

1 Toddot Comparison List. Complete.						
Platform	Prime	Broadcast	Visualize	Studio	Lite	
Mac and Windows	x	х	x	x	X	
64-bit architecture	X	х	х	x	X	
OpenGL 3.0 support	х	х	х	х	х	
API: C++, Python	X	х	х	x		
API: C.O.F.F.E.E.	X	х	x	x	X	
Interface & Workflow	Prime	Broadcast	Visualize	Studio	Lite	
Context-sensitive, fully-searchable HTML help	х	х	х	х	х	
Commander	Х	х	х	х	х	
ToDo List	Х	х	х	х	х	
Multiple projects open at once	х	х	х	х	х	
Customizable toolbars / layouts / menus	х	х	х	х	х	
Light and dark interface schemes	х	х	х	х	х	
Unlimited view windows	х	х	х	х	х	
Head-up display (HUD)	х	х	х	х	х	
Custom pop-up menu	х	х	х	x	х	
Non-modal tools with realtime feedback	X	х	х	х	х	
Collapsible Managers and Palettes	х	х	x	x	х	
Selection / display filters	х	х	x	x	х	
Custom User Data per object	Х	х	х	х	х	
Doodle viewport annotation tool	Х	х	х	х		
Layer system for object and material management	Х	х	х	х	х	
XRef external instancing / referencing system	Х	х	х	x		
Tablet support for Wacom and other pen tablets	х	х	х	x	х	
3dconnexion 3DMouse support	х	х	х	х		
Stereo display in Viewport	Х	х	х	х		
Object highlighting	Х	х	х	х	х	
*All versions available in 11 languages: English, German, Spanish, Italian, French, Ca	zech, Russian, Korea	ın, Japanese, Ch	inese, Arabic			



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Cameras	Prime	Broadcast	Visualize	Studio	Lite
Camera, Target Camera, Stereo Camera	x	х	X	x	X
Motion Camera, Morph Camera	x	х	х	х	
Camera Calibrator			х	x	
Camera Composition Helpers	x	х	х	х	x
Camera focus picker	х	х	х	x	х
Data Exchange / Format Support	Prime	Broadcast	Visualize	Studio	Lite
QuickTime support	Х	х	х	х	х
AVI support	Win	Win	Win	Win	Win
Image formats - float with layers: PSD, TIFF, OpenEXR	Х	х	х	х	х
Image formats - float: HDR, DPX, RLA, RPF	Х	х	х	х	х
Image formats: BMP, IFF, JPG, PICT, PNG, TARGA	х	х	х	х	х
Quicktime VR object, panorama	х	х	х	х	х
After Effects / CINEMA 4D Layer Compatible	х	х	х	х	х
After Effects (.aec) export/save with 3D data	х	х	х	х	
Nuke exchange	х	х	х	х	
Photoshop exchange	х	х	х	x	х
Apple Motion compositing exchange with 3D data	x	х	х	х	
Apple Final Cut Pro compositing exchange	Mac	Мас	Mac	Мас	
Digital Fusion compositing exchange	Win	Win	Win	Win	
Shake compositing exchange	х	х	х	х	
Support for DXF, DWG, 3DS, DAE, FBX, DEM, LWS, STL, VRML2,	x	х	x	x	x *
OBJ, Collada (DAE), Alembic (ABC)					
IGES importer			X	Х	
Okino connection - CAD file import via optional PolyTrans software (Windows only)			x	x	
BodyPaint 3D exchange - 3ds Max, Maya, Softimage and Lightwave	Х	х	х	х	
*Import only					



Modeling Tools	Prime	Broadcast	Visualize	Studio	Lite
Parametric object primitives	х	х	х	х	х
Scene Objects: Floor, Sky, Environment, Stage, Foreground, Background	x	x	х	x	x
Parametric spline primitives	х	х	х	х	х
Extrude, Lathe, Loft, Sweep	х	х	х	х	х
Polygonal modeling tools with N-gon support	х	х	х	х	
HyperNURBs subdivision surfaces	х	х	х	х	х
Modeling Generators: Metaball, Boolean, Symmetry, Array, Atom Array, Instance, Connect, Spline Mask	х	x	х	х	х*
Deformers: Bend, Twist, Bulge, Shear, Taper, FFD, Formula, Wind, Explosion, Melt, Shatter, Wrap, Polygon Reduction, Spherify, Spline Rail, Spline Deformer, Squash & Stretch, Connection, Jiggle, Surface, Wrap	х	x	x	x	x **
Displacement, Collision, Camera, Smoothing, Spline Wrap and Shrinkwrap deformers	х	x	х	х	
Workplanes	х	х	х	х	х
Dynamic / inferred guides	х	х	x	x	х
Guide objects	х	х	x	x	х
Snapping Toolset	х	x	x	x	х
Interactive brush sizing	х	x	x	x	x
Raycast selection / RMB	х	X	X	X	х
* Array, Boole, Spline Mask, Instance only. **Bend, Bulge, Sheer, Taper, Twist, Explosion	FX, Formula, W	ind only			
Sculpting	Prime	Broadcast	Visualize	Studio	Lite



Materials & Texturing	Prime	Broadcast	Visualize	Studio	Lite
13 Material Channels: Color, Diffuse, Luminance, Transparency, Reflection, Environment, Fog, Bump, Normal, Alpha, Specular, Glow, Displacement	x	x	x	x	х
Transparency with absorption, internal reflections, exit reflections	х	х	x	х	х
Blurry reflections and transparencies	X	X	x	x	X
Normal maps: tangent, object or world	X	X	x	x	X
Displacement: intensity (centered), red/green and RGB	X	X	x	x	x
Choose Photoshop PSD layers per usage	х	x	x	x	х
Animated textures (MOV, AVI, sequence) with viewport preview	х	x	X	х	х
Selectable viewport resolution and channel display per material	х	x	X	х	х
Shading models: Phong, Blinn, Oren-Nayar	х	х	x	х	х
Fresnel Shader incl. physically correct IOR	х	х	X	х	х
Noise Procedural shader with 32 different noise algorithms	х	х	Х	Х	Х
Layer shader	х	х	X	х	х
Proximity-based Proximal shader	х	х	Х	Х	х
Procedural surface shaders	х	х	X	х	х
Texture Baking	х	х	X	х	х
Sub-polygon displacement			X	х	
Sub-Surface Scattering		х	X	х	
Terrain Mask shader			X	х	
Brick, Wood, Pavement, Weather and Normalizer Shaders	х	х	х	х	
Sketch & Toon Art, Hatch and Spot (halftone) shaders			х	х	
3D Painting with layers, blend modes and Photoshop compatibility	х	х	Х	Х	х
Multi-brush painting of multiple material channels	х	х	Х	Х	х
Raybrush painting directly onto rendered result	х	х	х	х	х
Projection painting	х	х	х	х	
Exchange projections with Photoshop	х	х	х	х	x
Camera Mapping	х	х	х	х	х
ProjectionMan camera mapping workflow tool	х	х	x	х	х



UV Editing	Prime	Broadcast	Visualize	Studio	Lite	
UV editor	x	x	x	x		
Interactive UV mapping by projection types	X	x	x	x		
Optimal UV mapping to automatically remove seams	X	x	x	x		
LSCM unwrapping and relaxing	x	x	x	x		
ABF unwrapping and relaxing	X	x	X	х		
Lighting	Prime	Broadcast	Visualize	Studio	Lite	
Light Types: Omni, Spot, Infinite, Area, Square Spot, Parallel Spot, Square Parallel Spot	х	x	х	x	х	
Hard, Soft, Area shadows	x	х	х	х	х	
Visible, Volumetric and Inverse Volumetric lighting	X	x	X	х	х	
Noise within light illumination or visibility	x	х	х	х	х	
Include/exclude light diffusion, specular, shadow per object	х	х	Х	х	х	
Custom lens flares	x	х	Х	х	х	
Caustics			Х	х		
Color temperature in Kelvin	x	x	X	х	х	
Photometric brightness setting in Candela and Lumen	x	x	X	х	х	
Support of IES light data			X	х		



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Rendering	Prime	Broadcast	Visualize	Studio	Lite
Render up to 128,000 pixels square / 32 bits per pixel	x	x	х	x	800x600
Bucket rendering	х	х	х	х	x
Render instances	х	х	х	х	x
Color profile support	х	х	х	х	x
Camera white balance	х	х	х	х	х
Linear workflow	х	х	х	х	х
Adaptive antialiasing	х	х	х	х	х
Multi-Pass output	х	х	х	х	X *
Object buffers - specify unique alpha channels per object	х	х	х	х	X *
Ambient Occlusion	х	х	х	х	х
Global Illumination (IR, QMC, mixed)		х	х	х	
Physical Renderer with physical camera, high-quality depth of field, high-		.,	.,		
quality motion blur		X	Х	X	
Stereo rendering	х	х	х	х	
Depth of Field post effect			х	х	Pass
Vector Motion Blur post effect			х	х	Pass
Position Pass	х	х	х	х	х
CineMan Renderman-compliant bridge			х	х	
Sketch and Toon non-photorealistic rendering			х	х	
Pyrocluster volumetric particle rendering			х	х	
Physical Sky			х	х	
3D Sound Rendering	х	х	х	х	х
Picture Viewer: color correction, image merge, anaglyph preview	х	х	х	х	х
Watermark post effect	х	х	х	х	
Render Queue batch rendering system	х	х	х	х	
Network rendering clients		3	3	unlimited	
*Only available thru the AE CINEMA 4D Layer.					



Todas Companion Lion Complete						
Animation	Prime	Broadcast	Visualize	Studio	Lite	
Easy one-click record button to keyframe Position, Scale, Rotation, Point Level animation and user-defined parameters	x	x	x	x	x	
Record dot animation of all animatable parameters	х	х	x	х	х	
Automatic keyframing	х	х	х	х	х	
Cappucino - realtime keyframing				х		
PowerSlider animation toolbar for playback and keyframe manipulation	х	х	x	х	х	
Timeline - up to four timeline windows with customizable track display and dopesheet or F-Curve view modes	x	x	x	x	x *	
F-Curve Snapshot and Reduced Modification curves	х	х	x	х		
Constant Velocity option per track	x	х	x	х	X	
Keyframe reduction	x	х	x	х		
Keyframe baking	х	x	X	x		
ASCII animation import	х	x	X	x		
Non-linear animation / motion mixing system	х	х	x	х		
Constraints: PSR, Up-Vector, Clamp, Mirror, Parent, Aim, Spring	х	х	x	х		
Driver tag				х		
XPresso - node-based Expression Editor	х	х	x	x	X**	
Virtual Walkthrough tool - first-person navigation and animation			х	х		
*One Timeline window only. **Does not include the Python Node.						



Dynamic Animation	Prime	Broadcast	Visualize	Studio	Lite
Basic particle system	х	х	х	х	
Thinking Particles node-based particle system				х	
Rigid Body dynamics (limited to MoGraph objects)		х		Х	
Rigid Body dynamics				x	
Joints, Springs, Motors				х	
Soft Body dynamics				х	
Aerodynamics forces				Х	
Plastic & Breaking Springs				х	
Breaking Connectors				х	
Cloth dynamics & dressing functions				Х	
Hair dynamics				x	
Spline dynamics				x	
MoGraph Tools	Prime	Broadcast	Visualize	Studio	Lite
Cloner object		х		x	
Fracture object		х		x	X *
Matrix object		х		x	
MoInstance object		x		x	
MoText object		x		x	
Tracer object		х		x	
MoSpline parametric spline generator with L-system functionality		х		x	
Effectors for Position, Scale, Rotation, Color, Time using Falloff, Shader, Random, Formula, Delay, C.O.F.F.E.E., Inheritance, Sound, Spline, Step, Target, Time or Volume		x		x	x *
PolyFX polygon fracture deformer		x		x	
MoGraph Selection tag		x		x	
Beat Shader		Х		x	
MoGraph Multi-shader (blend)		Х		x	
Extrude Deformer		х		x	
*Fracture Object, Plain and Random Effectors only after registration.					



Character Animation Tools	Prime	Broadcast	Visualize	Studio	Lite
Character object / autorigger				х	
CMotion - parametric walk system				х	
Joints with full dynamic IK	х	х	х	х	
Skin Deformer supports linear, spherical and blended deformation based on joints	x	x	x	х	
Weight Manager and tools	х	х	x	х	
Auto weighting	х	x	x	x	
PoseMorph morphing and hierarchical mixing system				x	
Mirror tool	х	x	X	х	
Naming tool	х	x	X	х	
Paint tool	х	х	x	х	
Weight effector	х	х	x	х	
VAMP tool for translating weights, morphs, selection, textures, Uvs and vertex maps between different geometry				х	
Cluster deformer	х	х	х	х	
Morph deformer				х	
Tension tag				х	
Quaternion tag				х	
Point Cache tag	х	х	х	х	
Muscle deformer				х	
Point Cache deformer	х	х	х	х	
Correction deformer	х	х	х	х	
Visual Selector				х	



Hair Simulation and Rendering	Prime	Broadcast	Visualize	Studio	Lite
Guide-based Hair system				x	
Hair instancing				x	
Feather object				x	
Fur system				x	
Hair styling tools: Move, Scale, Rotate, Brush, Comb, Clump, Curl, Cut, Push, Straighten, Add Guides, Mirror, Set Roots				x	
Hair dynamics				x	
Hair shading system with multiple speculars, texture-defined root/tip colors, variable transparency, thickness, length, scale, frizz, kink, density, clump, tighten, displace, bend, curl, twist, wave, straighten				x	
Content	Prime	Broadcast	Visualize	Studio	Lite
Presets and demo scenes	х	х	х	x	х
Advanced presets and demo scenes				X	
Broadcast Library, incl. materials, cameras and objects		х		x	
Visualization Library, incl. materials, presets and architectural objects			X	x	