

## **Acentech Tapped for Expertise by National Geographic Channel's "American Paranormal" Show**

*Two acoustics and vibration consultants address infrasound for new series  
focusing on unexplained phenomenon*

**CAMBRIDGE, Mass. – January 26, 2010** – Acentech Inc., a nationally recognized multi-disciplinary consulting firm specializing in acoustics, audiovisual systems design, and vibration, announced today that it was invited to participate in the National Geographic Channel's "American Paranormal" show, a new series that brings various technical experts together to conduct scientific investigations into unexplained phenomena. Acentech's Dr. Steven Africk and Mr. Robert Berens appeared on the recent "Haunted Prison" episode that looked into the legendary haunting of Eastern State Penitentiary in Philadelphia. Their goal was to explore the possibility that the unique acoustical environment of this abandoned prison supports the presence of infrasound – very low-frequency acoustic energy below the frequency range of hearing of most humans, which has been associated with the strange sensations that people can experience in "haunted" locations.

Acentech's team spent two nights of filming at Eastern State Penitentiary, an abandoned and historic prison and one of the most popular tourist attractions in Philadelphia. Dr. Africk, a supervisory consultant in Acentech's Noise & Vibration Group, and Mr. Berens, a supervisory consultant in the firm's Architectural Acoustics Group, spent the first night monitoring a purportedly haunted cell block for infrasound, while, in parallel, other scientific professionals monitored the space for unusual infrared and electromagnetic signals, often claimed by ghost hunters to be caused by the ghosts themselves. For the second night, Acentech provided a custom-made "infrasound generator" for a demonstration of the effects of infrasound on a group of volunteers led through the prison. Both consultants appear on camera in the episode, which premiered on January 24, 2010. Additional airdates include Monday, January 25, 2010 at 12 am and Sunday, January 31, 2010 at 2 pm.

Infrasound is always present in the everyday environment, both from naturally-occurring sources, such as wind and weather, and from jet aircraft, heavy trucks, rockets, and other man-made noise sources. Animals like elephants, giraffes and whales appear to use infrasound for communication, but humans have evolved not to hear it. Some studies have shown that infrasound can cause eerie sensations, a sense of dread, and even visual hallucinations in people. Unusual levels of infrasound have been measured in some so-called "haunted" locations, suggesting that their eeriness may actually be explained by the presence of this very low-frequency sound.

Using standard acoustical measurement instrumentation, the Acentech team monitored audible-range and infrasound levels overnight in one of Eastern State's purportedly haunted cell blocks. A number of low-frequency noise sources, including roadway traffic, rain on the roof, and overnight package delivery aircraft taking off from nearby Philadelphia Airport and passing over the prison, were identified as contributing to the infrasound environment of the Penitentiary; the distribution of energy between the audible acoustic and infrasonic frequency ranges within the prison building seemed to be affected by its internal architecture.

Acentech then assisted the show producers in testing the idea that infrasound can affect people's perceptions by using a hidden infrasound generator, similar to a super low-frequency subwoofer, to create a high level of infrasound in a particular section of the prison; volunteers were then taken to this section and to another where there was no infrasound introduced. The volunteers indeed reported more strange feelings and sensations in the infrasound wing — many more than would be expected by mere chance. During compelling on-camera interviews, some volunteers described intense emotional experiences during the infrasound exposure, providing dramatic personal evidence of the psychological and physiological impact of "hearing" this inaudible sound — offering plausible evidence that subjecting people to high levels of infrasound can elicit the feelings and sensations that people associate with being in a "haunted" place.

Developed and produced by Emmy Award and IDEA Award-winning BASE Productions, Inc., "American Paranormal" is a television series taking a new scientific look at unexplained phenomenon — everything from UFO's to Bigfoot to ghosts — but not in an attempt to prove or disprove their existence. Putting aside the endless arguments of whether these things exist, the show instead focuses on performing objective scientific measurements of these phenomena and comparing the results with available evidence, case studies, and eyewitness testimony, exploring the questions of how these phenomena could exist, and in what form. The show relies on such technology as geographical laser scanning, motion-capture infrared cameras, electromagnetic sensors, and acoustic instrumentation, to paint a scientific picture of a space purported to exhibit unexplained phenomenon and to create amazing computer-generated imagery (CGI) in the process.

Dr. Africk is a supervisory consultant working primarily in areas related to underwater acoustics. He has performed and directed many efforts involving acoustic communication, underwater acoustics and sonar, and applications of acoustics, vibration, and ultrasound to nanotechnology and biotechnology.

Mr. Berens has over 30 years of professional consulting experience in architectural acoustics, noise and vibration control, and noise impact assessment and mitigation. He has consulted for countless commercial, institutional, industrial, residential, and governmental clients to define and achieve acceptable acoustical conditions in both interior and outdoor environments.

**About Acentech**

Acentech Inc. is a multi-disciplinary acoustics, audiovisual systems design, and vibration consulting firm providing a wide range of services to a diverse group of clients. With offices in Cambridge, Massachusetts; Trevose, Pennsylvania; and Westlake Village, California, the company's professional staff of more than 50 consultants has broad and deep expertise in all areas of acoustics and audiovisual systems design consulting. Having celebrated its 60th anniversary in 2008, Acentech is one of the oldest and largest organizations of its type: an unequalled resource to engineers, architects, and designers worldwide. For more information, please visit [www.acentech.com](http://www.acentech.com).