New Stuff

**Sketch mode:** Added a new mode called "Sketch" where you can sketch on top of your scene in 2D and play your sketches per frame in an animation. Freehand pen, lines, eraser and 4 pre-set pen sizes, with onion skin levels. Resizes to the world view. Also, separately load and save sketches: Mark areas for animator feedback, or rough out animation in 2D.

See movie


**Parent in place:** Workflow has been greatly improved by middle mouse drag action in list for parent in place.

See movie

Editsphere: Major improvements in the way the Editsphere operates which include fixes to direction rotation sensing, that previously caused it to rotate in the opposite direction at some angles. The rings in parent mode now show actual gimbal orientation. The middle 'M' hotspot now jumps to screen space.

See movies
http://setuptab.com/index.php/topic,2178.0.html

Displacements: Now displacement can be viewed in OpenGL! Not just Texture maps but noise and other shader displacements from the shader flow are visible in the viewpoint; which makes for easy alignment and quick look predictability of displaced geometry.

See movie
http://setuptab.com/index.php/topic,2177.0.html
**DelayPoints**: A new modifier which can be used to delay the deformation of points with a weight and/or delay based on the direction they are travelling. In the example below, the arms are moving quickly downwards and the effect of DelayPoints is weighted by the direction of travel, resulting in a motion blur type of effect.

See Movie

**Interface Flickering (Unified Back Buffer)**: A mode that solves the problem created by some graphic cards that force a unified back and depth buffer setting with no way to shut it off.

See Movie
http://setuptab.com/index.php/topic,2183.0.html
Hair Glue: A new Messiah effect for easily locking hair guides to geometry without needing them to be deformed by bones. Great for hair/fur dynamics; follows geometry through bends, etc.

Hair/fur from Subdivisions: Hair can now also generate from subdivision surfaces.
**UV render bake:** Render to UV textures with separate selection of which UV to use; great for export to Unity and other game engines; and to export with your objects with complex textures you created with messiah’s shader flow.

![UV render bake](image)

**Dynamic Render:** Instant update of render window, with quality threshold and resolution scale. Lets you render interactively and see the changes as you work; change colors, lighting, caustics, volumetric lighting and instantly start seeing your rendered results.

![Dynamic Render](image)

**Limited Region Follow:** Limited Region render area can now follow an object, so the region moves with the object as it renders inside. Update an area without having to re-render the whole frame across an animation.

**Mip Map** (multi image pyramid) automatic generation: Is basically a method of taking one texture and auto generating a series of consecutively smaller images (the pyramid) and then using the correct sized image depending on distance (because when you have too fine a detail when the resolution of the render cannot accommodate such detail, you can get a moiré pattern artifact, most noticeable in motion.

![Mip Map](image)

**Fade Distance:** New option to fade reflection amount beyond some distance.

![Fade Distance](image)

See Movie

**Bone deformer** now has a multi-threaded option, if you have an object with excessive geometry, and you find that one cpu just isn’t fast enough to process it all.

New **Messiah theme** interface with solid ground plane grid switch.

**Instances:** Particles can now generate instances on the fly! It can automatically distribute a list of objects randomly, to the particles complete with each having its own animation.

See movie

Hair guides can now be used as instance objects! Objects are aligned to the hair direction and sized to its length. Objects will realign itself to the hair, even with guides and dynamics on! You can use all the coverage maps and abilities from the hair to paint areas for a map that you want instances of shrubs and trees, and then put them in a list and they will render instances of themselves scattered to wherever you would have had hair, on the surface. Or simply design a fiber object or any other object to how you want it to look, and will place it where hair would have been on the surface.

SuperLattice: Allows you to fully drive one mesh with another. Proprietary method doesn’t require points to be inside of the lattice object to be affected; and the lattice object can be almost any polygonal object.

Improved Softbody dynamics by allowing weight values to control percentage of effect on the object instead of just on/off and weights can be used to 'pin' cloth
Improvements

- Faster and more memory efficient collision on hair, particles and softbody.
- 4 times speed increase in subdivision displacement processing before rendering.
- Volumetric light now has an 'Activate Volume Atmosphere' button along with a 2 x speed increase. Results are much smoother!
- Improved middle mouse select of objects in the view when dollied in really close.
- Improved the visibility of Opacity/Clip texture maps in OpenGL.
- Added option to jitter the pixel AA pattern that should remain consistent across threads and frames.
- Added a function for expressions to turn on and off the slider pin, so rigs can have part sensitive slider controls that can come up and disappear when needed.
- Improved copying of an armature handle action; now Messiah copies the expression string for you too.
- Improved Shadow map generation times and quality, now generation is 2 x faster with multithread.
- Added rotation of HDR images (heading, pitch, bank) via transform controls in texture map.
- Improved OGL displacement for MetaNURBS.
- Added new mode for particles to align their texture maps to the particle direction.
- Added undo of parent hierarchy in the list.
- Added split a bone into x number of segments.
- Added undo of bone length changes when dragged with hotspot.
- Changed box selection to standardize selection method when holding shift or cntrl keys in graph editor.
- Added options so particles can now be emitted according to weighting of points on an emitter object, even at fractional weights.
- Added an auto scale to bump, so user can flag it to scale the height value with the world scale of the object.
- Added extra functionality so Spot texture AA now adjusts its level similar to Mip level.
- Added new option for noise reduction sampling, to choose either the slightly slower but consistent pattern across threads methods, or the new fast as is method.
- Added save preview render from the render window with hotkey (ALT + S), or user key assignable.
- Added Models lights activate, if all regular lights are off.
- Sliders can be collapsed down to their labels, and expanded by clicking the label to clear up the interface.
- You can change the channel group and item key type from the “create key panel” if you forgot to before you entered it.
- Edit mode now has mini sliders in the list view for speedy value changes
- Particles and Softbodies have a 'Pre roll' option to ensure dynamics are where you want
Third party

FastMDD: Added improved support for FastMDD, refreshing a mesh is down to a single button click, which greatly enhances the workflow with modeling programs (like Modo).

See movie

http://vimeo.com/11796934

Fixes

• Fixed 'Wind' force so it only uses strength for control and other setting are now ghosted.
• Fixed 'Jet' force which now responds to size, polarity, range, and the falloff type (vacuum like effect if you set a negative polarity).
• Fixed object replacement problem with .lxo.
• Fixed rotation bug, when using the channel selector and then mousing outside the edit sphere zone.
• Fixed armatures disappearing on every other load or clear scene.
• Fixed key box selection when starting from negative frames in the dope master.
• Fixed pin on sliders turning on and off from mouse hovering.
• Fixed Slider position, size and state now save to the scene file.
New Expressions

DynamicRenderToggle expression: Toggle Dynamic Render on/off
ArmatureDrawing: Sets Armature drawing on or off
SetSliderPin: Sets the always displayed state of a slider on or off

SDK additions

FX_API(FXint, fxMousePos)(FXint *x, FXint *y, FXint flags);
FX_API(FXint, fxEffectEnable)(FXeffect effectID, FXint flags);
FX_API(FXint, fxEffectDisable)(FXeffect effectID, FXint flags);
FX_API(FXObject, fxEffectTargetAdd)(FXeffect, FXobject targetID, FXint flags);
FX_API(FXint, fxEffectDelete)(FXeffect effectID, FXint flags);
FX_API(FXint, fxEffectTargetStateSet)(FXeffect effectID, FXobject targetID, FXint state, FXint flags);
FX_API(FXint, fxEffectTargetStateGet)(FXeffect effectID, FXobject targetID, FXint *state, FXint flags);
FX_API(FXint, fxObjectReplace)(FXobject, FXchar *filename, FXint flags)

Training

A selection of the wide variety of free and paid training available from:

setuptab.com: http://setuptab.com/index.php?action=store;cat=6;start=0