



Capabilities Statement

VRSONIC, Inc.

2533 Wilson Blvd. Arlington VA 22201

(703)248-3200

www.vrsonic.com

CAGE CODE: 1N8J9

Dr. Hesham Fouad

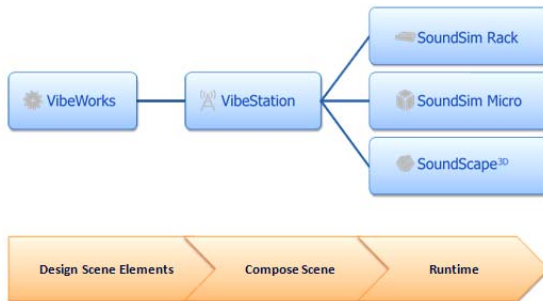
(703)248-3200

hfouad@vrsonic.com





Mission



VRSONIC was founded and incorporated in September of 1999. Its mission then, as now, was to pioneer the next generation of emergent spatial audio software and hardware technologies that would allow users to create unique and immersive sonic experiences. We call it "experiential audio" and it occurs when meticulous care and novel technologies are applied to modeling and rendering a soundscape to create a truly immersive audio environment.

Commercial Products

Our vision for the next generation of sound creates a true to life, fully immersive audio experience. We call it experiential audio and it goes well beyond the traditional Surround Sound paradigm to create a truly three dimensional sound experience. Experiential audio is not simply a new technique for rendering spatial audio; it's a new way of thinking of spatial audio as a new medium requiring novel approaches in modeling the soundscape.



SoundScape^{3D} is the most advanced spatial audio engine on the market. It features powerful modeling constructs for modeling the spatial and dynamic characteristics of real-world environments. SoundScape's Adaptive Display technology lets programmers render those environments to personal headphone applications or large speaker array installations.



VibeStudio is the first of its kind professional spatial audio design suite. VibeStudio is comprised of four applications: Config, Profiler, VibeWorks, and VibeStation. All four applications rest on top of the complex modeling and rendering engine SoundScape3D. Together these applications create a one of a kind spatial audio package that provides the ability to both create dynamic audio content and compose spatial audio scenes.



SoundSim Cube is a plug-and-play spatial audio appliance that is a complete spatial audio solution for a single seat in a single or multi-person immersive simulation. It provides InterfaceLink connectivity to your simulation so that it renders both the natural environment as well as all other simulation entities. It also provides real-time, IP-based spatialized communication among all the other Cubes in the array.



SoundSim Rack is a turnkey solution for bringing true spatial audio into large spaces such as immersive simulators, theaters and location-based installations. SoundSim Rack is specifically designed to work within a larger multimedia framework to create compelling presentations and immersive environments. Combined with VibeStudio, SoundSim Rack is a complete spatial audio design and presentation system.



Training Systems

VRSONIC's technology is both field and laboratory tested to be effective for training. Working with university, government, and commercial customers, we have integrated our spatial audio technology into numerous immersive training systems. We are currently involved in a number of DOD funded projects to develop next generation technology for creating training optimized Virtual Sonic Environments.

We've developed technology that is specifically designed to provide effective training by focusing on content development, ease of integration, and high fidelity presentation. Our VibeStudio product is the only true spatial auditory scene design tool of its kind. Using InterfaceLink technology enables it to easily integrate into any simulation infrastructure with no programming. Mapping simulation events to auditory cues is as easy as point and click. VibeStudio is also based on our ViBe technology, so that new simulation entities can be easily supported by simply dropping a new ViBe model into a models directory; no programming is needed. With our extensive library of ViBes, you have access to a wealth of content to populate your simulation.

Recent Projects



VRSONIC, in partnership with Lockheed Martin and FATS, developed a state-of-the-art spatial audio system for Lockheed Martin's Virtual Combat Convoy Trainers (VCCTs). VCCT trainers help train troops to recognize and respond to potential convoy threats, such as improvised explosive devices (IEDs). Specifically, the VCCT enables combat crews to communicate, maintain situational awareness and acquire targets while moving at highway speeds operating in a convoy environment. The VCCT trainers are expected to improve convoy tactics and reduce injuries and deaths resulting from convoy attacks.



VRSONIC is engaged in an Office of Naval Research, STTR phase 2 effort to develop a scientific basis for the optimal use of spatial auditory cues in immersive training systems. In this effort we are examining how real and metaphoric auditory cues can be used to enhance training in Virtual Environment systems. We are examining how those cues can be used to enhance a trainee's spatial awareness of the environment as well as to train operational tempo. Our goal for this effort is to develop the necessary technology so that empirically validated "best practices" in the use of spatial audio for training will be integrated directly into our tools through the use of scenario building wizards, templates and design patterns.



Working closely with Lockheed Martin and the Naval Research Laboratory, VRSONIC developed an HLA spatial audio simulation federate that became part of the Demo II prototype simulator called VECQB. The VECQB system is able to support teams of participants using a variety of interfaces including a HMD based immersive interface that includes visual, auditory and haptic feedback. VECQB also supports a "through the window" desktop interface and a projection based screen shooter. The VECQB audio federate is able to support all of these configurations with multiple immersed listeners each having a different auditory display configuration. The system also supports spatialized voice communications amongst all the participants.



- *In an analysis of best-of-breed solutions for VE based training system, STRICOM selected VRSONIC's audio technology as the top candidate for their Soldier CATT individual combatant training systems.*
- *NAVAIR recently awarded VRSONIC an achievement award for its involvement in the AAVTT development effort.*

Recent Projects (cont.)

SEOS VRSONIC, was selected by SEOS, a global supplier of visual display systems, to provide its flagship 3D spatial audio system, the SoundSim Rack, for integration into the University of Plymouth's William Day Planetarium. The University of Plymouth Planetarium Theatre, located in London, is a 45-seat venue providing an interactive and immersive experience to its audience. The upgrade will allow students to virtually visit unique field sites. The dome theatre will mimic access to real environments that are otherwise inaccessible due to location or hazards, such as sub-surface environments, polar or submarine landscapes, caves, quarries and hazardous industrial sites.



VRSONIC worked with the US Marines to produce a spatial audio system for the Amphibious Attack Vehicle Turret Trainer (AAVTT). The AAVTT is a simulation trainer that prepares Marines to operate the AAVTT in actual combat situations.

VRSONIC's role in the development of this simulation-based trainer was to create spatialized sound cues based on events occurring in the simulation including ballistics, platform sounds, environmental sounds and self produced sounds such as turret motion.



Working with ONR and Lockheed Martin, VRSONIC developed a highly realistic spatial audio system for a prototype enhancement to the Indoor Simulated Marksmanship Trainer (ISMT) used by the US Marines. The system, called ISMTE2, provided participants with highly realistic training scenarios that included highly accurate weapons sounds as well as a realistic virtual auditory environment. The system received excellent reviews by Marine subject matter experts who were especially impressed with the audio fidelity of the system. As part of the effort VRSONIC developed a specification that lays a road map for future audio components of ISMT systems.

Our Founder

Dr. Fouad has been involved in both research and commercial development of spatial audio systems for the past fifteen years. During this period he has focused primarily on the specification and real-time generation of complex sonic environments for Virtual Reality. Prior to this, Dr. Fouad worked in development of Artificial Intelligence technologies at IBM where he was engaged in expert system research and development efforts. Dr. Fouad was also engaged in the development of technologies for Computer Based Training (CBT) systems at Logicon where he invented a novel, heuristic-based CBT technology.



Corporate Information

DUNS	080571404
CAGE Code	1N8J9
NAICS Codes	541511 541512 541519 511210
SIC Codes	7373 7371 7379
PSC	AJ22 AJ25
Corporate Structure	Virginia S Corporation
Size Standard	Small Business
Accounting System	DCAA Audited Accounting System Wide Area Work Flow utilized Eight years of government accounting experience
Date of Incorporation	09/09/1999

Contact Information

VRSONIC, Inc.

2533 Wilson Blvd.

Arlington, VA 22201

Phone (703)248-3200

Fax (703)832-8682

Email jfouad@vrsonic.com

Website www.vrsonic.com

