A PROPOSAL TO

NATIONAL INSTITUTES OF HEALTH

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

For Support of a

PROGRAM TO ENHANCE TRANSFER OF RESEARCH RESULTS OF DHEW GRANTEES AT EDUCATIONAL INSTITUTIONS

Submitted By:

Patent Program
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SECTION A

INTRODUCTION

1. Objective

Research in the health area which is supported by the Department of Health, Education and Welfare is undertaken in the expectation that it will ultimately contribute to the development of preventive, diagnostic or therapeutic measures. While the research may lead to the development of new knowledge, the public can only benefit if subsequent steps are taken by which the information is converted to tangible items for improving the quality of health care. The objective of this program is to educate the researcher as to his responsibilities and to motivate him to initiate the process for transferring his research results into public use through the use of the patent system. Increasing the incidence of invention disclosure into the established channels for technology transfer will undoubtedly result in greater benefits to the public from the research it has supported.

We are proposing herewith a broad concept of an educational program at funded institutions which we believe will greatly enhance the transfer of university developed technology for the public benefit. Such a program is expected to lead to an earlier

and more widespread identification of inventive concepts resulting from DHEW funded research, and a better understanding by the academic researcher of the means available to bring these concepts to commercial realization. The program will be conducted at ten institutions selected from a list of a representative cross section of the nation's university medical schools.

2. Background

A significant portion of the DHEW funded research in the health area is allocated to university and other non-profit scientific laboratories which do not engage in the direct manufacture of health care products and services. Thus new technology developed at these laboratories cannot be made available directly to the public. The transfer of this technology is almost totally dependent upon the industrial community so that the public may benefit from the research which DHEW has supported. The link between research at university and non-profit scientific laboratories and the industrial developer is a crucial one, and one that has received far less attention than it, and the public, deserve.

There are three critical elements in the transfer link between universities and industry, namely the researcher himself, the attitudes and activities of the administrators of the research, and the proper use of the patent system for communicating the technology and encouraging its development by industry. The public can only benefit if there is a coordinated, joint, positive involvement of these elements.

The effective transfer of university developed technology depends on a thorough understanding of the technology and the most appropriate means available for its transfer. Only by satisfactorily matching these two aspects of the process can a successful transfer take place. For example, research results can be conveniently divided into two categories: those which are directly usable by the technician, nurse or physician, and those which are not. The transfer of the former type can and should be effected by publication in the traditional medical scientific journals. This mode of communication is actively and effectively utilized by the university researcher because such publications enhance his scientific stature, and favorably affect his opportunity for professional advancement and financial security.

Research results which are not directly usable in this way almost always require the assistance and/or involvement of an industrial company. Such results must be developed further to

convert the initial findings into useful products or services. Depending on the type of results there will, of course, be a wide spread in the magnitude of effort, both in time and money, needed to bring the results into public use. Where the cost is minimal, a publication or a direct contact with industry may be satisfactory means for transferring the results to the public. However, when the development cost is large and the chances of success less predictable, the industrial community needs the protection afforded by transfer of property rights embodied in patent claims to minimize the risks and provide some assurance that expenses can be recovered and a profit made. In such cases mere publication will not provide sufficient motivation to industry to initiate a development effort. In fact publication, without further steps, can lead to permanent loss of, or, at least, long delay in putting the technology into use, since technology available to everyone is more often than not developed by no one.

Today, almost all health care developments require prior marketing approval by one or more Federal regulating agencies. Such approval is usually based on the submission of data demonstrating the safety and efficacy of a proposed product or therapeutic procedure. No industrial company can afford to initiate and carry through the necessary costly development effort to obtain adequate data for submission without broad and

economically important legal protection afforded by the patent system. Patent ownership by the university or its non-profit counterpart provides the basis for exclusive licensing of an industrial company for a limited time during which the company will complete the development unhampered by excessive, unpredictable and irrelevant demands of the market place.

While the patenting of technology is extensively used in industry, the university community seeks patents only infrequently. Thus while industry relies heavily on patent protection of new technology, much university generated research results lie fallow for lack of such vital protection which is of crucial need to the industrial developer.

As mentioned previously a vital element in the technology transfer process are the attitudes and activities of university administrators in encouraging and fostering the transfer of research results. The administrators are responsible for the effective transfer of research results including obtaining patent coverage consistent with the university's patent policy. The office of the administrator is equipped or has the capability to take effective action to transfer research results. Such action includes the evaluation of the results to determine whether viable inventive concepts are present, arranging for the filing and prosecution of patent applications, seeking potential

licensees and negotiating and administering patent licenses. Experience has shown, however, that the university administration is better suited for handling inventive concepts once they have surfaced than in motivating the faculty to recognize inventive concepts suitable for development using the patent system. For the most part they act as passive receivers of disclosures.

The critical element in the transfer of university technology is the researcher himself. Unless he initiates the process, further activity by others is usually impractical or absent. The researcher's usual action (publication in scientific journals) causes technology needing extensive further development to become lost by having it become available to all with no legal protection available to a subsequent developer. Most university researchers are generally unaware of the consequences of publication as a means of effecting tranfer, as they erroneously feel that publication is sufficient to benefit the public. Unless a university researcher has had some industrial experience it is quite unlikely that he will have been exposed to the need for patents as a means to transfer technology.

Since neither the university nor the funding Federal agencies exercises any review procedures over his research results, it is our conviction that much useful technology is going undeveloped. An external review by a party other than the

inventor is for the most part an impractical, wasteful and expensive process, although it does provide some aspect of comprehensiveness. The improvement in the transfer of research results of university developed technology can best be effected by educating and motivating the researcher. Since the ignorance is so widespread the potential for improvements is proportionately great.

This background section would not be complete without a brief comment on basic research and its relationship to the public benefit of Federally funded research. The primary reason for performing basic research is the development of new knowledge. Occasionally this new knowledge can be converted into medical or health care items via a development effort which sometimes requires clinical investigations involving humans. Without the new information being uncovered by basic research such clinical investigations would not be possible. The question being faced is not whether to alter the balance between basic research and clinical investigations, but rather on how do we insure that the knowledge being uncovered in basic research is developed for the public benefit and not merely existing as an article in a scientific journal.

3. Rationale

The support of research at colleges and universities by the Federal Government has as its primary objective the discovery of scientific knowledge and the development of the resultant technology for the public benefit. A discontinuity in the overall program arises from the absence of measures to transfer university-developed technology for ultimate use by the public.

Contrasted with the highly organized, well-developed, competently staffed initial funding program, practically no effort or funds are devoted to insuring that the research results are translated into useful products and services. The continued public support of the Federal funding of research and development programs is increasingly dependent upon whether the public is actually benefitting from these efforts.

The Department of Health, Education and Welfare, operating through the National Institutes of Health, is engaged in the support of biomedical research to improve the overall health care of the public. Such research is expected to result in new drugs, diagnostic tests and medical devices, and better therapeutic procedures, all of which require extensive testing to demonstrate their safety and efficacy before they can be marketed. As noted earlier, companies involved in the

development of such medical health care products rely heavily upon patents of their own or exclusive licenses negotiated with third parties to minimize risks and protect investments. The transfer of DHEW funded, university-developed technology is therefore more dependent upon the use of patents than any other funding agency.

The three principal factors in the technology transfer process are the researcher, the university patent administration and its attitudes and procedures, and patents functioning as a means of communication and legal protection. The whole transfer process is dependent upon the initiating element, the researcher himself.

At present the researcher is the sole deciding factor in the determination of whether any action is to be taken towards obtaining patents on his research results, since review procedures generally do not exist at either the university administration or the funding agency levels. Very few researchers are aware of the great responsibility that has been placed on them. Most cannot identify what facets of their research can and should be patented, and are generally unaware of the university or agency procedures established to handle such matters. Moreover, the experienced researcher has frequently gained his experience during a time when it was considered

unethical to obtain patents on research results or to profit financially from the licensing of those patent rights.

A significant improvement in the technology transfer process would be achieved by sensitizing the researcher to the great responsibility that has been placed upon him as a consequence of his acceptance of Federal funds to conduct a research program. Until he is adequately and properly informed and sufficiently motivated, untold numbers of valuable health care items may lie fallow and go undeveloped for extended periods of time.

A program to educate and motivate the researcher represents one possible approach to overcome his natural reluctance to utilize the patent system. The researcher needs to be able to identify inventive concepts for their continued development. Motivating the researcher is equally important since he is the first and frequently the sole judge as to what further steps need or should be taken.

In 1974 Research Corporation received a grant from the National Science Foundation to conduct a three-year educational program involving eight educational institutions and having the objective of improving the transfer of university developed technology. Although varying between institutions, the overall results, covering a variety of disciplines, indicated that the

rate of disclosure submission by the researchers could be increased by 200% to 300%.

In the course of conducting the program, we noted that researchers in biomedical fields generally have more reluctance towards participation in the program. As a consequence, they are more difficult to motivate and additional effort is needed to produce results similar to those achieved in the NSF-funded program involving a variety of scientific disciplines.

SECTION B

SPECIFIC AIMS

The specific aim of this proposal is to educate and motivate the DHEW-funded university researcher to make greater use of the patent system in improving the transfer of university developed technology. The use of the patent system in specific situations provides the necessary motivation and protection for the industrial developer and safeguards the public interest, while at the same time speeding the introduction of valuable new products and procedures into the marketplace for the benefit of the general public.

SECTION C

METHODS

Proposed Educational Program

We are proposing to conduct an educational program for research administrators and all DHEW grantees involved in scientific research at ten institutions. While the program at any one institution will require an elapsed time of twenty-seven months, the most effective use of manpower requires that the program be initiated at the ten institutions sequentially. Thus, the overall program will require about thirty-eight months to complete.

The educational program proposed is based on these concepts:

1. Proper use of patents to facilitate the transfer of university-developed technology.

2. Methods for identification of inventive concepts which might be amenable to patenting.

3. Necessity for disclosure of such concepts for action by the institutions' administrators.

Program Summary

The proposed program consists of three separate and distinct educational approaches:

... a series of information sheets

... one or more seminars

... individual interviews

The series of ten information sheets will be distributed periodically to all DHEW grantees over a two-year period. Taken as a whole, the sheets will cover all of the basic concepts to be discussed in the seminars and at the interviews.

The seminars will be given early in the program immediately following a pre-educational effort consisting of distribution of the first three information sheets. The seminars at each institution should be completed in three (3) days. The seminars will cover all of the material contained in the information sheets in addition to specific previous case histories.

The individual interviews are designed to provide an opportunity to discuss the researchers' own programs as pertinent

and personal examples of uncovering actual inventive concepts. These will be conducted over a twenty-one month period.

A typical program activity chart at each institution is attached (Appendix C).

Scope of the Program

The inclusion of ten institutions in the program will provide a broad base of research effort on which to apply this program. The total annual funding of a random sample of ten institutions selected from the list of potential participants in Appendix A would be about $200,000,000 or about 17% of all DHEW funded research in universities. The total number of researchers involved amounts to 4,000.

Identification of Grantees

All institutions selected for inclusion in this program carry out a sizable amount of research sponsored by the DHEW. The successful functioning of the program requires that all of the grantees be identified for the preparation of mailing lists for the information sheets and seminar publicity announcements. Grantee information is readily available at most institutions from computer print-outs of active grants. Such print-outs,

giving project titles, can also provide an initial classification of grantees for the purpose of establishing a priority listing for the subsequent interviews.

Information Sheets

The information sheets will consist of a series of ten issues which will be sent to all grantees at the participating institution. The first three issues will serve as a pre-education effort in order to generate interest in the grantees to attend the seminars. The remaining seven issues will comprise a complete course in patent awareness.

The pre-education set of three issues will be distributed at a rate of one issue per month during the three months prior to the month in which the seminars are to be given. Widespread publicity alone is usually insufficient to motivate researchers to attend seminars on a subject of which, at the start, they have little or no knowledge or interest.

The remaining seven issues of the information sheets will be distributed on a quarterly basis during the remaining twenty-one months of the program. They will serve as a reinforcement to the patent awareness generated by the initial set of information sheets and the seminars. These sheets will also serve as the

principal means for reaching researchers who choose neither to attend the seminars nor make themselves available for personal interviews.

Seminars

The audio-visual approach is a proven time- and cost-efficient technique for presenting a block of information to a multi-person audience. Since the seminar represents a unique event in the researchers' varied activities, the information presented has a greater probability of being retained.

The seminar mode of communication was an essential element in an earlier program conducted for the National Science Foundation. Each seminar will consist of a 30-minute presentation followed by a question-answer period. A self-explanatory seminar outline is distributed prior to the presentation in order to minimize the need for note-taking. Slides used in conjunction with the oral presentation are reproduced in the outline. This mechanism has proved to be quite useful as the slide contents highlight the important ideas.

Six identical seminars are proposed in order to limit the expected attendance to about 30 researchers. Such limitation provides for a more conducive environment for audience partici-

pation and questioning. Scheduling of the seminars will be done on a discipline basis, a feature which has been found generally to improve the degree of researcher attendance.

Seminar Content

The experience gained from delivering over one hundred such seminars under the NSF Program has developed an understanding of the issues, problems and barriers faced by the university researcher and administrator. From this understanding, we believe we have identified essentially all of the important major elements needing explanation and discussion. These have been included in the presentation proposed here, and are expected to provide a comprehensive and effective understanding of the use of the patent system for the transfer of technology resulting from DHEW funding.

Individual Interviews

As a result of a review of active grant lists, followed by a study of Summary Progress Reports (NIH 2006-1), conferences between Research Corporation staff members and individual researchers will be started in the month following the month of the seminar. Approximately two man-days per month will be expended for a period of twenty-one months. During this period,

at each institution, we would expect to meet with almost 300 faculty researchers, or about 75% of the total grantees.

These conferences are designed to develop both a better knowledge on our part of the nature and direction of the individual research project, and also to develop a rapport with the researcher. Invariably, we have found that the establishment of a personal sense of mutual trust and respect between the researchers and Research Corporation staff members overcomes much of the natural reluctance to disclose inventions promptly and adequately. During these individual meetings, the general material covered at the seminars is expanded and related to the specific problems and situations of the individual researchers. In addition, it is possible to develop a time frame for future monitoring of the research itself and establish a basis for future meeting dates. After several meetings, it is expected, on the basis of previous experience, that the researcher will become more keenly aware of his responsibilities and duties in the transfer of his research results for the benefit of the public. He will also learn the mechanisms and procedures for accomplishing this desired end.

Participating Institutions

In Appendix A is a list of institutions from which the selection of ten institutions can be made for inclusion in this program. These institutions have a significant research effort supported by DHEW and can be expected to provide reasonable cooperation if selected for the program. Not included in this list are those institutions which have been involved in the previous NSF sponsored program nor those institutions which already have active patenting programs of their own. Formal written approval of each institution, confirming an administrative commitment to the program, will be obtained before activity is undertaken.

Selection of the ten institutions will be made, after further discussion and consideration, jointly by DHEW and Research Corporation.

Evaluation

The final report will contain a short-term statistical study on the number of identified invention disclosures at each institution covering the five-year period prior to the start of the program and for the two-year period after the seminar presentations. All inventions disclosed at each institution

during the program will be evaluated for patentability and commercial potential either by the institution or by Research Corporation. In the long term, those inventions accepted for technology transfer can be followed through their development and commercial phases within the time frame of the program and beyond, if desired.

SECTION D

PROGRAM COST

Cost Summary

An estimate of the costs by area of activity for conducting a program at ten institutions is as follows:

Program Development and Management ...	$25,300	
Preparation of Information Sheets	45,400	
Preliminary Visits	22,360	
Preparation of Seminar Material	8,870	
Conducting Seminars	13,890	
Individual Interviews	200,130	
Reporting	10,496	
Total		$326,446

Details of Program Cost:

1. Program Development and Management

Supervising Associate	100 hrs @ $63.00	$ 6,300
Technical Associate	400 hrs @ 44.00	17,600
Secretary	100 hrs @ 14.00	1,400
	Subtotal	$ 25,300

2. Information Sheets

a. Editorial Cost

Per Issue: Labor: 35 hrs
@ $44.00 = $1,540
Per 10 Issues: 10 x $1,540 — $ 15,400

b. Mailing List Preparation

10 Institutions @ $1,000
per Institution: — $ 10,000

c. Printing and Mailing

10 Issues @ $200 per Issue: $2,000
Per 10 Institutions: 10 x $2,000 — $ 20,000

Subtotal — $ 45,000

3. Preliminary Visits

a. At Beginning of Program (One man-day per Institution)

Average 1-Day travel		$ 193
Visit: 8 hrs @ $44.00		352
Technical Analysis: 4 hrs @ $44.00		176
Secretarial: 8 hrs @ $14.00		112
	Subtotal	$ 833

b. Prior to Seminars (Two man-days per Institution)

Average 1-day travel		$ 193
Average Per diem		42
Visit: 16 hrs $44.00		704
Technical Analysis: 8 hrs @ $44.00		352
Secretarial: 8 hrs @ $14.00		112
	Subtotal	$ 1,403
Per Institution	Subtotal	$ 2,236
Per 10 Institutions (10 x $2,236)	Subtotal	$ 22,360

4. Preparation of Seminar Material

Technical: 70 hrs @ $44.00		$ 3,080
Secretarial: 35 hrs @ $14.00		490
	Subtotal	$ 3,570
Supplies and Printing		5,300
	Subtotal	$ 8,870

5. Conduct Seminars

(Three man-days per Institution)

Average 1-day travel		$ 193
Technical: 24 hrs @ $44.00		1,056
Secretarial: 4 hrs @ $14.00		56
Per diem 2 days @ $42.00		84
	Subtotal	$ 1,389
Per 10 Institutions (10 x $1,389)	Subtotal	$ 13,890

6. Individual Interviews

(Forty-two man-days per Institution)

Travel (Two-day visits) 21 x $193	$ 4,053
Per diem 21 days @ $42	882
Technical: 336 hrs @ $44.00	14,784
Secretarial: 21 hrs @ $14.00	294
Subtotal	$ 20,013
Per 10 Institutions (10 x $20,013) Subtotal	$200,130

7. Reporting

a. Quarterly Reports (12)

Technical: 96 hrs @ $44.00	$ 4,224
Secretarial: 48 hrs @ $14.00	672
Subtotal	$ 4,896

b. Final Report

Technical: 105 hrs @ $44.00	$ 4,620
Secretarial: 70 hrs @ $14.00	980
Subtotal	$ 5,600
Subtotal	$ 10,496

A Proposed Budget for the program is given in Appendix B.

SECTION E

ORGANIZATION AND PERSONNEL

History of Research Corporation

Research Corporation was founded in 1912 by Dr. Frederick Gardner Cottrell, a scientist, educator and inventor, who donated rights under his basic patents on electrical precipitation as Research Corporation's initial endowment. Dr. Cottrell's concept (as reflected in the foundation's chartered purposes) was to use a portion of the net income from his and other inventions to support scientific research at colleges and universities, and to help other inventors bring their ideas to fruition and into public use. As an academic scientist he recognized the great need for funds to support research in its initial stages. As an inventor he was also conscious of the problems faced by academic scientists whose occasional inventions frequently lay fallow for lack of a mechanism or agency for developing them to the point where they could be brought to the public as useful products or processes.

The Cottrell patents on electrical precipitation were developed by Research Corporation, first through licensing and then through the establishment of an engineering and manufacturing organization. In 1954 this organization was

separated from the parent corporation as Research-Cottrell, Inc., a wholly owned taxable subsidiary. Following a public offering of Research-Cottrell stock in 1967, two subsequent offerings and other stock distributions have reduced Research Corporations's ownership to about 16% at present. Approximately 60% of the foundation's income comes from its investments in a diversified portfolio and in Research-Cottrell. The balance of the foundation's income is derived from royalties on patents assigned to Research Corporation by educational and scientific institutions and by individual inventors who have followed Dr. Cottrell's precepts by donating patent rights to Research Corporation.

"Science, Invention and Society", enclosed herewith, gives in considerable detail, an historical picture of the foundation.

Activities of Research Corporation

Science Advancement Programs

The foundation distributes its entire net income as grants to universities, colleges and scientific institutions. Its grants support basic research in the natural sciences and practical programs of public health nutrition. Since its inception, some $42 million has been awarded to hundreds of

institutions, principally in the United States, to support the research of more than 4,000 scientists. Grants in the sciences are awarded primarily on the basis of scientific significance and the work proposed is expected to be innovative, imaginative and creative.

Considerable emphasis has been placed on the younger scientists and, more particularly in the post-World War II years, on those in liberal arts colleges and smaller universities. In some years, this concept has been expanded to support science broadly in these institutions. Presently the foundation's grants programs are at a rate of about $3 million a year. For many years the total of grants and expenses has exceeded income, the difference being taken from realized capital gains and invasion of capital.

The following table details the grants which were approved during the period 1967-1975:

Year	Grants Approved	Excess of Grants and Expenses Over Income
1967	$4,660,225	$3,520,838
1968	2,009,939	884,535
1969	2,253,205	174,398
1970	3,499,730	(73,259)
1971	5,905,579	3,312,544
1972	3,476,380	1,247,198
1973	3,926,943	1,349,465
1974	3,920,397	641,004
1975	2,617,225	1,720,445

Patent Programs

General Background

During its formative and earlier years, Research Corporation rendered patent services to academic inventors and their institutions on a relatively informal basis. In the mid-thirties, however, a formal arrangement was made with the Massachusetts Institute of Technology under which the foundation relieved M.I.T. of the expense of the complex problems involved in the patenting and licensing of inventions made by faculty members at the Institute. Similar agreements were entered into with several other institutions prior to World War II, but activity in this area was largely suspended during the war years.

Following the war, an increased interest by educational and scientific institutions in the usefulness of the foundation's patent services led Research Corporation to establish formally what is now known as its Patent Program.

Agreements have now been entered into with more than 250 institutions which have recognized their need to have immediately available without charge specialized and skilled patent services not customarily available within their organizations. These

institutions felt that such functions would be more appropriately carried out by a specialized operating group, rather than becoming involved themselves directly with the evaluation, patenting and licensing of inventions resulting from faculty or staff research. Assigning these responsibilities to Research Corporation has allowed both faculty and administration to fulfill their duty to make available to the public useful results of scientific research, yet be relieved of most of the expense and effort required, thus conserving their resources for their primary functions: teaching and research.

Institutional Patent Agreements

These agreements provide that the institution may submit to Research Corporation any inventions made by its staff as in its sole discretion it may wish. The foundation agrees that it will evaluate these inventions for patentability and potential use by the public. If the evaluation is affirmative, and if Research Corporation offers to handle it, the invention may be assigned to Research Corporation, and the foundation proceeds to seek patents and license them to industry. If the evaluation is negative, the rights remain with the institution or sponsoring agency.

All the costs of evaluating invention disclosures, filing and prosecuting patent applications, and licensing issued patents

are borne by Research Corporation. Certain special expenses, such as the cost of court litigation, are borne initially by the foundation but may be deducted, as indicated below, from any royalty income that may later be generated, if the institution has so agreed.

The agreements, in one form, provide that the inventor shall receive a percentage of the gross royalty receipts. This share, in most instances 10 - 15%, is in all cases established by his institution. The remainder usually is shared equally between the institution and the foundation, subject only to the prior deduction of any special expenses referred to above.

The second form of the agreement provides for payment, after any so-called special expenses, of 57½% of the royalties received to the institution (which, in turn, may make some payment to the inventor) with 42½% remaining with the foundation.

The following table represents the growth in the number of institutions with which invention administration agreements are in effect.

Year	Number of Institutions At Year End
1967	195
1968	206
1969	215
1970	219
1971	238
1972	250
1973	257
1974	263
1975	267

Related Services

Beyond the services rendered by the foundation's patent staff on specific inventions submitted, institutions are also advised on corollary patent matters related to the overall administrative procedures of the institution. Staff members are available at all times for discussion of such problems and for visits to the institutions. The cost of this related service is borne by the foundation.

Invention Evaluation

In evaluating invention disclosures the patent staff uses as criteria:

... novelty and patentability, including patentability opinions from independent patent counsel in private practice,

... potential commercial usefulness and the prospects of inducing industry to develop and introduce the invention into public use, and

... other less tangible but substantial reasons for patenting, such as benefits to the public or broad scientific importance.

Since intimate familiarity with many fields is needed for this evaluation, the foundation's patent staff, which is scientifically trained, market oriented and highly experienced, is augmented by calling on the knowledge of the inventor and his colleagues, other technically trained or market oriented independent consultants, and industrial personnel with whom personal acquaintance has been developed over the years. Weighing information from such diverse sources, an informed decision is made as to whether an offer to accept an invention is justified.

Over the past seven years the foundation has evaluated a total of 3,502 inventions, accepting 367 or 10%, as detailed in the following table:

Year	Disclosures Submitted	Disclosures Accepted
1967	366	45
1968	397	62
1969	417	49
1970	424	55
1971	442	54
1972	452	38
1973	519	30
1974	485	34
1975	516	28

Patent Prosecution

Upon assignment of an invention, Research Corporation retains patent attorneys in private practice to prepare, file and prosecute patent applications. The patent staff works closely with the inventor and patent counsel in preparation of applications, follows the course of prosecution, and becomes deeply involved in making decisions relating to interferences, appeals and similar matters that are not exclusively problems of patent law.

Research Corporation's efforts in handling academic inventions are characterized by unusual flexibility. Since an in-house staff of patent attorneys is not maintained, it is possible to retain various patent firms and individuals with expertise in any technological area. This is especially important where an extremely narrow or highly-specialized technology is involved.

Every assigned invention will, as a minimum, be the subject of a U. S. Patent Application. In those cases where a publication has not pre-empted foreign patenting rights and where there is sufficient economic justification, corresponding foreign applications are filed. About half the accepted disclosures satisfy these criteria for which an average of five foreign patent applications will be filed.

Patent Licensing

Research Corporation does not itself develop inventions assigned to it, nor does it provide funds to others for such development. Instead, it relies on the incentives provided by the patent system of the United States to induce industrial concerns, at their expense, to undertake the necessary further research, development, and marketing efforts which are invariably needed to bring the inventions into use. It seeks, through these means, to effect the prudent management of its portfolio of patent applications and patents, to introduce its inventions into public use, to protect the public interest, and to provide reasonable and fair royalty returns for the benefit of the institutions and their inventors, and for its own charitable purposes.

As soon as the patent application has been filed, the patent staff selects as potential licensees qualified firms in the appropriate fields. Factors in this selection are adequacy of research and development facilities, specialized technological and marketing capabilities, financial responsibility, and willingness to commit the necessary funds and efforts for development. As industrial interest is developed, Research Corporation negotiates appropriate license agreements.

License Terms

The terms of the licenses negotiated vary with the circumstances, but the general philosophy behind them is clear and uniform:

... Licenses are designed to bring about effective commercial development, wide public use of the product or process, and a reasonable royalty inflow.

... Licenses are issued only to technically competent and reputable licensees which have a genuine interest in the subject matter.

... Licenses are preferably non-exclusive, as reasonable competition results in product economy and improvement, lower prices, and wider public use. It is also important that the

licensor retain freedom to issue additional licenses to meet changing conditions. Where it is clear that a licensee will incur substantial expense and risk in reducing the invention to commercial practice and market acceptance, the license offered may be exclusive for a limited period of time to compensate partially for the licensee's commitment to undertake the unusual risks. Typical periods of exclusivity in such cases are from three to five years from date of first commercial sale, the exact term varying with the circumstances and being negotiated in each case.

... Royalty rates, while subject to negotiation, are set at reasonable levels so that their impact will not make the licensee reluctant to work the invention thoroughly or discourage the public from full use of the invention. Licenses provide, by detailed requirements and through minimum royalties, that the licensee be diligent in the development and utilization of the invention.

... Licenses do not require licensing back to the foundation of improvement inventions made by the licensee. In certain cases, the license may require the licensing of patents on such inventions to other licensees at reasonable royalties.

Royalties received by the foundation during the past nine years totaled almost $22 million. The year-by-year breakdown is detailed in the following table:

Year	Gross Royalties Received	Royalties Distributed to Inventors, Institutions	Royalties Available for Grants
1967	$1,186,319	$ 133,183	$ 601,609
1968	1,306,308	119,279	568,562
1969	1,523,638	124,743	515,710
1970	3,751,136	1,057,236	1,791,807
1971	2,538,357	670,582	566,754
1972	2,312,573	380,375	654,796
1973	3,071,095	710,665	1,028,023
1974	3,788,342	861,443	1,421,499
1975	2,269,818	1,114,454	(509,314)
Totals	$21,747,586	$5,171,960	$6,630,446

Management of this Program

The proposed program will be under the overall management of a principal investigator. Direct liaison with the NIH Programs Officer will be handled by a program director. Contacts with the cooperating institutions will be through members of the technical staff of Research Corporation, all of whom will be involved in the conduct of the lecture-seminars and personal interviews.

Principal Investigator

The principal investigator for this proposal will be Dr. Willard Marcy, who is Vice President - Patents for the foundation.

A summary of his educational background and professional experience is as follows:

S.B. in Chemical Engineering, Massachusetts Institute of Technology.

Ph.D. in Organic Chemistry, Massachusetts Institute of Technology.

U.S. Army Chemical Corps Technical Command, Edgewood Arsenal, Maryland -
Four years experience in the design and operation of pilot plants for the manufacture of a variety of war gases.

Amstar Corporation (formerly American Sugar Co.)
Twenty years experience in production, pilot plant, full-scale plant design and initial plant operation in cane sugar refining.

Research Corporation
Twelve years management experience in evaluation, patenting and licensing of inventions from educational and scientific institutions.

Publications include -
Two patents and several papers on sugar refining and the commercial utilization of new inventions.

Supporting Staff

The entire professional staff of Patent Programs will be involved with this proposal in varying degrees.

TABLE A

Name	Title	Field	Degrees	Years Industrial Experience	Years with Research Corp.
H. Gordon Howe	Mgr-Licensing	Chemical	B.S.,M.S.	6	23
James S. Fulleylove	Mgr-Evaluations	Electrical	B.S.	13	14
Robert H. Ritchings	Senior Associate	Mechanical	B.S.,M.S.	6	27
Hans A. Eckhardt	Associate	"	B.S.,M.S.	25	7
Robert Goldsmith	"	Electrical	B.S.	26	5
Bernard M. Kosloski	"	Chemical	B.S.,M.B.A.	14	8
Morton Schwarcz	"	"	B.S.	30	6
Michael Suber	"	"	B.S.	15	6
Robert M. Williams	"	Electrical	B.S.,M.S., Ph.D.	5	8
Abraham Bavley	"	Chemical	B.S.,M.S., Ph.D.	32	2
Thomas M. Noone	"	Chemical	B.S.,M.B.A., Ph.D.	20	1

APPENDIX A

POTENTIAL UNIVERSITY PARTICIPANTS

Institution	DHEW Funding For R & D Million $ per Year	Institution Has Patent Agreement with DHEW
Harvard University	27.9	NO
Johns Hopkins University	27.1	NO
University of Texas	25.7	NO
Yale University	20.6	NO
Columbia University	20.3	NO
University of Pennsylvania	19.7	YES
New York University	17.5	NO
Duke University	15.4	NO
Baylor Medical College	14.0	NO
University of Alabama	12.2	NO
University of North Carolina	11.3	NO
Rochester University	10.7	NO
Rockefeller University	9.7	YES
Temple University	9.6	NO
Vanderbilt University	9.2	YES
Northwestern University	9.2	YES
Tulane University	6.8	NO
George Washington University	5.2	NO
Rutgers University	6.1	YES
Pennsylvania State University	6.1	YES
Howard University	2.0	NO

APPENDIX B

PROPOSED BUDGET

A.	Salaries & Wages			
	Supervising Associate:	100 hrs. X $25.40	=	$ 2,540
	Technical Associate:	4,981 hrs. X $17.74	=	$ 88,363
	Secretarial	663 hrs. X $ 5.65	=	$ 3,746
		Subtotal Salaries ..		$ 94,649
B.	Staff Benefits ..			$ 33,127
C.	Total Salary & Benefits ..			$127,776
D.	Permanent Equipment ..			-
E.	Expendable Equipment & Supplies ..			$ 5,300
F.	Domestic Travel & Per Diem ..			$ 56,400
G.	Publication Cost ..			$ 30,000
H.	Computer Cost ..			-
I.	Other Costs ..			-
J.	Total Direct Costs ..			$219,476
K.	Indirect Costs (at 113% of salaries and wages) ..			$106,970
L.	Total Cost ..			$326,446

Estimated Annual Budget

First Year	...	$150,000
Second Year	...	$125,000
Third Year	...	$ 51,446
Total Cost	...	$326,446

APPENDIX C

TYPICAL PROGRAM ACTIVITY AT EACH INSTITUTION

Month	Planning and Protocol Visits	Information Sheets	Seminars	Monthly Visits
-3	X			
-2				
-1	X			
1		X		
2	X	X		
3		X		
4			X	X
5				X
6		X		X
7				X
8				X
9		X		X
10				X
11				X
12		X		X
13				X
14				X
15		X		X
16			X	X
17				X
18		X		X
19				X
20				X
21		X		X
22				X
23				X
24		X		X

CHAPTER 1-901

DEPARTMENT PATENT ACTIVITIES

1-901-00 PURPOSE

This chapter describes the organization for patent activities within the Department.

1-901-10 RESPONSIBILITIES

A. Office of the Secretary

1. Assistant Secretary (Health and Scientific Affairs)

a. Evaluates current patent policy and develops policy to meet changing needs.

b. Makes determinations of rights in inventions and patents involving important policy considerations.

c. Maintains liaison with Congress on matters involving patent policy and programs and the Federal Council on Science and Technology.

2. Office of General Counsel

The General Counsel will designate a Department Patent Counsel who will be responsible for:

a. Patent Administration

1. Issuing patent administration procedures and recommending regulations for issuance by the Secretary.

2. Receiving reports of inventions by employees and holders of Department grants, fellowships and contracts.

3. Issuing licenses to applicants under patent applications and patents owned by the Government as represented by the Department and accepting licenses issued to the Government as represented by the Department.

4. Maintaining records and documents incident to patent administration.

-10A continued)

b. Legal Services

1. Rendering legal interpretations with respect to all patent matters within the Department.

2. Making patent determinations within the framework of existing law, regulations and policy.

3. Providing legal advice on patent matters to the Assistant Secretary (Health and Scientific Affairs).

4. Furnishing legal counsel to the Department Patent Board.

5. Providing other legal services, such as conducting patent searches, filing and prosecuting patent applications, and drafting legal documents such as assignments and licenses incident to patent administration for which the Department has responsibility.

6. Maintaining liaison with other Federal departments and the public on legal matters in the administration of the Department's patent responsibilities.

3. Department Patent Board

The Department Patent Board shall be composed of the Deputy Under Secretary, as Chairman, and representatives from the following staff offices and operating agencies:

Assistant Secretary (Health and Scientific Affairs)
Assistant Secretary for Administration
Department Patent Counsel
Office of Education
Health Services and Mental Health Administration
Consumer Protection and Environmental Health Service
National Institutes of Health
Social and Rehabilitation Service

The Department Patent Board shall upon the request of the Assistant Secretary (Health and Scientific Affairs):

a. Advise the Assistant Secretary (Health and Scientific Affairs) on patent policy matters.

b. Provide the Assistant Secretary (Health and Scientific Affairs) a medium through which to evaluate the effectiveness of Department patent policy and the administration of such policy.

(1-901-10 A.2. continued)

c. Assist in the development of patent policy.

d. Provide a forum for discussion of all matters pertaining to inventions and patents.

e. Review proposed changes in regulations affecting policy.

B. Operating Agencies

The head of each operating agency is responsible, in accordance with Department policy, for:

1. Including patent clauses approved by the Department Patent Counsel in grants, contracts and fellowships as appropriate to implement the Department patent regulations and policies.

2. Educating employees, contractors, and grantees as to the need for reporting inventions.

3. Evaluating the impact of patent policy on agency programs and providing such advice as the Assistant Secretary (Health and Scientific Affairs) may require on the most effective means of relating patent policy and procedure to program objectives.

4. Assisting, as requested by the Department Patent Counsel, to obtain scientific evaluations of inventions and providing such other information and assistance as may be required.

5. Providing such other information or reports as the Assistant Secretary or Department Patent Counsel may request.

SUPA Newsletter

Quarterly Publication of the Society of University Patent Administrators

Volume VIII Number 1 March 1983

PRESIDENT'S REPORT

Annual Meeting a Success; Busy Year Planned

BY ROGER G. DITZEL
President

Persons attending the Ninth Annual SUPA Meeting in Washington, D.C. have been extremely complimentary about the program as well as about the meeting in general. General Meeting Chairman Stephen Atkinson and his committee prepared an absolutely superb program including a mock negotiating session between industry and university representatives over the terms of a research-funding agreement. The arguments both ways were those that are heard in "real-life" situations, and were not limited to patent rights. The negotiating team members made this case study a highlight among all SUPA Annual Meetings.

The Society is enjoying a major period of growth, with 226 registering for the Annual Meeting. Such growth makes it difficult for the Meeting Committee to plan, but it also demonstrates the interest of the membership in educational-type programs.

Birch Award

The Society's growth also results from outstanding contributions of many unheralded members, as well as others who contribute to the aims of the Society. It was may pleasure this year to present on behalf of all members of the Society, the Birch Award to Norman J. Latker for his contributions to the aims of the Society over the past decade. This is the second time the Birch Award has been presented; the only previous recipient was Howard Bremer.

Mary Spores was also recognized at the meeting with a Meritorious Service Award, the first time this has been presented by the Society. She has worked for the Society in many capacities that have previously gone unrecognized.

Prior to receiving her award, Mary had agreed to be the editor of the Newsletter for 1983, a position she has held in past years. As editor, Mary will work with Jack Stuart Ott of Cleveland, Ohio, who has been retained by the Society to publish the Newsletter. This will allow Mary to concentrate on the content of the publication as opposed to the mechanical aspects.

(Continued on Page 2)

WASHINGTON REPORT

BY HOWARD W. BREMER
Chrmn., Committee on Legislation

With the passing of the 97th Congress it seems an appropriate time to summarize the disposition of some of the pieces of legislation handled by that Congress which had or could have an impact on universities and the innovation process.

Patent and Trademark Office Authorization—P.L. 97-247 (HR 6260)

Enacted August 27, 1982.

Raises patent and trademark fees and authorizes appropriations for the PTO for three years. Bill provides a two-tier system under which universities and other nonprofits, small businesses, and independent inventors will pay only 50% of the newly set fees.

These organizations in PTO parlance have "small-entity" status, provided appropriate documents are filed attesting to that fact.

The PTO has taken the position that the full fees must be paid if other than a "small entity" is licensed *and* had taken the position that a license to the federal government—required when federal funding was used in the making of the invention—disqualifed the university from the "small-entity" status. This latter position has now been reversed, thanks to the efforts of Senator Sam Nunn of Georgia. Our current advice is that universities will be able to qualify for "small-entity" status in those situations where the government receives a royalty-free license.

(Continued on Page 2)

Birch Award Presented Norman Latker

The Birch Award was presented to Norman J. Latker, Director of Federal Technology Management and Licensing Policy, Department of Commerce, by Roger Ditzel, President of SUPA.

The inscription on the award reads, "In recognition of unselfish commitment to establish and preserve the values of the technology transfer process".

Mr. Latker developed and implemented the Institutional Patent Agreement Policy for DHEW. This involved 78 agreements with major universities and other nonprofit organizations.

Mr. Latker was one of the primary draftsmen of P.L. 96-517, The University and Small Business Patent Act, for which administration he is at present responsible, along with the administration of P.L. 96-480, Utilization of Federal Technology Act.

He developed and implemented procedures and policies involving waiver of DHEW-funded inventions. He also identified through the management of the programs the factors necessary to achieve successful technology transfer and utilization of government-funded inventions.

A meritorious service plaque was presented to Mary Spores, Editor of the SUPA Newsletter.

President's Report . . .

(Continued from Page 1)

Secretary

Growth of the Society was also recognized at the Annual Business Meeting, where the Bylaws were amended to, among other things, split the position of Secretary/Treasurer into that of Secretary and Treasurer. Ed Lefner remains as Treasurer; Lamar Washington is the first holder of the new position of Secretary.

Ed McCordy and Art Smith completed their terms as Trustees and received thanks for their contributions and efforts from the membership.

Martin Rachmeler was elected Vice-President — Central, while Earl Freise and Bill Trease were elected Trustees for the next two years. Bill Trease had previously served as Vice-President — Central Region. We are looking forward to working with these new officers as well as continuing our relationships with those who continue to serve, namely Clark McCartney, Past-President; Phil DuFour, Vice-President — East; Cynthia Hanson, Vice-President — West, and Bob Custard, Trustee.

Needs Survey

Education of members is the major activity of the Society at its present stage. During the '83 Annual Meeting, Education conducted a survey of the needs of the membership with respect to education. Results of that initial survey will help in planning specific educational activities of the Society. In addition, this committee plans to update the 1977 SUPA "Survey of Institutional Patent Policies and Patent Administration."

When you receive your copy of the new survey, it is important that you complete it and return it. Having comparative numbers from 1977 and 1983 will give us a dynamic comparison of activity among many universities over the past six years.

As with any professional society, member involvement is essential to success. Committees and their Chairpersons have been named for 1983 (see a related article in this issue of the Newsletter). If you wish to become involved and make a contribution in some aspect of the Society's work, please contact the Committee Chairman of the activity in which you are interested and express your desire to be appointed to that committee.

1984 Meeting

It is my pleasure to announce that Spencer Blaylock has agreed to be General Meeting Chairman of the 1984 Annual Meeting and Todd Eachus has agreed to be Program Chairman. I look forward to working with them in structuring a meeting that will be even more successful than the last.

The 1984 Annual Meeting will be held February 5-7, 1984, at the Capitol Holiday Inn in Washington, D.C.

Finally, let me ask all members of the Society for comments and suggestions regarding the activities of the Society and how individual needs can better be met. Such comments and suggestions can be sent directly to me, to your regional Vice-President, to a Trustee or to a Committee Chairperson.

I look forward to serving as your President during this exciting period in the Society's history.

WASHINGTON

(Continued from Page 1)

Patent Term Restoration Act (HR 6444)

Not enacted. Bill was put on suspension calendar which foreclosed the addition of any amendments but required two-thirds vote for passage. Lost by five votes.

The bill in its final version was not the bill of the original concept and its provisions had suffered much from input and strong lobbying by consumer protection groups and generic drug houses.

Uniform Federal Research and Development Utilization Act of 1981. HR 4564 (S.1657) [The Schmitt (Senate) and Ertel (House) Bills]

These bills were initially designed to extend to large contractors, i.e. contractors with the government *other than* universities, nonprofit organizations and small businesses, the right to retain title to any inventions made during the course of a contract. The Schmitt Bill, in addition, made some amendments to PL 96-517, the Patent and Trademark Amendments Act of 1980, which would have been of value to universities. S.1657 (Schmitt) was passed out of Committee on the Judiciary, but was not brought up on the floor because of the objection of Senators Long and Metzenbaum. The House Bill (Ertel) was unacceptable particularly because it contained a repealer of P.L. 96-517.

The legislation was not enacted.

Economic Recovery Tax Act of 1981 (HR 4242)

Signed with public law (P.L. 97-34) on August 13, 1981.

Contains three provisions in particular relating to stimulation of R&D incentives: (1) tax credit for research and experimentation; (2) charitable contribution of scientific equipment to universities; (3) deduction for domestic R&D expenses when a company has foreign income. (Summary of bill available from the Joint Committee on Taxation - call (202) 225-2647.)

Alert:

1. Keep abreast of developments from Geneva Conference on Revision of Paris Convention—compulsory licensing considerations of interest to the University sector. Led by third-world countries with the apparent object of obtaining technology, the conferees, over U.S. objections, were attempting to establish compulsory licensing of inventions or loss of rights to inventions if not practiced within a relatively short period of time in a given country.

2. With the passage of P.L. 96-517 enacted 12/12/80; P.L. 97-256 enacted 9/8/82 (Technical and Conforming

(Continued on next page)

Changes in Patent and Trademark Laws) and P.L. 97-247 (PTO Fee Bill) enacted 8/27/82 the Patent and Trademark Office has proposed or made final new rules as per the following schedule of notices:

6/22/81 O.G.	Reissue, Reexamination & Protest	5/19/82 Fed. Reg.
6/28/82 O.G.	Patent & Trademark Fees	9/17/82 Fed. Reg.
10/26/82 O.G.	Small Business Fees	9/30/82 Fed. Reg.
9/21/82 O.G.	Independent Inventor & Nonprofit Fees	9/20/82 Fed. Reg.
—	File Wrapper Continuing Application (Eff. 2/27/83)	10/25/82 Fed. Reg.
—	Court Review of PTO Decisions	10/26/82 Fed. Reg.
11/2/82 O.G.	Revision of Patent Procedure (Eff. 2/27/83)	10/27/82 Fed. Reg.

SUPA NOTES

As announced by Program Chairman, Stephen Atkinson, 1983 summaries of the workshops at the annual meeting as well as the negotiation session between University and Industry will be mailed to all members and participants at the annual meeting.

* * *

If any member would like to serve on any of the SUPA Committees, write to the Committee Chairman, the Regional Vice-President or the President, who are listed elsewhere in this Newsletter.

* * *

The Pennsylvania State University has just completed its new copyright policy. Any member wanting a copy to use as a model can write to Dr. Robert Custard, University Patent Counsel, The Pennsylvania State University, 229 Applied Science Building, University Park, PA 16802.

* * *

Members are encouraged to send in items for the Newsletter that would be of interest to other SUPA members. Notices of position openings relating to patent and licensing administration will be accepted. Subsequent Newsletters will be mailed approximately June 15, September 15 and December 15.

President Ditzel (l.) presents Birch Award to Norman J. Latker.

Know SUPA's Newly Elected Officers

New officers were elected at SUPA's Ninth Annual Meeting in Washington, D.C.:

Central Regional Vice-President: Martin Rachmeler, Director of Research Services Administration, Northwestern University. A member of SUPA since 1978, he served as Program Chairman, 1981-82; Nominating Committee Chairman, 1982-83; Legislative Committee, 1980-81.

Secretary: Lamar Washington, Director of the Technology Transfer Office, Research Foundation of SUNY, member since 1980.

The Board of Trustees split the single office of Secretary-Treasurer. Ed Lefner, who held the dual position, now is Treasurer and Membership Chairman. Mr. Lefner is System Patent Administrator at the Texas A & M University System.

Trustees: Earl J. Freise, Assistant Vice-Chancellor for Research and Interim Patent Administrator, University of Nebraska-Lincoln, served as Secretary-Treasurer, 1975-77; Nominating Committee Chairman, 1977-78. Mr. Freise, a founding member of SUPA, attended the organization's initial meeting in 1974.

William Trease, Executive Director, University of Iowa Research Foundation. A member of SUPA since 1975, served as Central Regional Vice-President, 1980-82.

1983 SUPA Officers and Trustees

President	Roger Ditzel	Treasurer	Ed Lefner
Past-President	Clark McCartney	Secretary	Lamar Washington
V-P — East	Phil Dufour	Trustee	Bob Custard
V-P — Central	Marty Rachmeler	Trustee	Earl Freise
V-P — West	Cindy Hanson	Trustee	Bill Trease

SUPA Newsletter
1225 Elbur Avenue
Cleveland, OH 44107

History of SUPA Membership

Year	Membership at End of Year	Attendees at Annual Meeting
1975	51	not available
1976	87	85
1977	101	60
1978	94	78
1979	121	75
1980	133	80
1981	189	150
1982	218	165
1983	*	226

** Recent applications received brings the current membership to approximately 275. Actual membership for 1983 will be calculated at year's end.*

EDITOR: Mary Spores
Northwestern University
633 Clark Street 1203
Evanston, IL 60201

The SUPA Newsletter is published quarterly in Cleveland, Ohio. Copy for publication should be sent to the Editor by the 15th of the month *previous* to publication dates, March 15, June 15, September 15, December 15.

Effect on Small Entity Status of License Pursuant to 35 USC 202(c)(4)

Public Law 96-517 added a new chapter 38 to Title 35 of the United States Code entitled "Patent Rights in Inventions Made With Federal Assistance." Under the provisions of the statute, each funding agreement between a Federal agency and an individual, small business firm or nonprofit organization must provide, inter alia, that "... the Federal agency shall have a nonexclusive, nontransferable, irrevocable, paid up license to practice or have practiced for or on behalf of the United States any subject invention ..." See 35 U.S.C. 202(c)(4).

Under the provisions of 37 CFR 1.9 and 1.27, an independent inventor, small business concern or nonprofit organization cannot qualify for reduced patent fees if it has assigned, granted, conveyed or licensed or is under an obligation under contract or law to assign, grant, convey or license any rights in the invention to other than an individual who could be classified as an independent inventor if that person had made the invention, a small business concern or a nonprofit organization. The Federal agencies do not quality as nonprofit organizations for paying reduced patent fees under the rules. Applying this construction to the licensing of an invention to a Federal agency by an independent inventor, small business concern or nonprofit organization pursuant to a funding agreement under 35 U.S.C. 202(c)(4) would preclude their qualifying for paying reduced fees. This, however, would frustrate the intent of Public Law 97-247 and Public Law 96-517 when taken together.

This notice will serve as clarification that an independent inventor, small business concern or nonprofit organization, which is otherwise qualified as a small entity for purposes of paying reduced patent fees under 37 CFR 1.9 and 1.27, is not disqualified therefrom because of a license to a Federal agency pursuant to 35 U.S.C. 202(c)(4). A license to a Federal agency resulting from a funding agreement with that agency pursuant to 35 U.S.C. 202(c)(4) does not constitute a license for purposes of 37 CFR 1.9 or a transfer of rights for purposes of 37 CFR 1.27. Any other license or rights to a Federal agency will, of course, preclude qualifications as a small entity for purposes of paying reduced fees.

Applicants who have previously paid fees which were not reduced for small entity status because of a license to a Federal agency pursuant to 35 U.S.C. 202(c)(4) may claim a refund by filing the proper verified statement as required by 37 CFR 1.27 and by making reference to this notice.

Gerald J. Mossinghoff
Commissioner of Patents and Trademarks

Jan. 14, 1983
Dated

Published in the February 8, 1983, Official Gazette of the U.S. Patent and Trademark Office.

1983 SUPA Committee Chairs

Bylaws	Bill Trease
Copyright	Bob Custard
Education	Al Broseghini
Legal Affairs	Howard Bremer
Membership	Jim Brown
Newsletter	Mary Spores
Nomination & Awards	Howard Bremer
Industry Relations	Ralph Pinto
Annual Meeting	Spencer Blaylock - General Chairman Todd Eachus - Program Chairman
Audit	John Thompson

File w/ Technology Trans

NATIONAL TECHNOLOGY DEVELOPMENT CORPORATION IS PROPOSED IN SENATE

Senator Javits (Rep-N.Y.) has introduced (for himself Senator Humphrey (D-Minn) and Senator Mathias (R-Md.)) a bill intended to reorganize activities of the executive branch of the Government which are supportive of federal technology development and to centralize funding for energy and natural resources in a National Technology Development Corporation. The proposed act, designated the National Technology Development Corporation Act of 1976, has been referred to the Committee on Government Operations.

According to Senator Javits the bill would provide "an institutional solution to needed technological developmental aid by the United States and eliminate [a] serious gap in our advance planning capability, which could eventually rob the United States of its role as the industrial and technological leader of the world."

The bill would authorize the Corporation to make direct loans to applicants who are able to demonstrate a reasonable probability of success or a substantial benefit; to guarantee loans consistent with the purposes of the act; or to purchase capital stock in applicant corporations up to 50 percent of outstanding stock.

The corporation would recover its investment by acquiring a share in the equity of a recipient or by obtaining a share of the recipient's income from "exploitation of any patents or inventions developed as a result of activity assisted by loans or investments made or guaranteed by the corporation." The bill further provides that any invention developed as a result of such activity "shall be made available to others in return for reasonable royalties."

In his floor remarks on introducing the bill, Senator Javits had this, in part, to say:

> [Text] There is a gap--a deep and wide gap--between our legitimate and important efforts to develop specific technologies such as in energy, advanced weapons systems and a cure for cancer with the kind of basic research that is being done through the National Science Foundation. That gap must be filled by a governmentally directed effort to channel both investment capital and under-utilized scientific talent into areas that will be of significant probable long-term benefit to the American people--and to the people of the world.
>
> What I propose is an authority with the powers and the financing capability to fill this gap, an authority which in the long run will not be costly to the American taxpayer because it is not granting money or loaning money--it is investing the people's money in the people's future.
>
> Our existing institutions, although modified and expanded continually to meet and alleviate current pressing problems, were not designed for planning advance technology development oriented toward future needs: The current domestic fossil fuel shortage, which could have been substantially avoided, is conclusive evidence of this proposition.
>
> * * *
>
> Government primarily because of historical lack of need, has not dealt with the development and implementation of technology outside of the military sector to any significant degree. With the exception of certain efforts in specific fields, conducted almost solely on a grant or contract basis, the Federal Government leaves civilian innovation to private efforts and private financing.

Historically, with the striking exception of the recent past, such private efforts sufficed with remarkable success. But in recent years, as major break-throughs and engineering followup become more and more dependent on sustained capital investment and long-term research and development, our business community has been unable to provide the necessary effort. I do not indict business for this deficiency; I merely state it as a fact.

We have not witnessed a major technological breakthrough in the transportation sector for some decades; our research and development talent and capital in this sector which is substantial, has been channeled into breakthroughs of consumer convenience, such as automatic transmission and air-conditioning.

Development of more basic changes, such as energy efficient power plants and non-polluting engines, were avoided and sometimes even resisted, because they offered little or no market attractiveness--their benefits are long term to the public generally and not to demonstrable profitability.

These results are not surprising, although there are indeed some shining examples of long-term private research and development, particularly in the electronics industry where breakthroughs have been of enormous importance.

In the past, this situation was acceptable, because private initiatives would develop outside of the existing business structure if the pressure of public needs not being adequately served was manifested strongly enough.

But today there are two factors that retard such private development. The first is the enormous cost of significant technological innovation, both in terms of manpower and capital. Yesterday's "better mousetrap" has become today's offshore oil production platform or urban transportation systems. The costs of development have become prohibitive and many such opportunities are open only to the Fortune "500".

The second constraint, which may be psychological rather than economic, is the prevalence of increased corporate conservatism as more and more "trustees" manage big U.S. publically owned corporations and a desire to protect existing market shares rather than create new ones.

These factors sap competition and lead to a slowdown, or even a stagnation of technological growth in some fields. The consequences are increased social and environmental difficulties often leading to crises, and Government then seeks to do battle within a slow reacting ex post facto oriented institutional framework.

* * *

[S. 3111] provides for a single Federal corporation which has the financial capability to provide investment capital, where existing market resources are not available.

The National Technology Development Corporation would act much like a private lender but with some significant differences. First, it could invest in promising technologies even though they may be high risk and may not produce tangible economic results for years; second, it would limit its investments to areas established by a technical advisory board as necessary for the public good and in need of increased utilization or development; and third, it would have the option of taking either a nonvoting stock interest in the borrower or a traditional debt obligation, depending on the risk involved and other relevant factors.

* * *

The Corporation would concentrate its efforts on regions in most need of new industrial capacity and increased employment opportunities and on those borrowers who, while credit worthy in a long-term sense, have tried their best, yet failed to obtain capital through private financial channels; and it would give priority to small- and medium-sized borrowers.

Among the investments I could envision are:

First, construction of a solar heating and cooling equipment plant by a small corporation;

Second, minority entrepreneur who is attempting to develop promising new oil recovery techniques;

Third, a local development corporation with a sound idea for the clean burning of coal;

Fourth, a medium-sized business that is developing new engine concepts for short-range travel; or fifth, utility, for funding of solid waste conversion facilities. If only a few of the Corporation's investments meet their potential, the long term cost to the taxpayer may be zero, and the benefits incalculable.

The corporate form of technology funding would place the Federal Government's long term development functions in the investment column where they belong, rather than in the annual appropriation process.

Moreover, not only would an investment corporation leverage the Federal Government dollar outlays through use of the private markets, it would also further multiply its useful effects by lowering the barriers to entry in high capital requirements industries for new innovative firms. * * * [End Text]

- 0 -

DUTY TO DISCLOSE RELEVANT MATTERS INCLUDES ART FELT NON-ANTICIPATING

The U.S. Court of Appeals for the D.C. Circuit believes that an applicant has the duty to disclose to the Patent and Trademark Office matters that are relevant even though he feels they do not establish anticipation. However, since it determines that there was no infringement and vacates a validity determination it finds it unnecessary to formulate precisely what standard for nondisclosure of prior art bars enforcement of patent. (Turzillo v. P. & Z. Mergentime, 4/8/76)

Validity and infringement of two related patents were in issue. The earlier patent (422) covers a method and apparatus for anchoring a tie-down bar in an earth situs. The later patent (216) is for a method and means for forming cast-in-place reinforced concrete piles. Plaintiff, the licensee of both patents, charged defendant with infringing both patents during construction work performed on the District of Columbia subway system. The district court held that both patents were valid, that 422 was not infringed and that 216 was infringed.

A patent (to Phares) was not before the examiner during the prosecution of the 422 application and defendant contended that 422 is invalid because of applicant's failure to cite it to the Patent Office. The District Court rejected this contention.

DRAFT

In December of 1977, Senator Gaylord Nelson announced and conducted hearings on the allocation of invention rights generated by Government R & D grants and contracts. From the announcement and choice of witnesses, one may conclude that the Senator fervently supports a policy of Government ownership only, and public dedication of such inventions. The fact that the forum was denied to many who have studied this problem carefully is reminiscent of the Edmond Burke observation that:

> "Because half-a-dozen grasshoppers under a fern make the field ring with their importunate chink, whilst thousands of great cattle repose beneath the shadow of the British Oak, chew the cud and are silent, pray do not imagine that those who make the noise are the only inhabitants in the field."

Government ownership and dedication was primarily supported by one argument---such ownership is anti-competitive, as it promotes industrial concentration.

Another view believes that allowing contractors to retain invention rights promotes competition. That ownership in the contractor can lead to concentration is dependent upon a marketplace in which all concerns start with equal capacities. In fact, many industries are currently shared by a few companies due to the requirement for huge capital investments. In such cases, a dedication policy tends to serve the interests of such companies since ownership of such inventions is not a major factor in maintaining their market position if they choose to develop such inventions. Rather, extensive marketing distribution systems and superior financial resources are more important in maintaining market position and preventing entry of new firms and ideas than invention ownership. Worse, such companies may well be foreign based and dominate due to subsidization by their governments, making the inadequacies of a dedication policy even more pronounced, since the results of Federal R & D can enure to the benefit of such companies if their governments are willing to subsidize development of ideasein the public domain.

Aspiring firms and firms needing to undertake costly pre-market clearance

by the Government must by necessity rely on a proprietary position in new innovations in order to protect their investments. Invention ownership tends to be a significant factor affecting their investment decisions, as ownership is necessary to offset the possibility that a successful innovation will prompt a dominant firm to undercut its position through superior marketing and financing. Accordingly, public dedication encourages the status quo by discouraging promotion of innovations which displace old technology.

Further, the thesis that market shared by a few firms are per se anti-competitive, is questionable, since there is no question that some industries dominated by such firms are as competitive and efficient as would be expected if otherwise occupied by a large number of small firms. To use this doubtful thesis to support government ownership of inventions generated with its funding is unconvincing.

The stakes involved in the controversy over ownership of government-funded inventions are made even more apparent from the Senator's announcement of the hearings. He indicates that the government is now funding two-thirds of the country's research. It is not explained that such funding is "seed money" that generally produces inventions which must be developed and marketed at private expense. Presuming that the percentage of government funding increases to 70, 80, or ultimately 100%, and it is correct that invention rights are a primary factor in obtaining commitment of private resources for development of such inventions, does not the government then control their development?

The Senator, suggesting "occasional situations" where commercial use and exploitation of worthwhile inventions are discouraged by the need for a substantial investment, nevertheless indicates that rather than surrendering any invention rights in exchange for this investment, supports the thesis that "the Government should finance such operation, in whole or in part, to demonstrate

or prove the commercial value of the invention."

It seems clear that adoption of the Senator's philosophy will start our country down a road to mediocrity, as industry's effectiveness in sensing the needs of our society and investing in development of innovations to fulfill these needs would be discouraged by denying to them the right to own the inventions which they believe attractive investments.

Nelson hearings

TO: Dr. Betsy Ancker-Johnson from Norman J. Latker, Patent Counsel, HEW
(301) 496-7056

"Because half-a-dozen grasshoppers under a fern make the field ring with their importunate chink, whilst thousands of great cattle repose beneath the shadow of the British Oak, chew the cud and are silent, pray do not imagine that those who make the noise are the only inhabitants in the field."

Edmond Burke

With a keen eye for the opportunities which reduced competition can bring, Senator Gaylord Nelson made ~~another~~ a classic bid for media coverage by convening his Small Business subcommittee during the recent Christmas recess. The topic of conversation - announced with colorful headline-~~hinting~~ hunting references to Santa Claus and the Tooth Fairy - was whether it is better to allow avaricious businessmen to retain ~~any~~ ownership rights in their government-funded discoveries or, by damning the rascals, to insure and polish one's public image as a trust-busting defender of the down and downtrodden of the abused consumer reelection the next time around. As befits such an orchestrated event, the witness list was tightly controlled. The National Small Business Association, and the universities, and the research community can all be heard later. What we need now is impact! Who's going to write our kind of story if one of those X!%#$ universities is in here saying we ought to be giving away invention rights!

Now that the grasshoppers have had their say, it is well to remember that they are not the only occupants of the field.

Inventions which can and should be used, but are not used, are worse than useless; the costs associated with their discovery are wasted assets and the costs. The government owns thousands upon thousands of such inventions. There are several reasons for this phenomenon. One ~~of the most important~~ is that

is ~~the fact that~~ businessmen are ~~understandably~~ reluctant to invest risk capital in the commercial development of unproven technologies unless they are assured of a reasonable measure of exclusivity in the marketplace. To take an analogy from the trademark field, who would spend millions of dollars promoting the mark "Coca-Cola" if anyone could market a ~~cola~~ soft drink under that name?

Universities are not unlike the government in the sense that they have no control over manufacturing facilities. Like the government, they must transfer their inventions to the commercial sector. Here the ~~analogy~~ similarity ends, for universities are 600 percent more efficient than the government in commercializing their inventions, principally because of their ability to license exclusively.

No one is suggesting that taxpayers do not have a right to own the inventions produced at their expense. What is being suggested is that well-informed taxpayers would gladly exchange these stagnant assets for the new products, new jobs and increased tax revenues which private patent-based enterprises have traditionally lavished on our economy.

To give the ~~devil~~ gentleman his due, Senator Nelson is probably no less interested in new jobs, new products and new tax revenues than you or I. ~~He~~ Nevertheless he is mesmerized by the notion that patents are monopolies, and ~~all~~ monopolies lead to that greatest of evils: industrial concentration (much worse, mind you, than a pile of unused inventions).

Okay, ~~let's give the angels their due also~~. We agree that concentration poses a possible problem, and we are prepared to meet it, not by relying on the anti-trust laws alone, but by tying a string onto every right which the inventing institution is allowed to retain. One false move and zap!. The string has many strands, each one of which is known as a march-in right. Senator Nelson claims that these strings ~~have never~~ been pulled, and he's right.

Now all he has to do is show us a case where it <u>should</u> have been pulled.

~~It's your turn, Senator.~~

NJL

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October 15, 1976

Mr. Norman J. Latker
Office of the General Counsel
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and Welfare
5A03A Westwood Building
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Dear Norm:

I thought you might be interested in knowing the status of some of the ideas I presented in my June 29th letter to Marcy. Since that initial contact I have had a chance to refine and redefine many of the initial suggestions, thanks to the help of Larry Gilbert, and also have had the opportunity to meet with Bill Miles of UPI on several occasions to discuss several additional interesting possibilities. These interactions have led to the generation of the enclosed papers. While they are in need of much revision (both in substance and grammar) I thought you might be interested in the rough drafts.

As you are probably aware, the situation at Research Corporation is continuing to get worse, rather than exploring new ideas they are in a fight with their grants people to maintain an eroding patent evaluation program. Due to their planned cutbacks the university community on the whole is going to have less rather than more help. Thus, organizations like UPI are going to have to play an ever increasing and more important role, otherwise all the efforts over the past 2 1/2 years to stimulate patent awareness and technology transfer will fade rather than continue to grow.

For these reasons Larry and I feel some action should be taken. Presently, two alternatives seem to be available. Either establish a new "grass roots" patent management organization or attempt to convince Miles of the merits of flexibility. Due to the many problems (and time) which would be involved in attempting to establish a new organization, the pursuit of UPI seems presently to be the more attractive. This is especially true since my initial contacts with Miles have been quite positive.

As things unfold, I will keep you informed. Hope to see you at the LES meeting later this month.

Sincerely,

George M. Stadler
Assistant Director