

Institute of Noise Control Engineering of the United States of America

An Early History

1963 ~ 1981

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1963 ~ 1981

William W. Lang

Prepared for the INCE/USA
40th Year Anniversary Celebration
During NoiseCon 2011
Portland, Oregon

Edited by
Eric W. Wood

INCE/USA
INCE Foundation
Noise Control Foundation

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Dedications

This early history of INCE/USA was prepared as a tribute to the wisdom and foresight of the Institute's many founders and pioneer members, especially to those who participated at Arden House in 1971 and recognized the need for and worked hard to establish a new organization to better serve America's concern about noise.

We can be proud as we celebrate the 40th anniversary of INCE/USA that the Institute has grown and expanded to become a strong and effective influence supporting noise control engineering worldwide.

With great pleasure and respect this document is dedicated to the Institute's founders and pioneer members; the many officers, directors, and staff who have served with distinction over the past forty years; our thousands of dedicated members; and the many exhibitors at our NOISE-CON conferences and INTER-NOISE congresses who have contributed greatly to the ongoing success of INCE/USA.

William W. Lang

The publication of this book is in honor of Bill Lang, George Maling, and Leo Beranek, not necessarily in that order.

a thoughtful and generous donor who supported publication

INCE

design by Dick Bolt

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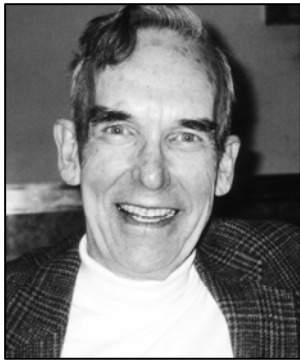
Preface

This highly-subjective history of the early years of INCE/USA, originally prepared as a contribution to the celebration of the 20th anniversary of the organization, has been revised for the 40th anniversary celebration. Single quotes (') have been used rather than double quotes (") to indicate that the remarks quoted have not been recorded by electronic means, but are from the memory of the author. The style of the narrative is informal; first names have been used where possible, and all titles have been omitted.

There would be no history to write if it were not for two people. Without Leo Beranek, Charter President of INCE, the organization could not have been founded. Leo was the person responsible for getting INCE off the ground. George Maling has provided the glue that has held the organization together over the years. In addition to serving as INCE Secretary, INCE President, and General Chair of INTER-NOISE 80 and 89, George has served continuously as Editor-in-Chief of *NOISE/NEWS* and its successor *NOISE/NEWS International* since publication of the first issue in 1972. He was an incorporator and founder of INCE and has provided the backbone that has kept INCE a thriving organization since its founding.

This history has been divided into six periods:

- The period before the founding (1963 ~ 1969)
- The pivotal year (1970)
- The year of incorporation (1971)
- The formative years (1972 ~ 73)
- The years of challenge (1974 ~ 76)
- The growing years (1977 ~ 1981)



Bill Lang



George Maling



Leo Beranek

Section 1

The Period before the Founding (1963 ~ 1969)

An important event occurred on 1963 November 09. I was on the platform of the railroad station in Ann Arbor, Michigan waiting for a sleeper to take me home to Poughkeepsie, New York. The Acoustical Society of America (ASA) meeting had just concluded, and by chance I happened to encounter on the platform, waiting for the same train, Bruce Lindsay, the Editor-in-Chief of the ASA. He remarked during our conversation: 'You'll be interested to know, Bill, that the Executive Council voted to kill *SOUND* magazine this afternoon.' Somewhat bewildered, I asked 'Why?', and Bruce explained that the Executive Council felt the magazine served only a small constituency within the society and it required more resources than it was worth.

The demise of *SOUND* has nothing to do directly with the founding of INCE; but, with its demise, those interested in noise control lost the only U.S. publication devoted to their interests. To be sure, Bruce Lindsay argued, the *Journal of the Acoustical Society of America* (JASA) published then, and continues to publish, articles on noise. But then, even more than now, JASA was a research-oriented periodical; and Lindsay emphasized that if a manuscript did not contain the results of new, previously unpublished research, it would not be accepted for publication in JASA. The result was that very few articles on noise and its control ever found their way onto its pages. But that's only part of the story. *SOUND* magazine was the successor to *NOISE CONTROL* magazine, first published by the ASA in 1955.

As an avid reader of *NOISE CONTROL* magazine, I found it an extremely useful periodical for the noise control practitioner during its short life. Indeed, it was the only magazine dedicated to the interests of the noise control professional and was published several years before the term "noise control engineer" was adopted by the profession. I had the opportunity to interview Leo Beranek in the 1980s as part of the ASA Oral History Project, which is sponsored by the ASA Committee on Archives and History in cooperation with the Center for the History of Physics of the American Institute of Physics (AIP). Leo recounted the establishment of *NOISE CONTROL* during his term of office as President of ASA in 1954-55. The Secretary of ASA was Wallace Waterfall, who served in that capacity from the founding of the Society in 1929 until 1969. Before Leo assumed the Presidency of ASA, he mentioned to Wallace that very few papers on noise were published in JASA because the noise papers submitted to the editorial staff were deemed to be too practical. Wallace suggested that Leo undertake the publication of a new magazine by ASA entitled *NOISE CONTROL*. With Lew Goodfriend as the editor, the first issue of the magazine appeared in 1955 January, and the magazine continued publication through Leo's term as ASA President.

However, towards the end of the decade problems began to develop. The composition of the Executive Council of ASA changes each year. The constituency served by *NOISE CONTROL* magazine represented only a small fraction of the membership of the Acoustical Society of

America, and its subscription list included many who were not members of ASA. As the Executive Council was dominated by physicists, psychologists, and physiologists who were not professionally interested in noise and its control, questions were asked about the expenditure of ASA resources for a small constituency. Why was ASA publishing a magazine for people who didn't belong to the Society? As Editor Lew Goodfriend, with Leo's help, had performed miracles to get the first issues off the ground; an excellent start had been made, but in 1958 Lew stepped down. He was not easy to replace, and a succession of editors appeared on the masthead for relatively short tenures following Lew's resignation. Also, the constant expenditure of ASA resources was considered by the Executive Council at each meeting. At the end of 1961, the scope of the publication was changed. To broaden the base of interest within the Society, the name of the magazine was changed to *SOUND*, and articles were solicited and published in other areas of acoustics besides noise and its control. Finally in 1963, the anti-*SOUND* forces on the Executive Council had mustered enough strength to kill the magazine at the end of the 1963 publication year. A gap was created by the absence of a publication of a professional society serving the interests of the noise control professional. This gap which was not to be filled for a decade was one of the important factors that led to the founding of INCE.

The identifiers "noise control engineer" and "noise control engineering" were unfamiliar terms in the 1950s and 1960s. The field of noise control engineering had not emerged during that period as a recognized discipline and there was no organization advancing the interests of noise control engineers during this period. The Acoustical Society of America was then, and for many still is, the professional home of many individuals concerned with noise and its control but in those days many acousticians concerned with noise and its control were frustrated by their inability to get their papers published in the research-oriented JASA.

According to Leo Beranek, ASA President in 1954-55, the Executive Council recognized the needs of specialists within the ASA for in-house organizations which would represent their interests. This led in 1960 to the establishment of Technical Committees within the ASA. The first chairman of the Technical Committee on Noise (TCN) was Lew Goodfriend (1960-62), who was succeeded by Jim Botsford (1962-64), and followed by Tony Embleton (1964-67), then Bill Lang (1967-69), and George Maling (1969-72) to be followed by the successive chairmanships of Pete Baade, Glen Warnaka, Bob Bruce, Larry Royster, Alan Marsh, Ron Bannister, and Jiri Tichy. The technical committees of the Acoustical Society serve an extremely useful purpose in arranging programs for the semiannual ASA meetings, electing members to ASA fellowship, and making nominations for medals and awards. But in the 1960s and 1970s, the technical committees had no budgets of their own and had only a minor influence on publications of the Acoustical Society. Technical committees of the Acoustical Society meet for an hour or two twice a year in the evening during the semiannual meetings of the society. The TCN during the 1960s was unable to fulfill all of the professional needs of the noise control engineer, but it was the only organization of acousticians interested in the practical, engineering aspects of noise control. In 1965, approximately 9 percent of the members of the Acoustical Society expressed a primary interest in noise.

According to its bylaws, the Acoustical Society is managed by its president and executive councilors who are elected to office and the appointees of the Executive Council (the secretary, the treasurer, and the editor-in-chief). Six candidates are nominated for two slots on the

Executive Council. The councilors serve for three years representing segments of the ASA population. In some years, there has been considerable interest and sympathy among the councilors for the constituency of the society concerned with the engineering aspects of noise control. In other years, this support from the ASA's executive body has been weak. It was during one of these nadir periods that *NOISE CONTROL* magazine and its successor, *SOUND*, disappeared from the society's publication list.

The establishment of technical committees at the end of the 1950s was a move by the ASA to give greater representation to its various constituencies. The chairmen of the technical committees were assigned to the Technical Council, a subordinate advisory group to the Executive Council. During the 1950s large numbers of Acoustical Society members left and joined in the formation of other societies. In particular, the predecessor organization to the Institute of Electrical and Electronics Engineers (IEEE), the Institute of Radio Engineers (IRE), formed an Audio Group in the early 1950s about the same time that the Audio Engineering Society (AES) was formed. The AES is a highly-successful, commercially-oriented society with a membership more than three times that of the Acoustical Society. The IEEE Group on Audio is now the IEEE Signal Processing Society. With 15,000 members, it is one of the most rapidly-growing constituent societies of the IEEE today. But I'm getting ahead of my story. In the late 1950s and early 1960s, the Acoustical Society made changes to its internal structure to meet the needs of its internal constituencies, as those were viewed by the Executive Council. However, many within the Society felt that this restructuring was not enough. The technical committees of the ASA had very limited powers and the influence of individual constituencies continued to wax and wane depending on the composition of the Executive Council.

It should be emphasized that the ASA is an extremely successful organization with a loyal membership of dedicated acousticians. The JASA is the world's premier scientific publication in the field of acoustics. Selling the Journal to the libraries of the world brings in large revenues. The society has had ample funds to spend over the years to support the activities approved by the Executive Council and ASA officers.

In the 1960s, the microelectronics revolution was still in its infancy. This situation affected the support for the noise control professional outside the ASA. I had been sent by IBM in 1964 to a two-week senior management course at Arden House, located in Harriman, New York. This old estate, which had been converted by Columbia University to a conference center, was an ideal spot for small conferences dedicated to specialized topics. In 1965, IBM's Jim Cooley, together with Bell Lab's John Tukey, rediscovered the Fast Fourier Transform. By 1966, the potential of this improved algorithm looked extremely promising, but a hardware implementation was several years in the future, and the implementations in software were still primitive. With the formation of the IEEE in 1963, the old IRE Group on Audio became the IEEE Group on Audio and Electroacoustics, of which I served as chairman during the period 1967-68. In 1968, George Maling and I organized an IEEE workshop on digital signal processing to be held at Arden House. This successful workshop was followed by another on the same subject in 1970 and ultimately led to the formation in the early 1970s of the IEEE Society on Acoustics, Speech, and Signal Processing. This society changed its name in 1990 to the IEEE Signal Processing Society. During the 1960s George and I gained experience in structuring a field of professional endeavor which was badly in need of such structuring, namely, digital signal processing. The

applications of digital signal processing in which we were interested were those that directly related to noise control engineering. But these few applications were quickly submerged by the growth of the digital signal processing field. Noise control applications and, indeed, the field of acoustics, play very little role in today's IEEE Signal Processing Society.

Two other aspects of the external climate are worth discussing. The Acoustical Society, founded in 1929, has been a constituent member of the American Institute of Physics since its formation. This situation continues despite the fact that the field of acoustics itself is no longer considered to be in the field of physics by the modern specialties. Physicists today tend to consider most of the key problems in acoustics to have been solved by Rayleigh, Helmholtz and their contemporaries. Nonetheless, the AIP provides a valuable umbrella service to the ASA and the other AIP members which lie in the shadow of the American Physical Society (APS).

The ASA is inter-disciplinary in nature, much more so than the other member societies of the AIP. The ASA includes not only physicists and engineers, but psychologists, physiologists, audiologists, and other specialists who are not physics-oriented or physics-based. The Executive Council, therefore, must be careful not to step on any of its constituent specialties. This is a delicate situation and has presented a problem to the society since its inception. When Ira Hirsh was ASA president in 1967-68, he remarked to me that he feared the psychologists and physiologists would break off to form their own society as they were dissatisfied with the AIP-oriented Acoustical Society of the 1960s. Leo Beranek tells me that the same problems existed in the 1940s and 1950s. Thus it was important that any action taken by one of the constituent groups should not work to the detriment of the ASA, which over the years has performed outstanding service to the professional acoustician.

The second major feature of the climate of the 1960s was the emergence of the environmental movement. Towards the end of this decade, the media and the public realized that the resources on Planet Earth are limited, began to become conscious of the needs of the environment, and started to pay more attention to the problems created by noise in our society. By the end of the decade of the 1960s, the American public had been prepared for action at the Federal level to see if something could be done to reduce the noise levels that our population was being exposed to. The decade of the 1960s closed with change in the wind.

Section 2

The Pivotal Year (1970)

Years following the pivotal year, Leo Beranek would write: “Bill truly conceived the idea of an Institute of Noise Control Engineering. In the late summer of 1970, Bill came to my home in Winchester Massachusetts and asked me whether I would be interested in joining him in establishing such an institute. The idea being that we could establish a place where noise control engineers could be certified, we could hold regular meetings to disseminate new research and practical developments in noise control, and we could enhance the literature through a Noise Control Engineering Journal. We discussed the proposition in great detail and then decided to go ahead. The idea was brought before the leading noise control engineers of that day through a workshop held at Arden House in Harriman, N.Y. in January of 1971. Bill took primary responsibility for the organization of this workshop—the birthplace of INCE.”

At the beginning of 1970 there was no professional organization in the U.S. which was solely dedicated to the interests of the noise control engineer. The title "noise control engineer" was quite new and was just being recognized as that of a practitioner in a specialized engineering discipline. But there was concern for the environment and new noise control initiatives were being taken by the Federal government.

Early in 1970, plans were made to organize a workshop in which the leaders of the emerging field of noise control engineering could meet together and discuss the issues they could face in this environmental decade. During 1970, I had several discussions with George Maling and Leo Beranek on the proposed workshop. At that time, the ASA was meeting in Atlantic City, New Jersey. George had succeeded me as chairman of the Technical Committee on Noise. At a subsequent meeting of the TCN, I announced that a "workshop on noise control engineering" would be held during the period 1971 January 10-12 at Arden House with Leo as chairman.

On 1970 May 17, I made notes on the proposed structure of the Institute of Noise Control Engineering. INCE would be a "non-profit, American engineering association for those professionally involved in the control of acoustical noise. It would be international in scope with an overseas membership and would publish an archival journal (there was no American archival journal exclusively devoted to noise control). This new association would emphasize the engineering aspects of the field, offer certification to qualified noise control engineers, and sponsor an annual symposium with exhibits, state-of-the-art papers covering the entire field, a topical conference, in depth on one subject, and a tutorial course." I also noted several reasons for the creation of an association with its own journal and national meeting and pointed out that ASA is not presently structured to do the job that INCE could do. The editorials in the final issues of both *NOISE CONTROL* and *SOUND* anticipated that much of the future material on noise would be published in JASA, but that had not happened. To be successful in starting our own journal, we would need a national meeting for the presentation of papers preceding their

publication in the journal. The creation of a new professional association was discussed with many people, and most agreed that it was appropriate to discuss at the forthcoming workshop.

Prior to the workshop at Arden House, there was intensive activity to structure the workshop on Noise Control Engineering, and we needed a list of engineers who were active in noise control. We prepared a package of preliminary materials which, with the initial invitation list (insert first shown below), a registration form and the information package, was mailed to those on the invitation list by the end of the summer.

Insert First. Initial Invitation List

Allen, C. H.	Flanagan, J. L.	Lawler, E. D.	Ramer, L. G.
Angevine, Jr., O.	Flynn, D. R.	Leasure, Jr., W. A.	Ribner, H. S.
Audette, R. R.	Foster, C. R.	Leehey, P.	Ross, D.
Baade, P. K.	Franken, P. A.	Lubman, D.	Sabine, H. J.
Bannister, R. L.	Galloway, W. J.	Lyon, R. H.	Salmon, V.
Barnett, N. E.	Garinther, G. R.	Maestrello, L.	Sanders, G. J.
Bauer, B. B.	Goodfriend, L. S.	Maglieri, D. J.	Sawley, R. J.
Bayless, W. S.	Graef, J. P.	Maidanik, G.	Sepmeyer, L. W.
Beranek, L. L.	Graham, J. B.	Maling, Jr., G. C.	Shaw, E. A. G.
Berendt, R. D.	Grine, D. R.	Mariner, T.	Sherwood, R. M.
Blackstock, D. T.	Groening, J. A.	Marsh, A. H.	Skaistic, S. J.
Bonk, B. A.	Gross, Jr., E. E.	McAuliffe, D. R.	Slaymaker, F. H.
Bonvallet, G. L.	Gruber, G. J.	Meecham, W. C.	Snowdon, J. C.
Boole, R. A.	Guintier, J. M.	Miller, L. N.	Soffrin, T. J.
Botsford, J. H.	Hamme, R. N.	Miller, M. M.	Soroka, W. W.
Bruce, R. D.	Hemond, Jr., C. J.	Moeller, K. G. F.	Steele, J. M.
Burkhard, M. D.	Hill, V. H.	Molloy, C. T.	Strumpf, F. M.
Callaway, D. B.	Hillquist, R. K.	Morrow, C. T.	Tatge, R. B.
Chalupnik, J. D.	Hirschorn, M.	Mull, H. R.	Thiessen, G. J.
Chanaud, R. C.	Hixson, E. L.	Musa, R. S.	Thomas, D. G.
Christoff, J. P.	Hodge, D. C.	Muster, D. F.	Tichy, J.
Close, H.	Hubbard, H. H.	Naake, H. J.	Toole, F. E.
Collier, R. D.	Huntley, R.	Nowikas, W. M.	Towne, R. M.
Corlies, E. L. R.	Ingalls, D. J.	Odell, A. H.	Ungar, E. E.
Crocker, M. J.	Ingard, K. U.	Oleson, S. K.	Vargovick, R. J.
Cuadra, D. E.	Jack, W. A.	Oliphant, K. S.	Veneklasen, P. S.
Cudworth, A. L.	Junger, M. C.	Oran, F. M.	von Gierke, H. E.
Day, J. W.	Karplus, H. B.	Ostergaard, P. B.	Warnaka, G. E.
Diehl, G. M.	Kingsbury, H. F.	Owen, R. E.	Waterhouse, R. V.
Donley, R.	Kirschner, F.	Paullin, R. L.	Wells, R. J.
Dyett, Jr., E. G.	Knowles, H. S.	Pearsons, K. S.	Williams, Jr., B.
Ebbing, C. E.	Kodaras, M. J.	Peterson, A. P. G.	Winzer, G. E.
Eldred, K. M.	Koidan, W.	Plunkett, R.	Woollett, R. S.
Embleton, T. F. W.	Kundert, W. R.	Potter, S. M.	Young, R. W.
Farrell, R.	Lambert, R. F.	Powell, A.	Zwieback, E. L.
Fehr, R. O.	Lang, W. W.	Powers, J. O.	

During this same period, I had numerous discussions with Leo Beranek, George Maling, and members of the workshop committee concerning the proposed Institute of Noise Control Engineering. It was subsequently decided to publicize the idea that the workshop would be devoted both to the technical aspects of noise control engineering and to the possibility that a new professional organization might be formed.

Early in 1970 December the program for the "workshop on noise control engineering," scheduled for 1971 January 10-12 was mailed to prospective participants. The concept of a possible new organization was circulated in the detailed program. I wrote the text for the discussion on 1971 January 11 of the topic: "Professionalism in noise control engineering--the challenge" (insert second). Leo Beranek wrote the text for the outline of the session to be held on 1971 January 12 entitled: "Professionalism in noise control engineering--future directions" (insert third). Inserts second and third were the programs for stimulating discussions which could ultimately lead to the formation of a new professional association which would be tax-exempt under Section 501(c)(6) of the U.S. Internal Revenue Code. This new (c)(6) organization or "business league" would be empowered to initiate a structuring of the field of noise control engineering. The tax-exempt status afforded by Section 501(c)(6) would permit the organization to attempt to influence legislation, to take positions on controversial issues, to publish a code of ethics, and to establish certification and accreditation programs for noise control engineers. It was hoped that similar organizations would be organized in other countries; and for this reason, the following wording was intentionally adopted as shown in insert second: "The proposed organization which has been tentatively named the international Institute of Noise Control Engineering (INCE) would operate in close cooperation with the acoustical societies of the U.S. and abroad and with other professional societies concerned with noise and its control." The lower case was intentionally used for the initial letter of the word "international" as that word was not to be included in the name of the organization which might be established. From the beginning, it was the intention of those individuals who became the founders that the Institute of Noise Control Engineering would play a leadership role in the world.

Section 3

The Year of Incorporation (1971)

Eighty-five specialists in noise control engineering came from all over the U.S. to Harriman, New York, in early 1971 January. Arden House, the former home of the Harriman family, is a unique conference center run by Columbia University and situated on a ridge of the Ramapo Mountains fifty miles north of New York City. The participants, all of whom were professionally active in the field, arrived on January 10 for the three-day invitational workshop on noise control engineering. They were divided into five groups: acoustical consultants, university people, government researchers and officials, engineers representing manufacturers of instrumentation and noise control equipment, and engineers from other industries. The purpose of the workshop was threefold: 1) to review the latest developments in noise control engineering, 2) to consider the needs of industry as well as local, state, and federal agencies insofar as the control of environmental noise is concerned, and 3) to consider what steps could be taken to advance the professional development and national standing of noise control engineers. Leo Beranek served as workshop chairman, and I served as co-chairman. We believed that these purposes could be achieved by an informal type of meeting consisting of scheduled speakers and discussion-type sessions in the relaxed atmosphere of Arden House. A workshop of this kind is a valuable means of disseminating information and exchanging new and perhaps controversial ideas to an extent that is not always possible through the usual channels of communication at technical meetings.

The opening address by Leo Beranek considered "The Noise Control Specialist: Needs and Responsibilities." In his talk, he stressed the objectives of the workshop and set the stage for the technical sessions and the discussions of professionalism. The keynote address which followed on Sunday evening was given by Dick Garwin, a noted IBM physicist who was then a member of the President's Science Advisory Committee. In this capacity, he had been involved during the preceding ten years with the field of aviation, both military and civil, and had been deeply concerned with aircraft noise problems. His presentation was entitled "The Impact of Noise Control Engineering on Society" and called for a structuring of the field of noise control engineering. He identified four aspects of the field—acquisition of new knowledge, development of tools, preparation of standards and regulations, and the engineering involved with specific sources of noise. "In the future, noise control engineering must be an integral part of the overall development process," he said; "noise must be considered as an important parameter just as cost, function, and marketability are now considered."

More than sixty technical papers were presented. A survey paper by Uno Ingard on the physical principles of noise control opened the technical sessions on Monday morning. Of particular interest was a study of the radiation from spatially-incoherent sources, a holographic analysis of vibrations, and a paper on the visualization of the sound pressure distribution in a reverberant room. The Monday evening session was devoted to noise control in buildings. In this session

some of the fundamental aspects of noise generation, radiation, and propagation in buildings were discussed. There was a demonstration of the use of a miniature ripple tank which illustrated the complexities of sound distribution in rooms. On Tuesday morning six papers addressed engineering approaches for evaluating and controlling environmental noise; the need was stressed to use the appropriate degree of sophistication without neglecting the political and social context, as well as the signal wave shape, statistical distribution, and frequency spectrum. The Tuesday evening session considered the latest developments in instrumentation, measurement and assessment techniques. New electronic technologies permit complex noise rating schemes to be built into practical, relatively inexpensive devices. The common theme of the Wednesday morning session devoted to engineering design was that noise control must be implemented early in the design stage of a product and careful planning is required to achieve satisfactory results. Good engineering design for noise control requires a clear understanding of applied acoustics and an ability to determine the relative importance of the various parameters that must be considered in the noise control problem. The final session of the workshop was devoted to the control of noise generated by subsonic aircraft. The eight papers in this session included a comprehensive summary of the status of noise control for gas turbine engines as well as presentations on a number of specific technical subjects.

The subject of professionalism in noise control engineering was addressed in the two afternoon sessions.

Insert Second. Program for Monday afternoon, 1971 January 11

PROFESSIONALISM IN NOISE CONTROL ENGINEERING—THE CHALLENGE

W. W. Lang, discussion leader

The current reexamination of our national priorities and the upsurge of public concern for the preservation of our environment have greatly increased the importance of noise control. Federal, state and local governments, as well as civic organizations and industrial firms, need assistance and advice on matters dealing with noise and its control. The confusion surrounding the technical aspects of the SST development program exemplifies this need. The ultimate goal of all professionals in the field is to reduce the levels of environmental noise, thus enhancing the quality of life for everyone.

The challenge is clearly defined. Noise control engineers must organize themselves to respond to the needs of the public. If they don't, others will have to step in and do the job for us. How can we influence the professional development of individuals entering the field of noise control engineering? How can we improve the professional status of noise control engineers? How can we influence the adoption of regulations and codes that are in the public interest and are feasible from an engineering point of view? How can we provide a source of reliable technical information that is available to the public?

The acoustical societies of the United States (i.e., the Acoustical Society of America, the Audio Engineering Society and the IEEE Group on Audio and Electroacoustics) are concerned with some aspects of noise and its control. The members of other American societies are also interested in noise control engineering. These societies have tax-exempt status under Section 501(c)(3) of the U. S. Internal Revenue Code. This status prohibits these organizations from

undertaking any action which would tend to structure their fields of interest or work for the economic betterment of their members.

What is required is another type of organization that can do everything that a (c)(3) organization is permitted to do and, in addition, is allowed to undertake programs to influence legislation, to take positions on controversial issues, to attempt to exert social influence, to publish a code of professional ethics, to establish certification and accreditation programs and to provide related services in the public interest. Such an organization is a so-called "business league" which falls under Section 501(c)(6) of the Internal Revenue Code. The American Medical Association, the National Society of Professional Engineers and the American Institute of Architects are examples of (c)(6) organizations.

To structure the field of noise control engineering, it is proposed that a new (c)(6) organization be formed. It would undertake a publication program and sponsor meetings like a (c)(3) organization, and it would sponsor some of the (c)(6) type of activities mentioned above. The proposed organization which has been tentatively named the Institute of Noise Control Engineering (INCE) would operate in close cooperation with the acoustical societies in the U.S. and abroad and with other professional societies concerned with noise and its control.

Insert Third. Program for Tuesday afternoon, 1971 January 12

PROFESSIONALISM IN NOISE CONTROL ENGINEERING—FUTURE DIRECTIONS

L. L. Beranek, discussion leader

A need was discussed for a new professional organization concerned with noise control engineering. Serving as the voice of the profession, this new organization would be expected to speak out on matters of public interest and to take positions on controversial issues. It would publish technical information available to the public. At the end of this workshop, the following course of action will be presented for discussion, modification, and consensus:

- a. Immediate establishment of an Institute of Noise Control Engineering (INCE) organized in either New York State or the District of Columbia under Section 501(c)(6) of the U.S. Internal Revenue Code. Nine members would be named to serve on an interim governing board in addition to three interim officers, a President, an Executive Vice President and a Secretary-Treasurer. The interim board members and the organizing officers would be drawn from the workshop committee and would serve until the first annual meeting of the organization.
- b. A credentials committee would be named to develop criteria for membership in the Institute. Membership applications would be accepted after the criteria are accepted and agreed upon by the governing board.
- c. A publications committee would be named to develop an editorial policy, establish the subscription rate and prepare a budget for the official publication of the Institute. This journal, tentatively named "Noise Control Engineering," would be inaugurated as soon as it is feasible to do so.

These two sessions involved discussions of topics of importance to the practicing noise control engineer. The discussions lasted far into the evening on both Monday and Tuesday. At the

conclusion of the workshop on Wednesday, a vote was taken. Ballots were passed out with a single question: "Do you approve of the formation of a new organization to further the goals of the Arden House workshop on noise control engineering?" Some participants had already left Arden House, but of the seventy ballots tallied, fifty were affirmative and twenty were negative. The die was cast.

At Arden House a feeling of good will prevailed. Ollie Angevine wrote: "I have been struck by the feeling of friendliness and involvement in this meeting. It may be because it is a small meeting ... we are obviously gaining some of the advantages claimed for encounter groups--increased friendliness and a feeling of knowing the other participants better. Yet we are all involved in matters of great interest and concern."

Leo Beranek and I worked to select a name for the Institute and took preliminary steps towards incorporation. The name that we wished to incorporate was the Institute of Noise Control Engineering of the United States of America, Inc.

At that time there were a number of other professional societies, none of which had "noise" in their name, which were concerned to some degree with noise and its control. On 1970 September 01, I wrote letters to the presidents of eight U.S. professional societies informing them that a workshop on noise control engineering would be held at Arden House in 1971 January and I sent them the preliminary material that had been prepared for distribution to potential participants. In my letter I asked the presidents to give me an estimate of the approximate numbers of their members who were professionally concerned with some aspect of noise or its control, and I also asked the presidents to turn over the enclosed information to one of their members known to be interested in noise who might wish to participate in the Arden House workshop. Cordial responses were received from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), the Society of Automotive Engineers (SAE), the American Industrial Hygiene Association (AIHA), the Institute of Environmental Sciences (IES), the American Speech and Hearing Association (ASHA), the American Institute of Architects (AIA), and the Instrument Society of America (ISA). These organizations all expressed interest in the Arden House workshop and informed me that they had sent the literature to one or more of their key members who might be interested in participation. Seven of the eight organizations replied.

The key player for the Acoustical Society during this period was Wallace Waterfall. Leo Beranek and I recognized that Wallace's position regarding the development of INCE/USA would be the Society's position, so we made sure that Wallace was completely informed on plans. I recall that Leo and I went to see Wallace in New York City in the spring of 1971 to explain that the Acoustical Society was not able to fully serve the professional interests of engineers working in noise control and that a new organization dedicated to those interests was needed. We emphasized that all of the members of our organizing committee and most of the others involved with the workshop and with the future professional organization were members of the Acoustical Society. As Leo was a past president of the Society and I was a past chairman of its Technical Committee on Noise, we pledged to Wallace that everything would be done to foster a close relationship between the ASA and the new organization still to be formed. The new organization would be formed under Section 501(c)(6) of the U. S. Internal Revenue Code,

while the Acoustical Society was a 501(c)(3) organization. The latter is for "scientific and educational organizations" which are prohibited from lobbying and from certifying the qualifications of their members.

Having settled on a name, the next major task was incorporation. We needed a lawyer who knew organizational law and who would be willing to serve pro bono as the organization was starting from scratch. During 1970, I had served as a Director of the IEEE under the leadership of Jim Mulligan, then IEEE Vice President for Technical Activities, and subsequently IEEE President. Through Jim Mulligan we learned that Lew Rivlin of the firm Peabody, Rivlin, and Gore, would be willing to assist in the organization of INCE/USA on a pro bono basis. This was good news. Leo Beranek and I visited Lew in his Washington office to find out what was needed to form the new organization.

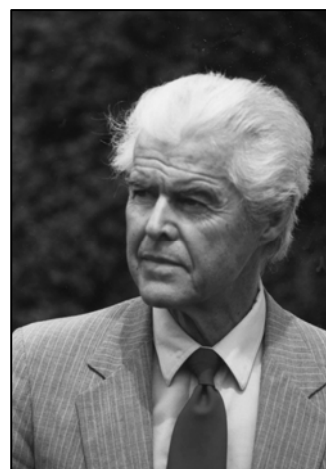
On 1971 April 18 the first meeting of the interim governing board for the Institute of Noise Control Engineering was held in Washington, DC. Present in addition to Leo and Bill were Harvey Hubbard, Uno Ingard, George Maling, Ken Oliphant, and Glenn Warnaka.



Harvey Hubbard



Ken Oliphant



Uno Ingard

Alvin Meyer, then recently appointed as Director of EPA's Office of Noise Abatement and Control joined as a guest. Ken Oliphant moved that the proposed Articles of Incorporation of INCE/USA be approved. They were accepted in principle. It was agreed that the bylaws would be prepared as soon as possible. There was a discussion of publication costs, the options available to the Institute insofar as publications were concerned, the needs of practicing engineers, and the financial resources necessary for various kinds of publications. It was agreed that after incorporation, the Institute should seek funding from both government and industry to support the Institute's programs. There was discussion of a basic dues structure for the Institute and of the creation of an interim financial plan. Steps were taken to establish a policy on the relationship of the Institute to other professional and technical societies concerned with noise. It was agreed that we would work closely with the Acoustical Society of America.

There was an extended discussion of qualifications for membership. It was agreed that, following incorporation, the membership situation would be addressed. The time and place of

the next meeting were set for Denver, Colorado, during the following October. The meeting in Washington on 1971 April 18 paved the way for incorporation.

On 1971 April 20 Leo and I met with Lew Rivlin. We told him that the interim Board of Directors had approved the Articles of Incorporation and that we wanted to proceed with the formal incorporation. Ten days after meeting with Lew, I sent a copy of the proposed INCE Articles of Incorporation to those who had agreed to serve on the initial Board of Directors and asked them to submit their first annual dues to the Institute in the amount of \$75. These dues were reduced after the first year to \$50. I informed the initial Board members that we expected to have the Institute in operation by 1971 July 01 and that the Institute would sponsor the second Arden House workshop on noise control engineering during the period 1972 January 16-19. The Articles of Incorporation were signed on 1971 June 04 with Leo Beranek, Bill Lang, and Lew Rivlin as the incorporators.

In early July, the first press release of INCE was issued. It read: "A new organization devoted to the control of environmental noise has been incorporated in Washington, DC. The Institute of Noise Control Engineering (INCE) is a non-profit technical society which ultimately may number among its members all professionals in this country who are concerned with the engineering aspects of noise control. Increasing public concern with noise problems has led to the formation of this new professional society. By certifying and registering noise control engineers, INCE will protect the interests of the public. Another primary objective of the Institute is to advance the technology of noise control engineering with particular emphasis on solving everyday noise problems. Formation of INCE was decided upon at a conference of noise specialists last January. It is planned that the new organization will sponsor meetings and conferences to hear reports on the latest advances in noise control engineering and will publish one or more periodicals to document these activities... Interest in noise is worldwide.... The first President of INCE is Leo L. Beranek, eminent noise control engineer and well-known authority in engineering acoustics."

The Executive Committee (Leo Beranek, Bill Lang, Lew Goodfriend, George Maling, and Ken Oliphant) played an important role during the first months of INCE/USA's life. On 1971 July 02, the committee met in the offices of Bolt Beranek and Newman in New York City. Leo reviewed the organization papers, the incorporation documents, and the Articles of Incorporation. I sought approval of the initial draft of the bylaws. George and Lew presented a tentative publications plan which included the possibility of publishing a newsletter and an archival journal. Ken presented the outline of a membership qualifications plan. The committee met again in New York City on 1971 October 07 to prepare for the first regular INCE Board of Directors meeting held later in October. The Executive Committee approved the naming of the first international congress on noise control engineering as INTER-NOISE 72.

Sometime early in 1971, George Maling said that he'd like to start an INCE newsletter. I replied, 'George, do you have any idea how much effort that would entail?' But George was not to be dissuaded; he was convinced that INCE needed a newsletter and that he was the right person to edit it. The newsletter was discussed in detail at the 1971 July 02 meeting of the Executive Committee, and they agreed that it would be published every other month and that a proposal would be made to the ASA Executive Council for the newsletter to be published jointly by the Acoustical Society and INCE with the Institute retaining editorial and financial control

over the publication. On 1971 October 13, Leo Beranek wrote to ASA President John Johnson proposing a "joint publication by ASA and INCE of a newsletter tentatively to be titled '*NOISE/NEWS*' which would be published outside the normal editorial channels of either society." Leo included a dummy of the first issue and informed John that the editorial policy would be set by a small committee, appointed in equal numbers by ASA and INCE. The ASA accepted the INCE proposal, and Volume 1, No. 1 of *NOISE/NEWS* was prepared for publication at the beginning of 1972. George Maling was Editor of the first issue, and he continues today his exceptional work as the Editor-in-Chief of *NOISE/NEWS International*.

The first meeting of the Board of Directors (1971 October 22) in Denver, Colorado, was a historic event and the atmosphere was subdued, but jubilant. Those present were Leo Beranek, President, Bill Lang, Executive Vice President, George Maling, Secretary-Treasurer, Lew Rivlin, Counsel, and the following Directors: Pete Baade, Malcolm Crocker, Ken Eldred, Lew Goodfriend, Warren Kundert, Ken Oliphant, and Glenn Warnaka. Lew Rivlin stated that he had reviewed the bylaws revised on 1971 October 15 and could see no problems. Leo discussed the proposal for an INCE Newsletter that had been sent to ASA President, John Johnson. The masthead would state that the newsletter is published by INCE with the cooperation of the Acoustical Society of America. After discussion it was moved that the Board authorizes the Executive Vice President to undertake publication of a newsletter and that such funds as necessary be applied. Approval was unanimous.

There was lengthy discussion of Ken Oliphant's draft "Qualifications for Membership." It was clear that there was no intention to exclude from membership any qualified professional from the ranks of those engaged in the practice of noise control engineering. It was equally clear, however, that noise control engineering was becoming recognized as a special and separate field of expertise and that relatively few engineers were qualified to serve in a professional capacity in matters related to noise. It was desirable to have a professional society stamp or imprimatur for those who are qualified in the field and who are making efforts to keep up professionally in noise control engineering.

At the Board meeting a balloting was conducted for future members of INCE. On 1971 May 07, I had asked the members of the interim board to assist in identifying the eminent noise control engineers in the U.S. who, by virtue of their stature in the field, could be certified for membership in the Institute on the basis of their qualifications and experience. I asked the members of the board to send me a list of ten to twenty-five individuals whom they consider to be eminent noise control engineers, asking them to list fellow workers and associates, but to omit members of the Board. A list of approximately 450 noise control engineers was assembled. At the meeting on 1971 October 22, each Board member selected not fewer than fifty, nor more than seventy-five, noise control engineers, that he considered to be eminent in the field. Of those selected, twenty-five or fewer could be identified as pre-eminent by the member. Following the 1971 October 22 meeting, the results of the balloting were tabulated.

George Maling prepared a matrix which summarized the results. The ten INCE Directors present at the 1971 October 22 meeting in Denver cast 795 votes for initial members of the Institute, selecting from the list of approximately 450 names. Some 219 individuals received at least one vote. They were grouped in three categories:

- six to sixteen votes: 43 individuals - Category I
- three to five votes: 68 individuals - Category II
- one to two votes: 108 individuals - Category III

Category I individuals were considered to be the pre-eminent engineers to be invited to join INCE immediately. As a first step they were invited to the second Arden House workshop held in 1972 January. Category II individuals were invited, if openings remained, to the workshop. Category III individuals were not invited to the workshop, except in special cases. It was considered by the Board that those in Category III required further processing of credentials while those in Categories I and II were invited to join INCE as initial members without further processing. So began the membership selection process.

The purpose of the balloting at the 1971 October 22 meeting of the Board was to identify the most eminent U.S. noise control engineers. Others who ranked lower in the balloting, many of them very experienced and distinguished noise control engineers, were welcome to seek membership through the normal membership procedures. It took several years before these procedures were adequately codified; and some of the preliminary procedures may have turned off potential members.

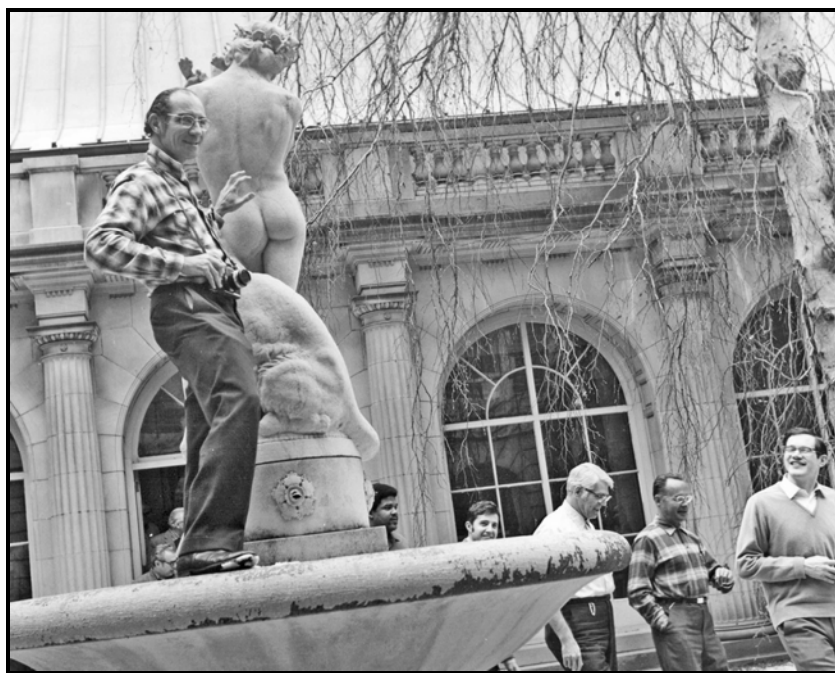
Appendices A and B provide excerpts from the original bylaws and articles of incorporation. Appendix C provides lists of founder and pioneer members of the Institute.

Section 4

The Formative Years (1972 ~ 1973)

Shortly after New Year's Day, 1972, George Maling's vision became a reality with the publication of Issue No. 1 of *NOISE/NEWS* dated 1972 January-February. This issue featured a photo of Leo Beranek on the cover, a lead article that "INCE is Incorporated," photos from the ASA Conference on Noise Standards which had been held at Arden House during the period 1971 July 28-31, the program for the second Arden House workshop, and a Call for Papers for INTER-NOISE 72.

The events of the second Arden House workshop were covered in the second issue of *NOISE/NEWS* (1972 March-April). The keynote address was given by Alvin Meyer of EPA's Office of Noise Abatement and Control. He described the public hearings that the EPA had sponsored in major cities during the second half of 1971 and the fifteen-volume report on noise submitted by EPA to the President and the Congress on 1971 December 31. On the second evening of the workshop, I made a presentation entitled: "Professionalism in Noise Control Engineering--A Progress Report" in which I reviewed the obstacles that had been overcome during the formation of INCE.



Vince Salmon (second photographer) at Arden House in 1972. Malcom Crocker in the lower right

During the second workshop, seven task forces were created to further INCE's objectives. These task forces dealt with the following subjects: INCE classification of subjects, *NOISE/NEWS* operating plan and schedule, INTER-NOISE 72 planning, professional associates, institutional representatives, public affairs, and long-range planning. As INCE was without its own logo or special symbol to embellish stationery, brochures, publications, and banners, workshop attendees were invited to participate in a contest to design a suitable logo for INCE. Those interested in participating were requested to bring their ideas to Arden House. The winner of the contest was Dick Bolt with the superb INCE logo that has adorned all INCE letterhead and publications since 1972.



Participants at the Second Arden House Meeting, 1972 January 16-19

The Board of Directors met on Sunday, 1972 January 16, at Arden House following the Annual Meeting of the Institute at which the treasurer reported that the Institute had total assets of \$1,285. At the Board meeting, I reviewed the organizational status of INCE. The Articles of Incorporation had been filed on 1971 June 11, having been signed by the incorporators on 1971

June 04. The request for (c)(6) status for INCE had been filed with the Internal Revenue Service on 1971 December 30. Several minor changes had been made to the bylaws. The Board was pleased with the first issue of *NOISE/NEWS* which was distributed that day and with the ASA's agreement to be listed with INCE on the masthead. The Board of Directors (1971-72) were initial members of INCE and were required to go through the formal application procedure by 1976 December. Eminent individuals identified in the balloting carried out at the first Board meeting were required to serve one year on the Board of Examiners and to prepare a paper for publication. Other individuals would become members by following the examination route. Our chief photographer George Maling took the following photograph.

The most significant event of 1972 was INTER-NOISE 72; and it is well documented in minutes, proceedings, and *NOISE/NEWS*. Malcolm Crocker served as General Chairman, Technical Program Chairman, and Proceedings Editor. Dan Flynn took care of all the local arrangements in Washington at the Shoreham Hotel.



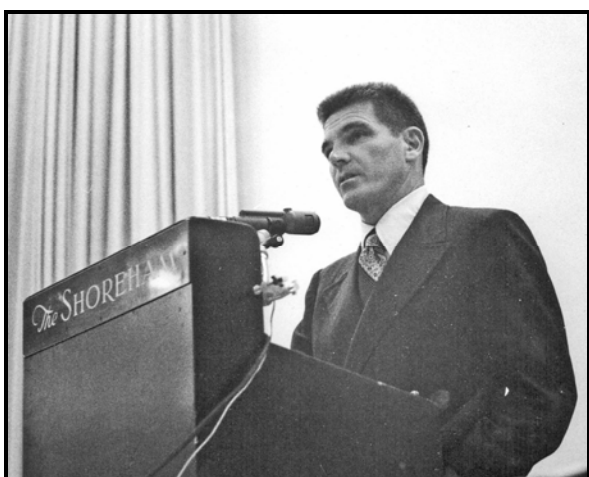
Leo Beranek leads the opening panel discussion, "What constitutes a national noise program," at INTER-NOISE 72. Left to right: Leo Beranek; Thomas Carroll, Assistant Administrator, EPA; F. Karl Willenbrock, Director, Institute of Applied Technology, National Bureau of Standards (now NIST); Grant Walton, Department of Environmental Protection, New Jersey; Peter Metz, Director of Planning, Massachusetts; and H.W. Posten, Commissioner, Environmental Control, Chicago. James Beggs, Under Secretary of Transportation, U.S. Department of Transportation, was a panelist, but was not present when this photo was taken.

Photo by Lou Brott Associates.

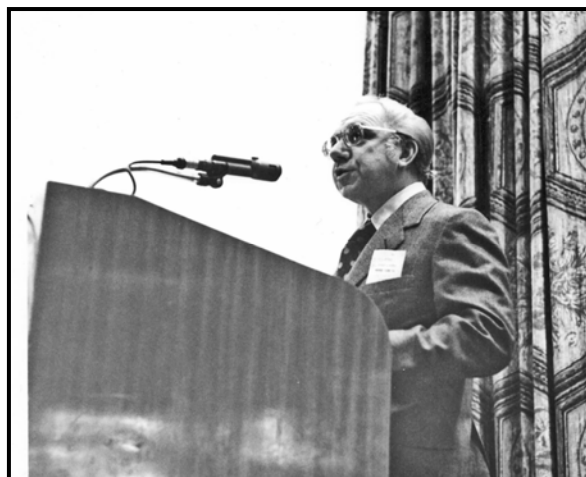


INTER-NOISE 72 Panelists Beranek, Carroll, Willenbrock, Walton, Metz, and Poste. Beggs not present when this photo was taken.

Photo by Lou Brott Associates.



William M. Magruder INTER-NOISE 72



Leo Beranek. INTER-NOISE 72.

Prior to the conference, 850 registrations had been confirmed, but the final attendance figure exceeded 1,300. Where did all these people come from and where, subsequently, did they go? No one knows, but recall the climate that existed in 1972 October. Federal noise legislation was being debated in both the Senate and the House of Representatives. DC was full of lobbyists and other interested parties working for and against the different bills that were making their way through the legislative process of the U.S. Congress. Many of the "walk-ins" at INTER-NOISE 72 may have been among the participants and bystanders in the legislative battle. As soon as the legislation was passed, shortly after the conclusion of INTER-NOISE 72, or perhaps at the first mention of the word "decibel" at a technical session, many of these individuals disappeared from the scene. In any case, participation in the activities of INTER-NOISE 72 and the enthusiasm of the attendees was truly remarkable.



INTER-NOISE 72 EXHIBITION. Managed by Jack Mowry.

Photo credit Lou Brott Associates.

Less well documented is the role of INCE in the passage of the Noise Control Act of 1972 by the U.S. Congress. This was summarized by Jane Frank, legislative assistant to Senator John Tunney of California, when she identified the "key turning point" for the noise bill as the INTER-NOISE 72 congress held in Washington on 1972 October 4-6. It was here that William M. Magruder, special consultant to President Nixon, announced that the White House would accept either the Senate version or the House version, but the House version was preferred. In this manner INTER-NOISE 72 set the stage for signals by the Administration that if a noise bill were to be passed by the Congress, it would be signed by President Nixon. Less than one hour before the adjournment of the 92nd Congress, the Senate unanimously passed an amended version of the House legislation, and this bill was signed by the President on 1972 October 27 as the Noise Control Act of 1972. Not only did INCE provide the "key turning point" for the noise bill, but individuals on the INCE team provided substantive technical advice during the legislative process. The background follows.

Leo Beranek called me during the spring of 1972 when the House and Senate versions were undergoing committee hearings and asked me to accompany him to Washington to provide technical back-up to the Congressional staff. We spent several days in Washington talking to Jane Frank and others who were working to move the bills through the complicated committee process. Just prior to INTER-NOISE 72, Leo as INCE President sent a strong letter to Senator Mike Mansfield supporting the noise bill. As time was short, George Maling personally delivered copies of Leo's letter to the offices of each of the 100 U.S. Senators. Then on Wednesday, 1972 October 04, Ken Eldred, Leo, and I met with William M. Magruder to discuss the White House position on the Senate and House versions of the noise bill. We met in a small anteroom to the Grand Ballroom of the Shoreham Hotel where the INTER-NOISE 72 luncheon was to be held. In our presence Magruder phoned the White House and talked to a staff person who said that the White House favored the House version of the bill. Magruder announced this position less than an hour later in his keynote speech. As noted by Jane Frank, in her keynote speech at the Arden House workshop a year later, INCE played a pivotal role in the process that led to the passage of the Noise Control Act of 1972.

The Noise Control Act of 1972 came to an inglorious end less than ten years after its passage and after the EPA had spent approximately \$100,000,000 in a futile effort to implement its requirements. This, in spite of the following sentence from Section 1 of the Act: "The Congress declares that it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes their health or welfare." Too bad that so little was accomplished by the EPA in implementing this policy, even with the expenditure of \$100 million.

It became evident to the officers of INCE that it would not be possible to have an international conference in the U.S.A. every year. Perhaps every other year would work. At the 1972 October 03 meeting of the Board, Fritz Ingerslev, having received an indication of interest from the Executive Committee, presented preliminary plans for INTER-NOISE 73 to be held at the Technical University of Denmark in 1973 August which were approved by the Board.

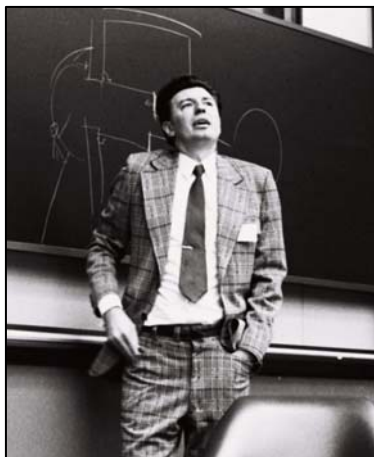
It was also clear to the officers that INCE would quickly outgrow Arden House which had provided an excellent venue for small invitational workshops, but would hardly be adequate for a major national or international conference. At the end of 1972, the Board approved the appointment of Ray Cohen as General Chairman and Dave Tree as Program Chairman of NOISE-CON 73, the first national conference on noise control engineering to be held in Washington, DC, during 1973 October 15-17. The plan approved by the Board was that the INTER-NOISE conferences would be held every other year in the U.S. alternating with venues outside the U.S. In those years when an INTER-NOISE conference was to be held outside the U.S., a national noise conference, NOISE-CON, would be held in the U.S. This policy continued until 1986, when it was decided by the Board that the INTER-NOISE conferences should be held every third year in North America. At the end of 1972, it was the consensus of the Board that the Institute should return to Washington, DC, for INTER-NOISE 74.

In 1973 January the third workshop was held at Arden House. President Uno Ingard called a special meeting of the Board in April at M.I.T. to discuss the INCE response to requests by the EPA for the review of documents on aircraft noise, railroad noise, and motor carrier noise. It was decided to establish ad hoc committees to recommend proposed INCE positions on the EPA

documents. The Board would then approve the recommendations of the ad hoc committees to the EPA.



Bill Lang



Istvan Ver



Leo Beranek

The above three photographs were taken during the 1973 January meeting at the Arden House.

Uno Ingard gave an excellent report of the state-of-the-Institute at the fourth Arden House workshop on 1974 January 12. Regarding the INCE professional journal, Lew Goodfriend was responsible as 1973 INCE Vice President (Communications) for launching the new INCE professional journal, *NOISE CONTROL ENGINEERING*. As announced by Charter President Leo Beranek at the Arden House Workshop in 1973 January, the new journal is published in cooperation with the Acoustical Society of America. Leo as Chairman of the Editorial Board and Lew as Editor-in-Chief performed a miracle in bringing out the first issue (Vol. 1, No. 1) of *NOISE CONTROL ENGINEERING*. In 1985, the title of the publication was changed to *NOISE CONTROL ENGINEERING JOURNAL*. The table of contents and editorial from the first issue are provided in Appendix D.

NOISE-CON 73 was a successful meeting with more than 800 participants. The first INTER-NOISE conference overseas was held with INCE encouragement at the Technical University of Denmark in 1973 August 22-24 with more than 700 participants. An agreement between the Acoustical Society of America and INCE was signed on 1973 April 11 by INCE President Uno Ingard and ASA President Karl Kryter. The three-year agreement provided for cooperation between the two organizations in the holding of meetings and in the publication of periodicals. Under the terms of this agreement, *NOISE/NEWS* and the journal, *NOISE CONTROL ENGINEERING*, are jointly sponsored by INCE and ASA.

Section 5

The Years of Challenge (1974 ~ 1976)

1974 was a relatively tranquil year with Vince Salmon as INCE President. The year opened with the fourth Arden House workshop on noise control engineering held on 1974 January 12-14. Lewis Branscomb, IBM Vice President and Chief Scientist, gave the keynote address which was later published as a paper in *NOISE CONTROL ENGINEERING*.

The Arden House workshops ended with the fourth because INCE had outgrown Arden House which had a capacity of 100 persons. The Board had decided that we needed only one membership meeting a year in the U.S. In the even-numbered years this could be an INTER-NOISE conference; in the odd-numbered years, a NOISE-CON conference. The Board returned to Arden House in 1978 for a Board meeting, not a workshop, and a commemorative meeting was held at Arden House on 1981 January 30-February 01 on the occasion of the tenth anniversary of INCE. Arden House also provided the venue for a gala celebration of INCE's 20th anniversary on 1991 July 13-14.

The major event of 1974 was INTER-NOISE 74 held again at the Shoreham in DC on 1974 September 30-October 02. John Johnson was General Chairman, John Snowdon served as Technical Program Chairman, and Roger Kerlin was responsible for publicity. INTER-NOISE 74 was sponsored by INCE in cooperation with the Acoustical Society of America and with the further cooperation of thirty-five leading government and professional organizations.



INTER-NOISE 74 General Chairman John C. Johnson (left) and INCE President Vincent Salmon (right) greet Senator John V. Tunney at the INTER-NOISE luncheon on 30 September.

1974 was the year in which International INCE was founded and its name was abbreviated to I-INCE. The founding was fostered by INCE, subsequently identified as INCE/USA to distinguish it from I-INCE; and responsibility for the sponsorship of the INTER-NOISE series of conferences was transferred to I-INCE.

In 1975 George Maling was President of INCE/USA. The highlight of 1975 was NOISE-CON 75 which was held on 1975 September 15-17 at the National Bureau of Standards in Gaithersburg, Maryland. The Annual Meeting of INCE/USA was held in Bethesda, Maryland, immediately following NOISE-CON 75.

For INCE/USA, 1976 was a challenging year with Ken Eldred as President. At the Board meeting held on 1976 February 14, Treasurer Glenn Warnaka informed the Board of the Institute's cash flow problem. Action was necessary to provide new sources of income. The INCE/USA Liaison Program was adopted; and by year end 1976, a financial plan had been put in place and the situation was improving. INTER-NOISE 76 was held in Washington, DC, on 1976 April 5-7 with Pete Baade as General Chairman, Roger Kerlin as Technical Program Chairman, and Mike Oslac as Publicity Chairman. INTER-NOISE 76 was an extremely successful congress.

Section 6

The Growing Years (1977 ~ 1981)

The year 1977 was a good year for INCE/USA. During 1977 an INCE/USA Finance Committee was appointed, with Ken Eldred as its chairman. A successful NOISE-CON 77 was organized by Harvey Hubbard and George Maling at NASA Langley, Virginia. This was the first INCE/USA meeting since INTER-NOISE 72 which produced a significant surplus for the Institute thanks to the untiring efforts of volunteers.

The major problem of 1977 was internal to the INCE/USA Board as it involved the membership situation. In this history, I have not mentioned the membership situation since the Board meeting six years earlier in 1971 when the Board voted to confer the status of Initial Member on a group of eminent noise control engineers. From the beginning, INCE/USA adopted the policy that there would be no "grandfathers" in the organization. A "grandfather" is an individual who, either by self-assessment or by the assessment of others, is deemed to be so eminent that he is automatically admitted to the organization without examination and without detailed evaluation of his credentials. Hence, the eminent engineers who were invited to join INCE/USA in 1971-72 as Initial Members agreed, in addition to submitting an INCE application for membership form and maintaining payment of dues, that they would become Regular INCE/USA Members by submitting a manuscript for publication in the journal, *NOISE CONTROL ENGINEERING*, and also by serving on the INCE/USA Board of Examiners for at least one year.

By 1976, 55 Initial Members had submitted manuscripts for publication in *NCE*, 40 others had indicated that manuscripts would be forthcoming in the near future, and 85 Initial Members had completed acceptable service on the INCE/USA Board of Examiners. The problem was how to convert the remaining Initial Members to Regular Members. The responsibilities of the Board of Examiners included the preparation, evaluation, presentation, and grading of INCE/USA examinations. In addition, the Board of Examiners evaluated and processed applications for membership. Instead of being "grandfathers," the eminent Initial Members would serve on the Board of Examiners and would process new Members into INCE/USA, the new Members being drawn from the large number of noise control engineers who were not selected in 1971 as Initial Members. The status of INCE/USA Initial Member was considered to be a temporary one. No new Initial Members were admitted after 1972 December 31; the intent being to phase out the Initial Membership program by 1976 December 31. Because a number of Initial Members had not yet converted their status to Regular Member by 1976 December 31, a one-year extension was given until 1977 December 31, when the Initial Membership program was terminated. By the end of 1977, the Board of Examiners had given the INCE/USA Professional Examination on three occasions. It was an eight-hour exam with many qualitative questions. Through the end of 1977, none of the applicants who had taken the exam had failed. It is extremely difficult to grade qualitative examinations, as the student is not required to come up with a quantitative answer to

the questions, but instead must describe how he or she would go about getting the quantitative answer. By the end of 1977, the number of Initial Members who had converted to Regular Members was approximately 100. The Board of Examiners concept had been successful for INCE/USA and provided a steady stream of manuscripts to the journal, *NOISE CONTROL ENGINEERING*, which were prepared by eminent noise control engineers. It avoided all questions of "grandfathering." However, the eight-hour exam prepared by the Board of Examiners was considered to be inadequate in determining whether an applicant could solve a noise control problem.

During 1977 and on into 1978, this situation was resolved when two major changes were introduced into the INCE/USA examinations structure. First, the eight-hour INCE/USA Professional Examination was modified to include questions requiring quantitative answers so that it was similar to the eight-hour Part B examination required for licensure as a Professional Engineer by the State Boards of Registration. Second, an INCE/USA Fundamentals Examination was prepared.

During that period, to become an INCE Associate, the applicant had to affirm an interest in noise control engineering. Those who received satisfactory grades on the INCE/USA Fundamentals Exam were advanced to the level of INCE Affiliate (now identified as INCE Member). The status of INCE Member was achieved with a passing grade on the eight-hour INCE/USA Professional Examination (now identified as INCE Member, Board Certified).

My year as INCE/USA President was 1978. The focus of the year was on the INCE/USA examinations. There was lacking in the INCE/USA examination structure a counterpart to the Engineer-in-Training (EIT) exam. The EIT exam is an eight-hour, multiple-choice examination which covers all fields of engineering and is intended to assess whether the candidate has a well-rounded education in the fundamentals of engineering. (It was later called the Fundamentals of Engineering exam.) Because the EIT exam was general, it was decided to develop a two-hour exam covering the fundamentals of noise control and acoustics to determine whether the applicant has a reasonable background in the fundamentals. The INCE/USA Board meeting on 1978 January 22 was held at Arden House. All Board members present volunteered to take the INCE/USA Fundamentals Examination consisting of 75 preliminary questions. The minutes of the meeting state: "The INCE/USA Members present at Arden House all took the examination and agreed that, with some minor modifications, it was an excellent Fundamentals Examination and would be satisfactory to fulfill the original objectives of the Institute which were to provide a Fundamentals Examination for those wishing to become Members. After further discussion it was moved and seconded that the Fundamentals Exam be approved ... and ... be given in San Francisco to those who were interested." The INCE/USA Fundamentals Examination was offered for the first time just prior to INTER-NOISE 78 on 1978 May 10 in San Francisco. There were 37 applicants who took the first offering.

During 1978 all Initial Members who intended to fulfill their obligations in converting to Regular Membership had done so, and the Initial Member program had been terminated on 1977 December 31. The Board of Examiners was succeeded by the INCE/USA Examinations Committee whose task was to convert the INCE/USA Professional Examination into one that is patterned on the P.E. Part B exam. The P.E. Part B exam required solving eight problems during

an eight-hour examination period. The Examinations Committee modified the questions prepared by the Board of Examiners so that they would require quantitative rather than qualitative answers. As with the grading of the P.E. Part B exams, partial credit is given for problem solutions that are partially correct.

Harvey Hubbard succeeded me as President of INCE/USA in 1979. NOISE-CON 79 was held this year and the venue was provided by Purdue University. Two highlights of 1979 were the membership situation and INCE/USA's finances. Elmer Hixson reported as Vice President-Membership on the good health of the Institute as shown by the large number of new Members and people taking the INCE/USA examinations. At the end of 1979, the membership stood at 152 Members, 232 Affiliates, and 789 Associates. The INCE/USA Finance Committee, formed in 1977, was having a positive effect on INCE/USA finances. By the end of 1979, Ken Eldred as committee chairman and Jim Seebold as INCE/USA Treasurer had succeeded in turning around the INCE/USA financial situation of 1976. INCE/USA had become vigilant on cost control and income generation. For the first time the Institute was operating in the black.

During 1980 there was evidence of a degree of stability in the operations of INCE/USA. John Johnson succeeded Harvey Hubbard as President. The salient highlights included the tenth anniversary celebration of INCE/USA held at Arden House on 1981 January 30-February 01. This celebration at Arden House was held almost ten years to the day of the first Arden House workshop in 1971. Prior to this celebration, a Founding Members' dinner was held on 1980 December 07 in Miami during the INTER-NOISE 80 congress. Of the 85 individuals who attended the first Arden House workshop, 28 were present for the dinner. After the dinner, Leo Beranek reviewed the events that led up to the founding of INCE/USA. INTER-NOISE 80 was held at the Miami Inter-Continental Hotel on 1980 December 08-10. George Maling was General Chairman and Jim Seebold was Technical Program Chairman for the congress. There were approximately 650 participants in Miami.

1980 President John Johnson presented a detailed review of the state-of-the-Institute at the annual meeting of the Institute held at Arden House on 1981 January 31. In his report he referred to the growth of the activities of INCE/USA in scope and magnitude. John concluded his report as follows: "A general conclusion for 1980 must be that it was a good year, but even more, that the notion and basis for establishment of INCE ten years earlier was well-founded."

On that note, it appears appropriate to conclude this informal account of the first years of INCE/USA.

Afterword

INCE/USA is the organization supporting noise control engineering professionals in the US for four decades. This early history of INCE/USA was written by Bill Lang as a document to be distributed during NOISE-CON 2011 as a contribution to the celebration of the Institute's 40th year anniversary. This document is a tribute to the wisdom, foresight, and hard work of the Institute's founders and pioneer members.

The 40th anniversary of the founding of INCE/USA will be celebrated during NOISE-CON 2011 in Portland, OR during 2011 July 25-27. Special anniversary events are planned including a dinner cruise on the Willamette and Columbia River and special invited papers recognizing the 40th anniversary will be presented. All founders and pioneer members have, of course, been particularly invited to attend.

Allan Marsh and Bill Cavanaugh representing the INCE Foundation have contributed greatly to the planning of the Institute's 40th year anniversary celebration together with Kerrie Standlee, general chair of NOISE-CON 2011, Jim Thompson current president of INCE/USA, and Joe Cuschieri executive director.

The success and growth of INCE/USA will require continuing support and dedication from current and future members. It is hoped that this history document serves as a foundation for the future success of the Institute.

Appendix A

Preamble to the original Bylaws of the Institute

Adopted 1971 October 22

In meeting its objectives, the Institute shall undertake programs:

1. To create a professional society that is sensitive to the needs and responsibilities of the noise control engineer and is dedicated to a leadership role in applying noise control technology to the benefit of mankind. (Key Goal)
2. To unite in common purpose the noise control engineers of the United States of America; to serve as the corporate body which supports and regulates the membership of the profession; and to promote the recognition of noise control engineering as a technical profession requiring both formal training and practical experience. (Basic Responsibilities)
3. To establish liaison and communicate with governmental bodies at the national, state and local levels; to report and interpret the effects of noise control technology on matters of national policy, including proposed legislation and regulations; and to cooperate with and furnish advice to governmental bodies on measures that will advance the public interest. (Relations with Government)
4. To define minimum standards of technical competence for noise control engineers; by means of written and oral examinations, to measure the capability of individuals against these standards and to confirm that individuals have satisfied these minimum requirements. (Technical Competence)
5. To encourage those noise control engineers who deal with the general public to seek legal status through registration by the appropriate governmental licensing board; and to prepare a code of ethics to guide the behavior of members of the profession and provide means for disclosure and correction of unethical practices. (Licensing and Ethics)
6. To attract to the profession well-qualified and properly motivated young people by publicizing the achievements of noise control engineers and the contributions of members of the profession to the welfare of mankind; and to stimulate through formal and informal accreditation the development of suitable curricula in noise control engineering at educational institutions. (Education)

7. To cooperate with other engineering and professional societies in the United States of America and other countries; and to encourage the establishment of national institutes in other countries leading to an eventual federation of institutes of noise control engineering. (Liaison)
8. To provide channels of communication for the effective exchange of information through conventions, meetings, publications, committees, and joint activities with other societies and associations; and to advance the common welfare by providing a source of information on the engineering aspects of noise control that is available to the public, private industry and governmental bodies. (Communications)
9. To promote participation by noise control engineers in the decision-making that is required to apply their knowledge and skills to the solution of engineering problems; and to foster effective means by which they may relate their work and talents to the interests of society. (Social Responsibility)
10. To undertake other programs and activities as may be appropriate to advance professionalism in noise control engineering and to protect the public interest. (Other Programs)

Appendix B

Institute Purposes Defined in the Articles of Incorporation

As signed on 1971 June 04.

The purposes for which the corporation is organized are as follows:

- To advance the technology and practice of noise control engineering;
- To protect the public welfare;
- To promote the professional, social and economic interests of noise control engineers;
- To stimulate the develop professional concepts and promote harmony, cooperation, and mutual understanding among noise control engineers;
- To collect, collate and disseminate technical knowledge in the field of noise control engineering and the related arts and sciences;
- To conduct the corporation's business and affairs in the District of Columbia and elsewhere;
- To enter into, make and perform contracts of every kind and description with any person, firm, association, corporation, municipality, county, state, body politic or government or colony or dependents thereof;
- To acquire and dispose of all such supplies, materials and other articles as shall be necessary or incidental to the conduct of the affairs of the corporation;
- To hold, acquire, improve, mortgage, lease, and convey real and personal property in the District of Columbia or elsewhere as shall be necessary or incidental to the conduct of the affairs of the corporation; and
- In general to have and exercise all the powers conferred by the laws of the District of Columbia upon corporations formed under the District of Columbia Non-Profit Corporation Act.

Appendix C

Founder and Pioneer Members

Founder and pioneer members who continue maintaining membership (2009).

BAADE, PETER K.	BERANEK, LEO L.	BIES, DAVID A.
BISHOP, DWIGHT E.	BLAZIER, WARREN E. JR.	BRUCE, ROBERT D.
CAVANAUGH, WILLIAM J.	CHALUPNIK, JAMES D.	COHEN, RAYMOND
CONNOR, WILLIAM K.	COPLEY, LAWRENCE G.	CUMMINS, JIM R., JR.
CROCKER, MALCOLM J.	DUDA, JOHN F.	DYER, IRA
ELDRED, KENNETH M.	GALLOWAY, WILLIAM J.	GOODFRIEND, LEWIS S.
GOODMAN, JEROME	HERBERT, R, KRING	HIXSON, ELMER L
HORNER, TOM	HUBBARD, HARVEY	IHDE, WILLIAM M.
INGARD, K. UNO	KAMPERMAN, GEORGE W.	KESSLER, FREDERICK M.
KINGSBURY, HOWARD F.	KIRSCHNER, FRANCIS	KLEINSCHMIDT, KLAUS
KLEPPER, DAVID L.	LANG, WILLIAM W.	LOTZ, ROBERT
LOWE, ALBERT W.	LUBMAN, DAVID	MAGLIERI, DOMENIC J.
MALING, GEORGE C., JR.	MARSH, ALAN H.	MEDWIN, HERMAN
MILLER, LAYMON N.	MILLER, THOMAS D.	NASH, ANTHONY
NORDBY, KNUT	PEARSONS, KARL. S.	PEPPIN, RICHARD J.
POTTER, STANNARD M.	POWELL, ALAN	RICHARDS, ROY E.
SALTER, CHARLES M.	SCHMIDT, BELA	SEEBOLD, JAMES G.
SHAPIRO, NATHAN	SHARP, BEN H.	SHINER, ALLEN H.
SUTHERLAND, LOUIS C.	TATGE, R. BRUCE	TEPLITZKY, ALLAN M.
TIMS, EUGENE F.	UNGAR, ERIC E.	VAN HOUTEN, JOHN J.
VER, ISTVAN L.	WALKER, BRUCE E.	WARNAKA, GLENN
WILSON, GEORGE P.	WINZER, GEORGE	

INCE Founders (Names in bold font are listed as founders in our 2009 membership directory. Additional names, not in bold font, are listed as founders in our 1980 and 1986 directories).

OLIVER ANGEVINE
JAMES CHALUPNIK
KENNETH ELDRED
BARRIE GRAHAM
MARTIN HIRSCHORN
WILLIAM IHDE
HOWARD KINGSBURY
MICHAEL KODARAS
GEORGE MALING, JR.
CHARLES MORROW
KARL PEARSONS
JIRI TICHY
RUSSELL WISE

PETER BAADE
MALCOLM CROCKER
DANIEL FLYNN
CONRAD HEMOND, JR.
ELMER HIXSON
K. UNO INGARD
FRANCIS KIRSCHNER
WARREN KUNDERT
ALAN MARSH
HAROLD MULL
GERHARD REETHOF
GLENN WARNAKA

LEO BERANEK
ALLEN CUDWORTH
LEWIS GOODFRIEND
RALPH HILLQUIST
HARVEY HUBBARD
JOHN JOHNSON
KLAUS KLEINSCHMIDT
WILLIAM LANG
THOMAS MILLER
DOUGLAS MUSTER
VINCENT SALMON
GEORGE WINZER

Pioneers as listed in the INCE 1978 December 31 Directory (150)

ALLEN, CLAYTON H.	ANCELL, JAMES E	ANGEVINE, OLIVER L.
BAADE, PETER K.	BAILEY, JAMES R.	BANNISTER, RONALD
BARGER, JAMES E.	BAUER, BENJAMIN	BENDER, ERICH
BERANEK, LEO L.	BIES, DAVID A.	BISHOP, DWIGHT E.
BLANCK, MICHAEL W.	BLAZIER, WARREN E. JR.	BOBBER, ROBERT J.
BOE, ROLLIN O.	BOLT, RICHARD	BONVALLET, GEORGE
BRUCE, ROBERT D.	CALLAWAY, VERNON E.	CAVANAUGH, WILLIAM J.
CHALUPNIK, JAMES D.	CHANAUD, ROBERT C.	COHEN, RAYMOND
CONNOR, WILLIAM K.	COPLEY, LAWRENCE G.	CROCKER, MALCOLM J.
CUDWORTH, ALLEN L.	CUMMINS, JIM R., JR.	DALY, EDWARD A.
DAVY, BRUCE A.	DRISCOLL, DANIEL A.	DUDA, JOHN F.
DYER, IRA	DYM, CLIVE E.	EBBING, CHARLES E.
ELDRED, KENNETH M.	ENGSTROM, JOHN R.	FEHR, ROBERT O.
FELDMAN, SAMUEL	FLYNN, DANIEL R.	GALES, ROBERT S.
GALLOWAY, WILLIAM J.	GOODFRIEND, LEWIS S.	GOODMAN, JEROME
GRAHAM, J. BARRIE	GRIFFIN, GLENN H.	GUINTER, JOHN M
HAAG, FRED U.	HALVORSEN, WILLIAM G.	HAMILTON, JAMES F.
HEMDAL, JOHN E.	HEMOND, CONRAD J., JR.	HERBERT, R. KRING.
HICKLING, ROBERT	HILLIARD, JOHN K.	HILLQUIST, RALPH K.
HIRSCHORN, MARTIN	HIKSON, ELMER L.	HOLMER, CURTIS I.
HOOVER, ROBERT M.	HORNER, TOM	HUBBARD, HARVEY H.
IHDE, WILLIAM M.	INGARD, K. UNO	JOHNSON, JOHN C.
JUNGER, MIGUEL C.	KAMPERMAN, GEORGE W.	KERWIN, EDWARD M., JR.
KESSLER, FREDERICK M.	KINGSBURY, HOWARD F.	KIRSCHNER, FRANCIS
KLEINSCHMIDT, KLAUS	KLEPPER, DAVID L.	KODARAS, MICHAEL J.
KOENIG, ROBERT J.	KUNDERT, WARREN R.	LAMBERT, ROBERT F.
LANG, WILLIAM W.	LEASEURE, WILLIAM A., JR.	LEPOR, MEYER
LOTZ, ROBERT	LOWE, ALBERT W.	LUBMAN, DAVID
MAGLIERI, DOMENIC J.	MAIDANIK, GIDEON	MALING, GEORGE C., JR.
MARLOTTE, GARY L.	MARSH, ALAN H.	MEDWIN, HERMAN
MEYER, ALVIN F., JR.	MEYERSON, NORMAN L.	MILLER, LAYMON N.
MILLER, THOMAS D.	MORGAN, WILLIAM R.	MORROW, CHARLES T.
MULL, HAROLD R.	MUSTER, DOUGLAS	NASH, ANTHONY
NORDBY, KNUT	NORTHWOOD, THOMAS D.	ODELL, ALBERT II.
OLIPHANT, KENWARD S.	PARRY, HUGH J.	PATEL, KRISHNA N.
PATTERSON, WILLIAM N.	PAULHUS, NORMAN "CHRIS" R	PEARSONS, KARL. S.
PEPPIN, RICHARD J.	PETERSON, ARNOLD P. G.	POTTER, STANNARD M.
POWELL, ALAN	PURCELL, JACK B.	REETHOF, GERHARD
RETTINGER, MICHAEL	RICHARDS, ROY E.	ROCKWELL, THOMAS H.
SALMON, VINCENT	SALTER, CHARLES M.	SCHMIDT, BELA
SCHULTZ, THEODORE J.	SEEBOLD, JAMES G.	SEPMAYER, LUDWIG W.
SESSLER, STEPHEN M.	SHAPIRO, NATHAN	SHARP, BEN H.
SHINER, ALLEN H.	SMITH, DONALD B.	SPERRY, WILLIAM O.
SUTHERLAND, LOUIS C.	SWING, JOHN W.	TANNER, ROBERT H.
TATGE, R. BRUCE	TEPLITZKY, ALLAN M.	THORNTON, WILLIAM R
TICHY, JIRI	TIMS, EUGENE F.	TYLER, JOHN M.
UNGAR, ERIC E.	VAN HOUTEN, JOHN J.	VATZ, IRVIN P.
VER, ISTVAN L.	VON GIERKE, HENNING E.	WADE, SAMUEL R.
WALKER, BRUCE E.	WARNAKA, GLENN	WEISS, MARVIN
WILSON, GEORGE P.	WINZER, GEORGE	WISE, RUSSELL E.
YERGES, LYLE F.	YOUNG, ROBERT W.	ZORUMSKI, WILLIAM E.

Appendix D

From NCE Volume 1 Number 1

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Editorial

Today, increasing public awareness of noise is placing ever increasing demands on the field of noise control engineering. Indeed our relatively young field has had to grow rapidly because of the passage of the Noise Control Act of 1972 and because of the recent ordinances and codes passed by cities to regulate noise in their communities. The engineering profession has not trained people for this field in large numbers and, as a result, many people have attempted to enter it simply by proclaiming themselves as engineers qualified to deal with the control of noise.

Clearly, there is a need for more and better trained noise control engineers. The objective of the Institute of Noise Control Engineering is not to limit membership in this profession but to broaden it and to increase it. Full *Members* of INCE are certified engineers who establish and maintain minimum standards of the profession and who recommend acceptable educational curricula for noise control education. *Affiliates* of INCE, a rank that indicates completion of engineering fundamentals and an intention to take the examination for full Membership, serve on key committees and assist the Institute wherever feasible. *Associates* receive the publications of the Institute, attend its meetings and help with activities to the extent of their interest.

We are especially concerned with professional integrity because noise control engineering deals not only with principles and practices developed out of hard sciences, but also enters upon the softer ground of dealing with people's perceptions and reactions. Because the effects of noise are not something that can be measured precisely in many of its aspects by instrumentation, it means that noise control engineering is also a form of so-

cial engineering practiced in conjunction with other professions.

This spectrum of talents requires sophistication, breadth of understanding and high standards of performance equivalent to other, longer established professions. The noise control profession cannot afford to be regarded as a group of practicing technicians; through its own action it must assure that its members are accorded the fullest measure of credibility and respect as certified engineers or as engineers who expect to become certified. Particularly in matters involving public interest, it is imperative that public administrators—and the courts—recognize the necessity of having the noise control aspects handled by competent personnel.

Standards of integrity are more likely to be established and adhered to if there exists a group that acts as a guiding light and conscience. Integrity is built through the writing of standards, through formal exchanges of opinion and experience in the treatment of certain complicated areas, and in the joining together to solve the extremely difficult problems of the field. Such activity has been fostered in other professions by bar associations, specialized colleges of physicians and surgeons, etc.

Similarly, the field of noise control engineering will benefit from the existence of its own organization devoted to maintaining a high level of professionalism by establishment of codes of ethics, through certification of engineering competence, through its popularization of the fruits of the field to the general public, and through its meetings and publications.

In fulfilling its key goal, that of exercising leadership in applying noise control technology to the benefit of mankind, the Institute of Noise Control Engineering, in cooperation with the Acoustical Society of America, already has sponsored meetings, conferences and workshops, has published a bimonthly newsletter, *NOISE/NEWS*, and has issued conference proceedings and lecture notes. With

this charter issue of *NOISE CONTROL ENGINEERING*, we take another major step in support of this profession.

NOISE CONTROL ENGINEERING, initially to be issued quarterly, is dedicated to providing information to those who must find solutions to noise control problems. Its standards of usefulness, reliability and content are high. Joint sponsorship by INCE and the Acoustical Society of America assures the readers of *NOISE CONTROL ENGINEERING* that papers will be authored by leaders in the field and by engineers with practical solutions to everyday noise control problems.

Close cooperation is expected between the Acoustical Society of America and the Institute of Noise Control Engineering. The ASA publishes the distinguished research-oriented *JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA* for a widely diversified readership of physicists, psychologists, physiologists, engineers, architects, voice communications experts, underwater sound experts and instrument designers. Previous attempts by the ASA to service the field of noise control have been lacking, primarily because only a small portion of those reading *JASA* are interested in problems related to noise, and even then the interest is often in basic research.

NOISE CONTROL ENGINEERING is to provide the vital service necessary to the field of noise control without affecting the readership or basic purpose of *JASA*. A three-year agreement between INCE and ASA was signed April 11, 1973.

It provides for a joint sponsorship of *NOISE CONTROL ENGINEERING*, with INCE as publisher; an Editorial Board whose members are half appointed by INCE and half by ASA; a Management Board of four members, two appointed by each organization; and mutual cooperation on all matters relating to the technology of noise and its control.

We are pleased to introduce the editor of *NOISE CONTROL ENGINEERING*, Evan Herbert. Mr. Herbert has had a distinguished record of editing important technical journals. He was Senior Editor of the original *INTERNATIONAL SCIENCE AND TECHNOLOGY*. From 1969–1972, he was Senior Editor of *INNOVATION*. Both journals were noted for their success in interdisciplinary communications and for the quality of their presentations.

Noise control engineering cuts across many disciplines and its practice, to be successful, must often involve interfaces and cooperative efforts with many other professions. As Editor of *NOISE CONTROL ENGINEERING*, Mr. Herbert will aim toward bringing an interdisciplinary approach to communication among all professions concerned with noise control. He will be attending meetings of various organizations, particularly the two sponsoring societies, and will, with advice from the Editorial Board of NCE, solicit papers attuned to its goals. Mr. Herbert's skills as a writer and editor are well proven; we may expect *NOISE CONTROL ENGINEERING* to be accurate and readable.

Any new publication can only succeed if it fulfills a need and if those who need it actively support it. Your help in encouraging subscriptions and in submitting papers to the Editor is sincerely solicited.

LEO L. BERANEK
Chairman of the Editorial Board

forty years supporting the noise control engineering profession

