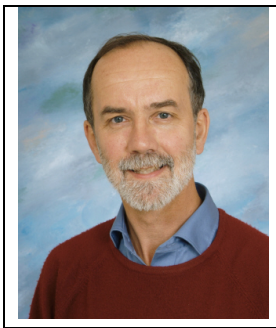
Synopsis of AirHush ISAT Performance Tests - Confidential

In order to get a professional and scientific opinion on the potential viability of the ISAT (Inflatable Sound Attenuation Technology) concept before proceeding to file patents, the inventor approached a very qualified scholar in the field of noise control, Dr. Murray Hodgson, Director of the Acoustics and Noise Research Group at the University of British Columbia in Vancouver, BC, Canada. Dr. Hodgson teaches undergraduate and graduate courses on acoustics, noise control and vibration to engineers and occupational hygienists, supervises undergraduate projects in Mechanical, Electrical and Computer Engineering, as well as Physics and Engineering Physics, and supervises graduate students on research projects in acoustics. He is the author of over 140 scientific publications.

	Dr. Murray Hodgson graduated from Queen's University, Ontario with a B. Sc. (Hons) in Physics and Mathematics in 1974. He then obtained a M. Sc. in Sound and Vibration Studies in 1978 and a Ph.D. in Acoustical Engineering in 1983 from the University of Southampton, Southampton, UK. He was a Post-Doctoral Fellow in the Department of Architecture, Cambridge University, UK, and a Research Associate at the National Research Council, Ottawa, before becoming Director of the Acoustics and Noise Research Group at the University of British Columbia in Vancouver.

Professor Hodgson had not heard of this type of approach to noise control (inflatable soundproofing) before meeting the inventor, and felt that the idea was at minimum worthy of further examination. Subsequently, Professor Hodgson visited San Francisco twice to conduct performance tests on the first two generations of ISAT prototypes, and conducted a further set of tests on a third generation ISAT prototype on the campus of the University of British Columbia. These tests demonstrated reductions in perceptible sound of more than 50dB at certain frequencies, and an over all preliminary STC rating of 38.7 for just a "single hull" ISAT panel. Here are a few direct quotes from Dr. Hodgson's performance test reports:

Report #1: "... ***The ISAT enclosures tested clearly provide significant noise attenuation, especially at higher frequencies...", "...the performance is better at low and high frequencies than would be expected if conventional stiff panels were involved...", and "...insertion losses of 30 or more dB are very significant."***

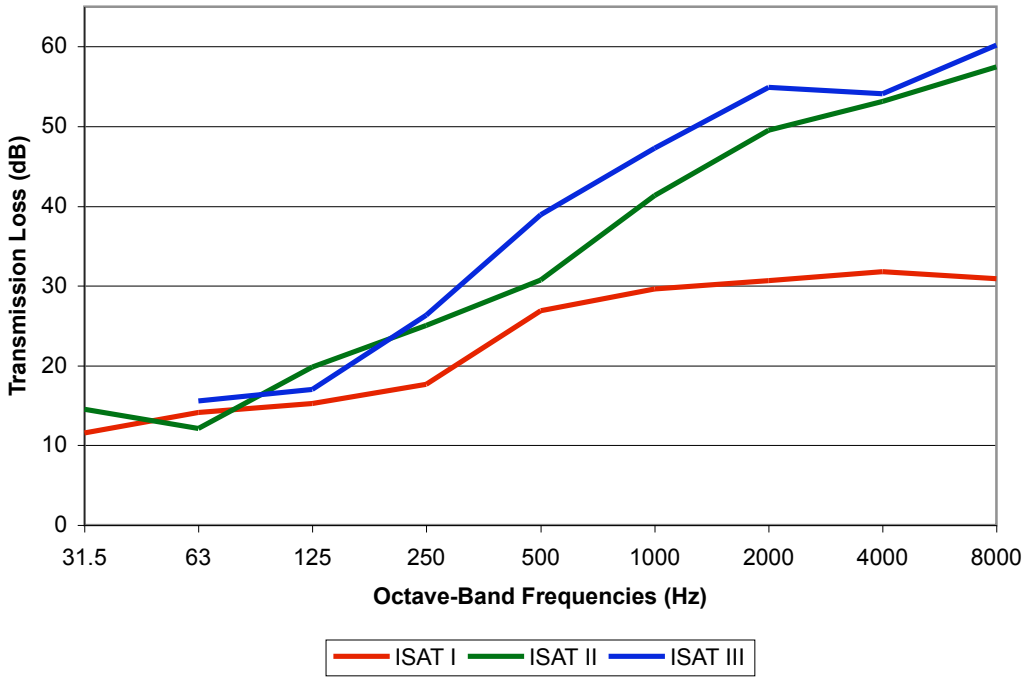
Report #2: ***"ISAT-II has better performance at low frequency...", "... and very high [frequency] performance is likely not required due to the noise attenuation provided by the building in which the enclosure is located."***

Report #3: ***"...In general, the third generation panel appears to outperform the previous renditions by 5-10 dB..." and "...the current ISAT panel provides significant sound attenuation, especially at higher frequencies, and is a viable method of sound control."***

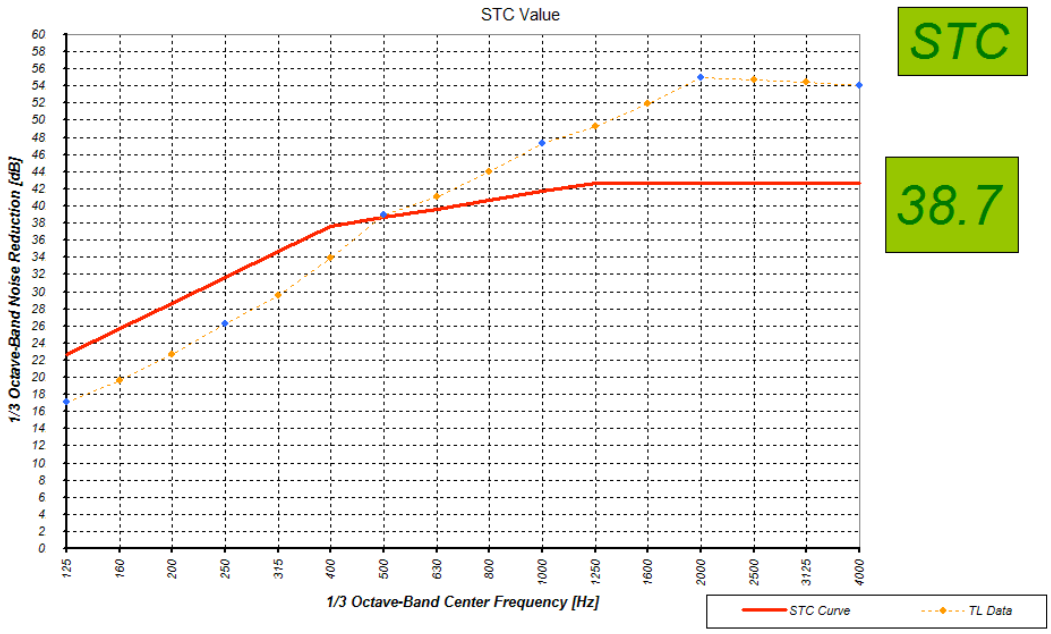
Continued…

The following graphs show the performances levels achieved at various frequencies by three early prototypes of the invention, and the STC rating derived for the ISAT III Panel (very similar to the current commercial AirHush ISAT Panels in production as of 2017):

Performance of first three generations of ISAT prototypes, as measured by Dr. Hodgson:



Preliminary STC (Sound Transmission Class) rating for a “Single Hull” ISAT III panel:



AirHush ISAT Systems, Inc., looks forward to sharing details of these performance tests, and additional STC, NRC and R test, with interested parties under NDA. Contact: info@airhush.com