The open architecture in Maya Complete software allows you to easily integrate Maya content into your production pipeline.

Maya Complete™ is the award-winning 3D modeling, rendering and animation software from Alias|Wavefront™ that delivers all the tools and features professional digital content creators need to produce world-class animation and visual effects for the Mac OS X operating system.

The features in Maya Complete software are all perfectly integrated into a single environment that is optimized for maximum speed and the smoothest possible workflow.

Simply put, Maya Complete software is your total solution to producing computer graphics with a sophistication and speed previously unattainable on the desktop.
Maya software ships with a complete set of online user documentation including a Learning Maya tutorial which steps the user through the software by illustrating concepts through a series of tutorial exercises. Alias|Wavefront also offers a complete program designed for all levels of learning from novice to expert.

Maya is a true Macintosh application which conforms closely to the Apple standard Aqua user interface. The advanced UI in Maya, with new Hotbox and Marking Menus, is both customizable and self-teaching. The software’s unique Marking Menus for example, train the user to advance from beginner to expert with each use by revealing only the information required by the user at any stage of operation.

Maya also features advanced brush-based technologies such as Maya Artisan and Maya Paint Effects which provide intuitive methods for working with 3D that are familiar to 2D professionals. Maya was created to fit neatly into existing production pipelines and is designed to work well with complementary products in the traditional 3D-2D workflow.

Maya software ships with a complete online user manual which includes a Learning Maya tutorial which steps the user through the software by illustrating concepts through a series of tutorial exercises. Alias|Wavefront also offers a complete program of training courses designed for all levels of learning from novice to expert.

**MAYA COMPLETE INCLUDES:**

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<td><strong>Modeling</strong></td>
<td>Industry-leading NURBS and polygon tools.</td>
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<td><strong>Maya Artisan™</strong></td>
<td>Highly-intuitive integrated brush interface for digital sculpting, and painting of textures and attributes onto NURBS and polygons.</td>
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<td><strong>Animation</strong></td>
<td>Trax™ non-linear animation editor, inverse kinematics (IK), powerful character skinning, advanced deformation tools, and general keyframing tools.</td>
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<td><strong>Maya Paint Effects™</strong></td>
<td>Unique paint technology for easily creating 3D scenes or 2D canvases of unparalleled complexity, detail and realism.</td>
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<td><strong>Dynamics</strong></td>
<td>Fully integrated particle system plus high speed precision rigid and soft-body dynamics.</td>
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<td><strong>Rendering</strong></td>
<td>Film-quality renderer with fully interactive editing and advanced visual effects.</td>
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<td><strong>MEL</strong></td>
<td>Open interface for customizing and scripting Maya Complete.</td>
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**TECHNICAL FEATURES**

- **Modeling Productivity**
  - Unmatched productivity through a combination of performance and workflow. Examples include 3D manipulators, selective display, unlimited undo, and automation of frequent or repetitive tasks using macros.
  - Fully editable and animatable construction history allows extensive modifications to any model without having to rebuild it.
  - High level of interactivity, even while modeling very large scenes.
  - Level of Detail (LOD) controls to optimize scenes for interactive display.

- **Maya Artisan Modeling and Character Building Tools**
  - Use the natural brush interface in Maya Artisan software to interactively sculpt and paint attributes on polygons and NURBS, or to paint geometry onto surfaces.

- **Spline Modeling Tools**
  - Based on the Academy Award® winning NURBS technology, from Alias|Wavefront. Maya contains the world’s most precise curve and surface modeling tool set.

- **Polygon Tools**
  - Streamlined non-manifold architecture focused on detailed creation, editing, and texturing of polygonal models down to the face, edge, and vertex level. Includes polygon reduction, data cleanup, color per vertex, multiple UV per vertex, and pre-lighting support for both general and games/interactive use.

- **Polygon Texture Assignment/Editing**
  - Streamlined workflow for creative texturing, including UV auto-projection and relaxation tools.

- **Deformation Tools**
  - Use lattices, sculpt objects, wires and other deformers for modeling characters and other freeform shapes.

- **Surface stitching**
  - Stitch adjacent NURBS surfaces together while maintaining full continuity.

- **Procedural Modeling**
  - Create complex objects/scenes using scripts as an alternative to GUI-based tools.
General Animation
Maya Complete software includes a comprehensive suite of tools that address every aspect of keyframe and procedural animation.

Character Animation
Maya Complete software offers the deepest functionality for creating, animating, and editing digital characters.

Maya Paint Effects
A groundbreaking and unique paint technology for creating amazing natural detail on a 2D canvas or in true 3D space.

Powerful General Keyframing Tools
• Fast cut, copy and paste of animated objects in the timeline
• Animation Playback for rapid review of complex scenes

Graph Editor and Dope Sheet
• Powerful, precise visual control over how any animated parameter changes over time. All attributes of any object in Maya are fully animatable.
• Dope Sheet allows rapid and intuitive global editing of keyframe timing

MEL
• Maya Embedded Language offers full scripting of any Maya feature — everything can be accessed
• Users can easily create custom macros and scripts or reconfigure the user interface

Path Animation
• Easily animate an object along a curve or surface, while editing the path or other animation parameters during playback

Set Driven Key
• Quickly and easily establish relationships where one action automatically drives another

Channel Box
• Quickly edit an object’s attributes on screen, one or more fields at a time

Generalized Constraints
• Comprehensive assortment of constraints including point, aim, orient, scale, geometry, normal, tangent, and pole vector

Powerful Expressions
• Attributes can be controlled using multi-line, complex expressions with the integrated scripting language in Maya

Blend Channels
• Using MEL, mix multiple animation channels into a single result

Procedural Animation
• Create complex animation using MEL procedures rather than traditional keyframing

Pose Based Characters
• Simplified character controls with keys and breakdowns approximate the way traditional character animators actually work

Trax Non-Linear Motion Compositor
• Non-destructive mixing and editing of animation tracks with total control over all aspects of motion blending
• Allows animators to quickly modify any aspect of a character’s motion, or allows game artists to prototype multiple character moves in a game
• Libraries of character moves can be stored and edited

Skeletons and Inverse Kinematics (IK)
• Three built-in IK solvers reduce time to create high quality character animation. Attributes include joint limits, stiffness, damping, preferred angles, etc.
• IK Spline Solver easily animates skeletal chains like a character’s spine or tail

Skinning
• Sophisticated skinning methods offer precise control of skin behavior, even in the most challenging areas like shoulders

Layered Deformations
• A comprehensive range of deformation alternatives is available, giving animators extensive control while simplifying setup
• Deformations work on both NURBS and polygons
• Includes Lattices, Sculpt Objects, Skin Clusters, Point on Curve Constraints, Blends, Wires, Wrinkle Tool, Bind/Detach Skin, Flow, and Wrap deformers
• Easily drive deformations by transformations of one or more joints
• Ideal for animating muscles, skin, and clothing
• Deformers may be layered and reordered at any time

Integrated Sound Synchronization
• Ideal for facial animation/lip synchronization or any other animation requiring precise sync to soundtrack

Motion Capture with Dense Data Editing and Re-sampling
• Allows motion capture data to be easily utilized and manipulated inside Maya software
• Blending of hand animation with motion capture data
• Dense data reduction and processing of motion curves

Powerful Painting Techniques
• Create a jungle of trees and plants in a matter of minutes, and walk your character right through it
• Add flowing hair and flickering flames in seconds for a level of realism previously unattainable in CG and still keep your file sizes manageable
• Define a logotype in glorious oil paint, and watch it draw on over time while your camera flies past
• Paint fantastic repeating textures for your game levels and see them update right on your model

Maya Paint Effects Brushes
• Completely integrated inside of Maya software, the Maya Paint Effects tool comes with a myriad of editable, pressure-sensitive preset brushes

Natural Media Brushes
• Extensive range of traditional painterly brushes available, including airbrushes, oil paint, chalk, pastels, pencils, watercolors, wet brushes, and markers

Effects Brushes
• Vast range of realistic effects, including complete environments with trees, grass, and flowers; characters with realistic hair, eyebrows, and beards; and special effects like lightning, clouds, rain, starfields, fireworks, fire and sparks

Brush Attributes
• All Maya Paint Effects brushes, no matter what their appearance, can be used either in true 3D space (allowing you to paint on or between 3D objects in your scene), or on a 2D canvas (useful for creating images and textures)
• Brushes can be blended together to make an infinite range of new user customized presets
• Brushes are fully animatable, and many of the presets have built-in dynamics settings such as turbulence and gravity

Maya Paint Effects Rendering
• Maya Paint Effects strokes can be drawn fully-rendered during interactive painting, providing immediate feedback to the user; final rendering is extremely fast, resolution-independent, and can include 3D cast shadows, depth-of-field, fog effects and motion blur
**T E C H N I C A L  F E A T U R E S**

**Dynamics**
Supports complex dynamic interaction including collisions between rigid-bodies, soft-bodies, and particles.

- **Rigid-Body Dynamics**
  - Realistic high speed simulation of multiple rigid objects, includes dynamic constraints such as nails, hinges, barriers, pins, and springs

- **Soft-Body Dynamics**
  - Accurate and rapid simulation of flexible objects allowing for the easy creation of secondary motion effects like muscle jiggles, floppy hats, etc.
  - Powerful spring architecture offers precise control of any flexible surface down to the individual springs

- **Extensible Integrated Particle System**
  - Powerful integrated particle system with expression based control over particle attributes, motion, and dynamics
  - Direct manipulators provide interactive control of particles, fields, and emitters
  - Textured control of particle emission allows particles to be controlled by texture values
  - Geometry instancing allows the placement of single or cycling geometry onto any particle
  - Particle collision events can trigger multiple procedural animation effects
  - Keyframe control possible by adjusting the base timing for each individual particle object effect

- **Volume Particle Controls and Emitters**
  - Intuitive control of particles via geometric shapes makes it easier to control particles where and when you want them

- **Field Controls**
  - Apply field forces like gravity, vortex, air, turbulence, etc. to any rigid-body, soft-body, or particle object
  - Custom fields can be added via the extensive dynamics API

- **Clip Effects**
  - Library of ready-made effects such as fire, curve and surface flow, shatter, fireworks, and lighting

**Rendering**
Maya Complete delivers film quality rendered images of stunning clarity and realism.

- **mayaPro™**
  - Interactive Photorealistic Rendering (IPR) delivers instantaneous editing of color, texture, lights, shadows, glows, motion blur, and many other effects in the final rendered image

- **HyperShade and Visor**
  - HyperShade allows the artist to visually design and edit simple to highly sophisticated shader networks such as skin, dirt, or rusty surfaces.
  - Full drag and drop workflow throughout the rendering GUI simplifies workflow.
  - Visual Outliner (Visor) displays libraries of textures and images, or image swatches for easy selection

- **Maya Artisan Paint Textures**
  - Integrated texture painting of color, bump, transparency, and other renderable effects using the natural brush interface in Maya Artisan directly on to NURBS or polygon surfaces

- **Lighting and Optical Effects**
  - Point, Spot, and Area lights for realistic illumination
  - High speed 2.5D motion blur, or precision 3D motion blur and depth of field effects heighten photographic realism
  - Realistic glows, fog, lens flares, and atmospheric effects

- **Rendering Productivity and Performance**
  - Utilizes fast selective ray-tracing for maximum efficiency
  - The Maya renderer is a fully integrated part of the Maya architecture.
  - No export to external formats or separate files is required.

- **Software Particle Rendering**
  - High quality software particle rendering with a comprehensive assortment of effects including blob, tube, and cloud rendering for gas clouds, fire, liquids, etc.

- **Hardware Rendering**
  - High-speed production quality hardware rendering with display controls such as texturing, multi-pass rendering, and motion blur

- **Image Quality**
  - Enhanced bump mapping, texture filtering and tessellation

**Integration and I/O**
The open architecture in Maya Complete software allows you to easily integrate Maya content into your production pipeline.

- **Compositing Integration**
  - Render Layer and Render Pass management closely integrates Maya into the compositing process by separating designated scene elements into distinct image layers for greater editing flexibility

- **Data Import**
  - File types: mayaAscii, mayaBinary, mel, OBJ, aiff, image, mov (ascii motion), VRML2, QuickTime

- **Data Export**
  - Geometry: OBJ, VRML2, mayaAscii, mayaBinary, mel, mov, GE2, RTG, QuickTime
  - Image: Maya IFF, Wavefront RLA, bmp, TIFF, SGI RGB, Alias PIX, JPEG, Targa®, and all QuickTime formats

**Platform**
Mac OS X
G4 Processor
256Mb RAM minimum
512Mb RAM recommended
3-button mouse

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