



Figure 1—The Bryce 4 Terrain Exporter. In this view, the terrain to be exported is displayed fully textured, and the application will generate maps for diffuse, ambient and specular color, as well as ambient, transparency reflection, and bump and clip maps. The number of polygons has been reduced from the default 5000 to 1568.

DV REVIEW **Mac PC**

Bryce 4

MetaCreations, \$299

3D Modeling, Animation, and Rendering Software

System Requirements:

Mac: Power Macintosh; Mac OS 7.5.5+

PC: Pentium processor or compatible;

Windows 95/NT 4.0 with SP3
Both platforms: 32MB free RAM (64MB recommended); 75MB free HD space; CD-ROM drive; 16-bit to 24-bit video display; QuickTime 3.0 (or Video for Windows for PCs).

Summary: While Bryce has long been criticized for its inability to integrate with other 3D programs, this upgrade—which adds file import and export capabilities for many common 3D file types—satisfactorily addresses these concerns. Coupled with other subtle improvements, this upgrade solidifies Bryce's position as a valuable tool in a production environment and doesn't compromise the program's intuitive and easy-to-use interface. **DV#294**

Reviewed by Chris Manners

DV SCORE CARD	1	2	3	4	5	6	7	8	9	10
Features	●	●	●	●	●	●	●	●	●	●
Performance	●	●	●	●	●	●	●	●	●	●
Ease of Use	●	●	●	●	●	●	●	●	●	●
Documentation	●	●	●	●	●	●	●	●	●	●
Tech Support	●	●	●	●	●	●	●	●	●	●
Price/Perf.	●	●	●	●	●	●	●	●	●	●
Overall	8.0 Bryce 4									

The biggest news about Bryce 4 is the program's newfound ability to export terrains, together with their texture maps, to a wide variety of common 3D file formats. Game designers in particular will be delighted with the program's polygon reduction facility. With the addition of import support for LightWave 3D, 3D Studio MAX, Alias|Wavefront, TrueSpace, and a host of other standard 3D file formats, the program now fits comfortably in a standard production pipeline. There are a couple of limitations, though: The program will export only terrains and their maps to these other formats. Other information, such as skies, atmospheres, and objects, can't be exported. At the same time, there's a limitation to the new file import features: Animation information isn't included. Nonetheless, the ability to export terrain to formats—including .DXF, .DEM, .LWO, .LWS, .RDS, and .OBJ—is truly a valuable advance.

The terrain export capability provides its own visual representation of the object to be exported and provides adaptive subdivision to allow for geometry reduction (see Figure 1). Although the default polygon count is 5000, the program will export high-quality terrains with as few as 500 polygons (and can create terrains with as few as two polygons). Depending on the type of material assigned to the terrain, Bryce 4 also creates all the appropriate texture maps for the object and generates these in common file formats, including .TIFF, .PCT, .BMP, and .JPG. The program lets you select the resolution at which you want to export these maps, ranging from 64x64 pixels up to 4096x4096 pixels.

To generate the maps, textures must be assigned properties in the program's Materials Lab, and you must use the program's built-in maps for attributes such as bump height, specularity, transparency, and so forth. If a texture doesn't use built-in maps in the texture channels A through D, the program will default to a clip map for the terrain. Fortunately, though, most of the default textures designed for terrains include these attributes, so the maps will indeed be created.

In addition to the ability to import object and scene files from other standard 3D applications, Bryce 4 can also use DEM files (U.S. Geological Survey Digital Elevation Maps) to generate accurate 3D representations of, for example, Half Dome in Yosemite National Park. The program now has a set of around 20 new terrain types that can be used as a starting point. To further the creation of supernatural and unique landscapes, the program now ships with a number of Kai's Power Tools 3 filters, which you can apply to a terrain object to create a vortex effect. By providing access to Photoshop filters, the program is able to apply effects to the grayscale maps that determine the height and structure of the terrain. The documentation says the program is compatible with all Photoshop plug-ins; but in reality, some of the more obscure third-party plug-ins can cause the application to quit. As a result, use some caution when using this feature, although KPT3, KPT5, and many of the standard plug-ins that ship with Photoshop perform admirably.



Figure 2—The Animation and Storyboard Preview screen. The small single preview in the top left corner animates in real time after the individual frames have been quickly rendered.

Other than the addition of I/O capabilities, the most important new feature of the program is the animation preview and storyboarding option. Clicking and holding on a new icon near the VCR controls at the bottom of the screen provides an extremely quickly rendered storyboard layout of an animation. The small window in the top left of the screen then animates the sequence after all the miniframes have been rendered and individual frames can be rendered from this view at full resolution. Because Bryce isn't known for a speedy renderer, this feature takes some of the guesswork out of creating an animated scene. And it's exhilarating to watch these tiny frames appear in quick succession and watch the sky and environment animate in the top preview window (see Figure 2).

There are a number of other new features in the program, and some are useful additions. The Sky Lab now matches the look and feel of the Materials Lab and adds the ability

to preview the sky from any angle by moving the camera around the scene, thus speeding workflow. A feature called Ray Spray lets you select an icon representing a spray can and "paint" in portions of the scene you're working on for a quick preview of work in progress. As a program that is gradually moving out of merely the consumer arena, though, there are features yet to be implemented within Bryce 4—one that would particularly appeal to video artists would be to allow QuickTime movie texture support. Perhaps this will appear in a later incarnation of the program.

The company has also added some Web development features that might appeal to a more general user: HTML documents and image maps can now be created, animations can be exported to RealVideo format, and scenes can be exported to Web formats (including QTVR, VRML 1.0, and the company's own MetaStream format). Bryce users have long been a vocal crowd,

and to this end, the company has created a chat tool called BryceTalk that links a Web-enabled user to a hosted chat area that includes tech support and hosted presentations. Find it at www.metacreations.com.

If you're already a Bryce user and you've been frustrated by the inability to import the program's fine terrains into your other applications, this upgrade is a blessing. And while many of the other new features are less dramatic, they nonetheless improve the application's ability to integrate well into a standard production environment without degrading its ability to create supernatural, photorealistic landscapes quickly. For new users, the program remains one of the easiest 3D applications to learn, even if it takes a little time to discover how to get away from the classic "Bryce" look. **DV**

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