related topics

References

Class Description (Application) (MotionDesk Basics 🕮)

²⁾ Refer to Experiments on page 52.

Activate Experiment

Class	ActiveProject				
Syntax	MyActiveProject.A	MyActiveProject.ActivateExperiment(string experimentName)			
Purpose	To activate an exper	To activate an experiment of the MotionDesk project.			
Parameters	The method uses the following parameters:				
	Parameter	Туре	Description		
	experimentName	String	Specifies the name of the experiment.		
Return value	_				
Related topics	References				
	ActiveProject		47		

AddExperiment

Class	ActiveProject		
Syntax	MyActiveProject.	AddExpe	riment(string experimentName)
Purpose	To add an experime	nt to the	e MotionDesk project.
Parameters	The method uses the following parameters:		
	Parameter	Туре	Description
	experimentName	String	Specifies the name of the experiment to be added.

Return value	-
Related topics	References
	ActiveProject

Close

Class	ActiveProject				
Syntax	MyActiveProj	MyActiveProject.Close(boolean saveChanges)			
Purpose	To close the M	To close the MotionDesk project.			
Parameters	The method u	The method uses the following parameters:			
	Parameter	Туре	Description		
	saveChanges	Boolean	Specifies whether the project is saved when it is closed.		
Return value	_				
Related topics	References				
	ActiveProject		47		

RemoveExperiment

Class	ActiveProject
Syntax	<pre>RetVal = MyActiveProject.RemoveExperiment(string experimentName, bool deleteFromDisk)</pre>

Purpose

To remove an experiment from the MotionDesk project.

Parameters

The method uses the following parameters:

Parameter	Туре	Description	
experimentName	String	Specifies the experiment to be removed.	
deleteFromDisk	Boolean	Lets you specify to delete the experiment from the disk.	

Return value

The method returns an object of the following type:

Туре	Description	
Boolean	True if the experiment could be removed.	

Related topics

References



Save

ctivePr	olect
	ctivePr

Syntax	<pre>MyActiveProject.Save()</pre>
--------	-----------------------------------

Purpose To save the MotionDesk project.

Parameters

Return value -

Related topics References

Experiments

Purpose	To handle the experiments of a project.		
Where to go from here	Information in this section		
	Class Description (Experiments)		
	Item		

Class Description (Experiments)

Syntax	Experiments = ActiveProject.Experiments				
Purpose	To handle t	To handle the experiments of a project.			
Attributes	The class co	ontains	the follow	ring attributes:	
	Attributes		Туре	Purpose	
	Count		Integer	To get the number of experiments.	
Methods	The class co		the follow	ring methods:	
	Item	To access an experiment. Refer to Item on page 53.			
Related topics	References				
	Class Description (ActiveProject)				

Item

Class	Experiments				
Syntax	MyExperiment = E	<pre>MyExperiment = Experiments.Item(object experimentIdentifier)</pre>			
Purpose	To access an experi	To access an experiment.			
Parameters The method uses the following parameters:			wing parameters:		
	Parameter Type		Description		
	experimentIdentifier	object	Identifier of the experiment. The identifier can be specified as string (experiment name) or integer (index)		
Return value	The method returns	s the fo	llowing parameter:		
	Туре		Description		
	Experiment ¹⁾		The specific experiment.		
	1) Refer to Experimen	nt on pa	ge 53.		
Related topics	References	References			
	Class Description (Experiments)				

Experiment

Purpose	To access an experiment.		
Where to go from here	Information in this section		
	Class Description (Experiment)		

Activate	55
To activate the experiment.	

Class Description (Experiment)

Syntax	<pre>MyExperiment = Experiments.Item(identifier)</pre>				
Purpose	To access an experiment.				
Attributes	The class contains the fo	llowing attribute	es:		
	Attributes	Туре	Purpose		
	Name	String	To get the name of the experiment.		
	Fullname	String	To get the path and name of the experiment.		
	IsModified	Boolean	To get the information whether the experiment is modified.		
	Visualization Management	ViewManager ¹⁾ .	To get the ViewManager object.		
	1) Refer to ViewManager (MotionDesk Basics 🕮)				

Methods

The class contains the following methods:

Method	Purpose
Activate	To activate the experiment. Refer to Activate on page 55.

Related topics

References

Activate

Class	Experiment			
Syntax	MyExperime	MyExperiment.Activate(Bool saveActive)		
Purpose	To activate the experiment.			
Parameters	The method	d uses the	e following parar	meters:
	Parameter	Туре	Description	
	saveActive	Boolean	Specifies whethe closed	r the current experiment is saved when it is
Return value	The method	ł returns	the following pa	arameter:
Return value	The method returns the followin			
	Type			Description The active experiment
	ActiveExperi			The active experiment.
	1) Refer to ActiveExperiment on page 46.			

Related topics

References

Troubleshooting (Project Management)

Customer 3-D Objects Are Missing After Restoring a Project

Problem	When you restore a ZIP archive, the 3-D objects of the custom object library used in the scene are missing.
Reason	If the scene of the experiment contains 3-D object of the custom object library, they are stored in the ZIP archive including their path information. When you restore the ZIP archive, MotionDesk restores the 3-D objects to the path which was included in the ZIP archive. If this path is different to the current path of custom object library, MotionDesk cannot access the 3-D objects.
Solution	You have two options:
	 Import the restored 3-D objects into the custom object library with the Library Manager. Refer to How to Import Objects into the Custom Objects Library (MotionDesk Custom Object Library Management (12)).
	 Change the location of the custom object library to the path of the restored 3-D objects. Refer to How to Change the Location of the Custom Objects Library (MotionDesk Custom Object Library Management □).

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