WEDNESDAY EVENING SESSION XIX

"TOWN MEETING ON A WORKING GROUP IN NDE"

D.E. Chimenti, W.D. Rummel, and R.B. Thompson

(Editors' note: The following record of the Wednesday evening problem session at the Fort Magruder Inn, Williamsburg was transcribed from audio tapes made during the presentations and discussion. Liberal editing of the transcript to produce this final version was necessary both to preserve continuity and to reduce the document to a reasonable length. Because of the method of transcription, the identity of a few speakers was irretrievably lost. Details of recorded discussion were especially poor near the end of the session. The editors have attempted, wherever possible, to reconstruct such details. Despite the difficulties presented by these factors, we believe the transcript retains the flavor and general thrust of the discussion.)

Dale E. Chimenti (AF Materials Lab): This problem session, which has become now something of a tradition in the QNDE meetings, is devoted this year to a question which has occupied some of us in the NDE community for the last couple of years, and that is whether or not we ought to move forward with regard to an organization, a society, working group, or some organized structure like that for NDE research and engineering. Our purpose here this evening--Bruce Thompson, Ward Rummel, and I--will be to moderate a discussion. I will give a brief review, and then I would like to turn it over to an open discussion and have all of the various opinions expressed, keeping in mind that we would like to keep fairly close to the items stated in the abstract.

First of all, about a year and a half ago now, we wrote and sent out a survey from which we got fairly good response, about 54 or so percent. And, in this survey, we asked some questions having to do with peoples' background and their interests, publication habits, and their ideas about a new society, or the new working group. Along with that we sent a planning document which detailed at least some of the considerations that the Ad Hoc Committee had begun to think over. So let me begin here by reviewing the survey, telling you a little bit about it. It was broken into four parts, and the first one asked questions about individual background and experience, shown in Fig. 1. Here are the questions and the responses, where the numbers preceding each response is a percentage of the total respondents. Therefore, in many cases they will not add up to one hundred percent. Disciplinary background is heavily weighted toward physics or applied physics and some
1. What is your disciplinary background?
   45% Physics or applied physics
   20 Electrical engineering
   13 Mechanical engineering or mechanics
   3-5 Each of chemistry, math, materials, metallurgy
   4 Other fields

2. How would you describe yourself?
   60% Researchers
   12 Engineers
   18 Managers
   7 Educators, many multiple answers

3. What is your specialty within NDE?
   54% Ultrasonics
   16 Eddy current
   5 Radiography
   8 Thermal methods
   5 Signal processing or Systems development
   10 Other areas

4. How long have you been working in NDE?
   Average is 10.7 years
   Median is 7.5 years
   1/3 have worked 5 years or fewer in NDE

5. Where employed?
   48% Industry
   28 University
   22 Government

Fig. 1. Results of Survey--About the Individual

is heavily weighted toward physics or applied physics and some electrical engineering; perhaps surprisingly, not many people indicated a background in either mechanical engineering, mechanics, or metallurgy. Most people described themselves as researchers, and the next category is engineers, although on this question there were quite a few multiple answers. In tabulating the results of the survey I simplified matters by taking the first answer. For specialty within NDE (and this is not too surprising, considering the historical tenor of this meeting) most people said they were in ultrasonics. But, here again, there were overlaps; and quite a few people had more than one answer.

The second portion of the survey dealt with affiliations, and, here's the breakout in Fig. 2. Question 4 asked what other societies respondents belonged to, and here about thirty percent were physics-related, twenty-four percent engineering related. This, then, could be seen as a reflection of the background of the people who had responded to the survey. And, not too surprisingly, since the survey went out to people who were on the mailing list for this meeting, we did okay on this one, right? (laughter)

In Fig. 3 we get to what I called in the response document, the crux of the matter, and that is what was your overall reaction to the question of a new society. Quite a few people said that they were positively disposed to the idea of a new society. And, following right behind, the next important question is, if you are positively disposed to it,
1. Which NDE-related societies do you currently belong to?
   46% ASNT
   12 IEEE
   3 ASME
   1 ASM
   8 Others
   28 No NDE-related group

2. Are these satisfying your requirements for professional contacts, information exchange in NDE?
   14% Yes
   34 No
   19 Not sure

3. Do you attend meetings of these societies?
   39% Yes
   9 No
   24 Sometimes

4. What other societies do you belong to?
   29% Physics-related
   24 Engineering-related
   24 Other or none

5. Which NDE meeting is most useful?
   67% Review of Progress in QNDE
   6 ASNT
   10 Other meetings. IEEE, Materials Characterization, and Gordon Conference mentioned often in multiple answers

Fig. 2. Results of Survey--About Affiliations

would that mean that you would actually be willing to join it, and most people said they would. Interestingly, some of the people who said they were neutral or even negative said they would join if there were a society, so that these aren't the same seventy-eight, seventy-nine percent here. And, if negative, I asked if respondents could put their objections into words; what would they say was wrong with that idea. The main concerns were that we are splitting apart NDE, or the people with the problems from the people with the solutions. And that is something that we really need to consider. Some other people said that we really ought to go to the ASNT and stride in there and tell them, "Look, you've got to do things our way." And, then there were other people who just felt that we have too many societies already, and travel funds are limited, and it has got to stop somewhere. This number in Fig. 3 I thought was extremely important--question 2--that such a large percentage of people said that they would help organize. Now, that means you, right? Were you the ones who said that? (laughter) Because we could sure use help. One of the observations I had made in reading over the survey was, even the people who said that they were negatively disposed to this whole idea and that we were really going off in the wrong direction, did not disagree with the premise that the NDE research and engineering community, (as compared to inspectors and equipment vendors) has really not been very well served in the last so many years. There was generally very good agreement on that point. Publications is a very important aspect, and it is the one that Bruce Thompson has been most closely associated with and has worked on very assiduously. And then we asked in Fig. 4, "If you do research and you publish it, where is it that you are publishing your research?" There was no one journal mentioned very often. The
1. What is your overall reaction to such a proposal?
   79% Positive
   11 Neutral
   9 Negative

2. If positive, would you be willing to join?
   78% Yes
   5 Might join

3. If negative, what are your objections?
   2/3 Fragmentation of NDE community
   1/5 Reconcile with ASNT, obtain concessions
   1/7 Already too many societies

4. If neutral, what elements would you change?
   Responses similar in character to 3.

5. Would you help fashion such a society?
   69% Yes
   11 No
   15 Maybe
   There was practically no disagreement among respondents that
   the NDE research and engineering community as a whole has not been
   well served in recent years and that something ought to be done.

   Fig. 3. Results of Survey--About a New Society

Journal of Applied Physics, Journal of Applied Mechanics, all kinds of
journals were mentioned, and I could not pull one out of the survey and
say that this one got so many percent. It was really very broadly
spread out through the spectrum of the research journals that you are
all familiar with. And here in question 2 we asked if the respondent
felt that they were reaching the right audience by publishing in these
journals. As you can see, a fairly substantial percentage felt they
were not, or at least they were not sure that they were.

In question 3 we asked if they would publish in a suitable NDE journal,
and I think the operative word here is "suitable." A broad spectrum of
the people who responded to the survey said yes, many of them
underlining sometimes two and three times, but certainly emphasizing,
the provisos that were put on this question--namely, if the lead time
to publication were short, and if the circulation was significant, and
if the quality of referring is good. So this seems to indicate that
there is a ready authorship for such a journal; in other words, there
are research articles that are waiting to be published in the right
journal, that the submissions would happen if there were a journal that
fulfilled these criteria. And, then, would you consult such a journal?
And, finally, what do you think is a reasonable price for such
services? The average and median come out to $45.00.

In addition to the kind of information that can be tabulated and
presented the way that I've done just now, there were also many
insightful comments. It ran the gamut from just a short couple of
sentences all the way to two-page letters. I told the Ad Hoc
Committee that I would excerpt some of these gems, so I'm making good
on that pledge now. I would like to put this up here--Fig. 5-- and
let you read them. These have been selected from respondents of all
persuasions, and I have tried to take an equal number of comments from
each of the three major groups, just to give you a rough indication. I
felt there were some excellent remarks.

1802
1. If you do research, where do you now publish?
   Variety of journals mentioned with no one type drawing a major share

2. Is this forum adequate? Reaching the right audience?
   16% Yes
   34 No
   30 Not sure

3. Would you publish in a suitable NDE journal?
   85% Yes, if lead time were short and circulation significant
   3  No

4. If journal were part of membership dues, would you consult it?
   76% Yes
   5  No
   9  Maybe

5. What is a reasonable level for the annual dues?
   Average and median figures are both about $45.

Fig. 4. Results of Survey--About Publications

Then, briefly here is a chronology of events in Fig. 6 which takes us up to the present. In June 1985, two years ago, several of us met and discussed the idea. In September of that year we met once again at Jan Achenbach's meeting at Northwestern University and discussed it further and lined up an Ad Hoc Committee. In the fall of that year we further refined and wrote the planning document and began some work on the survey, recruited an Ad Hoc Committee and, in the winter, we revised the planning document and survey once again from the input of the Committee. In the spring of '86, we mailed the survey. The results were analyzed, and contacts were initiated with the publisher of the JNDE. Bruce will have more to say about that. Finally, in the summer of '86 these results were reported just before the meeting in La Jolla. We then began our initial contacts with Bob Hardison of the ASNT. We met finally, in the fall of last year, with Bob Hardison at the IEEE meeting here in Williamsburg to make our case to him and to discuss his opinions, our opinions, and so forth. We had very useful and worthwhile discussions. In the winter of last year, we considered a response in a draft letter. Not much has happened since then. We have had further contacts with Plenum Press, and here we are today. I'll stop now and turn the meeting over to my colleagues.

Ward Rummel (Martin-Marietta): As a result of the activity in this group and my own work in ASNT, I have been appointed as the temporary liaison member between the two organizations. I think the thing that sticks out to me, as much as anything in all this work, is the desire not to fragment the technology. And, initially, as this was going on, there were great concerns and feelings that this would indeed fragment the technology. Yet, as we approach it and put it together, we did not see this. We think it should be a win-win situation in any event because the technology is broad enough in scope and yet narrow enough in participants, we must all work together to get the job done. The scope of ASNT does cover the researcher, scientist, engineer, technician, the whole gamut. But, in actual operation, the group must necessarily set priorities so the emphasis goes into the implementation.
I fully agree with the need to cover all aspects of NDE with a science-based approach. A society incorporating the spirit of the QNDE meeting and the Gordon Conference would be most useful.

Is interested audience large enough to reach critical mass needed for support of new organization... Is it possible to create an interest group within an established society?

I hope you get enough positive response to make this fly.

What is lacking is a society whose mission includes NDE research... ASNT has not provided the necessary forum... Good luck in getting this thing going.

---

Has the Ad Hoc Committee tried to work through ASNT to achieve its goals?

Prefer to see all NDE-related activities under single society, \textit{if possible}... Have you consulted ASNT with your concerns?

The Ad Hoc Committee should motivate the ASNT to focus more attention on NDE rather than NDT/I.

Let's make ASNT work for us...

ASNT certainly does not address needs of researchers... creation of a research society will cause further separation (between researchers and practitioners)...

The ASME has a new NDE division... suggest that you get behind the ASME bandwagon.

Current emphasis is either on "scientific" research or providing (inspection) services... The engineer is left out.

---

NDE community is small and adding another society will reduce our strength further.

There is already too much splintering of the NDE community... work through existing organizations.

New society may result in splintering... am willing to consider alternative approaches as long as the cause of NDE is the object of our attention...

A good journal should be the primary goal.

I have doubts that a journal completely free of advertising can be published at a reasonable cost.

If a new society collects participants from other societies-- it will be an improvement. If it is one more society to join... the process is further diluted.

The problem is to make the subject academically respectable and to encourage transfer of technology...

I support the concept as stated in the planning document... I would hope that the charter of this proposed society would not technically restrict it... would like to see a society that is flexible and responsive, and not too impressed with its own formalities.

Fig. 5. Survey Comments

I personally feel, and it seems to be the indication of this group, that some kind of official affiliation is necessary in order to meet the objectives of this group. Now, with respect to the meeting with ASNT, just to put that issue to bed, the interface was very positive with Bob Hardison and, subsequently, with the board of directors, to the point of being very generous in offers that would have been difficult for them to live up to. So there would be autonomy within the group, but the councils within ASNT, as they were organized, are such that there is a management within ASNT that we felt this group was
Fig. 6. Chronology of Events

not interested in. Offers were made to fund a small effort for the initial organization of this group, whatever method this group decided on, to provide seed money—with the idea that in the long run there would be a benefit on both sides and perhaps a merger at some future date. An offer to provide editorial work for an additional effort to make the journal go.

There is a very positive feeling, a very positive relationship with respect to ASNT, in that it is recognized that there are special needs and this group indeed needs to be recognized in this manner. So, first and foremost, we don’t see it as a fragmentation, but rather a win-win in a cooperative manner. Now, with respect to the liaison activity, ASNT does have a liaison group whereby we look at joint projects or joint items where we can have mutual benefit in terms of sponsoring an activity. Some of you will notice that this is the first time this meeting is jointly sponsored in principles by ASNT. There was an advertisement in the ASNT journal Materials Evaluation promoting this meeting and activities. Because it is recognized on both sides that the ultimate implementation is within the NDE community as such.

So, until we establish a method to make sure all priorities get the proper attention, we think this is the most proper way to go. The issues at hand are, of course, what kind of formalism in the organization, what are you folks indeed looking for, what are the needs and where should it be limited. There’s no question from the survey that a journal is necessary. There’s no question in the survey that a forum for an exchange of ideas such as this annual meeting is indeed necessary. And, there is no question an affiliation, a recognition, a mutual task with other parts of the NDE community are very, very necessary. Those are recognized, and that’s a jump-off point for anything that we do here. What we need to do is build on those kinds of ideas. With respect to the journal, I would like to turn that over to Dr. Bruce Thompson who will tell you a little about some of the exploration he has done in that area.

R. Bruce Thompson (Center for NDE and Ames Lab): Thank you very much. Well, I’m showing my great confidence here in mechanical things (laughter). I think we can look at all these survey results with a
certain amount of caution but nevertheless, I have a few more survey results I would like to share with you as the basis for this. The question of a journal came up some time ago and, when Dale first carried out the first survey which he has already summarized for you, he had some questions and I have just repeated them here. You have already seen these answers. Basically, a lot of people felt that the present forum was not adequate. They felt they would publish in a suitable journal. There are provisos having to do with adequate circulation, on-time and to a broad enough audience. If such a suitable journal were provided as part of the membership, a lot of people said they were interested.

Well, there are two aspects of that. How much would a journal cost and what should a journal consist of? At the Gordon Conference last summer, I circulated a questionnaire. That was obviously a very limited audience. It wasn't intended to be a scientific survey. But, I just thought I would get a feeling for what, at least, that group of people was interested in. So, basically, I asked three questions, actually a number of questions but you can boil them down to three. One was what would be desirable features in the journal. There was a question of what would be an appropriate journal. And one thing, of course, was the fact that the Journal of Nondestructive Evaluation in principle could be an appropriate journal if some changes were made. A majority of that set of people felt that might be a good idea. Another question was what would be a good title for a journal or the society. So, let me just briefly go through these answers to one and three and then we can go on to some more specifics.

With respect to desirable features, I've made a long wish list of all the things I thought you might put in a journal and I asked the people to rate these from one to five, with five being the most desirable and one the least. Obviously, some of these are already satisfied by other journals; we are not trying to usurp that turf, but simply to get peoples' opinions.

The highest, as one would expect, was current research papers. People felt a large need for critical reviews. I sort of put out this idea of summaries and research overseas. My perception is that we in the U.S. sometimes lose sight of what people in England, Germany, or France are doing. Sometimes they publish in publications with different languages, and it is kind of hard for us to figure out what's going on. So, it seems as though there might be value in occasionally inviting someone from one of those countries and asking, "what are the general trends and why in research"? Meeting schedules, references to paper in other journals. A bunch of things--educational opportunities, employment opportunities, advertising and so forth. Those were the responses to what people thought was interesting.

The other question was the possibility of a title. And, that has been discussed by the Ad Hoc Committee. The Ad Hoc Committee, by the way, consists of more than Ward Rummel, Dale Chimenti, and myself. We are representatives but not the total group. These were the titles that were suggested. And, in a sense, it is unfair to assign any meaning to a number of votes. Obviously, there are certain buzz words people thought were important and I agree. Measurement Science, Manufacturing Measurement Science, so the words "measurement science" appeared quite a bit. There is a question here as to what would be a name for a journal if said journal were to be formulated. Well, there had been some discussion with respect to the Journal of Nondestructive Evaluation. I believe this is the first meeting that Mike Buckley hasn't attended. Mike is well and healthy, but his other
responsibilities, which are not in NDE, have precluded his attendance for the first time. Mike is willing to give up the editorship of the Journal of Nondestructive Evaluation (JNDE). Plenum is willing to have that journal be associated with the new working group if, in fact, such an organization comes to pass. They can provide it at a price which is consistent with that $45 range Dale indicated was desired by the people responding to the questionnaire. Plenum is willing to guarantee that price for a couple of years because they already have subscriptions to a lot of libraries. Plenum would provide it to members of the working group for significantly less than fifty percent of what the library subscriptions are. So, we could, in fact, make a reasonable membership subscription based on that. Basically, if this group wants to do that, it's a possibility.

Mike Buckley has asked me to take over the editorship of the JNDE. If the group really wants to proceed, I would be willing to that. Of course, with some assistance from those many people who offered to help on Dale's questionnaire. Here is a proposed plan of what I thought should be in such a journal based on the questionnaire and some other thoughts I had. Obviously, the most important thing is current contributed research papers. And that has to be ninety percent of the journal. Another feature one would like to have is critical reviews of research topics, which would be invited. For example, every time we have visitors from Saarbrucken, I certainly learn a lot. Reviews might be a controversial idea, and I would like some feedback on this. It was something that was suggested at the Gordon Conference.

Sometimes we in the research community get interested in the subtleties of inverse-scattering or accousto-elasticity, etc., and maybe we lose sight of the practical problems we are trying to solve with science. But, we don't want to have a journal which is worried about this company's or that company's problem. But, possibly, some discussion of unsolved practical problems by somebody representing the scientific community might help us to focus our thoughts. So, that's another possibility. Finally, what would be very valuable in my opinion would be some sort of listing of references--the NDE-related papers that we publish in other journals. I know I have a terrible time finding out what has been published in NDE and am sometimes embarrassed by something that was published ten years ago. (laughter) The difficulty is that there are so many journals in which somebody could publish an NDE paper. It seems to me that if the community found it useful, members of the working group could send in the title of a paper they'd published in ASME Transactions or IEEE Transactions, Journal of Applied Mechanics, or Journal of Applied Physics, etc. One could work it out so it wasn't too much work for the editor. That's a very important proviso. It would be useful to have such a list. That is another possibility. So, I think I've spent my time.

Currently, I don't think the Journal of Nondestructive Evaluation is serving a particularly useful role in the community. But that is not Mike Buckley's fault. We have a chicken and egg situation. There is a small audience and, therefore, none of us submits our papers to it. And I say us, because I don't either. Who wants to submit your paper to a journal that is only going to go to a couple hundred libraries? On the other hand, if you form a Working Group, if there is an audience of our peers subscribing to this journal, it might be a viable thing that we'd all find quite useful.

I don't think we intend for us to do any more talking, so I would like to throw the floor open for questions, discussions, and comments about matters that have been raised.
William Clark (Westinghouse): Bruce, I have a question. It is not clear to me what the issue is here. Are we talking about the formation of a new society or a new journal? They are completely different areas of concern, and I happen to be one of the people who sent in a two-page letter to Dale. I feel very strongly about the separation of the people who implement the work and those who do research and support—they must be coupled. Now, I think as far as the initiation of a new society, that takes a lot of thought. How come some fairly prestigious technical organizations like ASME have been able over the years to handle both the implementation and the research area with their publications and their organization quite successfully. If they can do it, why can't the world of NDE?

Ward Rummel: ASME does not have the same broad spectrum that the nondestructive testing world has. The nearest thing in the societies is ASM which has struggled with these same problems and has divisionalized in much the same manner as what we are talking about here in order to meet the needs of the special groups. This is a step to meet the needs of the NDE community as I see it.

Robert Gilmore (G.E. Corporate R&D): I did a lot of work in the ASNT for many years. I have been a chairman of a local chapter and held all the other chairs. I can remember a national meeting chairman arbitrarily deciding that he wanted written manuscripts one year before a paper was given. This was ingrained in the approach that ASNT had to research and development. Now you have a room full of research people and they know that current topics are what you thought about last week. Twenty percent of the papers had changes made in the transparencies the night before the paper was given. If you can write a paper a year before you want to give it, you have stopped moving forward in the field. And, if you are interested in giving a paper of year-old data, you have a different mentality from somebody who jumps over tables when he solves a problem. ASNT is not willing to address this issue.

Ward Rummel: I might respond to that. There were many responses on the survey and certainly there have been many comments about the administrative makeup of ASNT as being of great concern to this group. The pure administrative matters can be changed, but not quickly, of course. In the meantime, we still have to survive. Comments to this?

Ed Henneke (Virginia Polytechnic Inst.): Yes. I would like to make some brief comments to the things that were just discussed. We have indeed made some changes in ASNT. For example, we have gotten rid of the need to publish proceedings, abstracts a year in advance. I really can't tell you the length of time it takes a paper to be published in Materials Evaluation, but I assure you it's a lot shorter than two years.

Ward Rummel: I checked that. It is nine months, but abstracts for the spring meeting a year from now are already due. So, some things have not changed.

Laszlo Adler (Ohio State): I think we will have to separate the two issues, whether we are talking about the Journal or talking about the society. I favor right now another journal. There is no question about it. I didn't quite understand what sort of agreement you have with the ASNT. What was the outcome of the ASNT discussion?

Dale Chimenti: To some extent, Laszlo, it is unresolved. They made some offers. We said our basic philosophy in approaching them was that we want to do this on friendly terms. These are the kinds of things that
we are interested in doing. We wanted to make them comfortable with
the fact that we were not going to step on what they considered their
sacred ground, and we are not interested in education, licensing, or
certification. The ASNT already does these reasonably well. All we
wanted to do was to provide services for researchers, engineers, and so
forth—the Journal in particular.

Laszlo Adler: I would like to speak from experience about the Acoustical
Society. Acoustical Society of America is a very large organization,
and it includes people much further apart than say a technician in NDE
and a researcher in NDE. We are talking about physicians and
psychologists versus physicists, and so on. But, to start a full
society I think is rather expensive business. As far as getting a
working group or a journal, I don't have any problem. But to have a
full society with a limited membership, I would see as financially
difficult.

Cecil Teller (Texas Research): I know ASME is not quite as diverse as ASNT,
but they've come to grips with this problem in a couple of ways I
believe. They have, of course, the journal that they put out each
month, Mechanical Engineering, which is structured very similar to
Materials Evaluation. But for each of the technical divisions, they
publish transactions which accept no advertising, as I recall. They
simply deal with technical papers and review articles. Something
similar to that might work in the context of ASNT. As a separate
technical division, or, if you will, research division. Also, it seems
to me that if publication is really the thing we are trying to come to
grips with in this current discussion, maybe even something similar to
the metallurgical community might work.

Steve Neal (Center for NDE and Ames Lab): Dale indicated that the papers
were published in so many different journals that he couldn't even pick
out one which was the most published. Bruce indicated that one of the
possible things in the new journal might be to have a bibliography of
NDE-related papers that were published in different areas. It seems to
me that would be extremely valuable. If I had the choice between
somebody giving me a new journal which we might come up with in a few
years which published a few new papers each year versus say a book of
one-paragraph abstracts in which you can find work in other areas
published in say 20 to 30 different journals in NDE, that abstract book
would be invaluable. Because all those journals are in your library.
If you just had that book so you knew where they were and what they
were, you'd have everything you needed right there. If you have a new
journal, then maybe you do get a few papers, but there are still
hundreds published in all the other ones that you don't know about. If
you just have the abstract book, then maybe you are already done.

John Murphy (Hopkins Applied Physics Lab): I thought that Bruce's
suggestion was a pretty good one, to be honest, in terms of the outline
of the journal that he had. I don't think it is an "either/or"
proposition, having abstracted volumes or having original papers. My
concern with the proposal, and I guess it would be something I want to
add, is that any journal such as the Journal of Nondestructive
Evaluation has to have a certain staying power to it. I remember the
effort that Allan Rosencwaig put in a few years ago in terms of
building a Journal of Photoacoustics or trying to build a journal
within the framework of the Journal of Molecular Spectroscopy. It is
my understanding that Allan put in quite a bit of time. John Opsal may
also be able to add more to this, but what came by was that there
wasn't the long-term commitment on the part of the publisher to stay
with that journal and to provide an opportunity for it to grow. I
think that if we had that kind of assurance from Plenum, that they were willing to run the course, then this might be a useful idea.

Bruce Thompson: The fact is that Plenum has stayed with the JNDE for eight years, and they have given us a guaranteed price for two more years. I think that indicates a lot of good faith on their part. My intuitive feeling is that Plenum is with us. However, coming back to the working group concept, as a prospective editor I don't think the journal is viable unless there are a lot more subscribers than three hundred libraries. Plenum has guaranteed a very low price to a group of people, saying, if there is a group who is commonly interested in this format, we're behind it. It would help them, and it would be good.

Jim Rose (Center for NDE and Ames Lab): Can you make a quantitative estimate of what's needed to be viable? Say, everybody in the room bought it, would that be enough?

Bruce Thompson: Oh, my intuition says two or three hundred, something like that. But, anyway, I don't think that is the key issue. If it is still going just to libraries, I have a feeling people aren't going to submit to it.

Audience member: One thing might help. If the journal would be called maybe International NDE.

Wolfgang Sachse (Cornell): I don't know what the answer to the dilemma is, but one thing crossing my mind is why not something completely new—an electronic journal. Let people publish wherever they want, JASA, ASNT, Ultrasonics, International Journal of NDE, whatever journal. But somebody set up a system whereby anyone who has access to a terminal can get any paper. The function of this group would be essentially to provide a ready index, so that I would know which code to type in and just read the paper on my terminal. I think more papers would get read. We could send our paper anywhere we like and, as long as it was in the repository, it would be accessible with this system. Maybe it's because I've just recently discovered electronic mail, and it's incredible. I think that if I would ask how many people do not have access to a computer in this room, there may be only one or two hands that would go up. But, I think that is something to think about.

Bruce Thompson: It's a great idea. I like that.

Basil Barna (EG&G Idaho, Inc.): I keep getting the feeling that we are wandering from the main point you brought up which really is, the journal won't be successful without a society, and the real decision to be made is whether that society is to be the ASNT or a new one. There is a fair amount of interest in this room, as evidenced by the presence of the people, and really, we need to make that decision. Should we send out a trial application form and see how many would be willing to send a fifty dollars or whatever with the understanding that the journal will be published? Okay. The key is that if you want the journal, and it seems like all of us do and, you are not going to do that without a society. Is that what you said?

Bruce Thompson: That's my opinion. It may be an incorrect opinion. That is my personal opinion. So really there are not two separate issues. There is one issue.

Dale Chimenti: Incidentally, what we all have in mind on the Ad Hoc Committee is a very informal organization with minimum superstructure.
Gil Chapman (Chrysler Corporation): You know one thing I think has always been observed. An organization is whatever the people who are participating make it. That is true for ASNT, and it will be true if this group starts. But I'm familiar with the ASHE and they have within it many groups. It seems to me it would be a very safe start if you could become a working group or a council within ASHE, because you have a journal there that already has a captive audience. I think we need to stay where we can keep the problems and the solutions close together.

Jim Rose: I would like to raise a question that I don't think has really been approached yet. It is a question of setting standards. The question is, "Do we want to have a role in setting standards?" There is much talk about not want to encroach upon....

Bruce Thompson: Excuse me, do you mean standards for papers or.....

Jim Rose: No. No. I mean standards for the use of NDE and industry, because one of the things we have to be interested in is technology transfer, getting our ideas into use. One of the big barriers that does exist is a question of standards. Now, we as a group, I presume, make only a small contribution to that effort, and I think that if what we are going to do is going to be useful, we have to begin to make some contribution to that. We have to begin to do some of the work. And that question hasn't been raised perhaps for good reason, but I think it is something we have to think about.

Ward Rummel: I would like to comment on that. You may or may not know that ASNT is not a standards-writing organization; so, with respect to ASNT, that is not an issue. The few standard-writing organizations that represent this part of the technology—in my opinion—are ASTM and ASME.

Bruce Thompson: I have the perception that part of the formation of the NE subdivision of ASME was to help NDE be better represented in the standard-making process. Is that a correct perception or do you know?

Ward Rummel: The ASME standards are part of our problems I believe, but they do set standards and codes.

Bruce Thompson: One logical implication of what Jim said and a comment that was on one of the slides is, "Well, why don't we get an ASME subdivision because that is the direct route to standards." In pointing out the pros and cons, that's one line of reasoning that would follow what you said.

Jerry Posakony (Battelle Pacific Northwest Labs): I think we are looking at an issue in which we are dealing with two different areas. The first area is the application of the technology. The second is the research in that same technology. We could follow a model similar to that which is used in the Optical society in which they have a base membership. After you choose your base membership, you choose whether you receive a journal that is applied or a journal that is for research and development aspects. I believe we could have both vehicles available. In this case we could have ASNT being the overall umbrella, with the journal that is definitely aimed toward the application of the technology. Another is the research and development of the technology. If you wanted to receive both journals—fine. You would pay for both.

But, very frankly, I doubt there is more than a dozen people in this room that would publish today into today's *Materials Evaluation*. It's
a trade journal. It is not the kind of thing that my boss says, "that's a good refereed journal." He'd mark me down if I go to a trade journal. It is just a case where we are faced very much with an issue of having two separate journals. We need two separate journals. It is a question of how we get there. We go to the working group following what has been done in an acoustics emission. That's a very loose organization. The problem that we face with going to a working group effort is that it is not sanctioned by management. I believe we've got to have some other more visible means, and the suggestion that I have is to proceed with a dual relationship, something such as a membership with a society such as ASNT with two different journal selections. Then we take the responsibility for the organization, planning, and preparation of the R & D side.

Krishnan Balasubramaniam (Drexel University): I am concerned in an educational point of view. If you take a Materials Evaluation, you may see two or three technical papers, and sometimes I find that none of them really interests me because they are not in the field in which I am working. It is not the case when you are looking at some popular journals. So, there is a need for more papers published in this field pertaining to NDE and, obviously, another journal or transaction is needed. And it can be done only as a part of ASNT, and I don't think there is any other way to do it. Thank you.

Jon Opsal (Therma Wave): It was inferred that I knew something about Allan Rosencwaig's problems. One of the difficulties was certainly the publisher and the way the journal was put together, I think. But, the real problem was the contributors. There were three times as many people who said they would contribute a paper as actually did. And the group that he was drawing on was not much different in size from this group. So, I think you are facing exactly the same problem he faced. Allan is very good at organizing things, and he is very convincing when he talks to people. And I think that if he couldn't do it, I really don't think it will be done here either. The real problem is that the Photoacoustics group is very similar to the NDE group in that there is not a single discipline involved. But I think if we do what Wolfgang was suggesting, or something along those lines, some way of getting the information centralized, that is something that has a good chance.

Leonard Bond (University College London): I think it might be helpful to make a few comments from the European point of view on the situation we've got there. In many ways, we've got a similar situation. We've got a research community which is much smaller as well as a technician community. Many of you know I'm very much involved in the publishing side in Europe. The journals that we've got are a mixture. We've got the British Journal of NDT. It's a technician journal. The British Institute of NDT is basically a technician's society. It is trying to improve its standards. It is an uphill battle because the research community is not very involved in the British Institute. We've got different interests. We're basically a physics community. You've then got the various engineering societies like the Institution of Electrical Engineers. They have their own proceedings. However, very few people actually publish NDT articles in the proceedings of the IEE. You then look at the other journal I wear a hat for. That's Ultrasonics, and I'm one of the technical editors of that. That is covering the whole of ultrasonics, not just NDT. It is hard work to get enough good-quality articles, and that journal's been going twenty years and it is a major conference which runs biennially. It is predominantly a European activity, but it does bring up articles as both Bruce and Jim have shown recently in the May issue. There are a lot of journals out there. It is a very competitive business. It is
not that I want to put Bruce off from becoming an editor. It is an interesting challenge. There is, however, a gap in the literature and I think most people here would recognize it. Where do you publish a good quality research level paper with a standard that could appear in the IEEE proceedings, the IEE proceedings, or the American Physical Society where it is going to be read by the NDE community. If we publish it in those particular journals, our peers who are not members of the NDT community will find it. But the NDT community that needs to see it so the technology will be applied, won’t find it.

Bill Lord (Colorado State University): I would like to follow up in support of two of the points that have been made by previous speakers. I’ve always thought of NDT as being the very broad field, and actually most people in this room would agree with that statement. But I think that people working in R & D have a real obligation in terms of making the results of their work known to the people who are going to use those techniques. I think that if the outcome of this meeting were to be another journal whose contents were read only by the people in this room, it would be a failure for a number of reasons. I don’t think our individual peers in our own fields of materials, electrical engineering, or mechanical engineering would recognize it or know about it. But also, what would be worse is the people working in industry would not read it. I want to make a suggestion, a kind of experiment. I would like to see us put aside a specific period of time, two or three years. I would like to see all three or four hundred attendees of this conference become members of ASNT, and I would like to see us all run for office in the society (laughter). And I think if we all did that, we would be taking this issue seriously, we could change the mode of operation overnight.

Dale Chimenti: May I ask you a question? How is the leadership of the ASNT actually chosen?

Bill Clark (Westinghouse): I think what is very clear is that ASNT is, in fact, a volunteer organization. The people who have the jobs and make the decisions are volunteers. The big shortcoming in the research community has been the fact that very few people in the research end of the activity have been visible in the society because they have just never have taken the initiative. I think that is a reasonable thing to give some thought to.

Bruce Thompson: I think a lot of people have done that, have taken the initiative. What has happened is they have not all done it at one time. A lot of people in this room have participated. I certainly participated, was president of the Los Angeles Chapter for a year, and I became discouraged. And I think a lot of other people in this room have done the same thing for a short period of time but there was not a critical mass. I qualify your statement only in that remark, and I agree with it.

W. Rummel: Let me answer Dale’s question. First of all, I would like to ask Jerry Posakony to keep me honest in this respect. The board of directors of ASNT is very large and I think that administratively one of the problems of the organization. It represents a large group. It is a consensus organization, and over the years I’ve seen people from the R & D community go just the windmill and simply get worn out because it is such a long and laborious process. It doesn’t say that it can’t be done but right now the organization is not set up for that.

Bill Clark: I don’t think it is a matter of taking it over. It’s a matter of working with people. Our Pittsburgh branch had the same story. We
had the vendors controlling everything that was going on. In a matter of less than a year, through my offering to find speakers and helping out here and there we've been able to change that society around completely. I think it could happen on the national level.

Ed Henneke: There is one other way of getting involved on the board of directors. That would be an appropriate way for the people of this organization that we are talking about to become more involved in ASNT. In addition to having a board of directors appointed at large from the various chapters around the country, you also can become involved with national meetings at the two yearly meetings. You get involved by attending the various committees such as science committee where Francis Chang has been active. You show up at these meetings. You participate in the discussions. Before long you find yourself (because you are so active) becoming a vice chairman or a chairman of one of those committees. You show up to the division committee meetings; actively participate in those discussions. Before long, you are grabbed by the neck to become one of the officers of those divisions. If you are an officer of a division or a counsel you automatically become a member of the board of directors.

I am a member of the board of directors and indeed I feel like I'm jousting at the windmill because I'm very interested in trying to make some changes and I pointed out earlier that we have made some changes as far as the way our meetings are run. Again, I'm a lone voice in the crowd. We need more people. In any case, the point I'm trying to make is that if we get more people interested in ASNT to the research counsel, we could get three people immediately on the board of directors. We also could get a number of us interested in tech councils. That would place four members on the board of directors. That's seven people. We get a couple of people that join the E and Q council, you have more members. Suddenly, we have outweighed the board of directors. We have more members on the board of directors who are representing the research, the education, the technical council than we would from the society. But, better than that, like Bruce said, become active in your local ASNT chapters. You could become nominated as their at-large member of the board of directors. We really can take advantage of the fact that ASNT has a very viable membership, 8500 members or so the last time I recall. We have an active headquarters of staff personnel who should be answering to the members at large and dealing with the activities. Now the problem presently is that we don't have enough people who are interested in research and the academic side of the house telling those people at headquarters how to behave. There is an organization which I think is viable as far as a large number of members. The board of directors in the August meeting is going to be discussing the possibility of ASNT publishing a research journal. At this point, the format of that research journal is totally open because the discussion has not taken place yet. Whether it would be to improve Materials Evaluation or whether a totally new, separate research journal is envisioned is totally up in the air at this point.

Jay Fisher (Southwest Research): I would like to address three things. One is the issue that we were talking about before, about fragmentation and archiving. There is an organization that does that and maybe it hasn't publicized itself enough. But it's paid for by the government already, and that's NTIAC and they track many different, I think at least all, journals that have been mentioned here and probably more. They keep track of current publications in the area of NDE and George Matzkanin runs it. He might want to talk about how that fits in, or if it could be coordinated with anything else that happens here. I don't think that's a necessary part of the new journal. Another comment. I'm a
member of the IEEE and the APS and the ASNT. When I joined the ASNT, one big difference that I saw between the ASNT and the others is that it didn't seem as professional in the sense that the other organizations seemed. They see themselves as having a big body of knowledge that's useful to society, and they do things to interact with, and help, society as a whole. And that includes watching things that are going on in congress and examples of a recent study that APS did on the Star Wars Program. Things like that or things like IEEE setting standards and trying to help the NRC set electronic standards to help make reactors safer. And I just don't see that kind of attitude in ASNT, and I wonder if this is something people here would see this new organization doing?

Paul Holler (Fraunhofer-Institut): If you accept another comment from somebody who has the privilege to be invited here to this interesting meeting, I would like to make three points. Number one is I feel very much the same as Jerry Posakony and Ward Rummel so the headline is technology in the name of the technology. This entity is one of the most important truths for quality assurance everywhere in industry. There are two areas: one is application and the other one is research and development. And one never should separate these two things. Otherwise, the researchers are in the so-called ivory tower and work for nothing. So, technology research without considering application and results, trying to get point of view to innovation doesn't mean anything at all. And the second thing is I think we must not only publish for ourselves, for the research scene. We have to publish for the research scene to get discussions and interaction, but we also have to publish for the people who apply the results. So we try very much to present our results as far as we believe they can be applied to steel people or aircraft people who have their own meeting.

Basil Barna: I think it is really a bad assumption to say that if there is a separate society, a separate interest group, that automatically means you've got a separation in your application and research. I'm a member of ASNT and I'm going to stay a member of ASNT. There are certain articles that should be published in Materials Evaluation. Now I don't understand why some people are all of a sudden assuming that if this working group goes forward, that's going to build a wall. I think that's a false assumption.

D. Chimenti: Not only that but perhaps the reason for the consideration in the first place is that a wall, if I may comment on this topic, seems already to exist. At least, that was the concern of the people who responded to the survey: that the interests of people in research and engineering in nondestructive evaluation were not being adequately served by existing institutions. Not that we're going to form a working group and thereby set up a barrier.

Bob Gilmore: In 1978, we said most of what's been said tonight. I've been seventeen years in ASNT, but I'll say this: if either of you will spearhead a research council in ASNT, I'll serve as your sonic chairman and editor of sonics. I'll do whatever has to be done. But, believe me, I've been out there all alone and I couldn't carry it by myself. I would suggest that we maintain coherency and integrity. Stick to one society; take a research council in the society. If we could take the existing journal with its three hundred library subscriptions and build it into an aspect of a society, I'm for doing it. And, if you want to take the lead, I think there are a lot of people in the room who would sign up. But, believe me, the people in this room control the central force for the direction of NDE. If this body decided to do it, believe me, it could be done. We've come awfully close to carrying it alone.
D. Chimenti: Am I alone in doubting that a group of maybe three or four hundred people is going to manage a leveraged buyout of a group of eight thousand? (laughter)

Bob Gilmore: We're not looking for a buyout. We're just looking for an opening for research and development in nondestructive evaluation and an edited and refereed archival journal. That's really what we're talking about. That is ninety percent of the discussion tonight and it has been ninety percent of the discussion for the last seventeen years that I'm aware of.

Dale Chimenti: Well, we are the world in a sense in this particular area. One of the things that was suggested in our meeting with Bob Hardison was to have some cross-talk between Materials Evaluation and the journal of a working group. Something like, for example, a summary or a compilation of papers, the results of papers in the research area appearing in simplified form in Material Evaluation. And, then the item that Bruce mentioned, namely, the appearance of an article every once in a while stating an unsolved problem from the inspector's point of view and in that way making contact with the research community, the people who are in a position to begin to provide solutions to those problems. Rather than trying to publish research papers in a journal which is read principally by people in inspection and equipment vendors.

John Murphy: I think what we should do at this point is to make a couple of concrete alternative proposals because the discussion is becoming diffused. I think there ought to be some specific proposals made that provide people with an opportunity to come to some resolution. In order to bring this meeting to closure, I think it is necessary to have investigated taking the next step.

George Mordwinkin (Sensor Corporation): I would like to make a proposal, if you want me to. I think that this group would be very valuable to the ASNT, and they know about it. And at the same time you have both vehicles you need for exposure of your ideas and support for your research and development. From my own experience with Materials Evaluation, the magazine desperately needs input you can provide, and I think it would be absolutely no problem publishing it.

D. Chimenti: Realistically, let me just point out that in the last year or so, in evolving this question of the working group, I've had interactions with the Ad Hoc Committee and, even as little as just looking at documentation, getting back with responses and so forth, has not been altogether smooth, because people are busy; they are occupied with other things. The first thing that we owe to our employers is the research or the engineering management that we do, or the education, the teaching that we do, and that is the prime focus of our activities. To take the position that we are going to be able to carve out from all our jobs, and we can all judge individually what that would mean, the amount of time necessary to charge an established society which holds presidential receptions like you mentioned, and be able (laughter) to turn things around, sounds to me, at least, a bit unrealistic.

Whereas with a working group that represents this community, we would be in a position to organize a structure which is, from the start, informal and in which there are no presidents to have receptions, for example. Maybe what we should do is, as John Murphy suggested, to have a proposition before the house and then go ahead with a vote on the propositions, since this is something of a debate. Let me throw out a proposition to be modified as you see fit. The proposition is “we
shall take it as our charge from this meeting to join the ASNT and work for change from within the organization." Does that sound like a reasonable proposition to vote on, or would somebody like to modify it?

Audience member: I have an alternative. I would like to suggest that ASNT is a windmill with many, many blades, and when people talk about having to play by their rules, ten percent of all the money that goes to them disappears somewhere in their coffers. That's what happened the last time I was in the fold and playing their game. I would like to suggest that we form a working group totally independent of ASNT. One of the points here I believe is that many of us have worried about the ASNT bureaucracy which is very difficult to work with, very entrenched and very oriented toward making money. Initially, the group should be independent of ASNT to see if this is really going to be viable at all. If it is, perhaps ASNT will realize that they are the ones who have to come to us saying, let's join together. But I doubt that will happen. Let's realize that many of us are not members of ASNT because of their bureaucracy, and I guess I'm not interested in trying again at this point.

(Editors' note) The discussion as recorded on tape became very diffuse and difficult to follow from this point on. Thus, the best that can be done here is to summarize the discussion and list the actions taken.

Several proposals were made and voted upon. The first of these was to elect a slate of Working Group officers that would hold office until the 1988 Review of Progress in QNDE. These officers were Dale Chimenti, Chairperson; R. Bruce Thompson, Vice-Chairperson; Ward Rummel, Secretary; Bill Cook later volunteered to serve as Treasurer.

The specific charter for this group included the renovation of the Journal of NDE as an archival journal and an examination and preparation of various organizational options and affiliations for the Working Group. Presentation of these considerations is to be made at the QNDE meeting in 1988 for evaluation and action by the group at large.

Two additional proposals were made indicating directions that the group wanted the Working Group officers to consider. The first of these specified the immediate joining and forming of a research council within ASNT, and the second was for the formation of the Working Group now as an independent group but with definite plans to seek subsequent affiliation as a body with some national society. Those societies mentioned were ASNT, ASME, and IEEE. It was argued that the latter proposition would provide more leverage in seeking the affiliation. Seven (7) voted in favor of the first proposition whereas fifty-eight (58) voted in favor of the second.

As a final action of the session, it was agreed to post a sign-up sheet for the Journal of NDE and for membership in the Working Group. This would constitute a first membership list of the Working Group.

The meeting was adjourned until the next Review of Progress in QNDE.