

ProScena Studio™

ProScena™

Technology and tools for rapid development of interactive 3D simulation scenarios.

Empowering small teams with the ability to create real-time 3D simulations for training and education scenarios, ProScena Studio offers developers an authoring solution that is:

- **Affordable** - Reduces development costs by leveraging commercial-off-the-shelf technology, tools and know-how.
- **Accessible** - Provides all team members with role-appropriate access to the development process.
- **Extensible** – Nearly every piece of the system can be replaced or modified to suit project needs.
- **Reusable** – Allows new content to be reused within and across applications and organizations.
- **Interoperable** – Solutions are portable across a variety of popular hardware and software platforms.

soVoz, Inc.

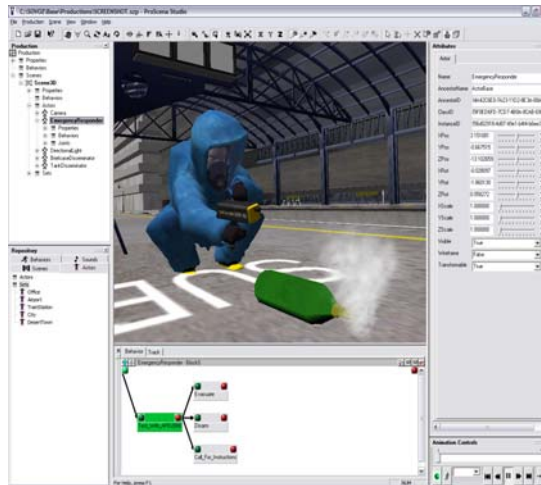
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Add State-of-the-art 3D Game Technology to your Simulation, Training and Education Apps

Introducing ProScena Studio™, a high-level content authoring system and runtime for creating real-time interactive 3D simulations for training, education and gaming applications. ProScena Studio™ solves three of the biggest problems associated with authoring interactive 3D content:

- It allows small development teams to benefit from state-of-the-art game engine technology (e.g. 3D graphics, behavioral animation, physics, popular gaming genres, etc.) without getting bogged down with low-level implementation details or infrastructure development,
- reduces the time, effort and skills required to produce engaging and effective training content by utilizing libraries of off-the-shelf content components, and
- manages the complexity of the 3D design process through an authoring environment that directly supports the needs of designers, artists, programmers and instructors. This helps parallelize the development effort, eliminates production bottlenecks, enables quick prototyping of interactive content and allows the whole team to validate their ideas early and often.

3D Simulation / Training Authoring Made Easy

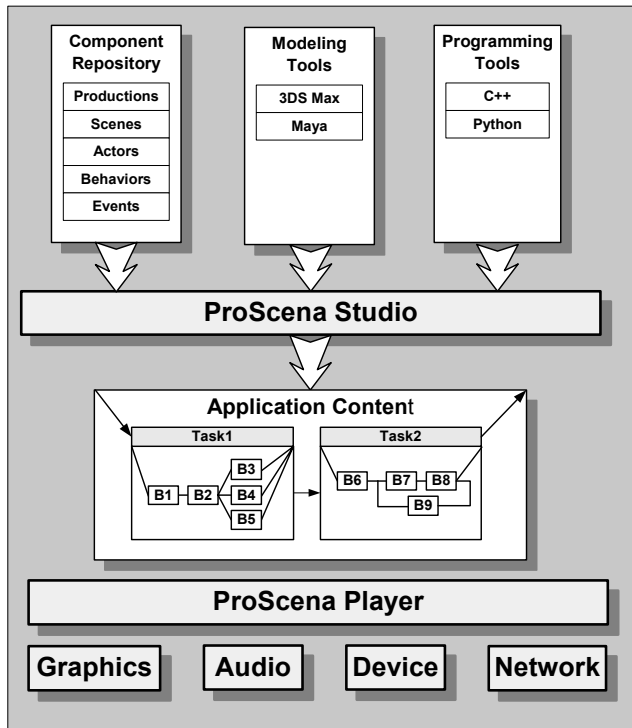
ProScena Studio™. ProScena Studio™ provides content developers with a set of high-level design tools, reusable content libraries and role-appropriate user interfaces for creating real-time interactive 3D simulation and training scenarios. In ProScena Studio, authors can express their plans either visually by pointing and clicking directly in the 3D scene; diagrammatically as a graph of event-driven behaviors; on a timeline or in a text-based scripting language such as Python. Since authors compose

directly within the runtime environment, task sequences and decision logic can be readily tested and refined as soon as they are defined, making quick prototyping easy. ProScena Studio™ supports both 3DS Max and Maya plugins, allowing custom 3D art and animation assets to be easily imported and used. Programmers also can create new types of content components to support authoring of domain-specific application content. Once desired results have been achieved, everything from an individual movement to a full 3D scene can be annotated with descriptive (SCORM-compliant) metadata and saved back to a content repository for later reuse. ProScena Studio also allows instructors to fine-tune application content and customize it to their needs through a simplified version of the ProScena Studio™ user interface.

ProScena™ Player. The ProScena™ Player is the runtime that allows users to participate in the interactive 3D scenarios created with ProScena™ Studio. The Player is a platform-independent simulation engine responsible for coordinating the behaviors and actions of objects in a scene, rendering 3D graphics and audio, and supporting device I/O and network communication. It also provides a wide variety of asset management and lifecycle services intended to simplify the development process and maximize system performance. The ProScena™ Player can be hosted in other applications, such as web browsers, or run as a standalone application. The ProScena™ Player currently employs Numerical Design Limited's (NDL) Gamebryo game engine, enabling interactive 3D content authored in ProScena™ Studio to be deployed on a range of hardware and software platforms, from PC to game consoles.

ProScena™ SDK. At the heart of ProScena, is a powerful content model based on reusable components. Components act as wrappers for imported assets (e.g. 3D models, animation, sounds, procedural code, etc.) providing a simple and easy-to-use interface for content construction. The ProScena™ SDK allows developers to create basic simulation components in either Python or C++. An additional API is also provided to support third party expansion and customization. For example, the ProScena™ Player can be adapted to work with a variety of third party software, allowing interactive application content to be authored that is potentially reusable not only across hardware and software platforms, but also game engines. This capability allows existing game engines to immediately benefit from the ProScena™ suite of high-level authoring tools, enables previously developed application content to be repackaged and used in new ways and can help transition proprietary game or simulation engine technology to middleware solutions that are always up to date with state-of-the-art features.

ProScena Studio™ Product Features



ProScena Studio™

- Graphical user interface with drag and drop authoring.
- Visual programming environment that fuses procedural and timeline-based animation methods.
- Textual programming environment and debugger for component construction and workflow automation.
- Real-time animation editing and preview
- Component attributes browser/editor.
- Integrated asset management tools.
- One step publishing to web or CD-ROM.

ProScena™ Player

Simulation/Animation

- Component lifecycle services such as: serialization, just in time activation, pooling, security, dataflow, and event management.
- Keyframe and procedural animation with real-time motion blending and layering.
- Real-time inverse kinematics.
- Particle Systems.
- Soft skin and skeletal animation.
- Dynamic collision detection.
- Animation export from Max and Maya.

Graphics— ProScena will ship with NDL's Gamebryo™. (Note: Product also supports integration of other third party game engines)

- Hardware accelerated 3D rendering engine
- Supports 3D model export from Max and Maya.
- Pixel and Vertex Shaders
- Dynamic RGB Lighting
- Multi, Projected, Animated, and Rendered Textures
- Environment, Bump, and Mip Maps
- Transparency
- Dynamic Level of Detail
- Dynamic Shadows
- Pixel-accurate 2D drawing
- Portal Culling

- Pixel/Vertex Fog
- Lens Flare
- Application definable rendering, sorting, and culling methods.

Audio – Product supports integration of third party audio subsystems

- 3D Spatialized sound.
- Streaming.

Network

- Http
- DIS/HLA network interfaces.(optional component)
- DirectPlay (optional component)

Devices

- Mouse, Keyboard, Joystick, and Haptic interfaces.

Supported Media Types

- 3D: 3DS Max, Maya.
- Images: JPG, PNG, TIFF, TGA, BMP, PCX.
- Sounds: MP3, WMA, Wave, MIDI.

Deployment

- Able to run as a part of another application (i.e. Web browser, etc.) or as a standalone executable.
- Open or secure content encodings.
- Streamed content delivery.

ProScena™ SDK

- High performance component framework using the industry standard languages Python and C++.
- Accessible component types like: Production, Scene, Actor, Behavior, and Event.
- Advanced component construction features such as: inheritance, containment, reflection, and mutation.
- API for developing adaptors to third party products such as: game engines, audio systems, devices, etc.
- Library of royalty-free components provided for reuse/modification.

ADL/SCORM Support

- Export SCORM conformant content.
- Encode and inspect a component's SCORM meta-data within the tool.
- Library of SCORM conformant behaviors for communicating data to and from an LMS.

System Requirements

ProScena Studio™

- Intel Pentium II Processor or higher.
- Windows ME, 2000 or XP.
- 256 MB or more of RAM.
- Microsoft DirectX 9 or greater.
- 3D video card with 32MB of RAM.
- 200 MB of available disk space.
- CD-ROM drive.

ProScena™ Player

- Intel Pentium II Processor or higher
- Windows ME, 2000 or XP.
- 128 MB or more of RAM.
- Microsoft DirectX 9 or greater.
- 3D video card with 32MB of RAM
- Microsoft Internet Explorer 6.0 or later