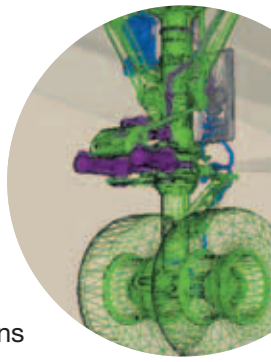
The Universal 3D Research Project

Mission and Objectives



Bringing 3D images to mainstream applications

Interactive 3D graphics are a powerful medium for the communication of ideas, educating of people and as a source of entertainment. However, while digital audio, video, and photos are exchanged easily via the Internet and across computing applications, technical barriers have prevented similar widespread use of interactive 3D content.

Bandwidth and computing performance have increased dramatically in the business world, and are opening opportunities for new communications media. However, the lack of standards for experiencing and sharing 3D content still limits its potential use beyond the engineering and design communities.

Computer-aided design (CAD), is at the core of today's 3D product development, engineering, design and manufacturing. Given a means for an effective and efficient path to this data, 3D CAD content could have valuable uses across organizations in training, documentation, marketing, sales and other Web-based applications. As the JPG file format brought pictures to PCs, cell phones, and the Internet, a new universal standard for re-purposing 3D content could lead to new uses and open new business and consumer markets.

Broad-based use of 3D technologies offers the promise of enriched media that revolutionizes how complex data is communicated in applications such as these:

- By re-purposing product designs, companies could have powerful, cost-effective, easy-to-develop training tools based on interactive simulation
- Electronic owner's manuals could provide interactive guides for maintaining and repairing devices and equipment throughout the life cycle of the product
- Online catalog customers could test products by interacting with the 3D models created during product development

To promote these and other applications, the Intel Systems Technology Labs (STL) initiated the Universal 3D (U3D) Research Project. The Intel Universal 3D Research Project is focused on bringing 3D images to mainstream business processes by helping to establish a common standard for repurposing and sharing 3D CAD data.

Objectives and Methods

Intel is taking a leading role in creating an open and extensible format for the sharing and visualization of 3D data in any mainstream application. This standard format – a "JPEG" for 3D graphics – along with runtime libraries, will be designed to support the re-purposing of existing 3D CAD data for use in other applications. The new standard will be developed in close collaboration with Ecma International and the 3D Industry Forum (see details below).

The first version of the Universal 3D (U3D) open format will be released in 2004 with a sample player and runtime libraries to support adoption and implementation. Key features will include streaming and compression, animation, and the capability for end users to begin interacting with the content before the entire file is downloaded to its destination. Additional advanced graphics capabilities will be added over time. These advanced features will take advantage of Intel's future multi-core architectures.

www.intel.com/
technology/systems/u3d

The 3D Industry Forum (3DIF)

Intel, along with other 3D industry organizations, has established a forum for thought leadership on 3D graphics usage models and applications. The 3D Industry Forum (www.3dif.org) began when Intel met with end users of 3D data as well as leading 3D graphics hardware and software developers. The discussions focused on the implications of a establishing a common standard for sharing 3D content over the Web as well as in mainstream business applications that are non-engineering and non-design centric.

Today, the 3D Industry Forum (3DIF) has more than 30 members, and its goals include:

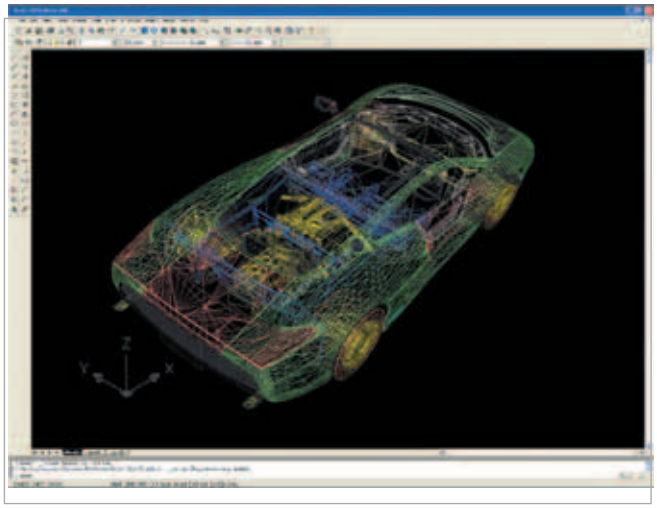
- Creation of a common standard for sharing lightweight 3D content with high visual quality, in cooperation with Ecma International
- Providing the tools and information necessary for adoption and integration of the Universal 3D standard file format
- Promotion of industry growth and ecosystem development for the 3D graphics market
- Education of business and end-user communities as to the value of benefits and usage models of 3D
- Coordination of efforts with other organizations that support similar and/or complementary initiatives

About Intel's Corporate Technology Group (CTG)

Intel employs over 7,000 R&D professionals in over 70 locations worldwide. By collaborating with key industry Fellow Travelers, universities and Intel business units, world-class research in CTG enables Intel to maintain its technology leadership and stay one generation ahead.

About the Systems Technology Labs (STL)

The Systems Technology Labs (STL) are one of four advanced research units in Intel's Corporate Technology Group (CTG). STL partners with Intel's product groups to deliver world-class technology and system architectures for Intel's future silicon products.



For more information please visit: www.intel.com/technology/systems/u3d

Source 3D data provided by and used with permission of the Boeing Company.

0804/SSB/HBD/PP/.5K ♻ Please Recycle 303739-002US