Genesis Generation X2

Manual Version 2.1.0

Content

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Important Information

Copyright

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Disclaimer

There is no warranty beyond the legal minimal warranty. In no case, the author shall be liable for any damage on hardware or software caused by using *Genesis Generation X2*.

Usage Rights

There are no limitations in using the morphs transferred by *Genesis Generation X2*. However, it's the responsibility of the user to ensure that using or distributing the transferred morphs does not violate the rights of any third parties like the original creators of the morphs.

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1. Overview

Genesis Generation X2 (short *GenX2* or just *GenX*) is a plugin for *DAZ Studio 4.6* (short *DS4*) and up to transfer morphs from Poser legacy figures to DS figures like Genesis and between different DS figures.

The transferred morphs work either relative to the legacy shape morphs for Genesis available separately at DAZ 3D or relative to the clone morphs that are transformed into full morphs with adjusted rigging by GenX2. The clone morphs for the DAZ generation 4 figures (Victoria 4, Michael 4, Kids 4) and those for Genesis and Genesis 2 are installed together with the Genesis and Genesis 2 starter essentials. The clone morphs for other figures are included with the legacy morphs products.

The GenX2 product includes support for the DAZ generation 4 figures and Genesis as sources for morph transfers and for Genesis as target. Further figures are supported by separate add-ons. To transfer morphs from or to Genesis 2 Male or Female, the GenX2 AddOn for Genesis 2 is required.

Installing, Starting, and Registering GenX

Before you can start GenX2, you need to enter the serial number in the plugin dialog of DS4, which is opened by *About Installed Plugins...* in the *Help* menu of the main menu. (You need to restart DS4 after entering the serial number.) Then, you can open the *GenX* tab from the *Window/Tabs* menu of DS4.

The serial number is provided by DAZ 3D after purchase. You will find it in the section *My Account > My Serial Numbers* when you log in at the DAZ 3D website. For the *upgrade* version, the serial number from version 1 of GenX will still work.

Important notes:

- Be sure to install GenX2 with the same user settings and privileges as DAZ Studio. The shared data for GenX2 (used by the 32 and 64 bit versions) is installed in the DAZ Studio user data folder and will not be found by GenX2 otherwise.

- If any errors occur while GenX2 is started, there will be an additional tab *Warnings* with information about the problem.

- GenX2 replaces GenX. Version 1 and 2 of GenX can't be installed together.

- If you own add-ons for GenX, you need to download and install the GenX2 version of the add-ons. The add-ons have been updated to work with GenX2. The old versions will not work with GenX2.

- In some cases, *GenX* might be missing in the main menu of DS4. This may happen due to menu customization. In that case, use *Edit/Customize* from the main menu and add the *GenX* entry on the left side under *Panes* to the main menu on the right side. It also helps usually to select a different layout or reset the current layout for the workspace.

1.1. *Quickstart 1*: Transferring Morphs

You transfer morphs from a supported source figure to a supported version of Genesis as follows:

1. Go to the *Transfer* tab of GenX.
2. Select the *source* figure:
   a) Use the *Source* button to select one of the installed and supported Genesis figures.
   b) Drag and drop a supported Poser figure from the DS4 content library to the *Transfer* tab. Alternatively, you may select a file from the file system with the *Load Figure* button.
3. Optionally, drag and drop one or several morph injection poses for a Poser figure to the *Transfer* tab. Injections can be loaded also with the *Apply Pose* button.
4. Select the morphs to transfer in the list by clicking on the checkbox left of the morph name.
5. Select *Selected morphs* from the drop down list as transfer *mode*.
6. Select a target *shape*. Usually, this is either the legacy or the clone shape.
7. Select the *target* figure. This is either Genesis, Genesis 2 Female, or Genesis 2 Male.
8. Click the *Transfer* button to create the morphs.

Note: While you may transfer all morphs at once, it's recommended to start with a few selected morphs to learn how the plugin works.

1.2. *Quickstart 2*: Transferring a Character
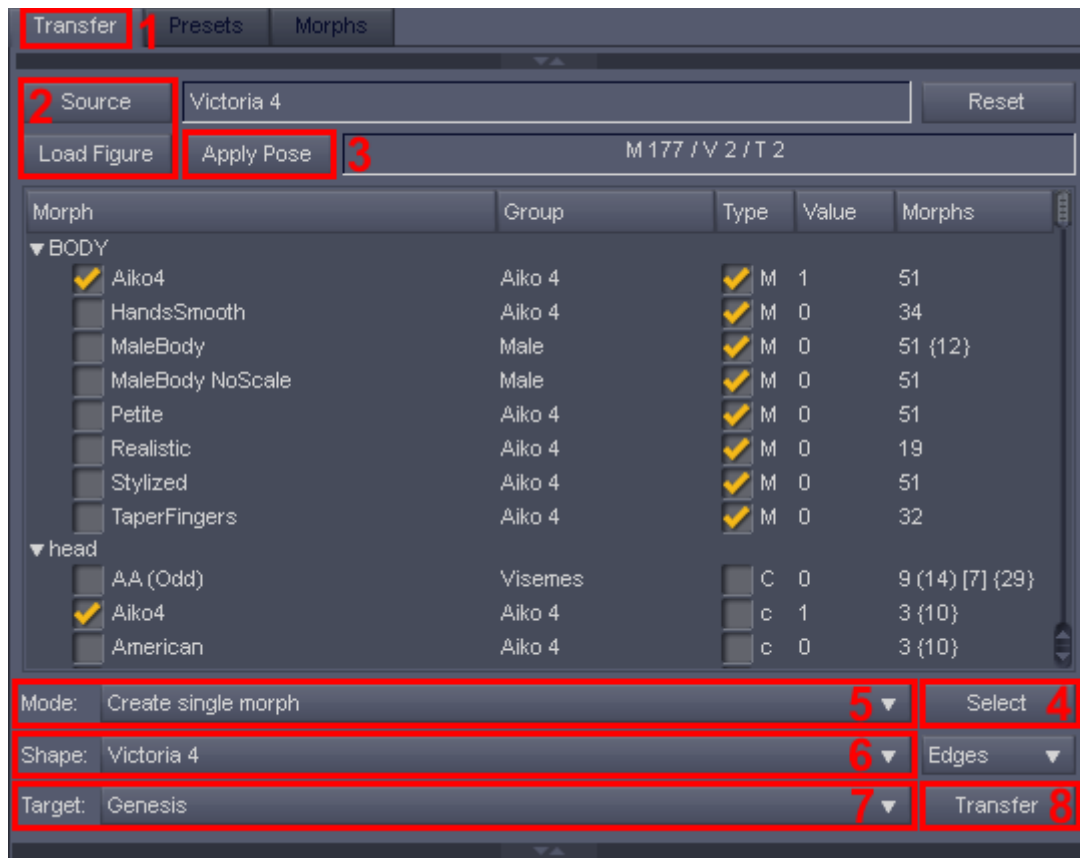

You transfer a character (a combination of several morphs) to Genesis as follows:

1. Go to the *Transfer* tab of GenX.
2. Select the *source* figure:
   a) Use the *Source* button to select one of the installed and supported Genesis figures.
   b) Drag and drop a supported Poser figure from the DS4 content library to the *Transfer* tab. Alternatively, you may select a file from the file system with the *Load Figure* button.
3. Optionally, drag and drop one or several character poses or shaping presets to the *Transfer* tab. For Poser figures, you may need to use required morph injections poses before. Loading poses or presets can be done with the *Apply Pose* button as well.
4. Click *Select* and select *Transfer: On for All Non-zero Values* to select all used morphs.
5. Select *Create single morph* from the the drop down list as transfer *mode*.
6. Select a target *shape*. Usually, this is either the legacy or the clone shape.
7. Select the *target* figure. This is either Genesis, Genesis 2 Female, or Genesis 2 Male.
8. Click the *Transfer* button to create the character morph.

Note: If you don't have a pose or preset to set the morph values, you can load the values for the character also from a figure in the scene. As step 3, load the figure with the character settings in the DAZ Studio scene. Then, use *Get Values from Figure in the Scene* from the *Select* button to load the character settings from the figure that is currently selected in the scene.

1.3. *Quickstart 3*: Using Transferred Morphs in DAZ Studio
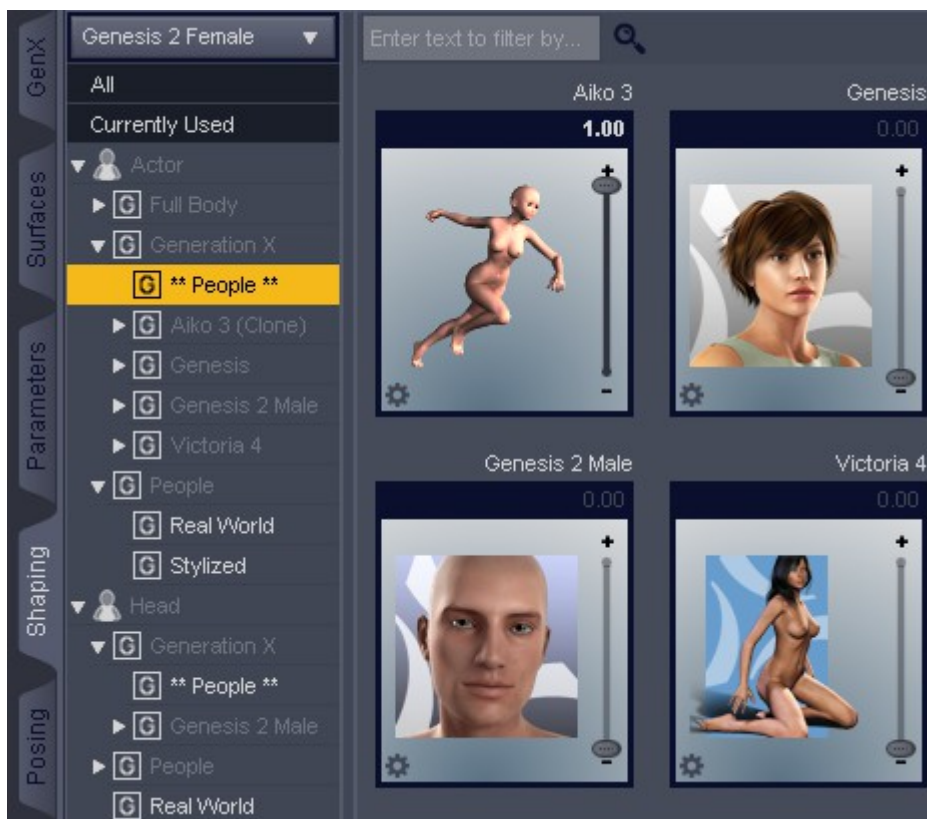
You use the morphs transferred by GenX2 as follows:

1. Load the Genesis or Genesis 2 figure from the DS4 *Content Library* tab. (You may need to start a new scene to ensure recently transferred morphs are available in the figure.)
2. Go to the *Shaping* tab and set the morph for the base shape of the transferred figure to 1.
   - Automatically generated shapes are listed under *Actor* / *Generation X* / *** People ***.
   - Legacy shapes are usually listed under *Actor* / *People*.
   - Legacy shapes for Poser figures may need to be transferred from Genesis to Genesis 2.
3. Optionally, set the *Navel* morph to 1 in the *Torso* part. (Genesis and the legacy morphs have no navel by default, unlike the legacy figures themselves.) The same may hold for nipples.
4. You will find all transferred morphs in the *Generation X* category of the various regions or bones in the *Shaping* or *Posing* tab as well as in the *Parameters* tab. Morphs transferred from Genesis or Genesis 2 are in the same tab, region / bone, and category as for the source figure. Automatically generated morphs and morphs transferred from Poser figures are either in the *Actor* or in the *Head* region.

Important: While all morphs work somehow on any shape, you will only get the original shape if you apply the transferred morphs to Genesis after setting the base shape of the according legacy figure (e.g. Victoria 4). Legacy morphs are not included in GenX2, but the clone morphs for legacy figures are automatically transformed into real morphs by GenX2.

1.4. User Interface

The GenX window has three tabs: *Transfer*, *Presets*, *Morphs*. In the *Transfer* tab, you can load a source figure, apply morph injection and character poses as well as shaping presets, and transfer selected morphs to one of the supported versions of Genesis. In the *Presets* tab, you may batch convert one or several character poses or expressions in Poser format or shaping presets in DSON format to shaping presets that use the morphs transferred to Genesis in the *Transfer* tab. The *Morphs* tab lists all transferred morphs and allows to manage them by enabling/disabling morphs, restoring or removing backups, and deleting morph files.

The tab menu for GenX contains an entry to show the about dialog box with version information.

2. The Transfer Tab

The *Transfer* tab consists of three parts: the *search* area at the top, the *options* area at the bottom, and the *transfer* area in the middle. You can hide and show the search and the options area by clicking on the small arrows in the center of the divider bar. The options area contains some generic options for the morph transfer (see section 3.5).

Note: This chapter only describes the user interface. See the following chapters for more details about using GenX2 to transfer morphs and characters.

Transfer Area

On top of the transfer area is the *source* button to select one of the installed *Genesis* figures as source for morph transfer. It also contains a list with recently used Poser figures that can be selected as source figure. The field right to this button shows the name of the currently loaded source figure.

Below are buttons to *load* a figure in Poser format (CR2 or CRZ) from the file system and to *apply* one or several pose or expression files in Poser format (PZ2, P2Z, FC2, FCZ) or shaping presets in DSON format (DUF, DSF) to the loaded figure. You can also drag'n'drop these files from the DS4 content library or from an external file manager. With *reset*, you unload the source figure.

Note: When creating your own shaping presets for legacy figures, you need to save them as a *properties preset* and enable the *Others* tab, where the full body morphs are listed.

Note: Unlike DS4 with Morph Loader, no injection pose are applied automatically.

The morph list in the center of the transfer area shows the morphs and controllers of the currently loaded figure. It is updated each time you apply a pose, either to inject or remove morphs or to set the dial values of the morphs. The field above shows the following information for the morph list:
- M: the total number of morphs/controllers listed
- V: the number of morphs/controllers with a non-zero value
- T: the number of morphs/controllers selected for transfer

At the bottom, you can select the *transfer mode*, the *target shape*, and the *target figure*. The *select* button opens a quick selection menu. You initiate the morph transfer with the *transfer* button.

Search Area

With the search area, you can find morphs and controllers in the morph list by their name. There are five search modes:

- *any*: searches for any occurrence of the entered text in a morph name
- *prefix*: searches for morphs starting with that text
- *full*: searches for an exact morph name
- *group*: searches for any occurrence of the entered text in a group name
- *value*: searches for a value (with a small tolerance); use an empty field for non-zero values

You can search for the *first* occurrence as well as forward for the *next* or backward for the *previous* occurrence. The found morph is highlighted in the morph list. If no morph is found, nothing is highlighted.

2.1. Morph List

The morph list shows the morphs and controllers that you may transfer. The first column contains the name of the morph and a checkbox to select the morph for transfer. The morphs are grouped by actors and regions. The *group* column shows the group for the morph dial. The third column is for the transfer options and the controller type (see below). The check mark indicates that the *auto follow* feature should be activated for the transferred morph. The *value* column shows the actual dial value for the morph. You can double click on it to enter a different value.

The last column displays the number of dependencies, i.e. the morphs and parameters that are controlled by that morph. Numbers in round braces are indirect dependencies, numbers in square braces are conditional dependencies, and numbers in curly braces are controlled transforms. Double click on a morph name to open a dialog with a full list of the dependent morphs.

Click on one of the column headers to sort the list for this column.

The controllers are marked by the following letters in the third row:

- m (*morph*): a single morph
- c (*controlling morph*): a single morph that controls other morphs (transferred as one morph)
- J (*joint controlled morph*): a morph that is controlled by transform parameters
- M (*morph controller*): a controller that controls several morphs (transferred as one morph)
- C (*controller*): a controller that controls several morphs (transferred as controller)
- P (*pose controller*): a controller that controls transform parameters only
- E (*empty controller*): a controller that is not supported by GenX (e.g. a controller for deformers, unused morph injections, or control rigs)

Note: If a morph is marked as circular, it can't be transferred, because some morphs have dependencies to themselves. Usually, it helps to inject the morph in Poser or DS4 and save the figure as a new CR2 to get rid of the circular dependency.

Context Menu

The context menu of the morph list allows to change the settings for *all* or *highlighted* (selected) morphs as follows:

- *Transfer on/off*: Selects or deselects the morphs for transfer.
- *Transfer on for zero-values / off for zero values*: Selects all used (non-zero value) or deselects all unused (zero value) morphs for transfer.
- *Auto follow on/off*: Enables or disables the auto follow feature.
- *Transfer controller as morph / controller* (Poser figures only): Determines whether a controller is transferred as a single morph (M) or as a controller for several morphs (C).
- *Get Values from Figure in Scene*: Imports the dial values from the currently selected figure in the scene. (This should be the same figure as loaded in GenX.)
- *Set values to zero*: Sets the dial values to zero.

The most common of these are also available from the quick selection menu (*select* button).

You can also select from the context menu, which morphs to include in the morph list:

- *No controlled morphs*: This hides all morphs that are controlled by other parameters.
- *Multi-controlled morphs only*: This hides morphs controlled only by a single parameter in a different actor.
- *All controlled morphs*: This shows all morphs.
- When *Pose controllers* is checked, the list also shows controllers that control transform parameters only, but no morphs.
- When *Joint controlled morphs* is checked, the list also shows morphs that are controlled by transform parameters.
- When *Hidden morphs/controllers* is checked, the list also shows morphs and controllers that are not shown in Poser or DS4 by default.
- When *Empty controllers* is checked, the list also shows controllers, for which nothing is transferred.

These options help to limit the morph list to those morphs that are reasonable to transfer. By excluding some morphs from the list, it also becomes easier to find a morph, but some morphs or controllers may be missing. In most cases, a morph that is controlled by only one parameter is part of a full body morph and should not be transferred alone.

The first three options apply to Poser figures only, where morphs may span several actors. In general, it's better to transfer those morphs as one morph instead of transferring them for each actor.

Note: When transferring a single morph from a character pose or shaping preset, it may be more save to include all morphs and controllers in the list to prevent some morphs are not transferred because they are not listed.

2.2. Transfer Modes

The following transfer modes are available from the *transfer* drop down list:

- *Selected morphs*: This transfers each of the morphs selected in the morph list as a separate morph or controller for the target figure.
- *Selected morphs (with defaults)*: In addition, this shows a dialog for some default values like the group and value range that you can set for all morphs.
- *Selected morphs (with properties)*: In addition, this shows a dialog for each morph, where you can modify the individual morph parameters like name, group, icon, and value range.
- *Selected morphs (with controller)*: In addition, this shows a dialog to create one controller for the morph values.
- *Selected morphs (with preset)*: In addition, this shows a dialog to create one DS4 preset to set the morph values.
- *Create single morph*: This creates one single morph for the target figure based on the values of the selected morphs.
- *Create controller*: This creates a controller for the dial values of the selected morphs without transferring morphs.
- *Create preset*: This creates a preset for the dial values of the selected morphs without transferring morphs.

The initial value for all transferred morphs and controllers is zero. When creating a single morph, a controller, or a preset, all transferred morphs should have a non-zero value or they will be ignored. If you create a controller or preset only, all required morphs have to be transferred before (or afterwards). A warning is displayed for all morphs that are referred to by the created controller or preset, but for which no morph file exists.

Note: The modes for selected morphs with controller / preset combine the mode *selected morphs* with the modes to create a controller or preset to ensures that all required morphs are transferred.

Transfer Target

For some figures, there may be several target shapes, usually the legacy shape morph and the clone morph. You select the target shape from the *shape* drop down list.

Note: The file structures for different target shapes are strictly separated to avoid conflicts.

When using clone morphs, GenX2 transforms the clones into working morphs for the full body and the head. The head morphs can be set to -1 to get a morph for the body only. These morphs are in the category *Generation X/<target figure>/*** People **** for the *Actor* and *Head* region.

Note: With version 2.1, GenX2 creates clone morphs with improved rigging. It does not overwrite existing clone morphs (stored in *** People ***). To create the clone morph only, simply load a figure, click *Transfer* without selecting any morphs for transfer, and confirm your action.

The target figure is selected from the *target* drop down list. Currently supported are Genesis, Genesis 2 Female, and Genesis 2 Male. (Genesis 2 requires a separate add-on.)

Transfer Quality

There are three quality settings when mapping points from the source to the target figure:
- *fast*: a mapping based on point distance
- *edges*: a mapping that additionally considers the orientation of facets
- *smooth*: a mapping that is based on a subdivided source mesh

The smooth mode is in particular recommended when transferring morphs from a figure with a lower mesh resolution than the target, e.g. when transferring morphs from Genesis to Genesis 2. It usually doesn't improve quality remarkably, if the source figure already has a much higher resolution like the Poser figures for generation 3 and 4. Still, it might be worth a try if a morph didn't transfer well otherwise.

Separated Nailbed

For Genesis 3, the nailbed for finger and toe nails is an integrated part of the body mesh, but the nails themselves are separated parts with a front and back side. This is different from most other figures, where only the top of the nails is modelled and connected to the rest of the mesh. On the one hand, this bears some risk that the nailbed will poke through the nail for some transferred morphs. On the other hand, this causes the nailbed to follow the nails, when this is unwanted, e.g. for nail length morphs that stretch the full nail as it is the case for V4.

With the *Separated nailbed* option active, nail morphs will not affect the nailbed. Use this option only when needed to prevent the nailbed to follow the nail. This is mainly the case for morphs that change the nail only, but not the shape of the fingers.

Morph Defaults Dialog

The morph defaults dialog is used for the mode *Selected morphs (with defaults)*. It allows to set the following defaults to be used for all transferred morphs:

- *Prefix*: The prefix is used to make the internal morph ids unique. By default, this is an acronym for the figure, e.g. V4 for Victoria 4. Changing the prefix allows to transfer the same morphs without overwriting the existing morphs.
- *Group*: The group is used in the *Shaping / Posing / Parameters* tabs to categorize morphs. By default, this is /Generation X/*figure name*. Each slash marks a new sub-group. Check *Append dial groups* to append the original dial group to the group you entered.
- *Region*: Select one of the Genesis regions, where the morphs should be displayed.
- *Value range*: This is the minimum and maximum value that can be set for the morph. Select *Respect* to force the limits, deselect it to ignore them.
- *Sensitivity*: This is the sensitivity for the value slider.
- *Auto follow*: This enables or disables the auto follow feature.
- *Visible*: This shows or hides the morph.

Leave a parameter blank to keep the standard value.

Morph Properties Dialog

The morph properties dialog allows to set the parameters of a particular morph or controller. It is displayed for the transfer modes *Selected morphs (with properties), Selected morphs (with controller), Create single morph*, and *Create controller*.

- *Identifier*: This is the internal identifier. It is recommended to not change it, because only the automatic identifier can be used by presets or controllers.
- *Name*: This is the name that is displayed in DS4 for the morph.
- *Group*: This is the group used to categorize the morph in the *Shaping* tab. It should start with a slash. Subgroups are divided by a slash sign as well.
- *Region*: This is the body region of the target figure where the morph value can be changed.
- *Icon*: This is the icon that is used for the dial.
- *Value range*: This is the minimum and maximum value that can be set for the morph. Select *Respect* to force the limits, deselect it to ignore them.
- *Sensitivity*: This is the sensitivity for the value slider.
- *Auto follow*: This enables or disables the auto follow feature.
- *Visible*: This shows or hides the morph.

For the mode *Selected morphs (with properties)*, there is an *abort* button to stop the transfer of further morphs.

The icon for the dial should have a size of 147x185 pixels and should be transparent where the morph name and the value slider is located. If you want to use a standard size Poser thumbnail, check the *fit 91x91 thumbnail* option to fit the thumbnail to the correct size without overlapping the slider. (Images larger than 91x91 are resized in this case.) Click the *file* button to select a PNG image for the icon. For the properties dialog for single morphs, this is set initially to the icon of the transferred morph, if any. Otherwise, it is set to the icon for the last loaded figure or pose/preset.

Shaping Preset Dialog

The shaping preset dialog allows to create a shaping preset for DS4 based on the values shown in the morph list. It is displayed for the transfer modes *Selected morphs (with preset)* and *Create preset*.

In the first text field, you enter the file name of the shaping preset to create. Optionally, you may select a PNG thumbnail for the shaping preset in the second text field. With the *file* buttons, you can select a file name from the file system.

You may include the shaping morphs for the legacy morph and fixing controllers that may be required by some figures. If you enable *Set unselected morphs to zero*, the preset will not only include the values of the selected morphs, but also a zero value for all unselected morphs from the morph list. This resets all morphs that are not used by the shape.

Note: You may create a shaping preset without selecting a morph in the morph list. This is useful for a preset with the base shape only or for a resetting preset with zero values only.

3. Transferring Morphs

To transfer one or several morphs, you do the following steps:

1. *Load a source figure*. This is the figure to transfer the morphs from. It is either one of the supported Poser legacy figures, or one of the supported Genesis figures. Installed Genesis figures can be selected with the *Source* button. Poser figures are loaded with *Load Figure* or by drag'n'drop from the DS4 content library or an external file manager. The most recent used Poser figures are also listed in the menu of the *Source* button. Only figures that are supported by GenX or installed add-ons can be loaded. The morph list shows the morphs found in the figure.

2. *Select a transfer mode*. Decide if you want to transfer several morphs one by one (*Selected morphs*), create one morph based on the morph values (*Create single morph*), or create a controller dial or shaping preset. (See section 2.2 for a description of all transfer modes.)

3. *Apply poses or presets*. Poses (Poser format) and presets (DSON format) can be used to inject additional morphs (Poser figures only) and to set values for morphs. Values can be also set directly by double clicking on a value in the morph list. Or they can be taken from a figure loaded in the current scene in DS4 with the *Get Values from Figure in Scene* menu entry in the context menu or the *Select* button. Morph values are used only by the transfer modes that create a single morph, a controller dial, or a shaping preset.

4. *Select the morphs to transfer*. Set the checkmark in front of the morph name to select a morph or controller for transfer. The context menu and the *Select* button can be used to select several morphs at once quickly. This includes the option to select all active morphs, i.e. morphs that have a value other than zero.

5. *Select the target figure*. The target figure is the figure the morphs are transferred to. Currently, this may be Genesis, Genesis 2 Female, or Genesis 2 Male.

6. *Select the target shape*. The target shape is the morph in the target figure to use together with the transferred morphs. Usually, this is either the clone shape, which is the original shape of the source figure, or the legacy shape, which is adapted to the target figure. When using a legacy shape, the transferred morphs are adjusted for the differences between the legacy shape and the original shape.

7. *Set the transfer options*. Decide about the various transfer options (see section 3.5).

8. *Transfer the morph(s)*. Click *Transfer* to initiate the morph transfer.

Transferred morphs and controllers are available in the target figure the next time you load the figure or load a scene that contains the figure.

Note: After transferring morphs, you may need to start a new scene to force DS4 to rescan the folder with the morph files. Otherwise, recently transferred morphs might be missing in Genesis.

If you don't set a region or group explicitly, the region and group are preserved, but with *Generation X* and the name of the source figure put in front of the group. If the source figure is a Poser figure, *Head* is used as region for face morphs and *Actor* otherwise.

When using the clone shape as target shape or when transferring to a target where no own clone shape exists, the clone morph is transformed into a full working morph with adjusted joints. Besides the full clone morph for body and head, a separate morph for the head only is created as well. These morphs are located in the ** *People* ** group of the *Actor* and *Head* region.

Note: The head morph can be set to -1 to get the body shape alone.

Note: While you will get a reasonable result when simply transferring all and everything with the default options, you may improve your results by some individual adjustments.

3.1. Morphs and Controllers

A morph changes the shape for a figure by shifting the points in the mesh. A controller doesn't change the shape directly, but changes the value for one or several morphs and other parameters. A morph may act as a controller additionally. Finally, morphs may be controlled by other parameters (*joint controlled morphs* or *JCM*) or may be active together with other morphs only (*conditional morphs* aka *morph controlled morphs* or *MCM*). These different types of morphs and controllers are indicated in the morph list by different letters in the *type* column and the number of dependencies in the *morphs* column (see section 2.1 for details).

GenX transfers both, the changes in the geometry and the changes of parameters. For the transfer mode *Selected morphs*, if a morph or controller controls other morphs or controllers, these controlled parameters are transferred as well, even if they are not selected in the morph list.

Because the source and target figure usually have differences in rigging, controllers that affect parameters like rotation, scaling, and joints may not work well in the target figure in some cases. The option *transfer controlled transforms* may be used to exclude these parameters when transferring controllers or morphs that also act as controllers from a Poser figure.

Transferring Controller as Morphs for Poser Figures

Because morphs in Poser may span several actors, morphs can't be transferred simply one by one, but all morphs that form a shape should be transferred at once. A controller may subsume several morphs for a single shape, but also may be used to control several shapes with a single dial. Unfortunately, there's no automated way to distinguish these types of controllers.

By default, GenX assumes that controllers in the BODY actor are for single shapes and hence are transferred as a single morph (marked *M* in the *type* column of the morph list), while controllers in other actors are considered real controllers that are transferred as controllers with dependent morphs (marked *C*).

If you would transfer a full body morph (say the *Aiko4* body shape) as a controller, you would transfer single morphs for each actor, resulting in uneven transitions at the actor intersections. That's why you should transfer the controller for a full body morph always as a single morph, and

not transfer the single actor morphs for that body morph (which are hidden in Poser by default for the generation 4 figures). However, there are exceptions. E.g. the *BicepsFlex* controller of Victoria 4 in BODY controls two independent morphs for the left and the right arm. If you transfer it as a single morph, you can't control the arms independently. If you transfer it as a controller, you get this controller and the morphs for each arm in addition.

Some controllers will only work correctly if you transfer them as controllers. E.g. the controllers to open and close the eyes in Victoria 4 depend on the limits of the morphs they control. If you would transfer them as a morph, these limits would be ignored and the morph would no longer work.

3.2. Conditional Morphs

For some morphs, there are additional correction morphs that are applied relative to the strength of a third morph. An example are the morphs to open and close the eyes in Victoria 4. That you can use the same dial for this on the base shape as well as on rather extreme head morphs like *Aiko 4* or *The Girl* is due to hidden conditional morphs.

This establishes a relationship between three morphs. One morph is controlling the conditional morph, which also depends on a third morph that is corrected. Unfortunately, the implementation is symmetrical for controlling and dependent morph, so the role of these morphs can't be detected for sure, even if it is obvious to the user.

Note: The assignment of conditional morphs to the controlling morph has been switched in GenX2 compared to the previous version to follow the more common type of implementation. Because of this and other changes, it is recommended to not mix conditional morphs transferred by GenX version 1 and GenX2.

If a morph has conditional morphs that are transferred together with this morphs, it has the number of conditional morphs in square brackets noted in the *morphs* column.

There are four options when transferring conditional morphs:

- *Ignore conditional morphs*: conditional morphs are not transferred
- *Transfer conditional morphs*: transfers all conditional morphs
- *Transfer CM if dependent morph exists*: transfers those conditional morphs, where the dependent morph already exists (or is selected for transfer as well)
- *Transfer CM with dependent morphs*: transfers all conditional morphs and all morphs on which they depend

Of course, you can transfer conditional morphs also directly by selecting them in the morph list.

Important: You have to be careful when transferring conditional morphs. If the controlling morph is missing, the conditional morph is directly controlled by the dependent morph, and hence the result will be wrong because the conditional morph is always active. This is for implementation reasons in DS4. It is safe to transfer the conditional morph together with the controlling morph even without the dependent morph. So, all GenX options for controlled morphs should be safe.

3.3. Morphs and Dialed Characters

Many characters are not just a single morph or shape, but are "dialed" by mixing several morphs, usually from the basic morph sets, but sometimes also with custom morphs. There are two options to transfer a dialed character. You can transfer all required morphs and set the dial values for each, or you merge the morphs into a single new morph. In either case, you prepare the figure just like you would do in Poser or DAZ Studio by applying the morph pose(s) to inject additional morphs and set the dial values. To select all morphs of a dialed character for transfer, simply use *Transfer: On for Non-Zero Values* from the context menu or the *Select* button.

The first option is to transfer all the single morphs that form the dialed character with the *Selected morphs* mode. In addition, you create a shaping preset or a controller that applies the dial values. Or you create only a preset or controller if you already transferred all required morphs. This option is reasonable if you want to use various characters, if you want to be able to modify the character, if the morph has conditional morphs, or if you transferred all basic morphs anyway.

Note: If you already transferred the morphs and want to create presets for several characters, you can use the *Preset* tab for batch conversion.

The other option is to use the *Create single morph* mode. This merges all selected morphs into one new morph that works independently from other morphs. The advantage is that you get a single morph for your shape without the need to transfer dozens of morphs. The drawback is that some complex dependencies like conditional morphs will no longer work.

Note: Transferring a character as a single morph also may reduce quality loss caused by transfer. When combining morphs that were transferred separately, small deviations may overlay and sum up resulting in more obvious differences to the original shape.

There are several alternatives to set the morph values for a character to transfer with GenX:

- *Morph (injection) poses*: You can apply or drag'n'drop poses in Poser format that contain morph values.
- *Load values from scene*: From the context menu, you may load the actual morph values from the figure that is currently selected in the scene. This is in particular useful if a character is saved in a DAZ scene file or as DAZ character script from DAZ Studio 3 or earlier. Of course, the figure should be the same as loaded in GenX and has the same morphs injected.
- *DSF shaping presets*: You can apply or drag'n'drop shaping presets saved in DAZ Studio 4.
- *Edit values manually*: You can double click on a value and enter a new value.
- *Reset values*: From the context menu, you may set all or selected values to 0.

3.4. Auto Follow

DS4 has an *auto follow* feature for morphs. If you change the morph in the figure, the morph is transferred automatically to all conformed clothing of this figure. This is mainly reasonable for full body shapes, but not for face morphs or some body details like the navel shape.

You can turn the auto follow feature on and off for transferred morphs with the checkbox in the *type* column of the morph list. By default, auto follow is enabled for all controllers in the BODY actor.

3.5. Transfer Options

Limits

The limits are the minimum and maximum value allowed for a morph or controller. Because the dials in DS4 become difficult to handle for large ranges with forced limits, you should set a reasonable limit here, but without restricting the morphs too much. The limits for a morph are only changed, if they would be outside of these limits otherwise, and if the value is forced to stay within the limits. (This option holds only for Poser figures as source.)

Transfer Resolution

The transfer resolution is the density when mapping the morphs from the source to the target figure. You may imagine the points of the source mesh as a set of small magnets that draw on the points of the target mesh when they are morphed. The transfer resolution in the options determines the density of these magnets. Lower values preserve more details, but too low values may cause errors because some points are not transferred at all. (You will get a warning in that case.) Larger values give smoother results but may cause a loss of detail. The effect of this option also depends on the mesh density where the morph is applied. If you are not sure, simply use the default value 50. The possible range is from 1 to 100.

Connect Path

Because DAZ Connect is a rather new feature, it is not yet accessible from plugins. If you use the default library path for DAZ Connect, the GenX2 plugin should find it by default. Otherwise, you have to use the *Connect Path* button to select the folder that is named for DAZ Connect data in the Content Directory Manager of DS.

Transfer

With the option *Prefer clone shape*, you determine if the shape selection box should be set to the clone shape (generated by GenX from the clone morph) or the default shape (sold separately).

The option *Compress generated files* does what it says. When enabled, the DSF files created by GenX are compressed to save disk space. This option also affects files created in the *Presets* tab.

Enable the option *Transfer controlled transforms* to include transforms like scaling that are controlled by a morph. This is required for some head morphs and works usually well for head morphs. A morph with controlled transforms has a number in curly braces in the *Morphs* column.

Enable *Transfer dial groups* to use the same dial group hierarchy as in the original Poser figure. This is in particular useful when transferring many morphs. Otherwise, only the last group is used.

Check *Show hidden dependencies* to make all transferred morphs visible. Otherwise, hidden morphs are hidden in DS4 as well if they are transferred as a dependency of a controller.

For the options for conditional morphs, see section 3.2.

Select one of the following behaviors in regard to existing files:

- *Replace existing files*: This overwrites any existing files.
- *Replace existing files (keep backup)*: Existing files will be kept as backups. (But existing backups are overwritten.)
- *Keep existing files*: A morph is not transferred if the according morph file already exists. An exception is the *Selected morphs (with properties)* mode, because you can change the identifier (which is also the file name for the morph).

Note: GenX operates completely in its own sub-folder for Genesis morphs. It's not possible to overwrite other files than those generated by GenX when transferring morphs.

Output Folder

By default, GenX creates the DSF files for all transferred morphs and controllers in the folder *data/.../Morphs/D3D Gen X/[shape]* in the content library where the figure geometry is located. You can select any other output path by activating the *Output Folder* option. Use the *Path* button to select a folder, enter it directly in the text field, or select one of the most recent used folders.

However, be aware that morphs are loaded only if the DSF morph files are located in a *Morphs* folder of the according figure. Also, controllers and other dependencies will be created correctly by GenX only when all required morphs are located in the same folder, because GenX relies on the file names of the transferred morphs to check if a dependent morph already exists. It is recommended to use this feature only for single morphs without dependencies.

3.6. Limitations

GenX employs several strategies to transfer all morphs as accurate as possible. Even morphs for expressions like opening the mouth or closing the eyes or small details like teeth or eye morphs will work in most cases. Nonetheless, there are some inevitable limitations when transferring morphs automatically, so there might be small differences to the original morph or sleight deformations. Finally, the mesh of Genesis has a lower resolution than most legacy figures, which may cause loss of detail when transferring morphs in some cases.

GenX transfers scaling and other transformations if they are controlled by a morph or controller. It depends much on the rigging of the source and target figure whether these transformations will still work. For example, head scaling and transformations for the eyes usually work very well. However, chest scaling will look very different on Genesis than on Michael 4.

GenX2 uses several adjustments to deal with differences in rigging. While some adjustments are exact and will work in any case, other adjustments may only work well for morphs that don't change the overall shape too much. In particular, the differences in rigging for the lower jaw in

generation 4 figures, in Genesis, and in Genesis 2 are handled by strategies like moving the origin or using morphs to emulate rotations.

3.7. Troubleshooting

There might be cases where morphs or morph settings are not loaded by GenX as they do in Poser or DAZ Studio. (E.g. binary morph injections are not supported by GenX.) If there are problems with morph injections, you may try to load the figure in Poser or DAZ Studio and apply the morphs there, then save the result as a new CR2. Usually, these re-saved versions should avoid oddities and work better with GenX. If only the morph dial settings are not applied correctly in GenX, you can also just save the dial settings as a new *pose* in Poser or as a *Shaping Preset* in DS4.

If you get warnings when loading a Genesis or Genesis 2 figure, it is likely that some morphs are installed more than once in different content libraries. This may also cause problems when transferring any of these morphs. Check the *data/.../Morphs* folders for the figure in question in all content libraries to eliminate any duplicates, or simply merge them all into one folder.

4. Presets Tab

While you can create shaping or character presets from morph poses and expressions in Poser format in the *Transfer* tab, this may be tedious if you want to transfer many of them. In the *Presets* tab, you can batch convert a large number of poses or shaping presets at once. Of course, the translated presets will only work if you also transferred all required morphs in the *Transfer* tab (without changing the identifier). If a created preset requires a morph that was not transferred, a warning with the morph ID is shown in the progress dialog.

With the *Add Pose* button, you add pose, expression, or shaping files to the list. You can also drag'n'drop files from the DS4 content library or an external file manager. *Remove* removes the selected files from the list. *Translate* translates all files from the list into shaping presets and removes the file from the list, if the translation was successful. You have to select the target shape and target figure from the drop down lists, for which the generated shaping presets should work.

The translated presets are written with the same name to the folder you name in the according input field. Optionally, you may use the id for the target figure and/or shape as preset for the name. Click on the *path* button to select a folder or select one from the drop down list. The translation may include morphs (and controllers), scalings, and eye transformations. Also, you can select to include the according shaping morphs and additional fixing controllers for the figure.

Note: You can use an empty file to create a shaping preset with the default shapes only.

Presets for Custom Injection Channels

For morph injections that use the custom morph injection channels (PBMCC and PBMDC) of DAZ figures, GenX creates unique names to allow several morphs with the same injection channel to be transferred to Genesis. These unique names are remembered, so they can be used when creating

presets. However, if there is more than one name remembered or if there was no morph transferred for a particular morph channel, there will be a dialog where you have to select the correct name. This name is the name that is displayed for the morph dial in Poser or DS4, so it should be obvious which is the correct one.

Activate *Always show dialog for custom morphs* to display this selection dialog even if there is only one morph name to chose from.

5. Morphs Tab

The *Morphs* tab lets you manage the morph files generated by GenX. Click on the *GenX* button to show the folder structure and the files with the morphs for the selected target figure. (You can also use the *All* button to list other morphs as well.) The *Reset* button clears the list.

Important Note: Be very careful with changes you are doing here. Some changes are not reversible (you get a confirmation dialog in that case) and some changes may cause morphs or controllers no longer working because of dependencies to other morphs or controllers.

The list shows the file names of the morphs (their internal identifier), not the display name. For morphs created by GenX, the identifier starts by a figure acronym, followed by the original internal name. For Poser source figures, the original body part is appended. The checkbox in the file list indicates whether a morph is enabled (checked) or disabled (unchecked). If the icon has a second gray file symbol, there is a backup with an earlier version of that morph.

You can perform the following operations on the morphs selected in the list:

- *Enable morph*: Makes disabled morphs available again.
- *Disable morph*: Makes morphs temporarily unavailable.
- *Restore backup*: Deletes the actual morph and restores the backup.
- *Remove backup*: Deletes the backup.
- *Delete file*: Deletes the morph file (together with the backup if existing).

You may temporarily disable morphs (and enable them again). A disabled morph is not loaded by the Genesis figure (and cannot be accessed by already loaded Genesis figures). If you have a large number of morphs, it may be reasonable to disable a whole set of morphs (e.g. all morphs transferred by GenX for Victoria 4) to save system resources.

5.1. Managing and Editing Morph Files Manually

All transferred morphs are stored in the folder *data/DAZ 3D/<figure>/<set>/Morphs/D3D Gen X* below the DS4 content root folder. You may delete the morph files here in case you no longer need them or restore the backups that are kept in this folder as well.

You may also edit the morph files in a text editor to change some of their parameters:
- *label* (in modifier_library / channel): the display name of the morph
- *visible* (in modifier_library / channel): *true* to show, *false* to hide the morph

- *min* and *max* (in modifier_library / channel): the value range
- *clamped* (in modifier_library / channel): *true* to respect, *false* to ignore limits
- *step_size* (in modifier_library / channel): the slider sensitivity
- *auto_follow* (in modifier_library / channel): *true* to enable, *false* to disable auto follow
- *icon_large* (in modifier_library / presentation): the icon for the morph
- *region* (in modifier_library): the body region for the morph
- *group* (in modifier_library): the group (separate sub-groups by slashes)

As an alternative, the *DSF Toolbox* by *Dimension 3D* provides a simple editor to change one or several of these parameters, either in a single file or as a batch change in several files at once.

6. Generation 4 Figures

GenX includes support for the DAZ generation 4 figures, namely Michael 4, Victoria 4, and Kids 4 including their derivatives Aiko 4, Hiro 4, Stephanie 4, and so on. The transfer is based on the clone shapes included in Genesis starter essentials. There are two target shapes for each of these figures. For Victoria 4 and Michael 4, the transfer can be done either for the legacy morphs sold separately at DAZ, or for the clone shape itself. For Kids 4, the clone shape may be used directly or in a scaled version, which allows better transfer and bending. The clone version of Kids 4 is included only for backward compatibility and does not support Genesis 2.

If you select the clone shape as target, GenX creates a working morph for the full body and for the head only from the clone morph. These morphs are located in *Generation X/** People *** for the *Actor* and *Head* regions. The advantage of the clone shapes is that they are very close to the original shapes.

As an alternative to the clone shapes, it is recommended to use the legacy shapes for Victoria 4 and Michael 4 as base shapes instead. These morphs have manually adjusted riggings and are closer to the Genesis shape, so they usually work better with poses and conformed clothing.

The following legacy shapes are supported:
- *V4 and M4 Shapes for Genesis* by DAZ 3D: The *Victoria 4* and *Michael 4* shape presets in GenX are optimized for these shapes. This is also the case for Genesis 2, where you have to transfer these morphs from Genesis to Genesis 2 Female or Male with GenX.
- *Victoria 4 for Genesis 2 Female* by MallenLane: Use the *Victoria 4 (shape)* preset to transfer morphs from Victoria 4 to Genesis 2 Female optimized for this morph.
- *Michael 4 for Genesis 2 Male* by Slosh: Use the *Michael 4 (shape)* preset to transfer morphs from Michael 4 to Genesis 2 Male optimized for this morph.
- *Generation 4 Legacy Shapes for Genesis 2 Female(s)* by Slosh: Use the *Victoria 4 (legacy)* preset to transfer morphs from Victoria 4 to Genesis 2 Female optimized for this morph.
- *Generation 4 Legacy Shapes for Genesis 2 Male(s)* by Slosh: Use the *Michael 4 (legacy)* preset to transfer morphs from Michael 4 to Genesis 2 Male optimized for this morph.

Note: The Jaw Fix corrections for V4 and M4 from GenX 1 are no longer needed. Instead, the transferred morphs care about the differences in rigging for the jaws of Genesis directly.

Note: Unlike the generation 4 figures, Genesis and the classic shape morphs (as well as the clone morphs) don't have a navel. Set the *navel* morph of Genesis to 1 to get a navel and to ensure morphs that change the navel work correctly.

Scaling for Freak 4 and Girl 4

The scaling features for Freak 4 and Girl 4 are a bit special because they depend on a conditional controller to turn them on and off. To make this feature working, you have to transfer the morphs for Freak 4 and Girl 4 with the options *Transfer controlled transforms* and *Transfer conditional morphs* activated. In addition, you have to transfer the controllers *FreakScaleOn* / *TheGirlScaleOn*.

Note: Because of differences in rigging, the chest will become a bit flattened when using the Freak scaling on Genesis. This may be compensated by additional morphs, e.g. the *Pectorals* morphs from the *Genesis Evolution: Body Morphs* pack.

Version History

Version 1.0, 25.10.2011

Initial release

Version 1.1, 16.12.2011

Bugfixes:

- option *keep existing files* was not remembered
- option *keep existing files* stopped transfer after first existing file
- now works with DSF files containing *null* as value
- transfer transforms for BODY actor correctly (scaling only)
- exclude Victoria 4.0 CR2 (without eyebrows actor) from loading

Changes:

- support for clone morphs (V4, M4, K4)
- apply DSF morph presets
- improved dependency analysis
- transfer pure controllers
- display groups in morph list
- display number of controlled transforms in morph list
- warning for missing morphs when creating preset or controller
- *select* button for quick selection
- option to exclude controlled transforms from transfer
- option to include empty controllers in morph list
- fault tolerant match for *targetGeom* and *valueParm*
- follow *linkParms* when applying poses
- a bit more compact file formatting

Version 1.2, 26.08.2012

Bugfixes:

- fixed bug where a few single points were transferred completely wrong randomly

Changes:

- plugin for DAZ Studio 4.5
- adjustments to be compliant with DAZ Studio 4.5 file format
- read compressed DSF files
- option to write compressed DSF files
- import morph values from selected figure in scene
- improved point mappings for smoother morphs

Version 2.0, 04.02.2014

Bugfixes:

- create single morph: linked morphs were applied twice, if both had values set
- create single morph: conditional morphs were not applied
- create single morph: forced limits where ignored when applying values to a morph
- now it is ensured that forced limits in transferred morphs allow 0 as value
- auto-follow setting in morph list was ignored when changed directly
- "get values from figure in scene" no longer includes values due to dependencies

Changes:
- morph transfer between TriAx figures
- morph exchange between morph compatible TriAx figures (including HD morphs)
- morph transfer for morph-compatible Poser figures without clone morph
- clones are automatically turned into full morphs if required (full body and head only)
- scaled clone morphs for better posing and conforming
- automated corrections for differences in rigging
- new point matching options: edges, smooth
- improved filtering for "show in list"
- warnings tab for initialization errors
- convert shaping presets in presets tab
- additional options when transferring conditional morphs
- reverted dependencies for "transfer conditional morphs"
- enhanced format for transfer definitions
- improved transfer definitions for generation 4 figures
- dropped support for GenX 1.0 transfer definitions
- several minor improvements

Version 2.0.1, 17.03.2014

Bugfixes:

- fixed possible crash when loading source figure in GenX or when closing DS
- fixed problem when loading files without space between number and closing bracket

Changes:
- search for group in morph list (any occurrence)
- search for value in morph list (empty for non-zero)
- rescale thumbnails larger than 91x91
- option to include target and source id in file name for presets tab

Version 2.0.2, 22.02.2015

Bugfixes:

- fixed problem that some compressed DSON files can't be read

Changes:
- support for multiple content libraries when loading morphs for Genesis figures
- option to set own output folder for transferred morphs and controllers
- special shape presets for V4 and M4 legacy morphs for Genesis 2

Version 2.1.0, 21.05.2016

Changes:
- improved file link search (including DAZ Connect)
- support for Genesis 3 technology
- adjust joints for facial expressions for each morph
- create clone morphs with improved rigging
- option to create clone morphs only
- option to prefer clone shape