

Introduction

Content to Racer (CTR) is a utility plugin for 3ds max which makes it possible to easy maintain the export process to Racer in one single step.

The purpose for this tool is that it can handle 2 types of data:

- Track data
- Car data

Track data is a group of geometry which defines the visual layout on which the car data will exist. This implies 2 types of export processes for the user to apply (e.g.: car data doesn't depend upon geometry flags such as 'collide'). The current status provides only tracks to be exported.

Getting Started

What you need to know:

The plugin is developed with the intention of being usable for a variety of workflows within 3ds max. For this reason, it comes with a custom interface to manage/manipulate the data. Multiple version support will also be included, starting from 3ds max 7 up to 3ds max 2012 for both x86(32bit) and x64(64bit) architecture. Following list marks the supported and tested versions so far:

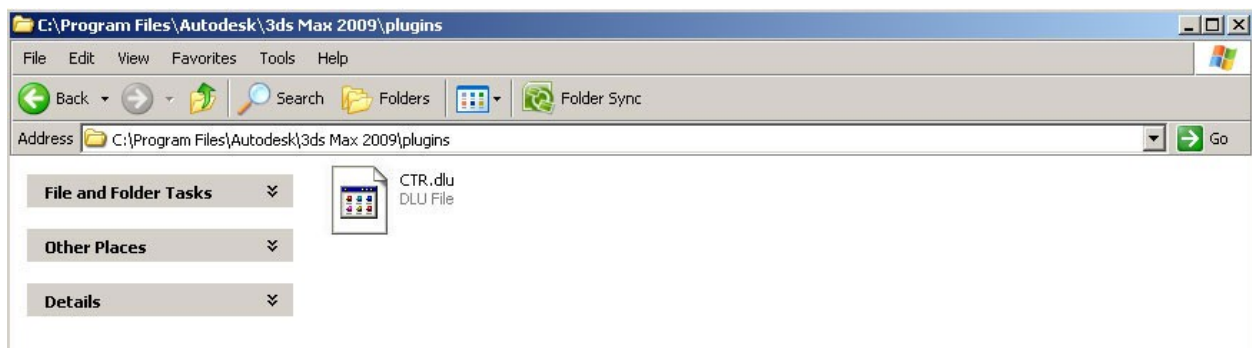
-3ds max 2009 (32bit & 64bit)

-3ds max 2010 (32bit & 64bit)

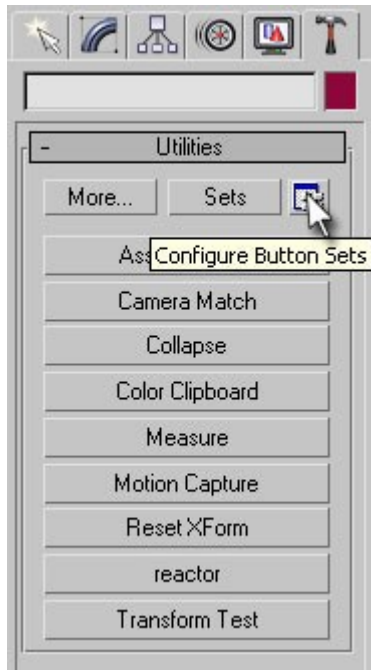
-3ds max 2011 (32bit & 64bit)

How to install:

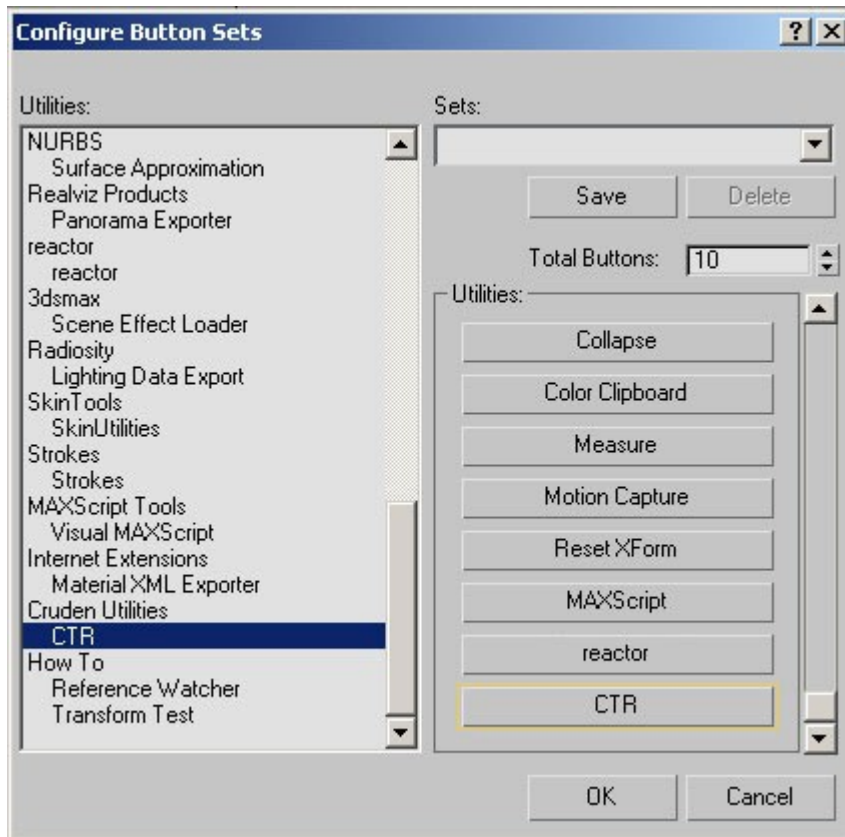
Using the tool requires 3ds max to load the plugin affront. Place the dll (CTR.dlu) in the following map of your 3ds max directory: .../3ds Max x/plugins/



Start 3ds max and go to the command panel. At this stage, the plugin is loaded into 3ds max but not yet directly accessible. Utility plugins are added to the interface using the utility page of the command panel:



Press configure buttons sets as shown in the image, this will open a configuration window. Locate the plugin, it's under Cruden Utilities -> CTR. Drag the plugin into a free utility slot (if no slots are available, add another slot by increasing the total buttons value):



This will make the CTR plugin utility available in the utility panel. The usage is explained at the interface section.

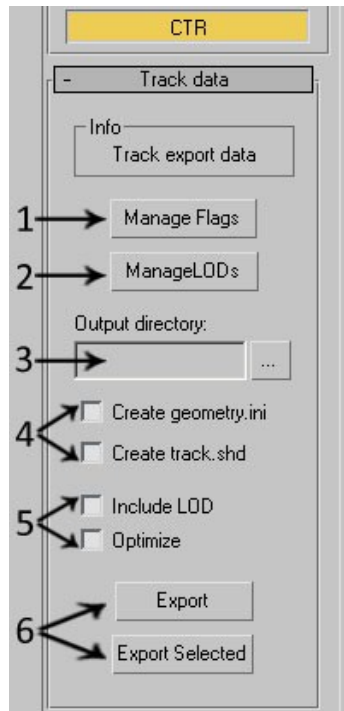
Interface

General

Having a good plugin not only depends on the functionality it contains but also on the interface it offers. Opening the plugin will bring 2 rollouts (track data and about). Future development will add a 3th rollout which controls car data.

Track data rollout

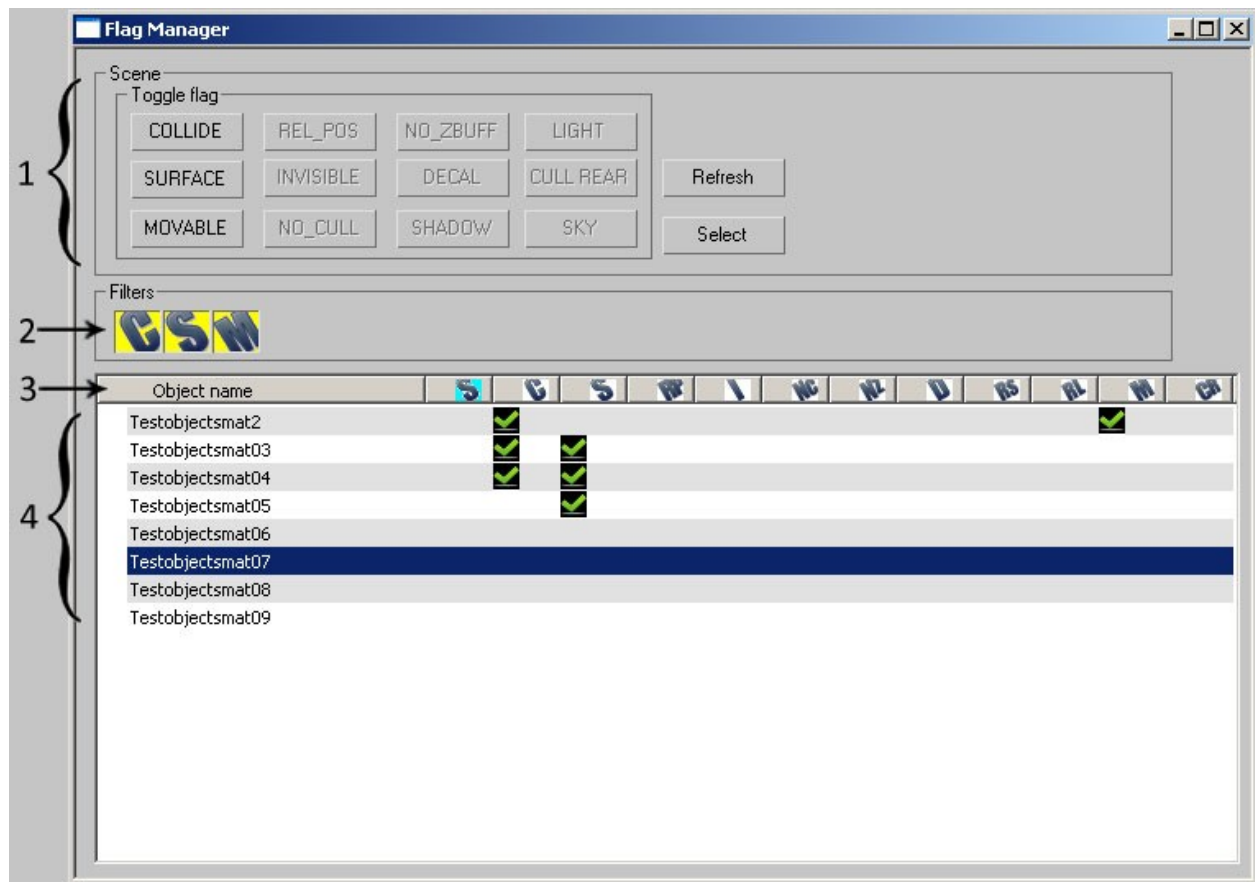
This rollout controls how track data must be interpreted by the exporter:



- 1: The flag manager ; makes it easy to assign and save flag data to track objects (see Flag manager)
- 2: The LOD (level of detail) manager: makes it easy to control LOD settings (see LOD manager)
- 3: Output directory ; a window for choosing the data output path
- 4: Corresponding .ini/.shd file ; include geometry.ini and/or track.shd with the export process
- 5: Include export specific data ; include LOD step (see LOD manager) | include .dof optimization step
- 6: Export ; export = all scene objects | export selected = only selected objects (see Exporting)

Flag manager:

The user interface for managing geometry flags gives the possibility to control the physics at large scale with a visible list. This ensures a proper overview and also speeds up the workflow.



1: These buttons toggle the flag attributes for the selected objects in the list. This parameter also includes scene data selection (select button) and a refresh of the list data (refresh button).

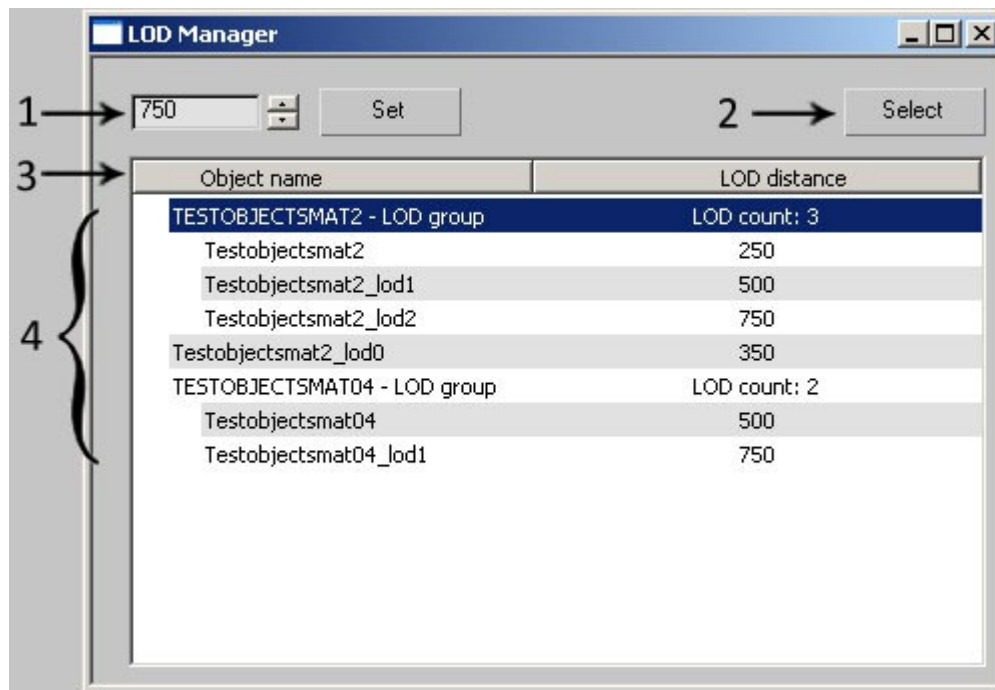
2: Filters are practical very useful when you need to control the list data for specific flag(s). Toggling these check buttons will filter (hide/show) the objects in the list relevant to their corresponding flag(s).

3: The list view column header not only indicates the different attributes but it enables the option of sorting when clicked. This works the same as any folder structured in Windows Explorer®.

4: The actual list view which visually displays the data controlled by parameters 1 to 3. It uses the same workflow as the 'select by name' dialog from 3ds max. Selecting data by clicking on a list item (single & multi line select) does not select the corresponding objects in the 3ds max scene (this is done by clicking the select button, see parameter 1). Selecting objects from the 3ds max scene itself will result in the selection of the corresponding list item. Hiding/unhiding scene data will also hide/unhide the corresponding list items.

LOD manager:

The user interface for managing lod steps gives the possibility to control the different LOD levels at large scale with a visible list based on the object name. This ensures a proper overview and also speeds up the workflow. LOD steps start from level 0 (e.g.: Testobjectsmat2) and continue with the semantic _lod1 to _lod9 (these need to be added manually). Note: Testobjectsmat2 is not equal to Testobjectsmat2_lod0 because LOD level 0 equals the object name in Racer (! LOD level 1 for Testobjectsmat2_lod0 equals Testobjectsmat2_lod0_lod1).



1: This control manages the LOD distance for the selected objects in the list. Setting the required value is done by pressing the 'Set' button.

2: Data selection control for selecting the focused list items in the scene (this works equally as the select option in the flag manager).

3: The list view column header not only indicates the different attributes but it enables the option of sorting when clicked. This works the same as any folder structured in Windows Explorer®. Note: only supported for the first column because LOD distance sorting isn't practical for the list structure.

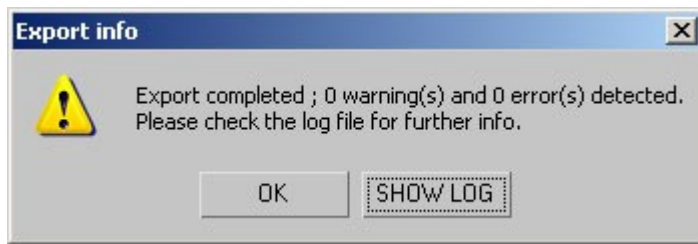
4: The actual list view which visually displays the data controlled by parameters 1 to 3. It uses the same workflow as the 'select by name' dialog from 3ds max. Selecting data by clicking on a list item (single & multi line select) does not select the corresponding objects in the 3ds max scene (this is done by clicking the select button, see parameter 1). Selecting objects from the 3ds max scene itself will result in the selection of the corresponding list item. Note: a group item is added before each object which has more than 1 LOD level. Assigning data to/selecting a group item will effect all the sub items.

Exporting:

Data export is the final step for creating .dof data directly out of 3ds max object data. This step is divided into 2 possible options:

- Export: Exports all the scene data (even if the object is hidden in the scene).
- Export selected: Only exports the selected scene data.

During the export progress, 3 progress bars will show up at the bottom of the 3ds max user interface. The 1st bar collects the scene data (e.g.: split groups), the 2th bar preprocess (e.g.: error checking) and the 3th bar exports the data (e.g.: .dof file creation). A backup is made of existing data files (geometry.ini -> geometry_backupold.ini ; track.shd -> track_backupold.shd). At the end of each export, a pop-up will appear to indicate the total amount of warnings and errors which were found during the process. These warning and error messages are located in a log file which is available via the same pop-up (or in the directory of your .max file):



These messages contain important information about possible warnings and errors that the data may contain when using if for Racer. A rule of thumb is to make sure that you do not ignore these messages, even when prototyping. They can save a lot of overhead for future use.

The most common messages will exist in the area of naming convention (make sure not to use unexpected characters for both object as material names) and file ambiguity.