

SHAPES - Change Log

Note: for a bug fix the description lists the original issue

5.0 - 18-04-28

New

- topological symmetry support for single- and multi-shell meshes
- export and import of blend shape deltas as a JSON file
- new weightsServer node to create and control blend shape weights based on influence positions, curves or textures
- new influence map feature to make blend shape weights paintable through a skin cluster node
- a custom path for storing blend shape setup related data can be defined via the preferences
- the custom path for the setup export gets remembered as a preference
- added preference to use the undeformed original mesh as the blend mesh when in Edit mode
- added a new preference setting to display joints in the shape driver list as mesh related
- ability to export and import frozen maps at all times
- hidden faces are now preserved when entering Edit mode (Maya 2017 and later)
- component selections are maintained when entering Edit mode
- added a check that the side identifier lists have the same number of entries
- new helper command to find which poses cause a RBF decomposition error

Plug-In Versions	SHAPES 4.4	SHAPES 5.0
rampWeights	1.1	2.0
SHAPESBrush	1.9	2.2
SHAPESTools	4.2	5.1
weightDriver	3.0	3.4
weightsServer	n/a	1.7

Fixed

- error when trying to mirror a pose interpolator or weight driver with a side identifier suffix
- error creating a RBF solver node when the driving node is referenced
- error when trying to mirror a RBF or pose interpolator setup when meshes with the names of the contained poses exist in the scene
- the weightDriver RBF node doesn't get correctly mirrored when the parent is placed at the symmetry center
- error when trying to replace a target shape with a mesh which has the same name as one or more other objects in the scene
- incorrect shapes are created when sculpting with the maya sculpt brushes in certain rigs
- smoothing an entire weight map doesn't affect the selected target shape but a different one
- the channel slider cannot be found after closing the UI in certain cases
- driver names are not updated when the blend shape node is renamed outside SHAPES even the change gets noted upon loading the mesh
- creating driver groups doesn't work
- blend shape maps don't get applied when rebuilding the setup when a custom data path is defined in the preferences
- the custom export path option gets disabled when cancelling the file dialog but doesn't get stored as a preference setting which saves the setup to the custom location even though this is not preferred
- the blend shape edit warning appears when transferring the setup
- using export setup and transfer setup alternatively resets the settings in the other window
- error when selecting a target shape after the setup has been transferred and the shape is controlled by the master blend shape node
- issues when mirroring a blend shape setup with shape drivers
- the SHAPES brush button is disabled when entering Edit mode
- SHAPES brush issue when toggling between blend to original and a second shape because the setting behaves the opposite way
- error when storing brush settings when the marking menu hasn't been invoked yet
- issue when sculpting with the SHAPES brush if the freeze map contain false colors
- fixed that the generic RBF mode for the weightDriver loses its rest pose at 0 when the scene is saved
- issues when setting new poses in shot fix mode before the first pose
- bug when trying to find the tweak node

4.4 - 17-08-01

New

- channel action to remove the target deltas for the entire mesh or selected components only
- weight and region maps can now be stored in an optional JSON file format
- paint value submenu when painting weight or region maps
- ability to lock regions from editing and normalization
- when entering Edit Mode the selected components are maintained on the sculpt mesh
- the behavior of the base weights warning message can now be controlled from the preferences
- added a check if the meshes transform and shape node names are unique
- if the blend shape data node doesn't match the blend shape node's name anymore when changed outside of SHAPES it gets automatically renamed when loading the mesh the next time
- improved the handling of asymmetrical meshes when mirroring shapes
- added a brush symmetry and color display toggle to the paint shape weights context menu
- SHAPESBrush: size and strength attributes can now be adjusted with a higher precision in the tool settings window
- SHAPESBrush: the default SHAPES brush type can now be set from the SHAPES preferences or the brush tool settings
- SHAPESBrush: new grab and twist brush type

Update

- compatibility with Maya 2018

Fixed

- values of 1 are discarded after inverting a region map
- error message occurs after the SHAPES window got closed and the last selected target shape's value is changed when moving the time slider
- SHAPESBrush: Paint Freeze Symmetry is enabled by default
- SHAPESBrush: several issues when setting options from the brush marking menu

4.3 - 17-03-02

Fixed

- the Pose Interpolator is not available as a shape driver for Maya 2016 Extension
- referenced nodes cannot manually be added to the driver list
- joints with a custom shape node don't display correctly as joints in the driver list
- after updating the setup to the new data model some driving nodes don't show up in the driver list in particular cases

4.2 - 17-02-24**New**

- added a twist axis option to the shape driver folder when working with the weightDriver in RBF mode or Pose Interpolator

Update

- added a version check for the weightDriver plug-in to make sure that the right version is used

Fixed

- the Pose Interpolator gets shown when having Maya 2016 with an update installed (pre Maya 2016 Extension 1)
- after exporting and rebuilding a blend shape setup it doesn't get loaded automatically
- the twist axis for the weightDriver in RBF mode is set to the z-axis when there is no child to the driving node
- the icon for the weightDriver in RBF mode is set to zero when the driving node has no children
- when adding an existing mesh as a new target with the option to keep the mesh it will stay connected to the blend shape node

4.1 - 17-02-14**New**

- new Weight Driver RBF mode for enhanced interpolation of multiple shapes per driving node
- support for the Pose Interpolator in Maya 2017 and later
- added the ability to define a custom blending of RBF or Pose Interpolator controlled blend shape targets before entering Edit Mode
- all target shapes can now be quickly extracted and connected as meshes to the blend shape node
- added a check for externally added target shapes

4.0 - 16-11-23

New

- general: it's now possible to add multiple meshes as target shapes as new default or posed targets
- general: when selecting an incoming node a new option lets the user choose to select the upstream dag node; in case there is no dag node the next node upstream gets selected
- general: new preference setting to keep the undo state when undoing; turning it off keeps the undo state but erases the redo queue
- ui: added a close button to completely remove the SHAPES UI
- weights: added a new menu item to smooth shape weights
- region maps & weight maps: added functionality to duplicate or backup a map, as well as loading the map backup
- region maps: added new menu items to invert and mirror region maps
- region maps: it's now possible to change the target selection when in region edit mode
- region maps: changed the region extraction so that now all selected target shapes are considered
- region maps: new option to extract regions to existing shapes only
- region maps: added the option to paint from buffer, which contains the previous maps
- transfer: added the wrap deformer auto weight threshold preference to the transfer options window

Update

- compatibility with Maya 2017

Fixed

- some intermediate meshes remain in the scene after some operations when working with secondary blend shape nodes
- if the driving node for a weight driver is not listed in the driver list it doesn't get automatically added
- when working with a secondary blend shape node the mesh doesn't stay selected after some blend shape weights operations
- the exported setup contains false connections when a combo driving shape is driven by a direct connection
- target shapes using the ramp weights node don't get exported/transferred correctly and result in non-working target shapes
- crash, when cleaning up the tweak node when a ramp weights node is present
- sculpt compare doesn't get activated when entering edit mode for the first time
- issue with saving weight maps when the blend shape node is within a namespace

3.2 - 16-04-29

New

- new option to create a post deformation blend shape node through the Add Blend Shape Node menu for Maya 2016.5 and later
- added a new rampWeights node to create ramp effects for target weights
- shape drivers in the driver list can now be grouped and organized
- the driver list can be reset individually
- the about window now displays the plugin versions
- added a token option to place extracted regions underneath the source shape

Update

- compatibility with Maya 2016.5
- when in Shot Fix mode and no blend shape node exists a new post deformation node gets created
- adding an empty target creates the name 'emptyTarget' for better readability

Fixed

- when creating a new weight driver the range field doesn't correctly display node rotations past 90 degrees
- reduced the display of errors when a target channel is empty
- exporting empty targets creates no target channels upon import
- SHAPES Brush symmetry setting is not properly set when opening the Maya tool settings
- importing a weight map onto a region ignores values of 1 when switching between regions

3.1 - 16-04-18

New

- new shot fix feature for corrective animation

Update

- new weight driver options for translation and custom ramp interpolation
- symmetry improvements for the SHAPES brush
- the SHAPES brush tool settings are available through the Maya tool settings window
- unassigned/partial region map weights can now be displayed as a color ramp
- unassigned/partial weights can be assigned to any region on object or vertex level
- auto distribution for unassigned/partial weights
- region extraction now supports in-between shapes
- option to toggle between black/white and color feedback when painting regions

Fixed

- error when trying to send the sculpt mesh to zBrush
- error when a target channel name contains a dash
- error/crash when a target channel with a live mesh connection is selected and edit mode is entered
- live mesh connections can get disconnected under certain conditions
- error when mirroring a shape in order based mode
- weight driver attributes are not in a layout for Maya 2015 and below
- error using a node as a shape driver when message attributes are present
- error when exporting the setup and node names already exist in the scene
- flushing a region map with white doesn't store the new values
- reducing region map weights leads to unassigned weights
- when transferring the setup to a hires mesh deformation artifacts can appear because of the used wrap deformer

3.0 - 16-02-10

New

- complete rewrite

All parts of SHAPES have been touched and many have been modified. The main changes and additions include:

- general speed improvements for all major actions
- region map feature to extract partial shapes based on a complex shape
- shape sequence feature as an alternative to in-betweens
- driven set feature to control set driven key setups
- sculpt compare feature
- tweak auto mirror option
- symmetry check/match feature when loading the mesh
- preference option to define the default Maya sculpt tool
- tweak propagation for combo shape editing
- updated export options
- improved setup transfer to another mesh
- ability to mirror the entire blend shape setup
- batch mirror for all shapes contained in one group
- ability to toggle the wireframe display when working with the SHAPES brush
- option to keep the selected mesh when adding it as a new target
- added some basic paint operations when working with blend shape weights
- new check for existing base weights
- added progressive in-betweens
- the blend brush can now be used to blend to the original mesh/undeformed shape
- weights maps can be added or subtracted from each other
- added the ability to store the freeze information from the Maya sculpting tools freeze brush for Maya 2016 and higher

2.2 - 15-04-22

New

- Maya 2016 compatibility
- added the option to use the Maya 2016 sculpting tools for the sculpt mode
- the default Maya sculpt tool can be defined through:
`optionVar -sv SHAPESDefaultMayaSculptTool SetMeshSmearTool;`
The default tool is `SetMeshGrabTool`.

Update

- the SHAPES Brush circle can now be set to be displayed during the sculpt process (from the marking menu only)
- the pull/push strength of the SHAPES Brush now also depends on the distance to the camera

2.1 - 15-03-14

New

- improved installation with the new installer
- student version for non-commercial/non-educational institution purposes
- interface preferences
- added an auto update function to refresh the target list when an undo event occurs; can be turned off when the scene interaction gets slow due to large data sets; warning messages inform the user about the chosen state
- improved checking for corrupted target/label/range information which prevents a mesh from loading causing errors
- speed improvements for collecting blend shape data enhancing the refresh time
- improved handling of orphan weights which lost their alias name; the alias name of the weight now may be either reconstructed or a new 'unknown' alias is assigned
- preset buttons for slider ranges
- target/label/range information can be cleared now without having to load the mesh if issues occur
- added some basic paint functions to the paint weights button right-click menu
- added the option to toggle the wireframe when using the brush

Update

- improvements when working with references
- better naming when duplicating a mesh
- improvements to the corrective animation workflow so that the slider stays in place when a key should be set at the current value

Fixed

- blend shape menu doesn't update correctly when renaming a blend shape node with a name which already exists in the scene
- error when the brush plug-in is set to auto load
- error when exporting the setup if the scene file extension cannot be read
- error while connecting blend shape nodes if some attributes are already connected
- error while connecting blend shape nodes when no helper attributes are present
- error when exiting sculpt mode when some camera attributes for the gate mask are locked or connected

2.0 - 14-09-30

New

- added the SHAPES Brush to replace the previous standard Maya sculpt geometry tool
- renewed shape combos now allow multi-source shapes and can be edited
- added options to the target list right-click menu to track the current selection and remember it for creating combos, as well as to delete the list
- added the option to set up the weight driver node with a custom reader source point
- edit weight maps for individual target shapes; supports weight painting for more than one blend shape node; including copy/paste, trim/crop, invert/mirror, import and exporting, rename and delete; works with multiple selection, except export
- slider ranges can now be individually set to work beyond the default 0-1 range; multiple selected targets can be edited in the same process
- changing the channel slider with multiple targets selected changes all values instead of just the first selection; works only if the shapes are not driven
- target shapes can now be dropped onto each other to create hierarchies
- added a new group attribute to create logical groups when working with many blend shape targets
- added buttons for filtering the list for active shapes
- when filtering target shapes by values a colored dot now indicates the value of the currently active channels
- the indication of active shapes can be set to update live
- added the ability to create a new shape based on either the original mesh or the currently deformed state of the mesh
- added a new function to bake the current pose to original to encompass design changes
- added the ability to update the setup with a new mesh containing topology changes
- new set key button for keying the selection with the current value
- added an option to ignore zero attributes on a shape driver when set to SetDrivenKey; this can help reduce the length of the available attribute list
- mesh tweaks can now be baked to the original mesh to allow for mesh updates without having to update all existing target shapes
- added the option to add a separate mesh when creating a new in-between shape; the menu items 'Add Selection As New Target' will show 'Add Selection As New In-Between' when the user has chosen to add a new in-between from the channels right-click menu
- remove orphan attributes (target shapes that have been deleted but remain as a weight[...] entry in the target list)
- added a menu item to reset the target list
- user editable side identifiers for mirroring
- added an option to display a green camera frame when in sculpt mode
- added an option to assign the default shader to the sculpt mesh; this helps to display the paint freeze color of the SHAPES Brush

Update

- merging shapes now respects the current target value of each selection
- updated the mirror actions to make them easier to understand
- deleting target shapes works now with multiple selection
- included a confirmation when deleting shapes; can be bypassed from the menu
- removed restriction to have a skin cluster in order to drive target shapes
- removed restriction to only use transform nodes as drivers
- when initializing splitting a shape the original target shape is turned off (only when the shape is not driven)

- when the driver list is filtered and a new driver is added the filtering will remain; if a driver is added but not matching the filtering it will stay hidden until the filtering is cleared; this applies to the type filter as well as the search string
- deleting a shape driving a combo results in a warning that the combo is about to be deleted and that this affects other driven shapes
- after deleting a shape the list will focus on the item above it instead of scrolling to the top
- when a custom node drives a helper attribute it can be selected through the channel right-click menu
- improvements to reading the blend shape data
- improved error messages when position based mirror could not be performed
- improved finding the symmetry edge for order based mirroring when the initially found edge would be right on the mesh border
- the target reverse list check box has been moved to the target list right-click menu
- separated the weightDriver node plugin from the SHAPESTools plugin for a better consistency between SHAPES and non-SHAPES environments, where only the weightDriver plugin is available (i.e. Renderfarm usage)
- improved the removing of unwanted mesh tweaks
- the blend shape pulldown menu now only displays the actual node name when working with references and namespaces
- after exporting the blend shape setup the blend shape node can be optionally deleted
- improved the capability to maintain custom set driven keys and geometry connections (daisy chain) when exporting the blend shape setup
- general code improvements

Fixed

- after painting blend shape weight maps the target list shows the individual weights and breaks the workflow
- exiting sculpt mode without making any changes results in an error with non-skin meshes
- exporting the setup stores in-betweens with the wrong target id
- mirroring a shape driven by SDK connects the new shape to the driver of the original
- Mirror/Symmetrize produces partly inverted results when Maya symmetry is enabled
- in case all driver channels are locked and hidden selecting the driver creates an error when trying to setup a set driven key
- reordering targets and then creating a combo lets icons appear on the wrong buttons
- deleting a shape used for driving a combo creates an error
- loading a skinned mesh with 'Auto List Joints On Load' option off leads to extraction errors
- entering sculpt mode with a helper attribute selected results in an error
- error when a mesh with the name of the new sculpt mesh (newCorrective) already exists in the scene
- loading a mesh with shape drivers sharing the same shape node name results in an error
- adding the selection as posed target produces an error if the sculpt mode hasn't been used before

1.1 - 14-03-09

New

- unlink a driven target shape to manually adjust the channel slider without having it snapping back to the driver value; the driver automatically is re-connected when selecting a target shape in the list, if the target list is refreshed or if a new mesh gets loaded
- added an animation folder to easily key selected channels; the blend shape node is automatically selected if the folder is opened; also allows to set an animation range with a defined pre/post key-bracketing (zero weights before and after); selecting a target shape automatically selects the animation curve node if the animation folder is open
- swapping of shape data between two shapes while keeping the driver connections if existent
- clicking the select button of a shape driven by animation curves or direct connections a second time allows you to delete the incoming node
- new blend shape nodes can be added either in front of the chain or after the currently active blend shape node; this can be used to add a new blend shape node for corrective animation, keeping it separate from the other blend shapes

Update

- the locator which defines the weight driver target vector appears now with a postfix '_loc' to better match the general naming convention
- increased the precision for the set driven key start and end values to two decimals
- merging shapes works now with any number of selected items in the target list
- the weight driver node can now handle an angle range up to 180 degrees
- the set driven key attributes option menu now also lists non-keyable attributes
- mirroring sdk driven target shapes doesn't require the model to be posed anymore
- improved update speed while working with a large list of target shapes when creating/deleting shape drivers and combos
- the weight driver cone has now a consistent size at any angle and doesn't extend to a very large disk with a value of close to 90 degrees

Fixed

- shadows disappear if the weight driver node is displayed in Viewport 2.0
- mirroring a shape driven by a weight driver node is not possible in certain situations depending on the rotation of the driving joint
- the cone of the weight driver disappears in viewport 2.0 if set to inverse
- mirroring sdk driven target shapes uses always 0 as the start value for the mirrored driver
- several issues when editing target shapes after switching back from a different blend shape node
- issues identifying the Maya version in case of special cuts
- shape driver attributes are not listed correctly and produce errors if the maxwell plug-in is present