

...imagination

ABOVE THE CLOUDS,

WHERE IDEAS BECOME

REAL WITH THE WORLDS

MOST POWERFUL

ANIMATION SOFTWARE,

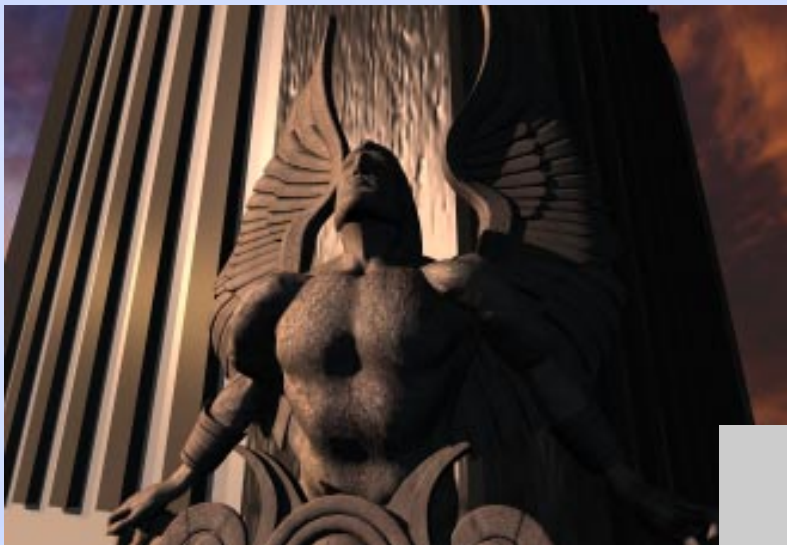
SOFTIMAGE 3D.

ACHIEVE YOUR VISION

With Softimage® 3D, you can make your ideas fly, flinch, cry, pinch—and be as real as you want them to be.

For the last decade, Softimage 3D tools have helped animators and producers deliver on the greatest ideas in animation history. They've even made dinosaurs fly.

Whatever you'd like to see fly (or jump or bounce or stretch), in Softimage 3D you'll find the tools you need to make it happen. Any animation software can make objects move... but with Softimage, you can move audiences. With characters full of personality and emotion that just couldn't get off the ground with any other package.



Perfect shadows, transparency, and depth-of-field effects were achieved with the programmable **mental ray** renderer* (left). Shaders were selectively applied to each scene element to individually control textures, materials, lights, lenses, geometry, and environments.



©1996 Softimage. Image courtesy of Industrial Light & Magic

The artist selected from a broad range of **modeling tools**—splines, patch, polygons, and NURBS—to create the exact look and feel of the character (right). Productivity tools like **Relational modeling** and **instancing** simplified creation of this complex model.

* Currently available for SGI; check with your Softimage reseller for availability on Windows NT.

Facial expressions were achieved by defining and saving key shapes in a library of **shape animations** (below), then reusing them throughout the sequence. Transitions were further refined by applying additive and average cluster animations.



Joe & Basket (Mostly Sports) — ©1995 Spans & Partner GmbH



Inverse kinematics (IK) with adjustable joint sensitivity and dampening was used to create believable movements (left). **Constraints** and artist-defined **expressions** provided exacting control for fine-detailed skin deformation and range of motion.

Using the **built-in Softimage 3D renderer** (left), the artist chose from a variety of configurable options—such as raytracing reflection depth, levels of antialiasing, and degree of motion blur—to achieve the desired results.

NO MORE BRICK WALLS

... unless that's the effect you want.

The Softimage 3D toolset offers unparalleled depth and detail. For every concept, there are *so many* ways to achieve the lifelike motion and the absolute quality output you want.

Softimage 3D puts every tool imaginable at your fingertips, to push, pull, squash, twist any object in any way you can think of—and probably a few that never crossed your mind.

The best in 3D computer animation—ground-breaking films, blockbuster games, hot new interactive titles—are winners because they're alive and they grab the audience. With the ability to combine Softimage 3D tools in unique ways, every animator has the opportunity to create signature effects that make the audience believe.

You have the power to call all the shots. You can make your characters move the way you want them to and render as you envision. So the quality of the end result matches your original expectations.

The large, **open design** makes it easy to see what you're working on. Key functions are just a mouse click or two away, and frequently used tools remain visible on the main screen.

Viewports are completely user-configurable. You can choose from full-, half-, or quarter-screen display, and orthographic, perspective, wireframe, shaded, color preview, schematic, rotoscoping, depthcue, or ghosting views.

The **schematic view** is interactive—objects can be selected and rearranged to better manage the parent-child relationships.



©1996 Softimage



DESIGNED BY ANIMATORS FOR ANIMATORS

Time and again, animators use the same phrase to describe the experience of working in Softimage 3D: "It works the way you think." Softimage 3D feels like a natural extension of the imagination—everything you need is right where you would expect it to be.

In Softimage 3D, the tools you use most are always visible, and key functions are only a mouse click or two away. The workspace is large and uncluttered, delivering immediate feedback to maintain the flow of your work. That means you can make decisions more quickly, work faster and with fewer hitches. And you'll be more satisfied with the quality of the end results.

The difference? Night and day—slamming against a deadline wall, or coming in ahead of schedule. When software works the way you think, the technology becomes transparent, and you can focus on the challenge of making your ideas really take flight.

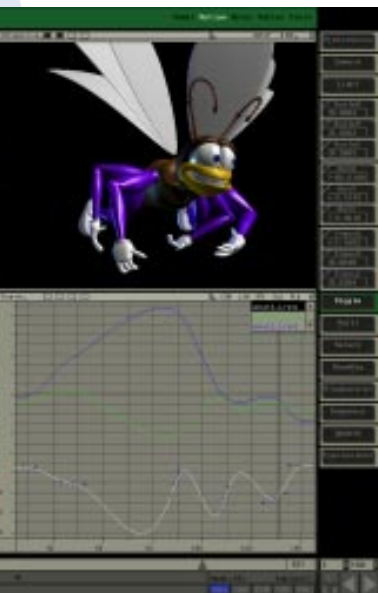
Coca-Cola, Summer Fun—Courtesy of (Colossal Pictures)



To make the umbrella open and move naturally, the artist used unique **lattice and spline deformations**, applying pressure, stress, and strain at the right moments to achieve realism. Using the full complement of Softimage animation tools, 3D art elements were combined with 2D cel facial expressions created in Softimage Toonz, then composited with Softimage Eddie™.

productivity

Select from more than 150 **function curves** (fcurves) for mathematically precise control of animation and other attributes.



The ever-present **playback timeline** provides constant, instantaneous feedback and control. See the beginning and ending frames, frame rate, and total number of frames.

With Softimage modeling, custom effects, rotate facility, and animation tools, this project was completed in record time. The productivity features and speed of the renderer brought the project in ahead of schedule, without sacrificing high-quality output.



COI, Flying Start—Courtesy of FrameStore and Blink Productions



©1994-1995 Sega



Working with some of Japan's best martial artists, the production team used **motion capture** to create the dynamic actions of the characters, in record time. Choose from magnetic, optical, facial, mouse, MIDI, and microphone input or output motion-capture devices. **Polygon reduction** automatically prepared the characters for optimal play-back on leading game systems.

DON'T LET ANYONE CLIP YOUR WINGS

With Softimage 3D available now on Windows NT™ and Silicon Graphics® IRIX (SGI) operating systems, you have choices you never had before. Softimage 3D delivers workstation performance on Windows NT on a range of affordable systems (Intel®, Digital Alpha, or MIPS® processors). So, more animators can have their own workstations. And Softimage 3D offers identical operations and complete compatibility across IRIX and Windows NT, so your existing investments in IRIX animators, hardware, and imagery are still every bit as valuable.

With Softimage 3D for Windows NT, you can choose from a variety of competitive hardware, service, and support options, and integrate seamlessly with your existing IRIX-based workplace. You get the best of both worlds.

Call today for information about Softimage 3D on Windows NT and SGI.

In North America, call 800 576-3846.

Anywhere else in the world, call 818 365-1359. Or visit us at

<http://www.softimage.com>





Three Wishes—©1995 Rysher Entertainment, produced at Tippett Studio



WipeOut game— Courtesy of the WipeOut team
©1995 Psygnosis Ltd.



Bed Time— Big Bang Technologies, Montreal

ROCK SOLID REPUTATION

Softimage 3D has been production-proven by nearly every major film, video, and game producer around the world. They relied on Softimage 3D to produce incredible animation for *Jurassic Park*, *The Mask*, *Casper*, *Jumanji*, *Reboot*, *Liquid Television*, *Sega Virtua Fighter*, and countless commercials, videos, and interactive titles. They stake their reputation on Softimage 3D because it's come through for them over and over again.



Casper—©1995 Universal City Studios and Amblin Entertainment, Inc., Casper™, & ©Harvey Comics. Image courtesy of Industrial Light & Magic



R/GA Digital Studios Inc./Ogilvy & Mather, Houston



La Cite des Enfants Perdus—Buf Compagnie, Claudie Ossard



Gadget Traps—©1995 SYNERGY, Inc. All rights reserved. Created by Haruhiko Shono

MORE POWER. MORE PERFORMANCE. MORE POSSIBILITIES. SOFTIMAGE|3D.

SOFTIMAGE|3D

FEATURE SUMMARY

SOFTIMAGE|3D*

Minimum Recommended System Requirements

Windows NT

- Workstation with Intel Pentium® Pro, Digital Alpha, or MIPS R4400 processor
- Windows NT 3.51 with Service Pack 2 or higher
- 64 MB RAM
- 1 GB hard disk
- 200 MB swap file
- CD-ROM drive

SGI

- Silicon Graphics workstation
- IRIX 5.2 or higher
- 64 MB RAM
- 1 GB hard disk
- 200 MB swap file
- CD-ROM drive

User Interface

- **Views** Perspective, x, y, and z parallel projection, schematic.
- **Manipulation & Transformation Modes** Referential/relative-to-view rotation, referential translation, constant volume scaling.
- **Lighting Types** Infinite, point, selective, spot, sun.
- **Lighting Variables** Color, cone/spread angle, falloff, hue, luminance, position, saturation, selectable object illumination, shadow types (ray-traced, depth map, soft), sun position (geographical location, date) target, umbra/penumbra color.
- **Camera** Up vector constraint, frame selection/all, rectangular/cursor Zoom, zoom, orbit, track, dolly, roll, show/select camera, select interest, hide camera, settings (field of view, depth of field, focal length, aperture, distance to object), picture format (custom, cine, slide, video), turntable view (rotation of camera around one axis in parallel projection view).
- **Camera Memory** Camera position/interest, zoom factor.
- **Hot Key Remapping** Create keyboard equivalents and save them to a preference file.
- **Keyboard Accelerators** Quick access to menu items without using the mouse.

- **Timeline Access** Playback and timeline access for lighting, material, texture 2D, texture 3D, layer fog, camera settings, ambience, and depth fading editors.
- **Animation Tools** Playback from any frame, flip-flop, and loop.
- **Display Stereo Images** Stereo image capability.

Model

- **Geometrical Objects** Face, Polygonal mesh, Polygon, patch, Bezier/Linear/Cardinal/Free Form/B-spline/NURBS spline.
- **2D/3D Primitives** Arc, circle, cone, cylinder, cube, dodecahedron, grid, icosahedron, null, octahedron, square, sphere, spiral, torus, tetrahedron.
- **Operations** Animation-based duplication, alignment, bevel, convert, clean-up, fractalize, guided extrude, breakup, local lattice, shrinkwrap, polyskin, edit point/coordinate, freeze, inverse, merge mesh, merge surface, order, plane clipping, rotate, round, scale, subdivision, symmetry, tag, translate zip patches, extrude, skin, revolution, four-sided patches, proportional modelling.
- **Boolean** Intersection, difference, union.
- **Polygonal Operations** Polygon as object, three-point planar constraint, assignable centroid reference, multiple polygon select, rounding, extrusion, revolution.
- **Animated Modeling Operations** Animated bevel, bridge, bumpmap, duplicator, guided extrude push, shrinkwrap, duplicator, branch.
- **Instantiation** Reference one set of geometry or hierarchy many times.
- **Relational Modeling** Relate an object with its operator: extrusion, revolution, skin, four-sided, zip patches.
- **Polygon Reduction** Rule-based polygon reduction with decimation optimization by percent of reduction or specific polygon count.

Motion

- **Animation** Constraints, dynamics, explicit path, function curves, keyframing, inverse kinematics, lattices, shape, skin distortion, spline/patch deformation, motion capture.

- **Animation Editors** Functions curve, DopeSheet.
- **Constraints** Position, orientation, direction, bounding plane, tangency to animation path, camera/object up vector, normal to polygon surface, object to cluster, cluster to object, three-point planar, two-point linear.
- **Object Attributes** Color transparency, self-illumination, shininess.
- **Functions** Deform, rotate, scale, stretch, translate.
- **Deformations** Cluster, control point, effector, lattice, patch, spline, vertex.
- **Q-Stretch** Automatic "squash and stretch" deformation based on speed and acceleration.
- **Expressions** Define relationships between objects using expressions and math functions. Modify existing function curves or channel input/output.
- **Animation Effects** Flock, wave, explode, glue, flake, jitter, limit, lockdown, magnet, polyshrink.

Motion Capture/Control

- **Data Input Devices** magnetic, visual or mechanical motion capture device.
- **Channels Drivers** mouse, microphone, dial box++, SpaceBall++, Polhemus 3Space FASTRAK, Ascension Flock of Birds, SuperFluo Motion Analysis, Acclaim, Acclaim Skeleton, Kiss, Monkey.
- **Output Channels** Export animation for events triggering, external robotics, sound or motion camera rig control.

Actor

- **Kinematics** 3D ball joints with angle limits, inverse/direct kinematics.
- **Dynamics** Collision, density, elasticity, fan, friction, force, gravity, kinetic/static roughness, mass, nail, wind.
- **Skin** Automatic/local/global/weighted/rigid envelopes.
- **Weighted Envelopes** Automated weighting of vertices. Skeletal memory is maintained when a new skin is applied.
- **Rigid Envelopes** Transformation based envelopes.

Matter

- **Shading Types** Blinn, constant, Lambert, Phong, shadow object.
- **Illumination** Ambient, diffuse, specular.
- **Color Systems** RGB, HLD, HSV.
- **Material Attributes** Refraction, reflectivity, transparency, static blur.
- **Mapping** 2D/3D textures, bump, cylindrical, raytraced/non-raytraced, reflection, reflectivity, spherical, transparency, UV, XY/XZ/YZ, 3D Solid Textures Cloud, marble, wood.
- **3D Solid Textures** Cloud, marble, wood.
- **Masks** Alpha channel, RGB intensity.
- **Rendering Options** Field, frame, wireframe, solo-region, tags, z channel.
- **Effects** Ambience, depth cue, depth fading, layer fog, motion blur.
- **2D Image Retoucher** Integrated 2D paint program accessed from texture editor.
- **UV Texturing** Edit and save UV texture coordinates on mesh objects. UV coordinates lock to vertices.

Tools

- Autotrace, composite, flopbook, file management, hidden line, import/export images, input/output frames on film++/video recorder, output to PostScript--, print in line-rendered format, shell, scan images++, database resource editor**
- **Import/Export Image Formats** Artisan, Alias, Aurora, Everest, RGB, RGBA, SGI, Targa, TIFF, PIC, Verigo, Wavefront, YUV, AVI**, DIB**
- **Import Image Formats** JPEG, GIF, IFL, DMP, FLC, FLI, CEL.
- **Import/Export Object Formats** DXF, IGES (including NURBS entities)
- **3D Studio** Import 3D Studio objects, animation and textures to Softimage 3D.
- **Color Reduction** Color quantize single image or sequence using a color palette or specified number of colors.

Programming Tools

- **Developer's Kit** for information exchange (object/images), custom effect and motion capture programming.

Other Items

- Database tools.

SOFTIMAGE|3D EXTREME†

Softimage 3D, plus:

Model/Motion/Tools- Upgrades

- **Meta-Clay® Modeling** Density-based modeling for organic, sculptured objects.
- **Modeling Effects** Mosaic, Nebula, Wakeup, Zzot, Reset Transf, Boolean2D, ChangelInfo, Eater.
- **Motion Effects** Cometa, Shock, Shock3D.
- **Tools** CubicMap, Deinterlace, FourthD, Label, Puzzle, Timewarp, Watch.

Particles

- **Particles Generation** Pixel-based particle generator using real-world dynamics to create effects such as snow, sparks, fireworks, explosions, smoke, fog, and natural phenomena.
- **Capabilities** Local and global force fields animated explicitly, keyframe and jitter on all parameters, dynamics-based particle animation, 3D geometry as emitters, inter-particle collision detection, particle disintegration and mutation, point/axis/surface/volume particle generation modes, 3D geometry as obstacles.

mental ray Rendering

- **Materials** Index of refraction, shininess, dissolve, ambient, diffuse, reflection, shadow, specular, transparency, transmitted component.
- **Mapping** Bump, displacement, reflection, texture, cubic, projection.
- **Depth of Field** Aperture, aspect ratio, focal length.
- **Effects/Options** Anti-aliasing, edge merging, field rendering, line rendering, motion blurring, special points/curves. OZ Shader Library. Over 45 programmable shaders included for lens effects including fisheye, visible light beams, atmospheric, volumetric, star, and flare effects, using surface, environment, solid material and texture shaders, or create your own.
- **File Formats** Softimage, Alias, Wavefront, Quantel/Abekas, PostScript (line rendering only).
- **Parallel and Distributed Rendering** Distribute rendering across workstation processors or network of workstations.
- **Orthogonal View Rendering** Render distortion-free texture maps.

* = Feature set available for Windows NT and SGI operating systems

† = Currently available for SGI; check with your Softimage reseller for availability on Windows NT

** = Windows NT only

+++ = SGI only

Customer Support

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