Maxon Cinema 4D S24 New Features

Placement Tools

Place Tool

- Places selected object(s) on the surface of other objects and aligns to normal
- Handles for rotation around normal of the surface and scaling relative to the bottom
- Multiple selected objects or hierarchies are treated as a single object with a combined bounding box.
- Ability to clone objects (ctrl modifier)
- Simple collision detection mechanism to avoid overlapping with other objects in the scene

Scatter Tool

- Scatters selected objects on surfaces along brush strokes
- Scattered objects are placed with the bottom of their bounding box on the surface
- Creates "Scatter Object" in the Object Manager and outputs Render Instances or Multi-Instances
- Tool offers settings to adjust and randomise scale, rotation and object ID (i.e. which of the selected objects is being scattered) for paint strokes
- Allows to editing of individual scattered instances through other tools (such as Place, Move, Rotate, Scale, Dynamic)

Dynamic Place Tool

- Temporarily turns selected objects into dynamic objects for placement
- PRS gizmo to move objects around, rotate and scale the selection (as in clump together / move further apart from each other)
- Automatically generates useful collision shapes for selected objects and for the static environment
- Offers the ability to run a dynamic simulation to drop the selected objects to surfaces

Asset Manager

Databases

- Supports online databases to allow for individual and on-demand asset delivery.
- The user can create their own databases or use databases provided by default.
- Supports Objects, Materials, Scenes and Node-Based Assets.
- It is possible to hide assets from a specific database without disabling or unmounting this database.

Download

- Assets are now available individually on-demand.
- Online updater has been deprecated. Presets library will be downloaded from the website. Notification of application updates and available language packs will now be seen in the Quick Start panel.

Search and Filtering

- The assets in the browser can be searched and found with a text based search system.
- Special search operators (also text based) can be used to find items based on specific attributes like size, creation data, dependencies, etc.
- Search strings including the operators can be saved as a Smart Search. The Smart search will appear in the Categories list and will perform the search as defined every time the user clicks on it.
- The option Category Search Mode displays the search results not as a plain list, but separates the results in categories.
- Specific filter options are located at the top of the browser as tabs and allow the user to quickly display only the assets which are Objects, Materials, Media, Nodes, Scene Manager Operators or Scenes.
- There is an option to switch filter options automatically based on the context (Object Manager, Material Manager, etc.)
- Some context menus offer the command Reveal in Browser, this allows the user to find the location of the specific assets in the browser hierarchy.

Keywords

- The user can create and assign keywords (tags in some applications) to the assets.
- The keywords will help the user to find specific assets.
- The Keywords can also be added to the Category list, so the user can list all assets, which have this specific keyword applied.

Favorites

- The user can mark specific assets as favorites.
- There is a predefined Favorites smart search in the Quick Access area.

Details Area

- If an asset, category or any other item in the browser is selected, its details can be listed in the Details area. Multi-selection is supported here.
- In the Preview tab of this area the user can see and change the preview of the specific asset.
- In the Info tab of this area the user can see and in some cases even edit some of the specific information like name, type, size, resolution, polygon count, proxy, etc. This information is different for different asset types.
- The Dependencies tab lists other the assets which are used in the selected asset - e.g. textures if a material is selected. This also lists dependents - e.g. in which materials this texture is used, and also lists dependencies on 3rd party plugins and node spaces.
- The Keywords tab allows the user to manage the keywords, which are assigned to the selected asset.
- The Versions tab lists all available versions of the specific asset. There the user can also manage them and create new versions.

Asset Creation

- Specific commands to add objects, materials, scenes and files to the browser.
- Option to convert Content Browser libraries to the Asset Browser database format.
- The node editor offers commands to add nodes to the browser.

Scene Interactions

- Drag-and-drop from the Asset Browser to the various C4D managers will automatically download and add to scene.
- The Place tool can be used to place the object in specific places of the viewport.

Animation

Tween Tool

- Create tween frames between previous and next key
- Interpolate Linear or Along Curve
- Adjust timing / Ripple Keyframes

Character Definition / Solver

- Position and Scale Transfer (in addition to Rotation)
- User Data Transfer
- Allows rigs/controllers to be retargeted
- Per-component strength sliders allow mixing between source and target
- Multiple Character Definition Managers can now be opened

Pose Library

- Thumbnail View now includes dropdowns to select Pose Database and Library
- Libraries, Groups and Poses can now be moved and duplicated within the Manager view
- Compose poses by Drag-and-Drop from the Object Manager
- Apply individual pose parameters by Drag-and-Drop from Pose Manager to viewport or Object Manager
- Tag Parameters can now be stored and applied via the Pose Library

Curve Evaluation and Tangents

- Improved weighted tangents via Bezier rather than Hermite interpolation
- Allows tighter curves for snappier animation
- Improved auto-tangents
- Better evaluation of Remove Overshoot
- Legacy (R23) Evaluation mode can be enabled per-track or per-project

Timeline View and Filtering

- Automatic / User mode toggle to easily choose between filtered track view or specific tracks
- Filter menu for easy access to Track Filtering options
- Filter presets to easily recall various filter settings specific to your workflow

Other Enhancements

- Easily create seamless looping animations with new Track Loop mode
- Skin Deformer performance enhancement
- Keyframes can now be created outside the project time
- Selection to Null command creates nulls based on the position of selected components (point, edges, polygons)
- Constraint tag tab order now reflects the internal evaluation order of the constraints
- Car Rig Character Object preset
- Toon Rig enhanced with updated Spine that now uses Spine IK and Volume Preservation, improved Foot and Hand Controllers

Scene Manager / Scene Nodes (Technology Preview)

Scene Manager

- Hierarchal creation and modification of scenes
- Modifier Stack
- Tag access to key elements of the Modifier Stack
- Placeholder Objects to guide hierarchal inputs
- Links and Instances
- Bypass individual objects / modifiers / nodes
- Viewport / Render Visibility of Scene Manager / Scene Node objects

Scene Nodes Core

- Dedicated Scene Root node
- Hierarchy definition no longer requires a Children Op
- Matrix now includes Shear

Distributions

- Surface Fill
- Surface Voxel Solidify
- Volume Voxel Fill
- Standard Particles
- Thinking Particles
- Distribution Looping Function
- Get Context Nodes

Viewport Interactions

- Select Scene Manager / Scene Node objects within the view
- Interactively Move/Scale/Rotate Scene Manager / Scene Node objects
- Place Scene Manager / Scene Node objects in relation to each other and Classic C4D objects
- Interaction with Classic Cinema 4D
- Drag and drop Classic C4D objects to Scene Manager / Scene Nodes
- Access User Data on Classic C4D objects

New Nodes

- Geometry Collision
- Ray Collision
- Geometry Property Interpolate
- Modeling Ops: Dual Mesh, Greeble
- Selection Ops: Select Bounding Box, Select Facing, Loop Selection, Ring Selection, Edge Break
- Generators: Grass, 7-Segment, Atom Array, Import Geometry

Debugging Tools

- Simple Port Values can be displayed within the node graph via Port Debug Info
- Info Overlay HUD within Scene Nodes interface displays key info about selected nodes and ports
- Data Inspector provides detailed introspection of port values in table format

Nodes API

- Allows 3rd-party developers to implement Node Spaces and Nodes via C++ API
- Access, create and edit Node System assets in C++
- Basic graph operations in Python and C++ (e.g. iterate a graph over nodes and ports, print port values)
- Import/Export a specific Node Space graph

Other Enhancements

UV Enhancements
- Select All UV Seams command
- Fill Selection tool now works in UV Editor
- Outline Selection tool now works in UV Editor
- Frame Selected UV Elements (S) and Frame Selected UV Islands (O) within the UV editor
- Updated Ministry of Flat / Automatic Packed UV algorithm includes improved detection of beveled edges for potential seams
- Allow Stretch option offers user control over polygon stretching in Automatic Packed UVs

Viewport
- C4D Viewport on Windows now uses DirectX rather than OpenGL for future-proofing
- Fast Approximate Anti-Aliasing (FXAA) - screen-space viewport anti-aliasing
- Shadow-hinting to assist in object positioning in the viewport.
- Grid fades based on distance
- Option to auto-switch view to Geometry Only on playback / scrubbing

Workflow Enhancements
- Store Selection command creates new point, edge, polygon selections
- Improved layout of Point, Edge, Polygon tag attributes
- Solo now acts as a single-button toggle
- Safe Frames can now be toggled via the View Panel / Options menu
- Integrated CV-Tokens for date/time, author, computer, username, height and renderer
- Instance Object now includes "Swap with Reference" option
- Any chip within Color Chooser can be dragged into the Node Editor to create a color node (and vice-versa)

Exchange
- USD Import supports materials
- USD Export supports materials including baking of 2D maps (for Node-Based Materials only)
- Substance Update
- Sketchup Update
- Exchange Preference reorganization
- GoZ Update

Magic Bullet Looks 5
- Magic Bullet Looks within Cinema 4D now offers all features of Magic Bullet Looks 5, including:
- LUT Browser
- Color Remap
- Huenity tool for customizing a range of hues
- Channel Mixer
- Improved Color Handling
- Improved Preset System and over 100 new Look presets
- Improved 'Send to Magic Bullet Looks' in the Picture Viewer, allowing Looks to be applied easier post-render

Redshift Integration Enhancements (in concurrent Redshift release)
- New Basic tab for easy/intuitive access to most important Render Settings
- Improved organization of Redshift Advanced Render Settings
- Redshift Viewport IPR enhancements
- Redshift commands and objects integrated within Cinema 4D menu system/option to hide Redshift menu