

character studio[®] 4 discreet[®]

CHARACTER ANIMATION



Image courtesy of
Blur Studio



Image courtesy of
Tobias Dahlen

character studio[®] 4 is the latest release of Discreet's innovative character motion extension to 3ds max[™] software. Artists can easily create and edit complex character animations using intuitive, highly evolved techniques that simplify the more mundane elements of character animation – allowing for greater focus on the important nuances of creating great characters.

Quaternion function curves

character studio 4 software provides you the ability to animate characters with an easy-to-read function curve system that eliminates difficulties associated with traditional Gimbal Lock. Thought impossible only a few years ago, new quaternion function curves in character studio 4 represent the most stable and predictable rotations available to animators today. As a result, character studio 4 software breaks new ground by allowing the resulting animations to be represented with accurate curves.

Non-linear animation mixer

character studio 4 offers a constraint-based animation mixer that provides you with the flexibility to blend motion files smoothly – a great way to make the most out of existing motion libraries or blend motion capture and keyframed elements. The new time warp ability offers you ultimate control over staging and changing animation timings.

Saving 3ds max IK/Bones into .bip files

Now you can load and save 3ds max IK animations (including 3ds max bone chains, linked objects, the Biped Head Target object, etc) along with the Biped file – keeping all animation data in a central location and making character management much easier.

3ds max controllers

The powerful controller subsystem available in 3ds max software is now able to drive character motion on the Biped[®] system as well. Add nervous twitches to rickety old bones, or blend random algorithms into character motions for even more “life”. The possibilities for easily creating compelling, lifelike animations just expanded through an improved approach to creating and managing animation data. 3ds max controllers can also be consolidated and used with the Animation Mixer.

Animation analyzer and fixer

The animation fixer provides you an analysis of any animation on a biped (including attached/associated bones) for the purpose of checking minute discontinuities. The Animation Fixer then suggests a number of approaches for fixing any annoying animation “pops” that may occur, including a “best guess” mode. This helpful option enables the system to tweak the data in a way that maintains tangencies and provides absolutely smoother character motions.

Motion capture advances

character studio software's industry-leading motion capture technology now supports toe animation and re-targeting of prop data.

Biped props

Biped has added three systemic prop objects that can be animated like 3ds max objects – allowing for animation to switch an object's point of origin, such as juggling objects or switching a weapon from one hand to another. Prop objects can also be animated across coordinate systems – for example, placing a prop down in a scene and then picking it up again with a different character.

discreet® realize

The easiest approach to IK available
Starting with **character studio** is as simple as drag and click. Your IK chain and constraints are handled for you automatically with this highly productive approach to quickly creating characters. And yet the system remains fully flexible so you can adjust almost any character parameter even after complex animations have been applied.

Figure editing tools

Even with full motion capture applied, you can change your character setups whenever you would like without destroying applied motion.

- Copy and paste poses between characters
- Change bone length
- Add/remove spine/finger/toe segments

Motion capture tools

character studio 4 offers the best motion capture filtering and editing available, fully integrated in **3ds max** software.

- Supports BVH and CSM data
- Marker Data information is available to set-up and integrate your own MoCap data
- Simple conversion of multiple MoCap files into Biped data with batch processing
- Blend MoCap data segments with Keyframes, Footsteps, and Crowd solutions

Crowd tools

- Handles large groups of biped and non-terrestrial creatures
- Includes integrated, scriptable behavioral system
- Scattering tool for cloning, distributing, and orienting delegates randomly across a surface or within a volume to set up initial conditions

Motion flow editing

- Map out the animations and probabilities of available character motions for any given crowd simulation
- Share Motion Flow networks between large numbers of characters
- One-click unification of motion flow scripts into standard Biped Animation files

Character skinning (Physique®)

- Highly optimized skinning algorithms for better viewport performance
- Skins biped and **3ds max** bones (even "free-floating" bones) within the same modifier
- Intuitive Morph and Joint-based Deformations, intuitive Tendons, and Bulge controls for creating the exact look required when any joint is rotated
- Fine tuning of Skin Sliding (inside and outside mesh control around the joint)
- Pinch and Stretch Skin to accommodate creases or remove bunching
- Weighted Blending ensures that skin moves evenly and naturally
- Supports all **3ds max** geometry types, with predictable and easy to manage results

System requirements

- Intel® or AMD®-based Processor at 300 Mhz minimum (Dual Intel Pentium® 4 processor or dual AMD Athlon™ system recommended)
- 256MB RAM and 300MB swap space minimum (1GB RAM and 2GB Swap Space recommended)
- Graphics card supporting 1024 x 768 x 16-bit color. (OpenGL and Direct3D hardware acceleration supported; 24-bit color, 3D graphics accelerator preferred)
- Windows-compliant pointing device (specific optimization for Microsoft Intellimouse™)
- CD-ROM drive
- **3ds max 3.1, 3ds max 4.x, or 3ds max 5**
Optional: sound card and speakers, cabling for TCP/IP-compliant network, 3D hardware graphics acceleration, video input and output devices, joystick, midi-instruments, 3-button mouse

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