

N I N T E N D O
NITRO-System
n3be File Format

Version 1.0.0

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Table of Contents

1	About n3be Files	5
2	The n3be File Format.....	6
2.1	n3be File Authentication.....	6
2.2	Keywords	6
3	An n3be File Example.....	10
4	n3be File Cautions	13

Tables

Table 2-1	An Overview of Keywords	6
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Revision History

Version	Revision Date	Description
1.0.0	1/14/2005	Initial release.

1 About n3be Files

The normal method of creating an intermediate file is by opening a scene in a 3D CG tool with the NINTENDO NITRO-System. Intermediate files can also be generated for one or multiple scenes without starting up the 3D CG tools console (running it in the background) by performing a “Batch Export”.

To execute a batch export, you must designate which scene will output an intermediate file, under what output conditions, and to what locations. The file that describes those settings is known as an `n3be` (Nitro 3d Batch Export) file.

An `n3be` file is a text-format file with an extension of `.n3be`.

This manual describes the format of an `n3be` file.

An `n3be` file is a shared format that does not rely on any 3D CG tools. For an explanation of how to use an `n3be` file to perform a batch export, please refer to the appropriate NITRO intermediate file plug-in manual for each 3D CG tool.

Currently, the NITRO intermediate file plug-in for Maya, SOFTIMAGE|3D, and SOFTIMAGE|XSI supports batch exporting. Since 3dsmax itself has no feature for processes in the background, there are presently no plans for support of batch exporting with that software.

2 The n3be File Format

An n3be file is a text-format file. Describe it using to the following format:

2.1 n3be File Authentication

In the first line of an n3be file, show that this is an n3be file with the character string

```
# NNS_Batch_Export      (Note: There is a space after the #)
```

If this character string is incorrect, the batch export will not be executed.

2.2 Keywords

In an n3be file, describe the command keywords along with the character strings and options configured in those keywords on one line. The process executes in order from the top line of the file.

The following keywords are available.

Table 2-1 An Overview of Keywords

Keyword	Description
log	<p>Creates a log file containing the intermediate file output information, any errors that were detected, and warning displays.</p> <p>Include the output file name after the keyword. The file name and extension are optional.</p> <p>Example: log "D:/tmp/log.txt"</p> <p>This keyword must be defined at the very beginning of the file.</p> <p>NOTE: If this keyword is described after another keyword, or if this keyword is set more than once, its settings will be invalid.</p>
input_folder	<p>The location of the scene file to convert into an intermediate file.</p> <p>The method for setting this keyword differs for each 3D CG tool.</p> <p>Maya</p> <p><u>Designate the path to the project folder.</u> Include the path to the folder after the keyword. (Separate folders with a "/". The "/" is optional after the last folder in the path).</p> <p>Example: input_folder "D:/data/maya_data/maya_project"</p> <p>SOFTIMAGE 3D</p> <p><u>Designate a database name.</u> Include the database name after the keyword.</p> <p>Example: input_folder "Database_name"</p>

	<p>SOFTIMAGE XSI</p> <p><u>Designate the folder where the scene file is located.</u> Include the folder path after the keyword. (Separate folders with a "/". The "/" is optional after the last folder in the path).</p> <p>Example: input_folder "D:/data/xsi_data/xsi_project/scenes"</p> <p>This keyword remains valid until a new input_folder is designated.</p>																				
output_folder	<p>The folder into which the intermediate file will be generated.</p> <p>Include the folder path after the keyword. (Separate folders with a "/". The "/" is optional after the last folder in the path).</p> <p>Example: output_folder "D:/data/nitro_3d_data"</p> <p>This keyword remains valid until a new output_folder is designated.</p>																				
n3es_folder	<p>The folder where the n3es file to reference as an intermediate file output option is located.</p> <p>Include the folder path after the keyword. (Separate folders with a "/". The "/" is optional after the last folder in the path).</p> <p>Example: n3es_folder "D:/data/nitro_n3es"</p> <p>This keyword remains valid until a new n3es_folder is designated.</p>																				
n3es	<p>The n3es file name to reference as an intermediate file output option.</p> <p>Include the file name after the keyword.</p> <p>Example: n3es "export_setting.n3es"</p> <p>However, the following items are not reflected in the n3es file:</p> <table border="0"> <tr> <td>settings_version</td><td></td></tr> <tr> <td>generator_name</td><td></td></tr> <tr> <td>generator_version</td><td></td></tr> <tr> <td>data</td><td></td></tr> <tr> <td>export</td><td>NOTE: Designate the process that corresponds to the selection with the keyword "scene" option</td></tr> <tr> <td>output_file_name</td><td>NOTE: Designate with the scene file name or with the options</td></tr> <tr> <td>process_mode</td><td>NOTE: Cannot transmit to the 3D Material Editor</td></tr> <tr> <td>output_folder</td><td>NOTE: Designate with keyword "output_folder"</td></tr> <tr> <td>merge_imd</td><td>NOTE: Cannot transmit to the 3D Material Editor</td></tr> <tr> <td>merge_imd_path</td><td>NOTE: Cannot transmit to the 3D Material Editor</td></tr> </table> <p>NOTE: The n3es file can be input and output from the NITRO intermediate file output plug-in for each 3D CG tool.</p> <p>This keyword remains valid until a new n3es is designated.</p>	settings_version		generator_name		generator_version		data		export	NOTE: Designate the process that corresponds to the selection with the keyword "scene" option	output_file_name	NOTE: Designate with the scene file name or with the options	process_mode	NOTE: Cannot transmit to the 3D Material Editor	output_folder	NOTE: Designate with keyword "output_folder"	merge_imd	NOTE: Cannot transmit to the 3D Material Editor	merge_imd_path	NOTE: Cannot transmit to the 3D Material Editor
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merge_imd_path	NOTE: Cannot transmit to the 3D Material Editor																				

scene	<p>Designates the name of the scene file that outputs the intermediate file. Include the scene file name after the keyword. The method for setting this keyword differs for each 3D CG tool.</p> <p>Maya</p> <p>Designate an <code>ma</code> (Maya Ascii) or an <code>mb</code> (Maya Binary) file name.</p> <p>NOTE: You must use either an <code>.ma</code> or an <code>.mb</code> extension.</p> <p>Example: <code>scene "sample.mb"</code></p> <p>SOFTIMAGE 3D</p> <p>Designate the scene file saved in the <code>scenes</code> folder inside the database.</p> <p>The following node formats are also valid.</p> <p>Example: When outputting a scene file with the name <code>test.1-0.dsc</code></p> <p><code>scene "test.1-0.dsc"</code> NOTE: Designate the scene file as-is</p> <p><code>scene "test.1-0"</code> NOTE: Omit the extension.</p> <p><code>scene "test"</code> NOTE: Only designate the scene name. In this case, the output target is the scene file with the largest update number.</p> <p>Example: When setting the prefix <code>aaa</code></p> <p><code>scene "aaa-test.1-0.dsc"</code> NOTE: Also designate the prefix. However, the prefix is not reflected in the output intermediate file.</p> <p>SOFTIMAGE XSI</p> <p>Designate the scene file saved in the <code>scenes</code> folder in the project.</p> <p>The following node formats are also valid.</p> <p>Example:</p> <p><code>scene "test.scn"</code> NOTE: Designate the scene file as-is</p> <p><code>scene "test"</code> NOTE: No extension is designated</p> <p>The name of the intermediate file to be created is not the character string designated in the <code>n3es</code> file. It is the scene file name.</p> <p>For example, in a case like Example 1 (below), an intermediate file with the name <code>modelA_run.i**</code> is generated.</p> <p>Example 1: <code>scene "modelA_run.mb"</code></p> <p>This keyword can designate the following options:</p> <p>option: <code>-name "character string (intermediate file name)"</code></p> <p>This option corresponds to the file name designated when there is a normal intermediate file output.</p> <p>Designate the name of the intermediate file to output after <code>-name</code>.</p>
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For example, in a case like Example 2 (below), an intermediate file with the name `A_run.i**` is created.

Example 2: `scene "modelA_run.mb" -name "A_run"`

option : `-root " character string (node name) "`

This option corresponds to the selection designated when there is a normal intermediate file created.

By including the node name after `-root`, that node and subsequent nodes will be generated in the intermediate file.

When this option is not designated, it corresponds to `All` when there is a normal intermediate file output, and all nodes in the scene will be created in the intermediate file.

For example, in a case like Example 3 (below), the nodes subsequent to the node named `head` will be created in the intermediate file.

Example 3: `scene "modelA.mb" -root "head"`

When designating multiple nodes at the same time, the node names must be separated with a comma, as in Example 4.

Example 4: `scene "modelA.mb" -root "left_arm,right_arm"`

NOTE: If multiple nodes with the same name exist within a scene, all of the nodes with that name will be targeted.

NOTE: If a node of the designated name does not exist in the scene,

`Node is not found. " node name"`

will be displayed, and an error will occur.

3 An n3be File Example

The following is an example of an n3be file.

Example: Generating multiple model files from Maya using the same n3es file

Output intermediate files: modelA.imd, modelB.imd, modelC.imd, modelD.imd, modelE.imd

```
# NNS_Batch_Export

log      "D:/tmp/export_log.txt"          ← Designates log file output

# for modelA                               ← Comment
input_folder  "D:/data/maya_data/MayaProject_A" ← Designates project
output_folder "D:/data/nitro_3d_data"
n3es_folder   "D:/data/n3es"
n3es          "imd_settings.n3es"         ← Designates imd output
                                                method
scene        "modelA.mb"                  ← Designates scene file and
                                                output intermediate file

# for modelB
input_folder  "D:/data/maya_data/MayaProject_B" ← Changes project
scene        "modelB.ma"

# for modelC
input_folder  "D:/data/maya_data/MayaProject_C" ← Changes project
scene        "modelC.mb"

# for modelD
input_folder  "D:/data/maya_data/MayaProject_D" ← Changes project
scene        "modelD.ma"

# for modelE
input_folder  "D:/data/maya_data/MayaProject_E" ← Changes project
scene        "modelE.ma"
```

Example: Generating multiple animation files from SOFTIMAGE|3D

Output intermediate files: model_walk.ica, model_run.ica, model_jump.ica,
model_punch.ica, model_wait.ica, model_wait.itp, model_down.ica, model_down.itp

```
# NNS_Batch_Export

# export animation data           ← Comment
input_folder  "Animation_Database" ← Designates database
output_folder "D:/data/nitro_3d_data"
n3es_folder   "D:/data/n3es"
n3es          "ica_settings.n3es" ← Designates ica output method
scene         "model_walk"        ← Designates scene name and output
                                   intermediate file
scene         "model_run"
scene         "model_jump"
scene         "model_punch"

n3es          "ica_itp_settings.n3es" ← Designates the output method for the
                                   scene that used ica and itp
scene         "model_wait"
scene         "model_down"
```

Example: Generating from designated nodes in a SOFTIMAGE|XSI scene

Output intermediate files: s1_tower.imd, s1_lake.imd, s1_forest.imd, s1_ground.imd, stagel_field.imd

```
# NNS_Batch_Export

log "D:/tmp/export_log.txt"

# Export only part of the scene
input_folder "D:/data/xsi_data/XSIProject_A/scenes"

output_folder "C:/nitro/game_data/"
n3es_folder "C:/nitro/n3es"
n3es "field_imd_settings.n3es"
scene "stagel_field" -name "s1_tower" -root "tower"
scene "stagel_field" -name "s1_lake" -root "lake"
scene "stagel_field" -name "s1_forest" -root "forest"
scene "stagel_field" -name "s1_ground" -root "ground"

# Export scene
scene "stagel_field"
```

← Designates log file output

← Comment

← Designates the folder where the scene file is located

← Only the nodes from "tower" down are generated

← Only the nodes from "lake" down are generated

← Only the nodes from "forest" down are generated

← Only the nodes from "ground" down are generated

← Specifies the scene name and generates the intermediate file

4 n3be File Cautions

Before configuring a scene, you must configure `input_folder`, `output_folder`, `n3es_folder`, and `n3es`.

If any of these are not set, the batch export aborts and an error occurs at that point.

Incorrect keywords are ignored. Also, if there is a problem in the format after the keyword (for example, if a designated folder or file doesn't exist), an error occurs and the batch export aborts at that point.

In an `n3be` file, lines starting with `#` are comments.

To temporarily disable a line from execution, you can comment out the line with `#`.

Even if the settings for the intermediate file output options are saved in the scene file itself, they will not be referenced in a batch export. The only settings that effect the output of a batch export are those in the `n3es` file.

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