Computers   **UMPCs**   **Mobile Phones**

About Q3D Interactive®

Q3D Interactive® is QSound Labs' flagship 3D audio product, developed directly from the studio-quality three-dimensional sound placement algorithms upon which the company was founded. Applicable to arbitrary streams or synthesizer channels using native or custom instruments and sound effects, **Q3D Interactive** places multiple sounds independently in 3D space for interactive gaming.

Feature Set

Q3D Interactive is a 3D sound positioning technology that is closely coupled to a multi-channel mix engine. Q3D takes one or more signals representing individual voices, instruments or sound effects, applies processing to position each input independently at the chosen location in 3D space, and mixes the results down to the number of channels required for the target delivery system, whether stereo earphones, speakers, or multi-speaker surround systems.

Q3D Interactive is applied directly in the end-user environment via software running on a computer PC, a DSP chip in a game console or cell phone, a computer audio driver or sound card. Optimized for low overhead real-time performance, Q3DI handles all aspects of sound control (start/stop, level, pitch and more) in addition to 3D placement. Q3DI positional audio is chiefly applied in video games or user interfaces, in which the behaviour of sound is designed in the creative environment, but the actual processing and positioning of sound happens at the time of game play according to game logic and user input.

QEM Environmental Modeling® is a component of Q3DI that uses echo and reverberation to simulate characteristics of various acoustic environments such as rooms of differing sizes, hallways, caves, etc. Echo and reverb are both the result of sound waves reflecting back to the listener from surrounding surfaces or objects. Like other aspects of Q3DI sound control, QEM environments are selected and modified by game logic in real time during game play to match the situations encountered by the player.

The Q3D Competitive Edge

- *Unparalleled 3D audio effects*
- *Easy-to-integrate software solution*
- *Small memory footprint*
- *High efficiency processing*
- *Low development costs & rapid time-to-market delivery*
- *Single-vendor full audio solution:*
  - *- Simplifies integration*
  - *- Saves platform resources*
- *Patented 3D audio technology*
- *Industry leading sound quality*

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QSoundLabs   *Leaders in Digital Audio Innovation*