Maxon Cinema 4D R23 New Feature

Animation

Pose Library
- Scene independent pose library
- Thumbnail view
- Blend poses
- Matching Name and Selection Filters

Character Solver
- Character Definition Tag allows rig-independent definition of character components
- Automatic rig extraction based on name templates
- Custom Character Definition Presets
- Character Solver transfers motion between rigs based on character definitions, regardless of hierarchy or joint rotations
- Extensive preset library of high-quality motion capture presets

Delta Mush
- Delta Mush smoothing of joint-based animation
- Tag-based control of smoothing parameters

Character Object - Toon Rig and Face Rig
- Toon Rig in Character Object offers easy-to-use rig supporting scaling and bendy limbs
- Face Rig in Character Object allows users to easily create a joint-based facial rig

Workflow Enhancements

- Attribute Manager Filtering
  - Animated Attributes
  - Keyframe Selection
  - Animatable Attributes
  - Xpresso Driver / Driven
  - Overridden in current take
- Keyframing Changes
  - Auto-Key Workflow
  - Paste in Place
  - Copy / Paste Ease Curve
  - Record All Animated / Record Hierarchy Commands
  - Delete Keys for all selected objects Command
  - Animation Context Menu on HUD

- Preview / Project Time Changes
  - Preserve Project Time with Merge and X-Ref / Allow Keyframes outside the project time
  - Increase Preview Time with Project
  - In / Out Commands to define preview range
  - Set Range to Markers
  - Go to Previous / Next Marker Range
- Timeline Changes
  - Timeline Filtering
  - Auto-Frame F-Curve
  - Show Pos/Scale/Rot F-Curve Commands
  - Improvements to defaults and object / track display behavior
- Marker Enhancements
  - Create Markers based on range / BMP
  - Marker HUD
  - Markers created with random color
- Deformer Enhancements
  - Auto-orient deformers based on geometry
  - Easily adjust deformer orientation to align with object axes
  - Viewport Enhancements including indicators of action and direction
  - UX Enhancements including sliders for strength / angle
- Exchange Enhancements
  - FBX option to export marker ranges as takes
  - FBX option to export only bound joints
- Other Enhancements
  - Set Pos / Reset Pose commands in weight tag
  - Invert Vertex Map checkbox

UV Enhancements
- for perpetual users, all the great enhancements in S22
- Display and manipulate UVs of multiple selected objects (for shared texture workflows)
  - Rasterized and Geometric Packing of multiple objects into a single UV space
- Grid in Texture UV Editor
- Snap UV elements and UV Transform Tool to Vertex, Edge, Mid-Point, Grid and Pixel
- Align Island based on edge selection
- Straighten point / edge selection
- Rectangularize polygon selection
- Path Selection within UV Editor
- Grow / Shrink Selection within UV Editor
- Quantization Palette
- Display UV Distortion in 3D View

Magic Bullet Looks
- Look applied in real-time to the viewport
- Look applied to final rendering as a post effect
- Option allowing for saving the unprocessed rendering result as a multipass
- Optical Touch Looks Preset library designed to make 3D renders look great

Viewport
- Improved screen space reflections
- Optimized display of node-based geometry
- Light Source Optimization and General Performance Enhancements
- Removed Redraw Limit

Scene Nodes (Preview)
High-performance node-based object system, available as a technical preview.
Operator Nodes
Distribution Nodes
- Linear, Linear Transformed
- Radial, Spiral
- Grid, Grid Offset (Honeycomb)
- Vertex, Edge, Polygon Center
- Mandelbrot, Mandelbulb
- Custom Distribution Group

Effector / Field Nodes / Geometry Nodes
- Get / Set Geometry and Topology
- Point, Edge, Polygon Info
- 3D Primitives
- Selection Nodes
- Bounding Box
- Geometry Clone
- Extrude, Lathe, Loft, Sweep
- Extrude, Inset, Bevel, Subdivide
- Optimize, Connect, Chamfer, Align Normals, Reverse Normals, Delete, Melt
- Remove Ngons, Remove Non Manifold, Triangulate, Retriangulate, Untriangulate

Legacy Import
- Legacy Object Import
- Sample Legacy Light
- Vertex Map Tag Import

Materials
- Material assignment
- Material parameterization

Flow Control Nodes
- Loop Carried Value
- Memory
- Range

Array Nodes / Node Editor
- General UI Enhancements for Scene and Material Nodes
- Node filtering
- Node Detail Levels
- Comments

Remesh Generator

Exchange
USD Support
- Import / Export Models, Cameras, Lights in usd, usda, usdc
- Export usdz

OBJ Performance and Feature Enhancements
- Import/export Support for PBR material definition used by Adobe Dimensions and other applications
- OBJ Sequence Export
- OBJ Sequence Import
- Vertex Color Import / Export (Z-Brush / Meshlab)
- Point Cloud Import
- Z-Brush Spline Import
- Flip UVs
- Unicode Support
- More Presets: 3ds max, Adobe Dimension, Blender, Maya, ZBrush, Trapcode

FBX (listed in Animation Workflow)
- Export Takes from Timeline Markers
- Export Bound Joints only

Python 3
- Update from Python 2.7.14 to Python 3.7.7
- Increased performance for Python expressions, scripts and plugins
- Encrypt Python plugins via the command line

Moves by Maxon
- Import and use Facial and Body Capture data from Moves iOS app (fully integrated)

General Workflow Enhancements
- Display alpha channel in Picture Viewer as a checker grid
- Insert Caret showing drag destination within Object Manager
- Instances can be made editable
- Updated Intel Open Image Denoiser to 1.2.1 / improved performance and better results
- Viewport Selection Tools now use Intel Embree technology for better performance and accuracy

Customer Journey
- Maxon One
- Subscription Management page