NOISE/NEWS INTERNATIONAL

Volume 13, Number 1
2005 March

A quarterly news magazine with an Internet supplement published by I-INCE and INCE/USA

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Travel Planning
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MEMBER SOCIETY PROFILE:
Committee on Acoustics of the Polish Academy of Sciences

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NOISE/NEWS INTERNATIONAL

A quarterly news magazine with an Internet supplement published by I-INCE and INCE/USA

Volume 13, Number 1 **2005 March**

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NOISE/NEWS INTERNATIONAL

The printed version of Noise/News International (NNI) and its Internet supplement are published jointly by the International Institute of Noise Control Engineering (I-INCE) and the Institute of Noise Control Engineering of the USA (INCE/USA).

I-INCE

The International Institute of Noise Control Engineering (I-INCE) is a worldwide consortium of societies concerned with noise control and acoustics. I-INCE, chartered in Zürich, Switzerland, is the sponsor of the INTER-NOISE Series of International Congresses on Noise Control Engineering, and, with the Institute of Noise Control Engineering of the USA, publishes this quarterly magazine and its Internet supplement. I-INCE has an active program of technical initiatives, which are described in the Internet supplement to NNI. I-INCE currently has 46 Member Societies in 39 countries.

INCE/USA

The Institute of Noise Control Engineering of the USA (INCE/USA) is a non-profit professional organization incorporated in Washington, D.C., USA. The primary purpose of the Institute is to promote engineering solutions to environmental noise problems. INCE/USA publishes the technical journal, *Noise Control Engineering Journal*, and, with I-INCE publishes this quarterly magazine and its Internet supplement. INCE/USA sponsors the NOISE-CON series of national conferences on noise control engineering and the INTER-NOISE Congress when it is held in North America. INCE/USA Members are professionals in the field of noise control engineering, and many offer consulting services in noise control. Any persons interested in noise control may become an Associate of INCE/USA and receive both this magazine and *Noise Control Engineering Journal.*

NNI Internet Supplement

www.noisenewsinternational.net

- Links to the home pages of I-INCE and INCE/USA
- Abstracts of feature articles in the printed version
- Directory of the Member Societies of I-INCE with links, where available, to the Member Society Profiles and home pages
- Links to I-INCE Technical Initiatives
- Calendar of meetings related to noise—worldwide
- Links, where available, to NNI advertisers
- Links to news related to the development of standards
- Link to an article "Surf the 'Net for News on Noise," which contains links to noise-related sites—worldwide

The Responsibilities for Global Noise Policy

I am pleased to announce that the International INCE Technical Study Group 5, a group instructed to examine and report on the need for global policies on noise control, has completed a draft report. The group was led by its Co-Convenors, William W. Lang and Tjeert ten Wolde.

The report has now been circulated to the Member Societies of International INCE, and will be put to a vote at the next meeting of the I-INCE General Assembly in Brazil in August. In addition to a general introductory section, the report includes guidance in the development of noise policies in occupational noise, community noise, and consumer product noise. The final section is a draft of International INCE positions.

A key question is "Who has the responsibility for the development of global noise policy?" It should be clear that no one organization will develop policies, although the United Nations (UN) could play a major role. In the area of community noise alone, the report identifies twelve organizations with a role to play in the development of global noise policies.

The World Health Organization (WHO) develops community noise policies, including recommended levels and assistance to United Nations Member States. The International Civil Aviation Organization develops policies related to aviation noise, The United Nations Environmental Program, an agency of the United Nations, is potentially an important part of global noise policy development, and the Organization for Economic Cooperation and Development provides guidance for community noise policies.

The World Bank is involved with economic development, and has policies with respect to noise. Another UN organization consists of European nations involved with community noise, and is involved with both the European Union and WHO in policy development.

The international standards organizations, the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) develop standards that are essential in the implementation of noise policies. The ISO develops standards for noise emissions, building acoustics, and hearing conservation, and the IEC develops standards for instruments.

International INCE, with its 46 Member Societies can play a major role in policy development; the International Commission on the Biological Effects of Noise (ICBEN) promotes scientific research to understand the effects of noise.

When organizations concerned with occupational noise and consumer product noise are added to the list concerned with community noise, the overall situation becomes more complicated. TSG 5 has done an excellent job of collecting information on the organizations involved in global noise policy and making recommendations by drafting International INCE positions for the three areas discussed above.

I urge all readers of this magazine to contact their Member Society and obtain a copy of the report. It is 49 pages in length, and is available in paper copy and Portable Document Format (PDF), which can be read with the freely-available Adobe Acrobat® Reader. Section 5 of the report contains the draft summary of International INCE positions, and it is only 2 pages in length. Comments sent to the I-INCE Member Societies will assist them in developing a position on the document for the vote that will take place next August. Global noise policy is a subject of importance to all of us, and I am very grateful to the Co-Convenors and members of TSG 5 for producing a report that can be very influential in our efforts to reduce noise levels worldwide.

Hideki Tachibana
President, International INCE

Conference Overload?

Paul R. Donavan
Pan-American News Editor

I suggest that readers of *NNI* go the I-INCE website and take a look at the schedules for Noise, Vibration, and Acoustics conferences. If you are like me, it will make your head spin. One common complaint I hear from colleagues is that there are just too many conferences. Granted many of these listed conferences are either highly specialized or clearly regional in nature. However, the lists also do not include a number of other conferences which are all N&V or have large N&V content. As a result, this complaint is not unjustified and question is what, if anything, should be done.

In some respects, the diversity of conferences can be quite welcome. With the significant number of specialty conferences, many "niches" are being addressed in the depth required. Also, conferences differ considerably on the types of written material that accompanies a presentation. These range from no written material required for, for example, the Acoustical Society of America (ASA) meetings, to fully peer reviewed papers prior to the conference for, for example, the upcoming Society of Automotive Engineers Noise and Vibration Conference. Each of these procedures has advantages and disadvantages to the attendees and non-attendees. Further, local or regional conferences also fill a need for those whose budget does not allow travel to distant meetings.

In other respects, the large number of conferences has become quite a problem. From an administrative viewpoint, scheduling our INTER-NOISE congresses is becoming a difficult task as we try to avoid times when other global and regional N&V conferences are held. The same situation is true for INCE/USA in scheduling NOISE-CON conferences in the USA. For the attendees who may be able to attend only one conference per year, trade-offs must be made and ultimately both the individual and organization suffer with lower participation.

On what may be a positive note, there has been some progress on organizing joint meetings that seem to be favorably received. In the past decade, there have been two joint meetings of INCE/USA and the ASA. This last summer, INCE/USA held its first and successful joint meeting with the USA's Transportation Research Board's annual noise meeting. In near future, INCE/USA and the ASA have two meetings scheduled, one of which will be joint (NOISE-CON 05) and one consecutive with INTER-NOISE 2006. For international meetings, joint meetings seem to be less of a trend, but there have been INTER-NOISE congresses coordinated with the International Congress on Acoustics. Joint inter-regional Congresses may be a direction that should be pursued in the future, and maybe even joint meetings outside of the I-INCE umbrella.

Some of the expectations of attending a conference are the exchange information and exposure to new ideas and findings. However, with over 10 parallel sessions as is now typical of the 3-day INTER-NOISE conferences, that exposure becomes small. With the ability to only see fewer than 10% of the presentations, more and more reliance has to be placed on reviewing the proceedings. At some point, reviewing the proceedings may become more important than attending the meeting—particularly if it involves considerable cost and time. To address this, expanded length of INTER-NOISE conferences should be seriously considered.

A "success story" for INTER-NOISE has been the requirement to have written, but not reviewed, proceedings. In our time-driven environment, writing papers which do not go through a time consuming review process, is quite attractive. As a result, I have personally found that the proceedings of INTER-NOISE congresses are an excellent source of reference material, which reflects current research and findings. Unfortunately, much of this information never reaches the pages of refereed, archival journals—leaving the proceedings as the only source of this material. Also unfortunate is that the proceedings are not all readily and/or consistently available. To expand the relevance of our INTER-NOISE proceedings, addressing this accessibility is of importance.

If any of the topics addressed here generate some opinions, I would ask that you communicate them to the governance of your member society, directly to the governance of I-INCE, or to me at pdonavan@illingworthrodkin.com.

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Committee on Acoustics of the Polish Academy of Sciences

Noise control in Poland is the primary concern of the Committee on Acoustics of the Polish Academy of Sciences and the Polish Acoustical Society. A member of the International Institute of Noise Control Engineering since 1974, the Academy has organized noise and vibration control conferences since 1964, originally as national symposia and later (beginning at 1976) as International Noise Control Conferences. One of the Academy's largest undertakings in recent years was the XIII International Conference (Noise Control 04) held in Gydnia in June 2004. The conference, convened just one month after Poland entered the EU, focused on how to implement EU environmental protection directives. Special interest sessions also covered specific technical solutions for noise control issues. The event was co-organized by the Central Institute for Labour Protection-National Research Institute and the Polish Acoustical Society.

Although the first measurements of municipal noise in Poland were taken more than 70 years ago, interest in noise control issues didn't fully develop until the 1948 publication of "Building Acoustics" by Professor Ignacy Malecki. A pioneer in the noise control field, Malecki is credited with initiating a lengthy period of scientific and technological study of noise issues, as well as legal efforts to manage them. His work led to educational programs in electroacoustics, national research programs on lowering noise levels, and well-equipped acoustic laboratories.

Today, Malecki's groundbreaking work is carried forward at many prestigious Polish institutions: Technical University, Wroclaw (Laboratory of Electroacoustics); Technical University, Warsaw (chair of electroacoustics); Adam Mickiewicz University, Poznan (Laboratory of Acoustics now the Department of Acoustics and Vibration Theory); University of Science and Technology, Cracow (chair of mechanics and vibroacoustics), Institute of Basic Technical Problems of the Polish Academy of Sciences; and the Main Mining Institute, Katowice.

In 1971, the Polish government passed a resolution on noise control programs and the first legislation dealing with the issue was formulated. The scope of the problem became apparent a decade later with the first published reports on noise and vibration hazards (1984 and 1987). According to the data, the main sources of noise pollution were—and continue to be—cars, airplanes, and industry. Over 20 percent of the country is subjected to high levels of traffic noise; excessive noise levels endanger about 330,000 workers.

In response to the data, a national program of environmental protection was announced in 1988, outlining the direction of noise control activities through 2010. The report acknowledged that a substantial percentage of the Polish population is overexposed to unacceptable noise levels created primarily by transportation and industry. It called for, among other things, scientific research on noise control issues; the introduction of modern urban and architectural solutions to improve the acoustic conditions of the environment; and measures to ensure proper operating conditions of infrastructure contributing to noise problems (e.g., highways, factories, electrical supply lines, gas piping, etc.).

Noise policy was part of the environmental protection law passed by Polish parliament in April 2001. In addition to the directives of this legislation, the country's leaders are also concerned with meeting the requirements of the Environmental Noise Directive now being implemented in member states of the European Union. (Poland joined the EU

continued on page 10

This is the 49th in a series of articles on the Member Societies of International INCE.

inter-noise 2006

Engineering a Quieter World

Honolulu, Hawaii, USA

Sheraton Waikiki

3–6 December 2006

The Congress and Expo Venue

The venue for Inter-Noise 2006 is Honolulu, Hawaii. Honolulu, the capital of Hawaii, is located on the island of Oahu. In addition to sparkling beaches, Oahu is home to many popular natural and cultural spots, including Diamond Head, Hanauma Bay, Nuuanu Pali Lookout, and the Polynesian Cultural Center.

Plenary Speakers

Tatsuo Maeda—Railway Noise
Tjeert ten Wolde—Noise Policy
Gilles Daigle—Sound Propagation

Paper Submission

Abstracts Due: May 15, 2006
Notification of Acceptance: June 30, 2006
Papers Due: August 18, 2006

Social Program

Sunday, December 3—Opening Ceremony and Welcome Reception
Monday, December 4—Exposition Opening Reception
Tuesday, December 5—Congress Banquet *(tickets required)*
Wednesday, December 6—Closing Ceremony and Reception

Accompanying Persons Program

Monday, December 4—Honolulu and Vicinity Sightseeing Tour
Tuesday, December 5—Polynesian Cultural Center
Wednesday, December 6—Oahu Half-day Sightseeing

Inter-Noise 2006 is scheduled during Hawaii's "winter" season. Participants can expect average daytime temperatures of 78˚F (26˚C) and ocean temperatures of 74˚F (24˚C). For more information on attractions, visit the conference Web site.

Note: Requirements for entry into the state of Hawaii from foreign destinations vary according to country. Please check with the nearest U.S. embassy or consulate for passport and visa information.

www.internoise2006.org

Jointly organized by INCE-USA and INCE-Japan

Member Society Profile *continued from page 7*

in 2004.) The EU directive requires that noise maps and action plans (noise policy) be made for:

- Agglomerations with populations greater than 100,000
- Major roads with more than 3 million vehicles a year (approximately 8,000 a day)
- Major railways with more than 30,000 trains a year
- Major civil airports with more than 50,000 operations year (approximately 135 day)

The first maps for major areas are required by mid-2007, and action plans are required one year later.

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INCE Update

INTERNATIONAL INCE

International INCE Elects New Officers and Directors

At its meetings in 2004 August during the INTER-NOISE Congress in Prague, Czech Republic, the International INCE Board of Directors elected Josef Novák of the Technical University, Prague, Czech Republic, as a director for a 6-year term. He represents INTER-NOISE 04. George Maling was elected vice president for publications and editor-in chief for a one-year term. Harold Marshall completed his 6-year term as the representative of INTER-NOISE 98.

Hideki Tachibana of the University of Tokyo, Japan, continues as president, Gilles Daigle of the National Research Council of Canada continues as president-elect, Tor Kihlman of the Chalmers University of Technology continues as immediate past president, Robert J. Bernhard of Purdue University continues as secretary-general, and Gerritt Vermier of KU Leuven continues as treasurer.

Other officers are Masaru Koyasu, vice president for the Asia-Pacific region, Bernard Berry vice president for Europe, Paul Donavan, vice president for the Pan-American region, Gilles Daigle, vice president for development, and Alan Marsh, vice president for technical activities.

Directors as INTER-NOISE representatives are Joseph Cuschieri (I-N 99), Michel Vallet (I-N 00), Tjeert ten Wolde (I-N 01), Rajendra Singh (I-N 02) and Hee Joon Eun (I-N 03). Per Brüel and William W. Lang continue as distinguished board members.

INCE/USA

INCE/USA Elects 2005 Officers and New Directors

The Annual Meeting of the INCE/USA Board of Directors and the Annual Meeting of INCE/USA was held on 2005 January 30 in Las Vegas, Nevada. The Board elected Paul R. Donavan of Illingworth & Rodkin, Inc. as president-elect of the Institute. He will serve in 2005 as president-elect and executive vice president, and will serve as president in 2006. Paul served as president in 2001, and has accepted this opportunity to be of further service to the Institute. Gerald C. Lauchle of The Pennsylvania State University served as president-elect in 2004, and is now president of INCE/USA. Joseph M. Cuschieri of Perry Technologies, Lockheed-Martin is serving as acting executive director.

James K. Thompson of Link Engineering was elected vice president – publications. John C. Freytag of Charles M. Salter Associates, Inc. continues as vice president - public relations. Richard A. Kolano of Kolano & Saha Engineers continues as vice president - board certification, and Gregory Tocci of Cavanaugh Tocci Associates continues as vice president - membership. Steven E. Marshall of Bristol Compressor continues as treasurer, Michael J. White continues as secretary, and George Maling continues as managing director – emeritus and managing editor of *NNI*.

At the Annual Meeting of INCE/USA, the result of the election of new directors by the voting members was accepted. Steven A. Hambric of The Pennsylvania State University, Richard A. Kolano of Kolano & Saha Engineers, and Michael J. Lucas of Ingersoll-Rand were certified as directors elected by the voting members. Alan H. Marsh of Dytech, Inc. and Gregory Tocci of Cavanaugh-Tocci Associates were also elected directors for a two-year term in accordance with the bylaws and articles of incorporation of the organization.

Key committee assignments are: Rajendra Singh, Ohio State University, Long Range Planning, Paul R. Donavan, Illingworth & Rodkin, Inc., Finance Committee, Joseph M. Cuschieri, Nominations Committee, Robert D. Hellweg, Hewlett Packard, Policies and Procedures, Richard J. Peppin, Scantek, Inc., Meetings/Exhibits, Arno S. Bommer, Collaboration in Science and Technology, Inc., Awards.

Tachibana continues as president; Daigle is president-elect

The 2005 National Conference and Exposition on Noise Control Engineering

NOISE-CON 2005

CONFERENCE INFORMATION

Submission of Papers

2005 June 17

Reservations for Hotel

2005 September 16

NOISE-CON 2005, the National Conference on Noise Control Engineering, will be held at the Hilton Minneapolis Hotel in Minneapolis, Minnesota, October 17-19, 2005. The conference is being organized by the Institute of Noise Control Engineering of the USA (INCE/USA) and will be a joint venture with the 150th meeting of the Acoustical Society of America (ASA). There will be one registration fee for both conferences. The ASA meeting will run from October 17 through October 21, and will be at the same hotel. NOISE-CON 2005 will be the 21st in a series of conferences on noise control engineering, which have been held in the United States since 1973.

NOISE-CON 2005 will open on Monday, October 17th with a plenary session followed by parallel sessions and a reception in the exposition area. Plenary sessions followed by parallel technical sessions are also planned for October 18th and 19th. In addition, the INCE fundamentals and Board Certification exams will be offered.

At NOISE-CON 2005, special emphasis will be placed on INCE/USA technical activities with opportunities for each INCE technical group to hold meetings during the conference. The goal is to strengthen the technical activities program and to encourage more participation in the technical initiatives being taken by the International Institute of Noise Control engineering (I-INCE). I-INCE is an international organization composed of 46 member societies that are either institutes of noise control engineering or acoustical societies.

Daniel J Kato of Cummins Power Generation will serve as NOISE-CON 2005 general chair, Robert J Bernhard of Purdue University will serve as conference co-chair, and Patricia Davies and Stuart Bolton both of Purdue University will serve as technical program chairs.

Most of the ASA Noise Technical Committee and Architectural Acoustics Technical Committee sessions, and other relevant ASA sessions, will be part of the joint NOISE-CON and ASA conference to form an exciting and coherent program of noise control related sessions. The sessions will reflect the overlap in membership between the two organizations and the spirit of cooperation that led to the decision to have this joint meeting.

Conference Web Site—www.noisecon2005.org

INCE/USA Web Site—www.inceusa.org

PLENARY LECTURES

There will be one plenary lecture each day of NOISE-CON 2005.

Monday, October 17

Perspectives on noise in the menu of environmental issues, and the role of technical solutions relative to policy approaches.
Carl Burleson, Federal Aviation Administration

Tuesday, October 18

Tire and pavement noise and the potential impact of quiet pavement technology.
Paul R. Donavan, Illingworth & Rodkin, Inc.

Wednesday, October 19

Hospital noise, its role in patient well-being and the challenges for noise control engineers.
James E. West, Johns Hopkins University

Technical Program

There are over 40 special sessions being organized covering a wide variety of topics of relevance to noise control.

We are also happy to receive papers that may not fit into these Special Sessions but address other aspects of noise control. Papers on new techniques and recent research findings are welcome, as are Case History Sessions where examples of techniques put into practice and lessons learnt are presented.

Many of the Special Sessions are co-sponsored by ASA Technical Committees, and NOISE-CON is co-sponsoring some of the ASA Technical Committees' own sessions. For further details of NOISE-CON -sponsored or co-sponsored Sessions and contact information for session Chairs can be found from the Special Sessions section on www.noisecon2005.org. For details of other ASA sessions please see ASA Call for Papers at asa.aip.org/.

The following is a list of Special Session Topics:

1. Indoor noise criteria
2. Plumbing noise
3. The safety of acoustical products
4. Advances in noise, vibration and harshness in automotive design
5. Current status of noise policy
6. Hospital interior noise control
7. Laser Doppler vibrometry measurements in underwater and radiation problems
8. Specifying uncertainties in acoustic measurements
9. Workshop on methods for community noise and annoyance evaluation II
10. Product noise and vibration control - Case studies.
11. Measurement of information technology product noise emissions
12. Measurement of product noise emissions
13. A new loudness standard
14. Array methods for noise source visualization
15. Forensic acoustics
16. Products for noise control
17. Energy methods in transportation noise
18. Numerical methods in acoustics
19. Active noise control: Centralized versus decentralized control
20. Applications of active noise control
21. From noise control to product design
22. Sound quality and soundscapes
23. Environmental sound quality
24. Methods for predicting and assessing community responses to noise
25. Case Studies: The environmental impact analysis process (EIAP)
26. Power plant noise: Technology that limits power plant noise control
27. State and local noise policies and noise ordinances
28. Public policy workshop
29. Role of vibrations and rattle in annoyance
30. Rail noise and vibration issues
31. Mitigating the effects of construction noise
32. Noise intrusion in the natural landscape
33. Noticeability of noise: Time structure
34. Transportation noise criteria
35. Issues in aircraft noise analysis
36. Progress in aircraft noise research
37. Aircraft source noise research
38. Advances in military jet noise modeling
39. Tire/pavement noise and quiet pavement applications
40. Vehicle noise measurement
41. Classroom acoustics
42. Innovative solutions to architectural design and to meeting LEED and HIPAA requirements
43. Vibration in transit systems
44. Session honoring contributions of Bill Lang.

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REGISTRATION

There will be one registration fee of approximately 325 USD for both NOISE-CON 2005 and the ASA meeting. Registration may be in advance or at the conference itself. For advance registrations, see the ASA web site, asa.aip.org. (The early registration deadline is 12 September.)

Conference Proceedings

The Proceedings of NOISE-CON 05 will be published on a CD-ROM, and will be available at the conference. The CD-ROM will contain additional NOISE-CON proceedings for the years 1996, 1997, 1998, 2000, 2001, 2003, and 2004. The CD-ROM will be available at the conference to conference registrants for 30 USD, and will be available after the conference through the INCE/USA page at the Atlas Bookstore for 70 USD. To obtain a list of proceedings and other publications available now, go to www.atlasbooks.com/mktplc/00726.htm.

Special Seminar/ Tutorial

A tutorial on Power Plant Noise will be given by Frank Brittain of Bechtel. The tutorial will be held from 1.00 p.m. to 5.00 p.m. on Sunday, October 16.

The Tutorial will review the basics of noise control for combustion turbine power plants – both simple and combined cycle. The major noise sources will be identified, and proven controls will be discussed. A brief description of how power plants and their equipment work will also be included.

This tutorial is intended for noise control engineers who have either very limited experience with power plants, or are involved with supplying equipment for power plants.

For registration details contact the INCE business office: ibo@inceusa.org. For more information on the seminar content contact: Frank Brittain: fhbritta@bechtel.com

Technical Tour

On Monday morning, there will be a special bus tour to the Aero Systems Engineering Fluidyne laboratory. The tour is limited to 45 persons, and there will be a 5 USD charge for lunch. Interested individuals should contact the INCE/USA desk at the conference, preferably on Sunday evening.

On Tuesday afternoon, attendees may sit in on a rehearsal of the Minnesota Orchestra, followed by a guided tour of Orchestra Hall. Seating will be limited and sign-ups will be available at registration.

Accompanying Persons Program

There will be no formal accompanying persons program, but there will be assistance at the registration desk for those who want to learn what activities are available in the area.

HILTON MINNEAPOLIS HOTEL

The Hilton Minneapolis hotel is located in the heart of downtown, connected by skyway to many of the city's finest attractions. Orchestra Hall is next door and The Guthrie Theatre, Walker Art Center, fabulous shopping and superb restaurants are just a short stroll away. The Hilton Minneapolis hotel is an elegant Victorian brick building that rises 25 stories above the center of one of America's top cities. The hotel features a fully equipped health club, indoor heated swimming pool, sauna, jacuzzi as well as a full service business center. For more details visit:

http://www.hilton.com/en/hi/hotels/index.jhtml?ctyhocn=MSPMHHH

A block of guest rooms at discounted rates has been reserved by the ASA for meeting participants at the Hilton Minneapolis Hotel. Early reservations are strongly recommended. Note that the special ASA meeting rates are not guaranteed after 16 September 2005.

Please make your reservation directly with the Hilton Minneapolis Hotel. When making your reservation, you must mention the Acoustical Society of America to obtain the special ASA meeting rates, which are 134 USD single or double. Rooms at the executive level are also available at 169 USD single or double.

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EXPOSITION

An exposition of companies that provide measurement instrumentation, materials and systems for noise control, and/or software for noise analyses will be held in conjunction with the NOISE-CON 05/ASA meeting. The exposition opens on Monday evening, October 17 and closes at noon on Wednesday, October 19. When this issue went to press, the exposition booths were fully booked.

The exhibitors are:
ACO Pacific, Inc,
Asphalt Pavement Alliance
Brüel & Kjær
Cambridge Collaborative, Inc.
Casella USA
Commercial Acoustics
CYRO
Data Physics Corp
Dodge-Regupol Inc.
Eckel Industries Inc, Acoustic Division
Façade Technology, LLC
Fox River Systems
G.R.A.S. Sound and Vibration.
HEAD acoustics, Inc.
Hoover Treated Wood
International Cellulose Corporation
Jamison Door
Kinetics Noise Control
LMS North America
Maxxon Corp.
MBI Products Company, Inc.
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SOCIAL EVENTS

On Monday evening, there will be a reception for all NOISE-CON registrants in the exposition hall. On Tuesday evening, there will be an ASA social followed by an Orchestra Hall open rehearsal and a tour with Cyril Harris. For NOISE-CON registrants staying on for the full ASA meeting, there will be a second ASA social on Thursday.

About Minneapolis

Minneapolis and St. Paul might be called twins, but they are certainly not identical. Minneapolis claims the greater number of attractions and businesses, while St. Paul functions as the state capital. Founded 20 years and 16 km apart, the cities have been frequent rivals, but over the years they have shared equally in the riches the area has to offer. In the midst of lakeside resorts, farm communities and river towns, they form a vibrant metropolis rich with Fortune 500 companies, a thriving art and theater scene and professional sports teams. These elements of industry, culture and recreation have shaped the Minneapolis and St. Paul metropolis into one of America's most livable urban areas.

The Walker Art Center, near the Hilton Minneapolis Hotel, is nationally renowned for its permanent collections, including 100 years of sculpture and 20th-century art and photography, and exhibitions of contemporary art. The Minneapolis Sculpture Garden, which covers more than 7 acres at the Walker Art Center, has more than 40 imaginative sculptures by leading artists in media ranging from wood to granite.

Other area attractions include:

- Mall of the Americas
- Minnehaha Falls and Park. This waterfall along the Mississippi River inspired Henry Wadsworth Longfellow's poem "The Song of Hiawatha" and composer Antonin Dvorak's New World Symphony.
- The Basilica of St. Mary is the oldest basilica in the U.S. and one of the finest examples of beaux-arts architecture in the country (it is on the National Register of Historic Places).
- Foshay Tower, an elegant art deco style building, modeled after the Washington Monument, was the first skyscraper west of the Mississippi River.

Institute of Noise Control Engineering
of the United States of America, Inc.

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Areas of Interest *(Please select by numbering your first, second, and third areas of interest.)*

01 _____Sources
02 _____Propagation
03 _____Passive Control
04 _____Active Control
05 _____Perception and Effects of Noise
06 _____Instrumentation and Measurement Techniques
07 _____Prediction and Modeling Techniques
08 _____Standards
09 _____Transportation Noise
10 _____Building Acoustics
11 _____Industrial Noise
12 _____Community Noise
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15 _____Other
*(describe)*_____

Preferred Method of Contact

☐ Home ☐ Business

Applicant's Signature _____ Date _____

For Students

☐ I certify that the applicant is a full-time student

Faculty Member's Signature _____

Annual Fee for INCE Associates and Members

	Fee	Special 1st-Year Rate
Student	USD 20	USD 20
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INCE Associates and INCE Members receive both *Noise/News International* and *Noise Control Engineering Journal* and will receive reduced registration fees at INCE/USA conferences.

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This page to be completed only by applicants for INCE Membership.

Principal requirements for becoming a full INCE Member

1. be enrolled as an INCE Associate (Member applicants are automatically enrolled as associates while their credentials are reviewed);
2. have earned a baccalaureate (or equivalent four-year academic degree) or higher degree from a qualified program in engineering, physical science, or architecture offered by an accredited university or college
   OR have had at least one sole-author paper or two first-author papers published in or accepted for publication in the *Noise Control Engineering Journal*;
3. have instructed, or have enrolled in and achieved a grade of "B" or better in, at least one full-semester (i.e., three-credit or more) course of instruction offered by an accredited university or college devoted to the physical principles of acoustics
   OR have demonstrated at least five years experience in noise control engineering involving research, teaching, professional practice, or any combination thereof; and
4. have the application form endorsed by an INCE Member.
   A satisfactory grade on the INCE Fundamentals Examination will be considered sufficient for election to membership in lieu of requirements 2 and 3 above.

Education Beyond Preparatory School

College/University	Location	Degree	Major	Year received

Acoustics Course(s)

List not more than two courses in the fundamentals of acoustics taught or taken for credit (identify college/university, department, course title and number, year, and credits; include grade received and name of instructor).

Experience

Describe your interests and/or professional experience in the field of noise and its control, indicating each year you have worked in this field. Include any special interests, number of publications, patents, etc.

NCEJ Publications

Please give complete citation, including authors.

Endorsement

The endorser, an INCE Member whose signature appears below, verifies that the information supplied by the applicant is accurate to the best of the endorser's knowledge.

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I hereby make application for INCE membership. I certify that the statements made in this application are true, complete, and correct. If elected to membership, I will be governed by the articles of incorporation, bylaws, and policies of INCE/USA.

Full signature of applicant _____ Date_____

Asia-Pacific News

Marion Burgess, Asia-Pacific Editor

AUSTRALIA

Acoustic Invention Winner

From over 100 inventions that were featured on the Australian ABC TV program, New Inventors (www.abc.net.au/newinventors), the Silenceair passive acoustic ventilator has been the outright judges winner for 2004. Chris Field applied his research to ventilation technology and has subsequently developed the transparent ventilation system, about the size of two bricks which allows more natural airflow through buildings than other ventilation devices, and reduces external noise entering a building, by diffusing sound. Chris now has substantial financial support to assist with the commercialization of his product. Chris was also the winner of the Australian Acoustical Society Bradford Insulation Excellence in Acoustics Award for 2004

Sound Insulation

The acoustic requirements in the revised version of the Building Code of Australia (BCA), introduced in May 2004, are still of concern to those working in the area. At the 2004 Annual Conference of the Australian Acoustical Society, a workshop on this topic was included in the program. Even though there were many parallel sessions of paper presentations the participants at the workshop overflowed the room and there was much lively discussion. The goal of the revision of the BCA was to improve the airborne and impact sound insulation requirements for walls dividing separate apartments. Much of the concern relates to the introduction of the correction factor for both the impact and airborne sound ratings and the suitability of the field rating values not really being comparable with the design values. As there are five methods of verification which can be used to meet the BCA acoustic provisions there is the potential for discrepancies and on going legal disputes. There was some positive comment in that there appears to be a larger section of the building industry developing the attitude of exceeding the BCA requirements to provide a larger margin of safety.

Outstanding Annual Conference

Acoustics 2004, Australian Acoustical Society annual conference held in November, was an outstanding success with over 200 participants. The high number of contributed papers and of registrants caused consternation for the organizing committee as they sought additional facilities at the venue. The conference had strong streams in underwater acoustics and transportation/environmental noise highlighting the emphasis on these areas of acoustics in out region.

Tinnitus Survey

Eric Le Page is well known for his pioneering work on otoacoustic emission and cochlear physiology during his time at the National Acoustics Laboratory. He has now set up a web page, www.oaericle.com.au to provide a resource for articles and consultation on topics related to the ear and hearing. In particular. Le Page is seeking respondants for his on line Tinnitus Survey as he states "there is much which we could still learn about the phenomenon, particularly the mechanisms which give rise to it."

JAPAN

Report on Noise by the Ministry of the Environment

On December 21, 2004, the Ministry of the Environment issued an annual report, for the 2003 fiscal year, on the situation of environmental noise in residential areas. The report showed that 72.5% of those surveyed (4,493 in total) are satisfied with "the environmental quality standard for noise." The percentage decreases by 1.3% in comparison with the preceding year. It is also reported that the number of complaints about noise was 15,928, which was increased at 3.0%. The top three of the complaints are for industrial noise (33.5%), construction noise (27.0%) and noise in outdoor commercial activities (13.6%). On the other hand, complaints for traffic noise are less than 10%, which are for aircraft noise (5.8%), road traffic noise (2.5%) and railway noise (0.7%). A unique complaint is reported, which is for low frequency noise (below 100 Hz) and 44 cases are identified.

National Noise Map for Road Traffic Noise

After the revision of the noise regulation law in 1999, it is mandatory for local governments to execute regularly monitoring of road traffic noise

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New ventilation system

Eric Ungar is honored

USA

Ungar is Honored by the Shock and Vibration Center

Dr. Eric E. Ungar of Acentech Inc. in Cambridge, Massachusetts, received the Shock and Vibration Information Center's Lifetime Achievement Award at the 75th Shock and Vibration Symposium. His citation at the Shock and Vibration Symposium read: *Through a half century of research, consulting, and teaching, Dr. Eric E. Ungar has made singular and distinctive contributions to the discipline of Shock and Vibration. His analyses of the excitation and control of structural vibrations will long remain a foundation upon which others can build.*

The Shock and Vibration Information Center (SAVIAC), which originally was established by the US armed forces and other federal agencies now operates under industrial sponsorship and sponsors the annual Shock and Vibration Symposia.

Eric Ungar also received the INCE/USA Distinguished Noise Control Engineer award at NOISE-CON 04 last July (*See the 2004 September issue of NNI.—Ed.*). He is a Fellow of the Acoustical Society of America and served as the Society's 1992-93 President. He received the Society's Trent-Crede Silver Medal in 1983 for important contributions to our understanding of vibrations in complex structures, the effects of structural damping, and the propagation of structure-borne sound. Eric is a Life Fellow of the American Society of Mechanical Engineers and served as chair of the Society's Design Engineering Division in 1978-79, and was honored with the ASME's Per Brüel Gold Medal in 1994. Eric held numerous technical and management positions at the consulting and research firm Bolt Beranek and Newman Inc. in Cambridge, Massachusetts until his retirement from BBN in 1996 as Chief Consulting Engineer. Thereafter he joined the BBN "spin-off" consulting firm Acentech Inc. in Cambridge where he serves as Chief Engineering Scientist. Prior to his long career at BBN he served on the mechanical engineering faculty of New York University and before that at the Sandia Corporation in Albuquerque, NM.

In addition to having published over 200 technical papers and more than a dozen chapters in leading acoustics and vibration texts, monographs and handbooks he translated and revised Cremer's classic *Structure-Borne Sound*, still considered "the fundamental text" in the field. In all, those of us who have known and worked with Eric over the years have come to regard him a "Consultant's Consultant" widely sought after for second opinions, which he seems always eager to share. (*Contributed by William J. Cavanaugh*).

Quiet Highways Workshop

The Workshop to develop a *Roadmap to Quieter Highways* was held on 2004 September 14-16 on the campus of Purdue University. The Workshop was sponsored by the Federal Highway Administration (FHWA) and hosted by the Institute for Safe, Quiet and Durable Highways (SQDH) at Purdue University. Presentations by eleven speakers representing government agencies, universities, and industry were made to the 46 participants of the Workshop. The program consisted of

- presentations to describe the state-of-practice for quiet highways,
- multiple breakout sessions and discussion forums to identify the key technological gaps in quiet pavement policy, construction, maintenance, analysis (measurement and prediction), research, and design practice,
- breakout sessions to identify the activities required to implement quieter highways, and
- discussion in the assembly to identify potential funding sources and leadership for the effort.

Given the progress currently being made in Europe, as documented by the FHWA/AASHTO European Scanning Tour for Quiet Pavement (*See the news article below.—Ed.*), and recent activity to develop quieter pavement in states such as Arizona and California, there was much to discuss at the workshop. However, the activity to find quieter pavement in the USA is still relatively small and focused. As a result, the Workshop and the resulting Roadmap, are timely and can have a significant impact our potential success in this area.

The *Roadmap to Quieter Highways* lays out a plan to answer key research questions, describes a framework for initiating potential policy changes, and identifies the key issues for designing, building, and operating quieter highways. The destination for the *Roadmap for Quieter Pavement* is reliable design, construction, and maintenance specifications for pavements that

are safe, durable, and cost competitive and that are substantially quieter than existing pavement over their entire design life. When this design goal is achieved, policy changes may be initiated to permit the use of quiet pavement as an alternative for noise mitigation.

The Workshop Proceedings include:

- the final version of the *Roadmap to Quieter Highways*
- minutes of the meeting including collection of breakout session reports and documentation of the deliberations of the complete assembly, and
- copies of the presentations by the various speakers.

The Workshop organizers hope that the Roadmap represents the starting point for a focused national effort to find quieter highway alternatives. For more information on the Workshop Proceedings, please contact Bob Bernhard, Director, Institute for Safe, Quiet and Durable Highways. (*Contributed by Robert J. Bernhard.*)

Quiet Pavement Systems International Scanning Project

In the spring of 2004, an International Scanning Project of quiet pavement systems was conducted in Europe by the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration. Under this project, a team of 14 people composed of a cross-section of state, federal academic and industry representatives visited five European countries over a 17-day period to assess quiet pavement technologies, polices, applications. The objectives of the Scan were to discover and document state-of-the-practice in quiet pavement systems, to identify and recommend successful European technologies for application in the U.S., and to evaluate applicable noise measuring and monitoring systems. The trip was designed based on a comprehensive desk scan of published research summarizing where the technology was most used, where it was first used, and where innovation was still being explored. Although there were many countries from which to choose, the team selected five that were visited in the following order: Denmark, The Netherlands, France, Italy and the United Kingdom. Six of the team members also visited several sites in Belgium.

Significant findings from the Scan were reported in six areas including policy, design, noise analysis, construction, maintenance, and research. In the area of policy, it was found that all of the countries visited have implemented a policy that requires consideration of quiet pavement where noise is anticipated to be a concern. Additionally, on 2002 June 25, the European Union (EU) implemented a significant Noise Directive which requires all member countries to conduct noise mapping, use common prediction models, ensure noise information is available to the public, and adopt action plans to reduce environmental noise. In the area of design, the quiet pavement technologies being used include thin asphalt surfaces, porous asphalt surfaces, exposed aggregate concrete pavement and diamond grinding. With these, noise reductions of 3-9 dB are being achieved. In the area of noise analysis, it was found that substantial amount of noise modeling research is performed in Europe and that noise measuring methods are generally those defined by ISO standards and draft standards. In the area of construction it was found that normal construction equipment and technology are used to construct the quiet pavements. In the area of maintenance, minor but persistent disagreements were found about effective maintenance of negatively textured and often highly porous pavements. Finally, in the area of research, it was found that an extensive amount of research on quiet pavement technology is currently underway.

Based on these findings a number of implementation items in the area of pavement design were identified for both asphalt and cement concrete roadways. More specifically for noise issues, it was recommended that measurement protocols specific to US needs should be developed and that current policy and traffic noise models should be revised to take advantage of the benefits of quiet pavement technology through an integrated approach with other noise mitigation alternatives. To compliment the Scan, a measurement program was undertaken in the fall 2004 to quantify the noise performance of European pavements in comparison to those in the US under the sponsorship of the California Department of Transportation and the FHWA.

Society of Automotive Engineers Noise & Vibration Conference

The Society of Automotive Engineers will hold its biennial Noise & Vibration Conference May 16-19, 2005 on 100th year since the founding of the

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European pavements produce lowered noise levels

European News

Bernard Berry, European Editor

European Union Projects: CALM IMAGINE HARMONOISE

EUROPE

Noise Activities of the WHO Regional Office for Europe

The noise home page of the World Health Organization (WHO) for Europe, www.euro.who.int/Noise, reviews issues related to noise, including noise guidelines, noise and health indicators, and noise and sleep. A number of pamphlets and publications on noise are also available for download.

On 2004 December 6-7, the second technical meeting of a group studying nighttime noise guidelines was held in Geneva, Switzerland. The discussions concentrated on central issues like exposure assessment, metrics, health effects, guideline set-up. Special attention was paid to sleep related health effects and sub cortical noise effects on health i.e., cardiovascular effects. A third meeting is planned for 2005 April 26-28 in Lisbon, Portugal. Information on the group's activities is available from the website URL above.

CALM Activities in the EU

CALM is a thematic network established by the European Union. The network is establishing a Community Noise Research Strategy to define the strategic plan for future noise research which is required to promote EU-wide noise reduction and improve the quality of life in Europe. A one-day conference, "Noise Research Strategies for a Quieter Europe," was held on 2004 October 19. A description of the conference with further links to the presentations may be found at www.calm-network.com/index_cc04.htm. This conference follows an earlier conference, "Objectives for Health Effects from Noise," held on 2004 March 18.

A report, "Research for a Quieter Europe," was first issued in 2002 July, and a final version is now available for download. It can be found at www.calm-network.com/SP_2020_Final.pdf.

IMAGINE is a European Project

The European project IMAGINE (Improved Methods for the Assessment of the Generic Impact of Noise in the Environment) is developing new calculation methods for railway, road, industrial and aircraft noise. IMAGINE will standardize the Harmonoise (see below) methods and will provide guidelines on how to use these methods for noise mapping and noise action plans (e.g., traffic flow management) in the EC. The project began in 2003 December, and by the end of 2006, practical guidelines are expected to be available for how to measure source data for Harmononoise and how aircraft and industrial noise are to be treated. The IMAGINE home page may be found at www.imagine-project.org. For an introduction to the project, go to www.imagine-project.org/artikel.php?ac=direct&id=5.

Harmonoise Project Reports are Complete

The Harmonoise project began in 2001 August, and has now (2005 January) produced methods for the prediction of environmental noise levels caused by road and railway traffic. These methods are intended to become the harmonized methods for noise mapping in all EU Member States. The methods are developed to predict the noise levels in terms of L_{den} and L_{night}, which are the harmonized noise indicators according to the Environmental Noise Directive 2002/49/EC. A final report (not yet accepted by the EC), three reports on road noise, four reports on rail noise, and two reports on advanced propagation modeling have been produced. The home page for the project is www.harmonoise.nl, and the above reports may be downloaded from www.harmonoise.nl/artikel.php?ac=direct&id=253.

UNITED KINGDOM

UK DoH Advisory Group

There is a newly constituted UK Government Department of Health (DoH) Ad-Hoc Advisory Group on "Health Effects of Noise." It is chaired by Dr Bob Maynard, Senior Medical Officer at DoH. Members are Mr. Bernard Berry (Bel Acoustics), Dr. Ian Flindell, Prof. Bridget Shield, Dr. Jo Bray (UK Defra - Environment Dept.) , Ms Lesley Ormerod (UK Environment Agency), Dr. Geoff Leventhall (consultant), Mr. Philip Grindrod (Dept for Transport), and Prof Stephen Stansfeld (Queen Mary University of London). The Group is expected to work over the next 12 months, considering a wide range of noise and health issues, and preparing a

continued on page 26

International Representatives

Below is a list of international contacts for the advertisers in this issue. The telephone number is followed by the fax number where available. In cases where there are several telephone numbers per location, or several locations within a country, a bullet (•) separates the telephone number(s) from the respective FAX number. Advertisers are asked to send updated information by e-mail to: IBO@inceusa.org.

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Pan-American News *continued from page 21*

Society. The Conference will be held at the Grand Traverse Resort in Traverse City, Michigan and feature almost 300 papers on various aspects of automotive noise and vibration control. With typically 1600 participants, it is one of the largest specialty noise and vibration conferences and attracts papers and attendees worldwide. In addition to the technical sessions, a large exhibition of N&V related products and services will held. This year's conference is chaired by Pranab Saha (INCE Bd. Cert. 1984) of Kolano & Saha Engineers, Inc. Technical papers will be organized into 30 categories and presented in 8 to 9 parallel sessions. Four workshops will be held in the evenings covering the topics of Acoustical Materials, Statistical Energy Analysis, Structure Borne NVH, and Sound Quality. On Monday before a the official start of the conference a golf outing will be held with the proceeds going to the Ralph K. Hillquist (INCE Bd. Cert. 1976) Honorary SAE Scholarship Fund. Ralph is founding member of INCE/USA and a fellow of both SAE and the Acoustical Society of America. More information regarding the conference can be found on the SAE website, www.sae.org.

Asia-Pacific News *continued from page 19*

at areas in agglomerations (*metropolitan areas—Ed.*). It is also requested for them to make up noise maps for major roads. So far, Ministry of the Environment has gathered the noise maps from local governments and arranged them into a web site with a country map. The web site was opened to the public on 2004 November 01. The web site is located at www-gis.nies.go.jp/noise/car/. However, it is available only in the Internet environment with Japanese fonts.

European News *continued from page 22*

report for Prof. Sir Liam Donaldson, the UK Government's Chief Medical Officer.

NPL Reports are Available

The National Physical Laboratory has an acoustics section that engages in a number of activities related to noise control. A recent report is a guide to the basic standards for sound power determination produced by the International Organization for Standardization (ISO). The laboratory's home page is www.npl.co.uk, and the report may be found at www.npl.co.uk/acoustics/techguides/soundpower.

Data Physics

Data Physics Introduces Quattro

Building on the success of Abacus, Data Physics has introduced Quattro, the latest ultra portable DSP engine, bringing a high performance and cost effective solution to small channel count systems. Ultra portable and said to be rugged, it provides USB 2.0 connectivity to a host PC or laptop and is completely bus powered. With 4 inputs, 2 outputs and 1 tachometer channel, it is a solution for small channel count applications. It has real time analysis capability from DC to 93 kHz (204.8 kHz sample rate). Load the software, connect the USB cable between Quattro and the PC and it is ready to begin measurement.

Quattro is said to provide a powerful and highly mobile backbone for the most demanding applications. 4 inputs and 2 outputs are said to make it ideal for advanced modal testing including MIMO analysis. The easily configurable tachometer input makes difficult machinery diagnostics effortless and with a host of available measurements including synchronous averaging, order tracking, demodulation and a complete rotor dynamics toolkit, it is ideally suited for troubleshooting any rotating machinery problem. Quattro interfaces to the SignalCalc software environment. User configurable control and measurement panels, unlimited display layouts and intelligent data management combine to make any PC a powerful and intuitive Dynamic Signal Analyzer.

Additional product information can found at www.dataphysics.com/products/analyzerfamily/ace/index.htm

Data Physics is also pleased to announce the acquisition of Gearing & Watson, a well known UK based manufacturer of electrodynamic shakers and underwater acoustic systems. In his announcement, Dr. Sri Welaratna , President & CEO, Data Physics Corporation, commented on the importance of combining the full range of shakers from the very small, 2 lbf model to very large, 50,000lbf model under one roof. The new range of shakers will be sold under the SignalForce product name. Data Physics already markets and sells Ling Electronics (LE) shakers built by Satcon Technology Corporation, which cover the high force rating applications. Expanding into shakers is of strategic significance to Data Physics, who has been a leading supplier of vibration controllers used to drive shakers for product testing applications. Data Physics also supplies dynamic signal analyzers which are used with smaller electrodynamic shakers for modal analysis by the structural test community. Gearing & Watson shakers are renowned for superior designs that offers higher reliability and Data Physics SignalCalc dynamic signal analyzers and SignalStar vibration controllers are renowned for superior technology that offer higher performance and accuracy.

Users of vibration test systems for product test and dynamic signal analyzers for modal analysis will now be able to buy a complete solution of the highest quality and performance from one source. Gearing & Watson Electronics Ltd (GW) was established in 1973 as a specialist designer and manufacturer of moving coil exciters, high power amplifiers, complex signal generators and closed loop control systems. The company is ISO 9001 certified for quality assurance and is an approved defense contractor. During year 2000 GW won a UK Department of Trade and Industry SMART award for the use of increased technology in vibration testing systems.

Vibracoustic

Vibracoustic North America Opens New Technology Center

Vibracoustic North America, a division of Freudenberg-NOK, has developed a state of the art NVH technology center in Plymouth, Michigan, dedicated to serve its customers and provide solutions that will enhance product quality by improving ride and comfort.

The Vibracoustic staff is available to provide technical consulting, conduct testing, perform analysis, and deliver a complete working solution to the NVH issues that our customers may be facing. The facilities and equipment are also available for lease on a short and long term basis.

Some of the equipment and services include:

- Chassis dynamometer in a semi-anechoic chamber
- Powertrain dynamometer in a semi-anechoic chamber
- Dynamic and multi body modeling>
- Finite element analysis
- CAD (UG, Ideas, and Catia)
- NVH testing and data analysis
- Prototyping

Below are URLs to some of our capabilities and a product overview overview of our products. For more information, contact Dr. Rod Hadi, Director of Engineering, Advanced Product Design and Systems Engineering, Vibracoustic North America - Freudenberg NOK, Mobile: (734) 751-5850 Fax: (734) 354-5338, Email: rgh@fngp.com

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Vibracoustic

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www.freudenberg-nok.com/pdf/Vibracoustic_Consulting_Services.pdf
www.freudenberg-nok.com/pdf/Automotive_Technical_Training_Education.pdf

Scantek

Human Vibration Analyzer

Scantek is pleased to announce the release of an add on module that changes a sophisticated sound level meter into a human vibration analyzer. The SC-310 can measure NC and 1/3rd octave band spectra over the audible range. Now though, the meter shows three new screens: 1/3rd octave band real time spectrum from 1 Hz to 80 Hz in linear or logarithmic units, the second, a graphical version of the spectrum, and the third, the acceleration evaluations. This module, available for the CESVA SC-310 sound level meter, allows users to meet vibration measurement criteria found in ISO 2631-2:2003 and measurements per ISO 8041. The SC-310 also has the ability to measure reverberation time, room NC-criteria, and other parameters. All results are seen on computer monitor or easily downloaded with supplied software.

Vibration Calibrating System VC-110

Scantek is pleased to announce the VC 110 from MMF accelerometer calibrator. The new unit provides full and traceable calibration of accelerometers for both sensitivity and frequency response. The rapid and easy calibration of vibration measuring systems gives a) Measurement of frequency response, b) Built-in signal conditioner with transducer sensitivity display, c) Built-in accumulator for mobile use, d) Traceable to standard, and e) PC controlled. The new unit replaces the popular VC 100 and adds a) Higher measuring accuracy b) Doubled battery operating time and c) ASCII command interface for external control

Device for Measuring Footstep Sound Insulation of Floor Coverings

Scantek is pleased to announce the availability of an instrument developed for a manufacturer of floor coverings in order to measure footstep sound insulation to ISO 140/717 or DIN 52210. It generates a reproducible shock impulse onto a sample of the floor covering and measures the resulting shock acceleration.

Acoustic Sensor for Ground-borne Sound

Scantek is pleased to announce the introduction of the model T16/940 transducer from MMF. Developed for the ground-borne sound locating device *Digiphone* of Hagenuk KMT, the unit is intended for pinpointing faults of power cables. It detects ground vibrations which are generated by flash-over faults using the sound field and distance method. The sensor measures both vibration and magnetic fields. It contains the electronic circuit for amplification and filtering. Its plastic case with handle was designed for field use. Different accessories are supplied for optimum adaptation of the sensor.

Triaxial Underwater Accelerometer

Scantek is pleased to announce a new underwater accelerometer set from MMF. This triaxial accelerometer was developed for measuring structural vibration during and after construction of a dam. The pressure-proof case is intended for submersion in liquid concrete. The KS823 features a hook for hanging it up while the concrete hardens. The compact sensing element reaches a sensitivity of 400 mV/g making it possible to detect lowest vibration. The KS823 has a constant current compatible output.

Scantek, Inc., an ISO 17025 NIST accredited Calibration Laboratory, is a distributor for multiple sound and vibration lines, including Norsonic, RION, CESVA Acoustical Instrumentation, Castle Group, KCF Technologies, Metra Vibration Transducers, DataKustik, RTA Technologies, and BSWA Transducers. Scantek is committed to providing quality customer repair service and calibration of your sound & vibration instrumentation and engineering needs. For more information, call (800) 224-3813 or visit www.scantekinc.com. Inquiries may be mailed to Richard Peppin, President, Scantek, Inc., 7060 #L Oakland Mills Road, Columbia, MD 21046

LMS

The Belgian Government provides Multi-million Euro Co-finance Support from its Airbus 380 Technology Development Program

LMS International has announced that the Belgian Federal Government recently approved to co-finance the development of LMS Virtual.Lab for Aerospace, a dedicated virtual simulation suite for aircraft and space system development. LMS Virtual.Lab for Aerospace offers an integrated solution to simulate component and full aircraft performance, and addresses specific development challenges such as the structural integrity of airframe designs, the dynamic performance of landing gear and slat systems or the vibro-acoustic comfort of the aircraft cabin. The co-finance backing from the Belgian Government is part of a large-scale business and technology development program that

enables Belgian high tech companies to bridge the considerable pre-investment of participating in the development of the Airbus A380 aircraft. Through programs like this, the Belgian Government aims at supporting the growth of the aerospace high-tech industry in Belgium. Aircraft manufacturers are faced with the challenge of designing systems and components that are safer, more reliable, and cheaper to operate, and have less environmental impact. In case of the Airbus A380 project, the size and the complexity of the aircraft, the extensive use of new construction types and materials, and the historically short development cycle increases the engineering challenge. Based on these rigorous requirements, LMS engaged in the development of a dedicated suite of simulation solutions, LMS Virtual.Lab for Aerospace, that allows engineering teams to systematically analyze the performance, structural integrity, safety, reliability and comfort of the aircraft design. LMS Virtual.Lab enables aircraft designers and engineers to quickly explore multiple design alternatives and optimize the overall aircraft behavior before committing to prototype building and testing.

LMS Provides Caterpillar Inc. with Solutions for Noise and Vibration Engineering

LMS International has announced that LMS will provide Caterpillar with LMS Virtual.Lab and LMS Test.Lab for Noise and Vibration engineering. The LMS solutions will be used to optimize the vibration comfort and noise performance of new designs, from the early virtual prototype stages up to the final prototype validation.

Competitive pressure continuously forces off-highway manufacturing companies to optimize the noise and vibration performance of their products and to pro-actively respond to changing customer requirements and ever-stricter legislation. The LMS Test.Lab system strongly supports engineering teams in tackling these complex challenges. LMS Test.Lab combines state-of-the-art capabilities, strong ease of use and a complete coverage of key noise and vibration applications. This strongly increases the efficiency in pinpointing and correcting vibration problems, and in analyzing and optimizing the dynamic properties of designs. In off-highway engineering, the role of noise and vibration testing is no longer limited to the qualification and optimization of physical prototypes in the late development stages. Using LMS Virtual.Lab Noise and Vibration, engineering teams analyze the correlation between Finite Element (FE) models and test models, and improve the accuracy of FE models. In addition, LMS Virtual.Lab Noise and Vibration assists them in building hybrid simulation models, combining FE models and test-derived models of components and subsystems. Overall, LMS Virtual.Lab Noise and Vibration supports the accurate simulation and efficient optimization of a design's noise and vibration performance before committing to virtual prototype testing.

New Revision of Tec.Manager is Introduced

LMS International has introduced Rev 5 of LMS Tec.Manager, its web-based and ASAM-ODS compatible solution for efficient data organization, retrieval and reporting. LMS Tec.Manager enables engineering departments to leverage the information value of large volumes of data that represent a huge investment in time and cost. New data organization and navigation capabilities further extend its capabilities to handle the data from a wide range of different engineering software tools working with a multitude of data formats. LMS Tec.Manager Rev 5 removes these data format barriers and enables users to search and access data from their standard browser. It is no longer required to know where the data are physically stored, nor the engineering applications that actually generated the data. By working with LMS Tec.Manager, information can be easily shared between different departments, customers and other external partners.

With the extended Web Navigator of LMS Tec.Manager Rev 5, development teams are able to easily share and leverage engineering data, by browsing through specific directories and opening selected data containers. Any file or database can be opened from within the browser and exhibited in a variety of graphical displays, each in its own native format. All integrated data drivers eliminate the need to license, install and understand all of the engineering applications that generated the data originally. In addition, the web navigator is capable of generating reports as well as downloading data for further use. Everything works fast since only the data to be displayed is copied and transferred over the network, while all original data remains at their initial locations.

The improved Application Server within LMS Tec.Manager Rev 5 represents a collaborative web-based solution that packages a complete data management system, enabling larger businesses to effectively share and leverage engineering data across the entire enterprise. In addition to all Web Navigator capabilities, it offers effective data management, efficient data search and secure

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data access capabilities. The LMS Tec.Manager Application Server indexes the data available in user-defined network sections, and builds a corresponding catalogue, which links individual files or groups of files with dedicated keywords and context-specific attributes. After specifying a few intuitive search criteria, the advanced queries embedded in LMS Tec. Manager are able to find and return a link to even the smallest piece of data buried among hundreds of thousands of files. In a window that looks similar to Google or Alta Vista, all search results can be viewed immediately in their respective native formats. LMS Tec.Manager even allows the data content of different file types to be displayed in one single plot or graph. LMS Tec.Manager Rev 5 further extends its user-specific authentication and file access mechanisms, by offering check-in/check out capability. This feature eliminates potential data loss, resulting from multiple users updating the same data at the same time. In addition, this data management solution is built on the basis of one single application server, which reduces installation, administration and maintenance costs significantly. An advantage that specifically concerns LMS Test.Lab is the capability to access LMS Tec.Manager directly from within LMS Test.Lab. This enables LMS Test.Lab users to perform highly efficient data search operations on LMS Test.Lab data and other data, and use the traced data for further processing in LMS Test.Lab. The LMS Tec.Manager integration in LMS Test.Lab also allows these users to easily submit newly generated LMS Test.Lab data in LMS Tec.Manager, both on a manual or automatic basis. Optionally, the integrated LMS Tec.Manager solution can be equipped to support ASAM-ODS database technology, or provide different levels of LMS CADA-X APM (Advanced Project Management) compatibility.

Toyota Racing Development and LMS Engineers Tune Simulation Software for Competitive Racecar Design Requirements

LMS International has announced that Toyota Racing Development (TRD) U.S.A. has selected LMS Virtual.Lab Motion to develop and optimize chassis and suspension systems for its race vehicles. TRD is continually challenged to optimize the dynamic performance and handling of their vehicles in the NASCAR Craftsman Truck series, and LMS Virtual. Lab Motion will enable TRD racing engineers to efficiently model suspension setups, integrate them into full-vehicle models, and virtually test-drive these vehicles on digital tracks. The software integrates the full simulation and optimization process, allowing TRD to quickly fine-tune racecar performance with digital models, thus bypassing the tremendous time and cost of building and testing multiple physical prototypes. Competitive pressure pushes TRD engineers to develop the best platforms, redesign and optimize key components in the shortest possible time, and quickly understand the tradeoffs in setting up vehicles for specific racetracks and weather conditions. Extreme requirements in terms of racing performance and ever-shorter development cycles constantly drive TRD to push the limits of its technological capabilities. Advanced simulation tools are utilized as much as possible by such teams to leverage their engineers' expertise in developing winning race vehicles. Based on these rigorous requirements, TRD conducted an exhaustive evaluation and selected LMS Virtual. Lab Motion to support the demanding task of tuning the dynamic response of race vehicle designs. The organization particularly values the powerful capabilities of the software to efficiently design, analyze and optimize suspension models. The full integration with CATIA V5 allows engineers to quickly model design changes, and to analyze the kinematic and dynamic performance of multiple design options in record time. Dedicated post-processing and visualization features enable engineers to effectively identify and optimize suspension changes. Integrated optimization capabilities support them in analyzing and tuning suspension designs for specific racetracks and other conditions.

Larson Davis

An Upgrade From Larson Davis

A new firmware upgrade enables the use of high capacity individual NiMH cells instead of the custom battery pack originally supplied. The combination of enhanced firmware and state-of-art rechargeable batteries can extend the operating time of the Larson Davis Model 824 by as much as 50% when combined with the use of high capacity individual NiMH cells instead of the cell pack originally supplied. Not only do these new cells provide a longer operating time, but their recharging time is reduced to as little as fifteen minutes using advanced charging units from major manufacturers.

For more information on the Model 824 SLM/Real-time Analyzer, contact the Acoustic Test Products division of Larson Davis, Inc., toll-free at 888-258-3222 (U.S. and Canada) or 801-375-0177; fax at 801 375-0182, e-mail: info@larsondavis.com; or visit the Larson Davis web site at www.larsondavis.com.

Endevco

Endevco Opens a Facility in Asia

Endevco, a subsidiary of international aerospace, defense and electronic sensors group Meggitt PLC, announced a landmark in its 50 year history with the opening of Meggitt Sensors and Controls Xiamen Ltd (Meggitt Xiamen), its first manufacturing facility in Asia. In addition to serving as a base for business expansion in the Asia-Pacific Region, Meggitt Xiamen will bring production and distribution closer to Asia-based customers, who can now expect the same innovative, high quality products with shorter lead times and reduced total cost of ownership. Endevco develops sensors for the measurement of acceleration, vibration and pressure in extreme environments such as aerospace, automotive and medical systems. Meggitt Xiamen shipped its first commercial products to customers in September.

In addition to Endevco products, the new facility will also support local production for other Meggitt divisions. 100 employees are currently based at Meggitt Xiamen, representing manufacturing, operations, engineering, technical and administrative functions.

Endevco Expands Global Customer Capabilities with New Sales and Support Organization in Europe

Endevco, a designer and manufacturer of dynamic instrumentation for vibration, shock and pressure measurement, is expanding its global capabilities with the opening of an additional business center in Europe. The new center enables Endevco to provide higher levels of support for its European customers, who represent a significant portion of its worldwide customer base. A direct sales force, marketing, distribution and fulfillment, application engineering support and technical support will be housed in the Germany-based center, which also serves as the central hub for Endevco's network of existing offices in the UK, France and Spain.

A major focus of the center will be program and solution support for major OEMs in the automotive, aerospace and military market segments. Additionally, a direct European sales force ensures that customer needs for application-specific capabilities and overall support and communication will be met in a timely and efficient manner. Products are available directly from Endevco or through its network of authorized distributors in Europe.

Endevco is a designer and manufacturer of dynamic instrumentation for vibration, shock and pressure measurement. The company's comprehensive line of piezoelectric, piezoresistive, ISOTRON® and variable capacitance accelerometers are used to solve measurement problems in a wide variety of industries including aerospace, automotive, defense, medical, industrial and marine. Other products include pressure transducers, microphones, electronic instruments, and calibration systems. Endevco has a direct sales force in the U.S. and Europe, and its product line is also available through authorized sales channels and distributors. Endevco is a subsidiary of U.K.-based Meggitt PLC.

PCB Piezotronics

Piezoelectric Force Sensors

General Purpose Piezoelectric Force Sensors from the Force/Torque Division of PCB Piezotronics, Inc. measure dynamic compression, tensile, and impact forces in a wide variety of applications. Sensors are offered in both ICP® and charge output types, and measure full-scale compression forces from 10 to 5000 lb (45 N to 22 kN) and full-scale tensile forces from 10 to 500 lb (45 to 2200 N). Applications include drop and impact testing, material testing, fatigue testing, biomechanics, and modal analysis force input. ICP® force sensors contain built-in microelectronics to convert the high impedance charge to a low impedance voltage, which eliminates the need for expensive charge amplifiers and low noise cables. Charge output versions are also available for higher temperature applications.

Acknowledgements

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Conference Calendar

Below is a list of congresses and conferences sponsored by International INCE and INCE/USA. A list of all known conferences related to noise can be found by going to the International INCE page on the Internet, www.i-ince.org.

2005 June 27-29

International INCE Symposium

Managing Uncertainty in Noise Measurement and Prediction

Le Mans, France. For further information, fill in the form on the home page, www.uncertainty-noise.org. To ask a specific question, address an e-mail message to info@uncertainty-noise.org.

2005 August 06-10

INTER-NOISE 2005

The 2005 International Congress and Exposition on Noise Control Engineering

Rio De Janiero, Brazil. Contact: Prof. Samir N.Y. Gerges, Mechanical Engineering Department, Acoustics and Vibration Laboratory, University Campus - Trindade, Florianopolis, SC - CEP 88040-900, BRAZIL. Tel. +55 48 2344074; Fax: +55 48 2320826: e-mail: samir@emc.ufsc.br.

2005 October 17-19

NOISE-CON 2005

The 2005 National Conference and Exposition on Noise Control Engineering

Minneapolis, MN, USA. Contact: Institute of Noise Control Engineering, INCE/USA Business Office, 210 Marston, Iowa State University, Ames, IA 50011-2153. Tel. +1 515 294 6142; Fax: +1 515 294 3528; e-mail: IBO@inceusa.org. Internet: http://www.inceusa.org.

2006 December 03-06

INTER-NOISE 2006

The 2006 International Congress and Exposition on Noise Control Engineering

Honolulu, Hawaii, USA. Contact: Institute of Noise Control Engineering, INCE/USA Business Office, 210 Marston, Iowa State University, Ames, IA 50011-2153. Tel. +1 515 294 6142; Fax: +1 515 294 3528; e-mail: IBO@inceusa.org. Internet: http://www.inceusa.org.

2007

INTER-NOISE 2007

The 2007 International Congress and Exposition on Noise Control Engineering

This congress will be held in Istanbul, Turkey. For further information on the dates, please contact the I-INCE General Secretary, Robert J. Bernhard, Ray W. Herrick Laboratories, Purdue University, West Lafayette, IN 47907, USA. Tel. +1 765 494 2141; FAX: +1 765 494 0787; e-mail: bernhard@ecn.purdue.edu.

Directory of Noise Control Services

Information on listings in the Directory of Noise Control Services is available from the INCE/USA Business Office, 210 Marston, Iowa State University, Ames, IA 50011-2153; +1 515 294 6142; Fax: +1 515 294 3528; IBO@inceusa.org. The price is USD 400 for 4 insertions.

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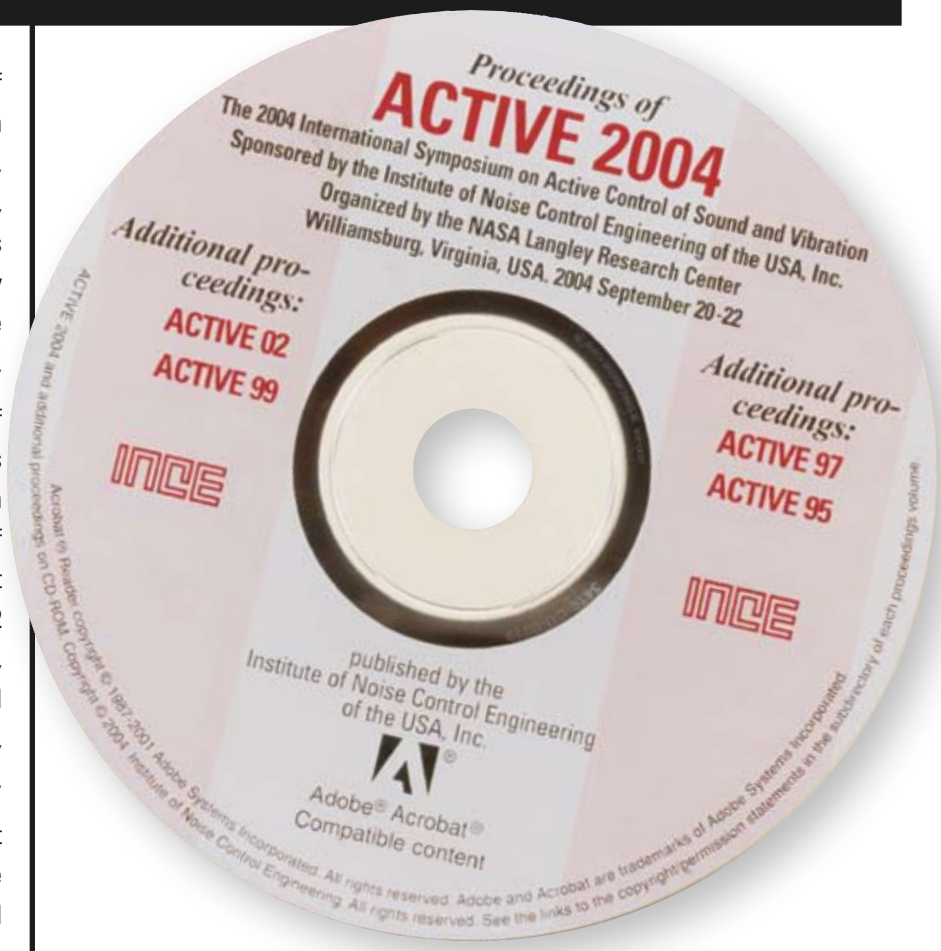
ACTIVE 04 CD-ROM

WITH ADDITIONAL PROCEEDINGS

This CD-ROM contains the Proceedings of ACTIVE 04, The 2004 International Symposium on Active Control of Sound and Vibration. ACTIVE 04 was held in Williamsburg, Virginia, USA on September 20-22. The Symposium was sponsored by INCE/USA, and was organized by the NASA Langley Research Center. There are 101 papers from ACTIVE 04 on the CD-ROM.

The CD-ROM also contains the proceedings of four other ACTIVE Symposia. ACTIVE 02 was held at the Institute of Sound and Vibration Research in the United Kingdom in July of 2002 (117 papers). ACTIVE 99 was held in Fort Lauderdale, Florida, USA in December, 1992 (115 papers), ACTIVE 97 was held in Budapest, Hungary in August, 1997 (103 papers), and ACTIVE 95 was held in Newport Beach, California in July of 1995 (125 papers).

Together, these 561 papers are the most extensive collection ever published on the technical aspects of active control of sound and vibration. The CD-ROM can be searched by any character string.



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