D R A F T

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of [illegible]

D R A F T

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes accumulated from technology managers throughout the world or screened from existing electronic and hardcopy databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

1. Creation of a New Database of Licensable New Products and Processes

A. The Basic Premise for Creating the New Database.

Industry and entrepreneurs everywhere have recognized that they are in the midst of a worldwide explosion of new technology that may enure to the benefit of their competition unless they themselves can pursue its application. At the same time governments who fund research are creating new incentives to encourage exchange of scientific and technical information especially between business and government research institutions. This is being done to speed the better application of research and justify the government investment. These facts have created an unprecedented environment in which government supported research institutions who own their technology are under increasing pressure to collaborate with industry manufacturers in order to complete the innovation process and produce jobs.

Because the scientific journals are not the normal or most timely way of communicating new products or processes to industry or to entrepreneurs, an increasing number of institutions with large government funded programs have employed Technology Managers to supplement journal publications with other disclosures directly tailored to attract industry's attention.

In addition to the support provided to research institutions, Governments like the U.S. have recently started funding small businesses to test concepts and develop prototypes of new products and processes that have been evaluated by government review bodies to be potentially useful to the government and the public. Only about 20% of the proposals received end up with awards. Most of these small business products and processes will need the assistance of larger industry partners or venture partners to reach the marketplace. In most part, the small business-awardees have been left to their

own devices to find partners. However, abstracts of the 18,000 awards which cover an investment of over $1.5 billion dollars since the program began are publicly available in hardcopy. These abstracts have been accumulated for inclusion in our database from participating Federal agencies. Surprisingly this database is not presently available from any on-line vendor.

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company but believed to have other uses. There is no known single source for hardcopy disclosures of this class of technology.

own devices to find partners. However, abstracts of the 18,000 awards which cover an investment of over $1.5 billion dollars since the program began are publicly available in hardcopy. These abstracts have been accumulated for inclusion in our database from participating Federal agencies. Surprisingly this database is not presently available from any on-line vendor.

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company but believed to have other uses. There is no known single source for hardcopy disclosures of this class of technology.

There is a rapidly growing cottage industry feeding off parts of the above described hardcopy information for the purpose of selling information services to industry. Some technology sources indicate they are uneasy dealing with this group because "they have no staying power" i.e., the strong financial backing to ensure an adequate and stable institutional framework for continual growth and update of available technology information. There is clearly no single credible entity in the worldwide business of identifying the finite number of organizations attempting to license technology, accumulating those technologies in a database, and then selling access to industry. The preliminary findings of a market study conducted on behalf of USET is headed to a conclusion that industry would be very interested in subscribing to such a database. This is not surprising since the database will create savings over that which they themselves would have to incur to find the same information.

During the past year as we have reviewed technology oriented electronic databases it has become apparent that such databases to be useful to industry users must identify at least:

1. the performing organization
2. the inventors
3. a technical description
4. advantages over prior art
5. patent coverage, if any
6. availability of licenses

It is very clear that almost none of the available electronic databases meet these basic criteria and one that does is very user unfriendly.

B. Identification of Sources with Licensable Technology

~~For~~ In the last six months we have identified a number of months we have been attempting to identify a core of licensable technology sources who are likely contributors to a database which can be demonstrated to have "staying power". It is not predictable in advance how many of those identified would cooperate with MCC if we decided to proceed. However, it is clear that many have Technology Managers that pursue outreach

programs that include hardcopy dissemination of technology available for licensing. To facilitate dissemination, this information is not copyrighted. These existing hardcopy abstracts could clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources

programs that include hardcopy dissemination of technology available for licensing. To facilitate dissemination, this information is not copyrighted. These existing hardcopy abstracts could clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest to industry users, i.e., performing organization, inventors, technical description, advantages over prior art, patent coverage, availability of licenses, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine tagging of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 18,000 abstracts of awards to small businesses to electronic form has produced near 100% accuracy and is not resource intensive.

If we proceed, ~~it seems likely as we~~ and gain credibility, ~~that~~ we could convince some technology sources to manage their technology with software being developed by T.I.C., ~~which~~ includes an up-load to our electronic database. When the software is available this could be done immediately with technology from the ten clients USET exclusively manages.

This software

With the above in mind the following are potential licensable technology sources listed in order of importance:

1) <u>150 U.S. Universities</u>

We have identified the technology management contacts including telephone numbers and addresses at 150 U.S. universities with an R&D budget in excess of $10 million dollars. Many of the technology managers are familiar with USET personnel, which we hope will foster their cooperation. Preliminary discussions with some of the Technology Managers make it clear that by close collaboration we can secure new potential technology disclosures for our technology database even prior to submission of the research for publication. This arrangement would maintain us at the cutting edge of technology. Clearly the 10 USET clients in the listing are obligated to participate. Further, in a dry run we contacted a small number of non-clients and were able to solicit abstracts of over 300 technologies. The technology managers in this group are networked through the Society of University Patent Administrators. ~~It is very important that we maintain~~ credibility with the Society to gain membership cooperation. (continued)

OR issuance of patents.

is essential to development of the database.

2) <u>305 U.S. and Foreign Industrial Concerns Who Have Indicated Their Desire to License Company Technology</u>

We have identified the technology management contact including telephone number and address at each of 305 businesses who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology conferences. This group of technology managers is networked through the Licensing Executive Society. ~~Local~~ Credibility with this organization also is essential.

3) The Small Business Innovation Research Program (SBIR)

We have identified the technology management contact including telephone number and address at each of 305 businesses who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology conferences. This group of technology managers is networked through the Licensing Executive Society. ~~Local~~ Credibility with this organization also is essential.

The U.S. SBIR program was created in 1982 by Public Law 97-219. The law requires that all federal agencies set aside 1-1/4% of their annual R&D budget to fund development of promising technology in the hands of small businesses. Since 1983 approximately $1.5 billion dollars has been spent on 10,000 awards. Uncopyrighted descriptions of each award and the technology involved is available from each funding agency. All 10,000 announced awards have been accumulated from the 11 agency contact points and are now being converted into an electronic database. Since only 1 of 8 submissions from small businesses are granted funding, industry should be very interested in the technology that survived the government evaluation and screening process. As noted, while hardcopy is publicly available, no on-line vendor is managing the database.

4) The D.O.E. Energy Related Inventions Program

The D.O.E. program was created by statute in 1976. The law creates a funding program to develop energy related products and processes brought to the attention of D.O.E. by small businesses and individuals. The evaluation and recommendations for funding have been assigned to the National Bureau of Standards. In the last 10 years NBS has recommended funding of 8,000 technologies. We have uncopyrighted hardcopy abstracts of these technologies and are proceeding to convert them into an electronic database. Recent legislation has expanded NBS's evaluation service to all other inventors. How this authority will be implemented remains to be seen but could result in an increase in evaluated technologies.

5) The Pergamon Journals

Editors of the Journals could as part of the review process ask authors whether the paper submitted describes any new product or process which he or his organization was interested in licensing or further developing. If so, an abstract of that paper could be created for inclusion in our database. The submitter's incentive to participate would be explained as possible royalty return or additional research funding from industry.

6) Foreign Sources of Licensable Technology with Agreements to Disclose to USET

have appointed technology managers who function much like university technology managers. Over a period of time this area will be extremely fertile grounds for technology disclosure, aimed at industry but presently is in a state of flux.

While the above list of technology sources is not complete, it does suggest that the critical mass for a licensable technology database could be reached rapidly.

C. Competitors

have appointed technology managers who function much like university technology managers. Over a period of time this area will be extremely fertile grounds for technology disclosure, aimed at industry but presently is in a state of flux.

While the above list of technology sources is not complete, it does suggest that the critical mass for a licensable technology database could be reached rapidly.

C. Competitors

All private businesses offering services based on an accumulation of licensable technology do so as follows:

1) Solicit abstracts of current technology on a specified format;

2) Create a searchable proprietary database, and

3) Sell hardcopy access to only technology areas in which subscribers have indicated an interest. (We are not aware of anyone using CD-ROM or floppy disks to communicate the results of a search to subscribers.)

Another characteristic that is not entirely common to the companies reviewed is a conference capability. Conferences are structured around sources of technology interested in licensing and those looking for new technology. Both the technology sources and the lookers pay to attend. Not only does the conference supplement income, it also builds the business's database.

The following are companies generally following the approach described above:

Dr. Dvorkowitz & Associates, Ormond Beach, FL--Dr. Dvorkowitz is franchising his database overseas and solicits a great deal of foreign technology. Dr. Dvorkowitz, who is 72 years old, recently sold his conference capability and is also interested in selling his database activity which purportedly includes 20 K technologies. Subscriptions are $10K annually.

Lloyd Patterson, International, Ormond Beach, FL--Lloyd Patterson has only twenty one clients which he services on a very personal basis including small conferences. Patterson is interested in being acquired. He claims to have 20 K technologies in his database. Subscriptions are $30K annually.

NERAC, Tolland, CT--NERAC searches not only the database it has solicited, but other on-line databases to address specific technology problems ~~(and not unlicensable technology.)~~ Most of NERAC emphasis is "batch" searching to solve technology problems. Subscriptions are $6K annually.

Technology Catalysts, Washington DC--Technology Catalysts claim that its database has much technology from small businesses, ~~and also has a~~ conference capability. They have a

Technology Insights, Englewood, NJ--Technology Insights discloses its technology by newsletter. Technology Insights puts great emphasis on reviewing the Patent Office's weekly Gazette for new patents with high technology potential.

TECHSTART International, New York, NY--TECHSTART indicates that Arthur Anderson Company is their alliance partner. While access is provided by hardcopy, they indicate that floppy disks will be available in the future.

BBI (MacMillan), Tustin, CA--BBI discloses its technology by newsletter. They limit themselves to the Life Sciences and also have a conference capability. They are now part of MCC through the MacMillan acquisition.

Regis McKenna, Inc., Palo Alto, CA--Not much is known about Regis McKenna, though ~~all~~ most of their activity to be seems focused on the electronic industry. However, on Feb. 2, 1989 the company offered a seminar entitled "University Research: The R&D Gold Mine".

While, in theory, all the companies have access to all technology sources, it does not appear that any one company has attempted to pursue all sources. There appears to be little evidence that the federal laboratories are being tapped at all. NERAC, Patterson, and Technology Catalysts appear uninterested in universities. There is a surprising amount of technology available from industry sources.

With the possible exception of Technology Catalysts, there is no evidence that these companies have tapped the SBIR abstracts.

As best as could be determined, all the companies are running in the black. While this is in no means an exhaustive study of the companies reviewed, it will assist in designing any service we intend to provide around a proprietary technology database.

D. Value-Added to Planned USET Licensable Technology Database

If MCC proceeds with the licensable technology database gathered from the technology sources identified we believe that the following factors will make it superior to that in the hands of competitors.

1. Better access to a greater number of technology sources (i.e., Pergamon Journals, universities, foreign licensing agents, government laboratories, etc.).

2. More efficient creation and, therefore, a larger

electronic database from hardcopy through use of new optical scanning technology.

3. Inclusion of SBIR database.

4. Inclusion of Energy-Related Invention database.

5. Availability of technology management and up-load software as incentive for technology source cooperation.

electronic database from hardcopy through use of new optical scanning technology.

3. Inclusion of SBIR database.

4. Inclusion of Energy-Related Invention database.

5. Availability of technology management and up-load software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

7. Screening and reformatting of existing electronic databases for licensable technology made more efficient by T.I.C. sorting software. The Patent Office Offical Gazette offers a ~~opportunity~~ an important opportunity that does not appear to have been exploited by competitors

8. Distribution on CD-ROM or floppy disk to subscribers who wish to create their own searchable database in their area of interest. On-line searching for subscribers limited to their designated area of interest is also a possibility and could be delivery mechanism of choice given superiority of T.I.C.'s sorting software.

3. Inclusion of SBIR database.

4. Inclusion of Energy-Related Invention database.

5. Availability of technology management and up-load software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

3. Inclusion of SBIR database.

4. Inclusion of Energy-Related Invention database.

5. Availability of technology management and up-load software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

7. Screening and reformatting of existing electronic databases for licensable technology made more efficient by T.I.C. sorting software.

8. Distribution on CD-ROM or floppy disk to subscribers who wish to create their own searchable database in their area of interest. On-line searching ~~in the~~ir area of interest is also a possibility.

for subscribers limited to their designated and could be delivery mechanism of choice ~~given T.I.C's software that~~ given superiority of T.I.C's sorting software.

C:\WP50\BUSPLAN:Rev6

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes accumulated from technology managers throughout the world or screened from existing electronic and hardcopy databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

1. Creation of a New Database of Licensable New Products and Processes

A. The Basic Premise for Creating the New Database.

Industry and entrepreneurs everywhere have recognized that they are in the midst of a worldwide explosion of new technology that may enure to the benefit of their competition unless they themselves can pursue its application. At the same time governments who fund research are creating new incentives to encourage exchange of scientific and technical information especially between business and government research institutions. This is being done to speed the better application of research and justify the government investment. These facts have created an unprecedented environment in which government supported research institutions who own their technology are under increasing pressure to collaborate with industry manufacturers in order to complete the innovation process and produce jobs.

Because the scientific journals are not the normal or most timely way of communicating new products or processes to industry or to entrepreneurs, an increasing number of institutions with large government funded programs have employed Technology Managers to supplement journal publications with other disclosures directly tailored to attract industry's attention.

In addition to the support provided to research institutions, Governments like the U.S. have recently started funding small businesses to test concepts and develop prototypes of new products and processes that have been evaluated by government review bodies to be potentially useful to the government and the public. Only about 20% of the proposals received end up with awards. Most of these small business products and processes will need the assistance of larger industry partners or venture partners to reach the marketplace. In most part, the small business-awardees have been left to their own devices to find partners. However, abstracts of the 18,000 awards which cover an investment of over $1.5 billion dollars

since the program began are publicly available in hardcopy. These abstracts have been accumulated for inclusion in our database from participating Federal agencies. Surprisingly this database is not presently available from any on-line vendor.

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company

since the program began are publicly available in hardcopy. These abstracts have been accumulated for inclusion in our database from participating Federal agencies. Surprisingly this database is not presently available from any on-line vendor.

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company but believed to have other uses. There is no known single source for hardcopy disclosures of this class of technology.

There is a rapidly growing cottage industry feeding off parts of the above described hardcopy information for the purpose of selling information services to industry. Some technology sources indicate they are uneasy dealing with this group because "they have no staying power" i.e., the strong financial backing to ensure an adequate and stable institutional framework for continual growth and update of available technology information. There is clearly no single credible entity in the worldwide business of identifying the finite number of organizations attempting to license technology, accumulating those technologies in a database, and then selling access to industry. The preliminary findings of a market study conducted on behalf of USET is headed to a conclusion that industry would be very interested in purchasing such a database. This is not surprising since the database will create savings over that which they themselves would have to incur to find the same information.

During the past year as we have reviewed technology oriented electronic databases it has become apparent that such databases to be useful to industry users must identify at least:

1. the performing organization
2. the inventors
3. a technical description
4. advantages over prior art
5. patent coverage, if any
6. availability of licenses

It is very clear that almost none of the available electronic databases meet these basic criteria and one that does is very user unfriendly.

B. Identification of Sources with Licensable Technology

For a number of months we have been attempting to identify a core of licensable technology sources who are likely contributors to a database which can be demonstrated to have "staying power". It is not predictable in advance how many of those identified would cooperate with MCC if we decided to proceed. However, it is clear that many have Technology Managers that pursue outreach programs that include hardcopy dissemination of technology available for licensing. To facilitate dissemination, this

information is not copyrighted. These existing hardcopy abstracts could clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest to industry users, i.e., performing organization, inventors,

information is not copyrighted. These existing hardcopy abstracts could clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest to industry users, i.e., performing organization, inventors, technical description, advantages over prior art, patent coverage, availability of licenses, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine tagging of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 18,000 abstracts of awards to small businesses to electronic form has produced near 100% accuracy and is not resource intensive.

If we proceed, it seems likely as we gain credibility that we could convince some technology sources to manage their technology with software being developed by T.I.C. which includes an up-load to our electronic database. When the software is available this could be done immediately with technology from the ten clients USET exclusively manages.

With the above in mind the following are potential licensable technology sources listed in order of importance:

1) <u>150 U.S. Universities</u>

We have identified the technology management contacts including telephone numbers and addresses at 150 U.S. universities with an R&D budget in excess of $10 million dollars. Many of the technology managers are familiar with USET personnel, which we hope will foster their cooperation. Preliminary discussions with some of the Technology Managers make it clear that by close collaboration we can secure new potential technology disclosures for our technology database even prior to submission of the research for publication. This arrangement would maintain us at the cutting edge of technology. Clearly the 10 USET clients in the listing are obligated to participate. Further, in a dry run we contacted a small number of non-clients and were able to solicit abstracts of over 300 technologies. The technology managers in this group are networked through the Society of University Patent Administrators. It is very important that we maintain credibility with the Society to gain membership cooperation.

2) <u>305 U.S. and Foreign Industrial Concerns Who Have Indicated Their Desire to License Company Technology</u>

We have identified the technology management contact including telephone number and address at each of 305 businesses

who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology conferences. This group of technology managers is networked through the Licensing Executive Society.

3) The Small Business Innovation Research Program (SBIR)

The U.S. SBIR program was created in 1982 by Public Law 97-

who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology conferences. This group of technology managers is networked through the Licensing Executive Society.

3) The Small Business Innovation Research Program (SBIR)

The U.S. SBIR program was created in 1982 by Public Law 97-219. The law requires that all federal agencies set aside 1 1/4% of their annual R&D budget to fund development of promising technology in the hands of small businesses. Since 1983 approximately $1.5 billion dollars has been spent on 10,000 awards. Uncopyrighted descriptions of each award and the technology involved is available from each funding agency. All 10,000 announced awards have been accumulated from the 11 agency contact points and are now being converted into an electronic database. Since only 1 of 8 submissions from small businesses are granted funding, industry should be very interested in the technology that survived the government evaluation and screening process. As noted, while hardcopy is publicly available, no on-line vendor is managing the database.

4) The D.O.E. Energy Related Inventions Program

The D.O.E. program was created by statute in 1976. The law creates a funding program to develop energy related products and processes brought to the attention of D.O.E. by small businesses and individuals. The evaluation and recommendations for funding have been assigned to the National Bureau of Standards. In the last 10 years NBS has recommended funding of 8,000 technologies. We have uncopyrighted hardcopy abstracts of these technologies and are proceeding to convert them into an electronic database. Recent legislation has expanded NBS's evaluation service to all other inventors. How this authority will be implemented remains to be seen but could result in an increase in evaluated technologies.

5) The Pergamon Journals

Editors of the Journals could as part of the review process ask authors whether the paper submitted describes any new product or process which he or his organization was interested in licensing or further developing. If so, an abstract of that paper could be created for inclusion in our database. The submitter's incentive to participate would be explained as possible royalty return or additional research funding from industry.

6) Foreign Sources of Licensable Technology with Agreements to Disclose to USET

The British Technology Group--serves as the nonexclusive

licensing agent for the United Kingdom's government funded research institutes.

GKSS--A German Funded environmental research institute that licenses its own technology.

INRA--A French funded agricultural research institute that licenses its own technology.

7) Foreign Sources of Licensable Technology Who Have Not

licensing agent for the United Kingdom's government funded research institutes.

GKSS--A German Funded environmental research institute that licenses its own technology.

INRA--A French funded agricultural research institute that licenses its own technology.

7) Foreign Sources of Licensable Technology Who Have Not Been Contacted But Are Likely Contributors

Licensingtorg--The designated exclusive licensing agent for all technology from USSR funded research institutes.

Invar--The designated nonexclusive licensing agent for France's government funded research institutes.

JITA--The designated exclusive licensing agent for Japan's government funded research institutes. (JITA's technology has been disclosed to the Dvorkowitz proprietary database.)

Technical Research Centre of Finland--Licenses technology from 35 research institutes funded by the Finnish government.

AKADIMPEX--Licensing agent for Hungary's government funded research institutes.

Austrian Trade Commission--Nonexclusive licensing agent for Austrian businesses.

Canadian Patents and Developments Ltd.--Exclusive licensing agent for Canadian research institutes and some Canadian universities.

Israeli Industry Center for R&D (MATIMOP)--Nonexclusive licensing agent for Israeli businesses.

Italian Trade Commission--Nonexclusive licensing agent for Italian businesses.

Swedish National Board for Technical Development--Swedish licensing agent--claims to cover all sources of technology in Sweden.

8) Existing Electronic Databases Disclosing Technology

Before listing the possibilities of using existing databases, it is important to discuss the problems they entail. First, with one exception, none of the accessible databases are limited to licensable technology. Further, none appear to be limited to new products and processes. They all appear to commingle scientific and technology results which are not limited to new products and processes. Further, to the extent they are

copyrighted, the right to screen them for licensable technology may be limited.

However, to the extent that the information on such an electronic database can be obtained on a media that can be leased and moved to a MCC site with no copyright or other conditions attached, disclosures of licensable new products and processes can be screened out, reformatted and used in our database. We believe that this can be undertaken with the sorting software being developed at T.I.C.

copyrighted, the right to screen them for licensable technology may be limited.

However, to the extent that the information on such an electronic database can be obtained on a media that can be leased and moved to a MCC site with no copyright or other conditions attached, disclosures of licensable new products and processes can be screened out, reformatted and used in our database. We believe that this can be undertaken with the sorting software being developed at T.I.C.

Since the following NTIS databases are uncopyrighted and meet this access test they are being acquired to screen for licensable technology and reformatting:

Federal Research In Progress Database--Summaries of U.S. government research and engineering projects currently funded by 10 Federal agencies primarily at universities (70 K records). Project description includes title, starting date, investigator, performing and sponsoring organization and detailed abstract.

Federal Applied Technology Database--Contains abstracts of selected processes, instruments, materials, equipment, software, and techniques generated by federal laboratories (14 K records).

Bibliographic Database--Contains the abstracts from all technical reports announced by NTIS both foreign and domestic (1.5 million records).

It is emphasized that this paper does not address the T.I.C. proposed initiative of using its new sorting software to develop an on-line technology database consisting of existing copyrighted databases. The T.I.C. exercise is aimed at creating a comprehensive technology database for use by business in reviewing prior art (whether or not licensable) for the purpose of determining whether investments in selected R&D programs are justified.

9) Biomedical Business International (BBI) (MacMillan)

BBI solicits abstracts of new medical products and processes for disclosure in their newsletters. We do not know the extent to which they have gained the cooperation of relevant technology sources but it appears insubstantial in comparison to what is available. Indeed, they solicit abstracts from USET periodically without much success.

10) U.S. Government Laboratories

In 1986, federal laboratories were given the authority for the first time to license their technology. These laboratories are actively creating the infrastructure to proceed and a few have appointed technology managers who function much like university technology managers. Over a period of time this area

will be extremely fertile grounds for technology disclosure, aimed at industry but presently is in a state of flux.

While the above list of technology sources is not complete, it does suggest that the critical mass for a licensable technology database could be reached rapidly.

C. Competitors

will be extremely fertile grounds for technology disclosure, aimed at industry but presently is in a state of flux.

While the above list of technology sources is not complete, it does suggest that the critical mass for a licensable technology database could be reached rapidly.

C. Competitors

All private businesses offering services based on an accumulation of licensable technology do so as follows:

1) Solicit abstracts of current technology on a specified format;

2) Create a searchable proprietary database, and

3) Sell hardcopy access to only technology areas in which subscribers have indicated an interest. (We are not aware of anyone using CD-ROM or floppy disks to communicate ~~with~~ the results of a search to subscribers.)

Another characteristic that is not entirely common to the companies reviewed is a conference capability. Conferences are structured around sources of technology interested in licensing and those looking for new technology. Both the technology sources and the lookers pay to attend. Not only does the conference supplement income, it also builds the business's database.

The following are companies generally following the approach described above:

Dr. Dvorkowitz & Associates, Ormond Beach, FL--Dr. Dvorkowitz is franchising his database overseas and solicits a great deal of foreign technology. Dr. Dvorkowitz, who is 72 years old, recently sold his conference capability and is also interested in selling his database activity which purportedly includes 20 K technologies. Subscriptions are $10K annually.

Lloyd Patterson, International, Ormond Beach, FL--Lloyd Patterson has only twenty one clients which he services on a very personal basis including small conferences. Patterson is interested in being acquired. He claims to have 20 K technologies in his database. Subscriptions are $30K annually.

NERAC, Tolland, CT--NERAC searches not only ~~its own~~ the database, but other on-line databases to address specific ~~technology~~ problems. Most of NERAC emphasis is "batch" searching to solve technology problems. Subscriptions are $6K annually.

Technology Catalysts, Washington DC--Technology Catalysts claim that its database has much technology from small businesses and also has a conference capability. ~~Technology Insights~~ They puts

✓ We suspect that they maybe using the SBIR database, Cost of subscription is unknown but suspected of being high.

it has solicited and not on licensable technology.

more this sentence to next item

while access is provided by hardcopy, they indicate that floppy disks will be available in the future.

great emphasis on reviewing the patent Office's weekly Gazette for new patents with high technology potential.

Technology Insights, Englewood, NJ--Technology Insights discloses its technology by newsletter.

TECHSTART International, New York, NY--TECHSTART indicates that Arthur Anderson Company is their alliance partner.

themselves

BBI (MacMillan), Tustin, CA--BBI discloses its technology by newsletter, limits ~~itself~~ to the Life Sciences and also ~~has~~ have a conference capability. They are now part of MCC through the MacMillan acquisition.

they

Regis McKenna, Inc., Palo Alto, CA--Not much is known about Regis McKenna, though all their activity seems focused on the electronic industry.

to be

While, in theory, all the companies have access to all technology sources, it does not appear that any one company has attempted to pursue all sources. There appears to be little evidence that the federal laboratories are being tapped ~~to any great extent.~~ at all. NERAC, Patterson, and Technology Catalysts appear uninterested in universities. There is a surprising amount of technology available from industry sources.

With the possible exception of Technology Catalysts, there is no evidence that these companies have tapped the SBIR abstracts.

As best as could be determined, all the companies are running in the black. While this is in no means an exhaustive study of the companies reviewed, it will assist in designing any service we intend to provide around a proprietary technology database.

NERAC and Technology Catalysts appear to be the more aggressive competitors. Their interest in being acquired is unknown.

D. Value-Added to Planned USET Licensable Technology Database

If MCC proceeds with the licensable technology database gathered from the technology sources identified we believe that the following factors will make it superior to that in the hands of competitors.

1. Better access to a greater number of technology sources (i.e., Pergamon Journals, universities, foreign licensing agents, government laboratories, etc.).

2. More efficient creation and, therefore, a larger electronic database from hardcopy through use of new optical scanning technology.

3. Inclusion of SBIR database.

4. Inclusion of ~~E~~energy-~~R~~elated I~~i~~nvention database.

5. Availability of technology management and up-load software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

3. Inclusion of SBIR database.

4. Inclusion of ~~E~~energy-~~R~~elated I~~i~~nvention database.

5. Availability of technology management and up-load software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

7. Screening and reformatting of existing electronic databases for licensable technology made more efficient by T.I.C. sorting software.

8. Distribution, on CD-Rom or floppy disk, to subscribers who wish to create their own searchable database in their area of interest. ~~on CD-Rom or floppy disk~~ On-line searching in their area of interest ~~could also be~~ is also ~~possible~~ a possibility.

C:\WP50\BUSPLAN:Rev6

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes accumulated from technology managers throughout the world ~~and~~ screened from existing electronic and hardcopy

C:\WP50\BUSPLAN:Rev6

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes accumulated from technology managers throughout the world ~~and~~ screened from existing electronic and hardcopy
databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

1. Creation of a New Database of Licensable New Products and Processes

A. The Basic Premise for Creating the New Database.

Industry and entrepreneurs everywhere have recognized that they are in the midst of a worldwide explosion of new technology that may enure to the benefit of their competition unless they themselves can pursue its application. At the same time governments who fund research are creating new incentives to encourage exchange of scientific and technical information especially between business and government research institutions. This is being done to speed the better application of research and justify the government investment. These facts have created an unprecedented environment in which government supported research institutions who own their technology are under increasing pressure to collaborate with industry manufacturers in order to complete the innovation process and produce jobs.

During the past year as we have ~~attempted to accumulate~~ technology oriented databases it has become apparent that such databases to be useful ~~must have~~ at least:

1. the performing organization
2. the inventors
3. a technical description
4. advantages over ~~prior art~~
5. patent coverage
6. ~~etc~~

It is very clear that almost none of the available electronic databases ~~and very few of the hard copy databases~~ meet these basic criteria and ~~those which do are~~ very user unfriendly.

Because the scientific journals are not the normal or most timely way of communicating new products or processes to industry or to entrepreneurs, an increasing number of institutions with large government funded programs have employed Technology

Insert on next page

Managers to supplement journal publications with other disclosures directly tailored to attract industry's attention.

In addition to the support provided to research institutions, Governments like the U.S. have recently started funding small businesses to test concepts and develop prototypes of new products and processes that have been evaluated by government review bodies to be potentially useful to the government and the public. ~~Thus~~ Only about 20% of the proposals received end up with awards. Most of these small business

Managers to supplement journal publications with other disclosures directly tailored to attract industry's attention.

In addition to the support provided to research institutions, Governments like the U.S. have recently started funding small businesses to test concepts and develop prototypes of new products and processes that have been evaluated by government review bodies to be potentially useful to the government and the public. ~~Thus~~ Only about 20% of the proposals received end up with awards. Most of these small business products and processes will need the assistance of larger industry partners or venture partners to reach the marketplace. In most part, the small business-awardees have been left to their own devices to find partners. However, abstracts of the 18,000 awards which cover an investment of over $1.5 billion dollars since ~~1984~~ the program began are publicly available in hardcopy. These abstracts have been accumulated for inclusion in our database from ~~the~~ participating Federal agencies ~~participating in the program~~. Surprisingly this database is not presently available from any on-line vendor.

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company but believed to have other uses. There is no known single source for hardcopy disclosures of this class of technology.

There is a rapidly growing cottage industry feeding off parts of the above described hardcopy information ~~databases~~ for the purpose of selling information services to industry. Some technology sources indicate they are uneasy dealing with this group because "they have no staying power" i.e., the strong financial backing to ensure an adequate and stable institutional framework for continual growth and update of available technology information. There is clearly no single credible entity in the worldwide business of identifying the finite number of organizations attempting to license technology, accumulating those technologies in a database, ~~access to which is then sold~~ and then selling access to industry. The preliminary findings of a market study conducted on behalf of USET is headed to a conclusion that industry would be very interested in purchasing such a database. This is not surprising since the database will create savings over that which they themselves would have to incur to find the same information.

B. Identification of Sources with Licensable Technology

For a number of months we have been attempting to identify a core of licensable technology sources who are likely contributors to a database which can be demonstrated to have "staying power". It is not predictable in advance how many of those identified would cooperate with MCC if we decided to proceed. However, it is clear that many have Technology Managers that pursue outreach programs that include hardcopy dissemination of technology available for licensing. These existing hardcopy abstracts could

INSERT Here

To facilitate dissemination this information is NOT copyrighted.

clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest, i.e., performing organization, inventors, technical description, advantages over prior art, patent coverage, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine tagging of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 18,000 abstracts of awards to small businesses to electronic form has produced near 100% accuracy and is not resource intensive.

If we proceed, it seems likely as we gain credibility that we could convince some technology sources to manage their technology with software being developed by T.I.C. which includes an up-load to our electronic database. When the software is available this could be done immediately with technology from the ten clients USET exclusively manages.

With the above in mind the following are potential licensable technology sources listed in order of importance:

1) <u>150 U.S. Universities</u>

We have identified the technology management contacts including telephone numbers and addresses at 150 U.S. universities with an R&D budget in excess of $10 million dollars. Many of the technology managers are familiar with USET personnel, which we hope will foster their cooperation. Preliminary discussions with some of the Technology Managers ~~mae~~ it clear that by close collaboration we can secure new potential technology disclosures for our technology database even prior to submission of the research for publication. This arrangement would maintain us at the cutting edge of technology. Clearly the 10 USET clients in the listing are obligated to participate. Further, in a dry run we contacted a small number of non-clients and were able to solicit abstracts of over 300 technologies. The technology managers in this group are networked through the Society of University Patent Administrators. It is very important that we maintain credibility with the Society.

2) <u>305 U.S. and Foreign Industrial Concerns Who Have Indicated Their Desire to License Company Technology</u>

We have identified the technology management contact including telephone number and address at each of 305 businesses who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology

conferences. This group of technology managers is networked through the Licensing Executive Society.

3) The Small Business Innovation Research Program (SBIR)

The U.S. SBIR program was created in 1982 by Public Law 97-219. The law requires that all federal agencies set aside 1 1/4% of their annual R&D budget to fund development of promising

conferences. This group of technology managers is networked through the Licensing Executive Society.

3) The Small Business Innovation Research Program (SBIR)

The U.S. SBIR program was created in 1982 by Public Law 97-219. The law requires that all federal agencies set aside 1 1/4% of their annual R&D budget to fund development of promising technology in the hands of small businesses. Since 1983 approximately $1.5 billion dollars has been spent on 10,000 awards. ~~A~~ description of each award and the technology involved is available from each funding agency. All 10,000 announced awards have been accumulated from the 11 agency contact points and are now being converted into an electronic database. Since only 1 of 8 submissions from small businesses are granted funding, industry should be very interested in the technology that survived the government evaluation and screening process. As noted, while hardcopy is publicly available, no on-line vendor is managing the database.

4) The D.O.E. Energy Related Inventions Program

The D.O.E. program was created by statute in 1976. The law creates a funding program to develop energy related products and processes brought to the attention of D.O.E. by small businesses and individuals. The evaluation and recommendations for funding have been assigned to the National Bureau of Standards. In the last 10 years NBS has recommended funding of 8,000 technologies. We have ~~the~~ hardcopy abstracts of these technologies and are proceeding to convert them into an electronic database. Recent legislation has expanded NBS's evaluation service to all other inventors. How this authority will be implemented remains to be seen but could result in an increase in evaluated technologies.

5) The Pergamon Journals

Editors of the Journals could as part of the review process ask authors whether the paper submitted describes any new product or process which he or his organization was interested in licensing or further developing. If so, an abstract of that paper could be created for inclusion in our database. The submitter's incentive to participate would be explained as possible royalty return or additional research funding from industry.

6) Foreign Sources of Licensable Technology with Agreements ~~with~~ USET

The British Technology Group--serves as the nonexclusive licensing agent for the United Kingdom's government funded research institutes.

GKSS--A German Funded environmental research institute that

licenses its own technology.

INRA--A French funded agricultural research institute that licenses its own technology.

7) Foreign Sources of Licensable Technology Who Have Not Been Contacted But Are Likely Contributors

Licensingtorg--The designated exclusive licensing agent for all technology from USSR funded research institutes.

Invar--The designated nonexclusive licensing agent for France's government funded research institutes.

JITA--The designated exclusive licensing agent for Japan's government funded research institutes. (JITA's technology has been disclosed to the Dvorkowitz proprietary database.)

Technical Research Centre of Finland--Licenses technology from 35 research institutes funded by the Finnish government.

AKADIMPEX--Licensing agent for Hungary's government funded research institutes.

Austrian Trade Commission--Nonexclusive licensing agent for Austrian businesses.

Canadian Patents and Developments Ltd.--Exclusive licensing agent for Canadian research institutes and some Canadian universities.

Israeli Industry Center for R&D (MATIMOP)--Nonexclusive licensing agent for Israeli businesses.

Italian Trade Commission--Nonexclusive licensing agent for Italian businesses.

Swedish National Board for Technical Development--Swedish licensing agent--claims to cover all sources of technology in Sweden.

8) Existing Electronic Databases Disclosing Technology

Before listing the possibilities of using existing databases, it is important to discuss the problems they entail. First, with one exception, none of the accessible databases are limited to licensable technology. Further, none appear to be limited to new products and processes. They all appear to commingle scientific and technology results which are not limited to new products and processes. ~~These problems plus the fact that the software used to search is generally not user friendly, makes existing databases difficult to deal with.~~

However, to the extent that the information on such an

Further, to the extent they are copyrighted, right to screen from a licensable technology may be limited.

It emphasized that this

It emphasized that this paper does not address the T.I.C project initiative of using its NPN sorting software to develop an on-line technology database consisting of existing copyrighted databases. The T.I.C. ~~has~~ exercise is aimed at creating a comprehensive technology database for use by ~~of~~ ~~assisting~~ business in reviewing patent (whether or not licensable) ~~deliverables~~ for the purpose of determining the whether investments in selected R+D programs are justified.

electronic database can be obtained on a media that can be leased and moved to a MCC site with no copyright or other conditions attached, disclosures of licensable new products and processes can be screened out, reformatted and used in our database. ~~This can be efficiently handled by~~ the sorting software being developed at T.I.C.

~~The~~ following NTIS databases meet this access test ~~and~~ are being acquired to screen for licensable technology and reformatting:

electronic database can be obtained on a media that can be leased and moved to a MCC site with no copyright or other conditions attached, disclosures of licensable new products and processes can be screened out, reformatted and used in our database. ~~This can be efficiently handled by~~ the sorting software being developed at T.I.C.

~~The~~ following NTIS databases meet this access test ~~and~~ are being acquired to screen for licensable technology and reformatting:

Federal Research In Progress Database--Summaries of U.S. government research and engineering projects currently funded by 10 Federal agencies primarily at universities (70 K records). Project description includes title, starting date, investigator, performing and sponsoring organization and detailed abstract.

Federal Applied Technology Database--Contains abstracts of selected processes, instruments, materials, equipment, software, and techniques generated by federal laboratories (14 K records).

Bibliographic Database--Contains the abstracts from all technical reports announced by NTIS both foreign and domestic (1.5 million records).

We have not explored in detail the possibility of extracting and reformatting licensable technology from Orbit/BRS electronic databases such as RAPRA and Aqualine because Orbit/BRS are vendors selling access on conditions imposed by the database creator.

9) Biomedical Business International (BBI) (Macmillan)

BBI solicits abstracts of new medical products and processes for disclosure in their newsletters. We do not know the extent to which they have gained the cooperation of relevant technology sources but it appears insubstantial in comparison to what is available. Indeed, they solicit abstracts from USET periodically without much success.

10) U.S. Government Laboratories

In 1986, federal laboratories were given the authority for the first time to license their technology. These laboratories are actively creating the infrastructure to proceed and a few have appointed technology managers who function much like university technology managers. Over a period of time this area will be extremely fertile grounds for technology disclosure, aimed at industry but presently is in a state of flux.

While the above list of technology sources is not complete, it does suggest that the critical mass for a licensable technology database could be reached rapidly.

C. Competitors

All private businesses offering services based on an accumulation of licensable technology do so as follows:

1) Solicit abstracts of current technology on a specified format;

2) Create a searchable proprietary database, and

C. Competitors

All private businesses offering services based on an accumulation of licensable technology do so as follows:

1) Solicit abstracts of current technology on a specified format;

2) Create a searchable proprietary database, and

3) Sell hardcopy access to only technology areas in which subscribers have indicated an interest. (~~At one~~ We are not aware of anyone using CD-Rom or floppy disks to communicate with subscribers.

Another characteristic that is not entirely common to the companies reviewed is a conference capability. Conferences are structured around sources of technology interested in licensing and those looking for new technology. Both the technology sources and the lookers pay to attend. Not only does the conference supplement income, it also builds the business's database.

The following are companies generally following the approach described above:

8. Regis McKenna, Inc., Palo Alto, CA
4. Technology Catalysts, Washington DC
3. NERAC, Tolland, CN
2. Lloyd Patterson, International, Ormond Beach, FL
1. Dr. Dvorkowitz & Associates, Ormond Beach, FL
5. Technology Insights, Englewood, NJ
6. TECHSTART International, New York, NY
~~7. alliance partner Arthur Anderson Company~~
7. BBI (Macmillan), Tustin, CA

6. TECHSTART indicates that Arthur Anderson Co. is their alliance partner

Each company has some characteristics that distinguish them from the others.

5. 7. 1&5 Technology Insights and BBI disclose their technology by newsletter. 7. BBI limits itself to the Life Sciences and also has a conference capability. They are NOW part of MCC through the Macmillan acquisition

4. Technology Catalysts claim that its database has much technology from small businesses and also has a conference capability. Technology Insights puts great emphasis on reviewing the patent Office's weekly Gazette for new patents with high technology potential.

2. Lloyd Patterson has only twenty one clients which he services on a very personal basis including small conferences. Subscriptions are $30K annually. Patterson is interested being acquired.

3. NERAC searches not only its own database, but other on-line databases to address specific technology problems. Most of NERAC emphasis is "batch" searching to solve technology problems.

He claims to have 20K technologies in his database.

Subscriptions are $6K annually.

Dr. Dvorkowitz is franchising his database overseas and solicits a great deal of foreign technology. Dr. Dvorkowitz, who is 72 years old, recently sold his conference capability and is also interested in selling his database activity which apparently includes 20K technologies. Subscriptions are $10K annually.

While, in theory, all the companies have access to all technology sources, it does not appear that any one company has attempted to pursue all sources. There appears to be little evidence that the federal laboratories are being tapped to any great extent. NERAC, Patterson, and Technology Catalysts appear uninterested in universities. There is a surprising amount of technology available from industry sources.

With the possible exception of Technology Catalysts, there is no evidence that these companies have tapped the SBIR abstracts.

As best as could be determined, all the companies are running in the black. While this is in no means an exhaustive study of the companies reviewed, it will assist in designing any service we intend to provide around a technology database.

~~Dvorkowitz Associates and Lloyd Patterson, International are interested in being acquired. Each claims to have a database with over 20,000 technologies.~~ NERAC and Technology Catalysts appear to be the more aggressive competitors. Their interest in being acquired is unknown.

Not much is known about Regis McKenna, though all their activity seems focused on the electronic industry.

D. Value-Added to Planned USET Licensable Technology Database

If MCC proceeds with the licensable technology database gathered from the technology sources identified we believe that the following factors will make it superior to that in the hands of competitors.

1. Better access to a greater number of technology sources (i.e., Pergamon Journals, universities, foreign licensing agents, government laboratories, etc.).

2. More efficient creation and, therefore, a larger electronic database from hardcopy through use of new optical scanning technology.

3. Inclusion of SBIR database.

4. Inclusion of energy-related invention database.

5. Availability of technology management and up-load

software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

7. Screening and reformatting of existing electronic databases for licensable technology made more efficient by T.I.C. sorting software.

software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

7. Screening and reformatting of existing electronic databases for licensable technology made more efficient by T.I.C. sorting software.

pg 1 - a new paragraph A2.:

During the past year as we have attempted to accumulate technology oriented databases it has become apparent that such databases to be useful must have at least:

a. the performing organization
b. the inventors,
c. a technical description

pg 1 - a new paragraph A2.:

During the past year as we have attempted to accumulate technology oriented databases it has become apparent that such databases to be useful must have at least:

a. the performing organization
b. the inventors,
c. a technical description
d. advantages over prior art
e. patent coverage
f. etc.

It is very clear that almost none of the available electronic databases and very few of the hard copy databases meet these basic criteria and those which do are very user unfriendly.

pg 1 par a2.

Because the scientific jurnals are not the normal or most timely way of communicating new products or processes to industry or to entrepreneurs an increasing number of institutions with large government funded programs have employed Technology Managers to supplement journal publications with other disclosures directly tailored to attract industry's attention.

C:\WP50\BUSPLAN:Rev6

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes identified from MCC other electronic or hardcopy databases, and

C:\WP50\BUSPLAN:Rev6

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes identified from MCC other electronic or hardcopy databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

1. Creation of a New Database of Licensable New Products and Processes

A. The Basic Premise for Creating the New Database.

Industry and entrepreneurs everywhere have recognized that they are in the midst of a worldwide explosion of new technology that may enure to the benefit of their competition unless they themselves can pursue its application. At the same time governments who fund research are creating new incentives to encourage exchange of scientific and technical information especially between business and government research institutions. This is being done to speed the better application of research and justify the government investment. These facts have created an unprecedented environment in which government supported research institutions who own their technology are under increasing pressure to collaborate with industry manufacturers in order to complete the innovation process and produce jobs.

Because the scientific journals are not the normal or most timely way of communicating new products or processes to industry or entrepreneurs, government funded research institutions are supplementing journal disclosures by creating additional hardcopy disclosures of their technology tailored to attract industry. Some, but not all such disclosures, are finding their way into some Government managed electronic databases. In the U.S., an incomplete, ill-defined database is being sold by NTIS in electronic form to on-line vendors. The evidence seems to suggest that the NTIS database does not have much credibility with industry.

In addition to the support provided to research institutions, Governments like the U.S. have recently started funding small businesses to test the feasibility of technology concepts and further develop prototypes of new products and processes that have been determined to be useful to the government and the public. Most of these small business products and processes will need the assistance of larger industry partners or venture partners to reach the marketplace. In most

pg 2, par 3:

i.e., the strong financial backing to ensure an adequate and stable institutional framework for continual growth and update of available technology information.

~~license technology~~, accumulating those technologies in a database, access to which is then sold to industry.

pg 2, par 3:

i.e., the strong financial backing to ensure an adequate and stable institutional framework for continual growth and update of available technology information.

~~license technology~~, accumulating those technologies in a database, access to which is then sold to industry.

part, the small business-awardees have been left to their own devices to find partners. However, abstracts of the 15,000 awards ~~made from the time the U.S. SBIR program started in~~ 1984 ~~to date~~ are publicly available in hardcopy, ~~and~~ have been accumulated for inclusion in our database from the ~~11~~ Federal agencies participating in the program. ~~This database discloses technology in which 11 Federal agencies have chosen to invest over $1.5 billion dollars.~~ Suprisingly, ~~the~~ database is not presently available from any on-line vendor. ~~In addition, we have accumulated the abstracts of 8000 energy-related products and processes that the National Bureau of Standards has evaluated and recommended for further funding and development to the U.S. Department of Energy from in 1976 to date. This database is also~~ not presently available ~~from any on-line~~ vendor.

part, the small business-awardees have been left to their own devices to find partners. However, abstracts of the 15,000 awards ~~made from the time the U.S. SBIR program started in~~ 1984 ~~to date~~ are publicly available in hardcopy, ~~and~~ have been accumulated for inclusion in our database from the ~~11~~ Federal agencies participating in the program. ~~This database discloses technology in which 11 Federal agencies have chosen to invest over $1.5 billion dollars.~~ Suprisingly, ~~the~~ database is not presently available from any on-line vendor. ~~In addition, we have accumulated the abstracts of 8000 energy-related products and processes that the National Bureau of Standards has evaluated and recommended for further funding and development to the U.S. Department of Energy from in 1976 to date. This database is also~~ not presently available ~~from any on-line~~ vendor.

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company but believed to have other uses. There is no known single source for hardcopy disclosures of this class of technology.

There is a rapidly growing cottage industry feeding off parts of the above described databases for the purpose of selling information services to industry. Technology sources indicate they are uneasy dealing with this group because "they have no staying power". There is clearly no single credible entity in the worldwide business of identifying the finite number of organizations attempting to license technology ~~and then selling industry access to the accumulated technology database.~~ The preliminary findings of a market study conducted on behalf of JSET is headed to a conclusion that industry would be very interested in purchasing such a database. This is not surprising since the database will create savings over ~~that~~ which they would have to incur to find the same information ~~themselves.~~

B. Identification of Sources with Licensable Technology

For a number of months we have been attempting to identify a core of licensable technology sources who are likely contributors to a database which can be demonstrated to have "staying power". It is not predictable in advance how many of those identified would cooperate with MCC if we decided to proceed. However, it is clear that many have technology managers that pursue outreach programs that include hardcopy dissemination of technology available for licensing. These existing hardcopy abstracts could clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest, i.e.,

pg 3, under universities: add:

Preliminary discussions with some of these Technology Managers make it clear that by close collaboration we can secure new potential technology disclosures for our technology database even prior to submission of the research for publication. This arrangement would maintain us at the cutting edge of technology.

pg 3 item 2 add sentence:
In addition to the above we have accumulated information on the areas of technology interest of these companies from the point of licensing in or out or both. Additional effort will be required to obtain the details of their interest for our technology database.

pg 3, under universities: add:

Preliminary discussions with some of these Technology Managers make it clear that by close collaboration we can secure new potential technology disclosures for our technology database even prior to submission of the research for publication. This arrangement would maintain us at the cutting edge of technology.

pg 3 item 2 add sentence:
In addition to the above we have accumulated information on the areas of technology interest of these companies from the point of licensing in or out or both. Additional effort will be required to obtain the details of their interest for our technology database.

.pg 3, SBIR, INSERT SENTENCE:
Further, we now have in our database the names and addresses of over 3000 small businesses that have won SBIR awards since 1984. Of these approximately 75 have been repeat winners every year on new programs, another 100 have been successful in over 50 % of the cases so that we now have a good understanding of the dynamics of the SBIR program.

performing organization ~~source~~, inventors, technical description, advantages over prior art, patent coverage, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine ~~identification~~ of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 10,000 ~~SBIR~~ abstracts of awards to small businesses to electronic form has produced near 100% accuracy and is not resource intensive.

tagging

If we proceed, it seems likely as we gain credibility that

performing organization ~~source~~, inventors, technical description, advantages over prior art, patent coverage, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine ~~identification~~ of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 10,000 ~~SBIR~~ abstracts of awards to small businesses to electronic form has produced near 100% accuracy and is not resource intensive.

tagging

If we proceed, it seems likely as we gain credibility that we could convince some technology sources to manage their technology with software being developed by T.I.C. which includes an up-load to our electronic database. This could be done immediately ~~after the software is available~~ with technology from the ten clients USET exclusively manages.

when the software is available

With the above in mind the following ~~is a list of~~ potential licensable technology sources:

1) ~~175~~ 150 U.S. Universities

listed in order of importance

~~We have identified 175 U.S. universities who each have an annual R&D budget falling between 8.8 and 440 million dollars. In addition,~~ we have identified the technology management contacts including telephone numbers and addresses at 150 ~~of~~ U.S. ~~these~~ universities. Many of the technology managers are familiar with USET personnel, which we hope will foster their cooperation. Clearly the 10 USET clients in the listing are obligated to participate. Further, in a dry run we contacted a small number of non-clients and were able to solicit abstracts of over 300 technologies. The technology managers in this group are networked through the Society of University Patent Administrators

vary with R&D budgets of $10 million dollars in excess

2) 305 U.S. and Foreign Industrial Concerns Who Have Indicated Their Desire to License Company Technology

It is very important we maintain credibility with the Society.

We have identified the technology management contact including telephone number and address at each of 305 businesses who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology conferences. This group of technology managers is networked through the Licensing Executive Society.

3) The Small Business Innovation Research Program (SBIR)

The U.S. SBIR program was created in 1982 by Public Law 97-219. The law requires that all federal agencies set aside 1 1/4% of their annual R&D budget to fund development of promising technology in the hands of small businesses. Since 1983 approximately $1.5 billion dollars has been spent on 10,000 awards. A description of each award and the technology involved is available from each funding agency. All 10,000 announced awards have been accumulated from the 11 agency contact points and are now being converted into an electronic database. Since only 1 of 5 submissions from small businesses are granted

C:\WP50\BUSPLAN:Rev6

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes identified from MCC other electronic or hardcopy databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

C:\WP50\BUSPLAN:Rev6

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes identified from MCC other electronic or hardcopy databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

1. Creation of a New Database of Licensable New Products and Processes

A. The Basic Premise for Creating the New Database.

Industry and entrepreneurs everywhere have recognized that they are in the midst of a worldwide explosion of new technology that may enure to the benefit of their competition unless they themselves can pursue its application. At the same time governments who fund research are creating new incentives to encourage exchange of scientific and technical information especially between business and government research institutions. This is being done to speed the better application of research and justify the government investment. These facts have created an unprecedented environment in which government supported research institutions who own their technology are under increasing pressure to collaborate with industry manufacturers in order to complete the innovation process and produce jobs.

Because the scientific journals are not the normal or most timely way of communicating new products or processes to industry or entrepreneurs, government funded research institutions are supplementing journal disclosures by creating additional hardcopy disclosures of their technology tailored to attract industry. Some, but not all such disclosures, are finding their way into some Government managed electronic databases. In the U.S., an incomplete, ill-defined database is being sold by NTIS in electronic form to on-line vendors. The evidence seems to suggest that the NTIS database does not have much credibility with industry.

In addition to the support provided to research institutions, Governments like the U.S. have recently started funding small businesses to test the feasibility of technology concepts and further develop prototypes of new products and processes that have been determined to be useful to the government and the public. Most of these small business products and processes will need the assistance of larger industry partners or venture partners to reach the marketplace. In most

part, the small business-awardees have been left to their own devices to find partners. However, abstracts of the 18,000 awards ~~made from the time the U.S. SBIR program started in~~ 1984 ~~to date~~ are publicly available in hardcopy ~~and~~ have been accumulated for inclusion in our database from the 11 Federal agencies participating in the program. ~~This database discloses technology in which 11 Federal agencies have chosen to invest over $1.5 billion dollars.~~ Suprisingly, the database is not presently available from any on-line vendor. ~~In addition, we have accumulated the abstracts of 8000 energy-related products and processes that the National Bureau of Standards has evaluated and recommended for further funding and development to the U.S. Department of Energy from in 1976 to date. This database is also not presently available from any on-line vendor.~~

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company but believed to have other uses. There is no known single source for hardcopy disclosures of this class of technology.

There is a rapidly growing cottage industry feeding off parts of the above described databases for the purpose of selling information services to industry. Technology sources indicate they are uneasy dealing with this group because "they have no staying power". There is clearly no single credible entity in the worldwide business of identifying the finite number of organizations attempting to license technology and then selling industry access to the accumulated technology database. The preliminary findings of a market study conducted on behalf of USET is headed to a conclusion that industry would be very interested in purchasing such a database. This is not surprising since the database will create savings over that which they would have to incur to find the same information themselves.

B. Identification of Sources with Licensable Technology

For a number of months we have been attempting to identify a core of licensable technology sources who are likely contributors to a database which can be demonstrated to have "staying power". It is not predictable in advance how many of those identified would cooperate with MCC if we decided to proceed. However, it is clear that many have technology managers that pursue outreach programs that include hardcopy dissemination of technology available for licensing. These existing hardcopy abstracts could clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest, i.e.,

performing organization ~~source~~, inventors, technical description, advantages over prior art, patent coverage, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine ~~identification~~ tagging of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 10,000 ~~SBIR~~ awards abstracts to electronic form has produced near 100% accuracy and is not resource intensive.

performing organization ~~source~~, inventors, technical description, advantages over prior art, patent coverage, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine ~~identification~~ tagging of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 10,000 ~~SBIR~~ awards abstracts to electronic form has produced near 100% accuracy and is not resource intensive.

If we proceed, it seems likely as we gain credibility that we could convince some technology sources to manage their technology with software being developed by T.I.C. which includes an up-load to our electronic database. This could be done immediately ~~after the software is available~~ when the software is available with technology from the ten clients USET exclusively manages.

With the above in mind the following ~~is a list of~~ are potential licensable technology sources:

1) ~~175~~ 150 U.S. Universities with R&D budgets of $1 million or more dollars.

~~We have identified 175 U.S. universities who each have an annual R&D budget falling between 8.8 and 440 million dollars.~~ ~~In addition,~~ We have identified the technology management contacts including telephone numbers and addresses at 150 ~~of~~ U.S. ~~these~~ universities. Many of the technology managers are familiar with USET personnel, which we hope will foster their cooperation. Clearly the 10 USET clients in the listing are obligated to participate. Further, in a dry run we contacted a small number of non-clients and were able to solicit abstracts of over 300 technologies. The technology managers in this group are networked through the Society of University Patent Administrators.

listed in order of importance:

2) 305 U.S. and Foreign Industrial Concerns Who Have Indicated Their Desire to License Company Technology

It is very important that we maintain credibility with the Society.

We have identified the technology management contact including telephone number and address at each of 305 businesses who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology conferences. This group of technology managers is networked through the Licensing Executive Society.

3) The Small Business Innovation Research Program (SBIR)

The U.S. SBIR program was created in 1982 by Public Law 97-219. The law requires that all federal agencies set aside 1 1/4% of their annual R&D budget to fund development of promising technology in the hands of small businesses. Since 1983 approximately $1.5 billion dollars has been spent on 10,000 awards. A description of each award and the technology involved is available from each funding agency. All 10,000 announced awards have been accumulated from the 11 agency contact points and are now being converted into an electronic database. Since only 1 of 8 submissions from small businesses are granted

funding, industry should be very interested in the technology that survived the government evaluation and screening process. As noted, while hardcopy is publicly available, no on-line vendor is managing the database.

4) The D.O.E. Energy Related Inventions Program

The D.O.E. program was created by statute in 1976. The law creates a funding program to develop energy related ~~inventions~~ brought to the attention of D.O.E. ~~In practice~~ the evaluation

funding, industry should be very interested in the technology that survived the government evaluation and screening process. As noted, while hardcopy is publicly available, no on-line vendor is managing the database.

4) The D.O.E. Energy Related Inventions Program

The D.O.E. program was created by statute in 1976. The law creates a funding program to develop energy related ~~inventions~~ brought to the attention of D.O.E. ~~In practice~~ the evaluation
and recommendations for funding have been assigned to the National Bureau of Standards, ~~who has evaluated and recommended funding of approximately 8,000 technologies~~ in the last 10 years. We have the hardcopy abstracts of these technologies and are proceeding to convert them into an electronic database. ~~Recent~~ legislation has expanded NBS's evaluation service to all other inventors. How this authority will be implemented remains to be seen but could result in an increase in evaluated technologies.

5) The Pergamon Journals

Editors of the Journals could as part of the review process ask authors whether the paper submitted describes any new product or process which he or his organization was interested in licensing or further developing. If so, an abstract of that paper could be created for inclusion in our database. The submitter's incentive to participate would be explained as possible royalty return or additional research funding from industry.

6) Foreign Sources of Licensable Technology with Agreements with USET

The British Technology Group--serves as the nonexclusive licensing agent for the United Kingdom's government funded research institutes.

GKSS--A German Funded environmental research institute that licenses its own technology.

INRA--A French funded agricultural research institute that licenses its own technology.

7) Foreign Sources of Licensable Technology Who Have Not Been Contacted

Licensingtorg--The designated exclusive licensing agent for all technology from USSR funded research institutes.

Invar--The designated nonexclusive licensing agent for France's government funded research institutes.

JITA--The designated exclusive licensing agent for Japan's government funded research institutes. (JITA's technology has

been disclosed to the Dvorkowitz proprietary database.)

Technical Research Centre of Finland--Licenses technology from 35 research institutes funded by the Finnish government.

AKADIMPEX--Licensing agent for Hungary's government funded research institutes.

Austrian Trade Commission--Nonexclusive licensing agent for

been disclosed to the Dvorkowitz proprietary database.)

Technical Research Centre of Finland--Licenses technology from 35 research institutes funded by the Finnish government.

AKADIMPEX--Licensing agent for Hungary's government funded research institutes.

Austrian Trade Commission--Nonexclusive licensing agent for Austrian businesses.

Canadian Patents and Developments Ltd.--Exclusive licensing agent for Canadian research institutes and some Canadian universities.

Israeli Industry Center for R&D (MATIMOP)--Nonexclusive licensing agent for Israeli businesses.

Italian Trade Commission--Nonexclusive licensing agent for Italian businesses.

Swedish National Board for Technical Development--Swedish licensing agent--claims to cover all sources of technology in Sweden.

8) Existing Electronic Databases Disclosing Technology

Before listing the possibilities of using existing databases, it is important to discuss the problems they entail. First, with one exception, none of the accessible databases are limited to licensable technology. Further, none appear to be limited to new products and processes. They all appear to commingle scientific and technology results which are not limited to new products and processes. These problems plus the fact that they ~~are~~ generally not user friendly, makes existing databases difficult to deal with.

Need software used to search ~~[illegible]~~

However, to the extent that the information on such an electronic database can be obtained on a media that can be leased and moved to a MCC site with no copyright or other conditions attached, disclosures of licensable new products and processes can be screened out, reformatted and used in our database. This can be efficiently handled by the sorting software being developed at T.I.C.

The following NTIS databases meet this access test and are being acquired to screen for licensable technology and reformatting:

Federal Research In Progress Database--Summaries of U.S. government ~~funded~~ research and engineering projects currently ~~underway at~~ 10 Federal agencies (70 K records). Project description includes title, starting date, investigator, performing and sponsoring organization and detailed abstract.

funded by

primarily at universities

Federal Applied Technology Database--Contains abstracts of selected processes, instruments, materials, equipment, software, and techniques generated by federal laboratories (14 K records).

Bibliographic Database--Contains the abstracts from all technical reports announced by NTIS both foreign and domestic (1.5 million records).

We have not explored in detail the possibility of extracting

Federal Applied Technology Database--Contains abstracts of selected processes, instruments, materials, equipment, software, and techniques generated by federal laboratories (14 K records).

Bibliographic Database--Contains the abstracts from all technical reports announced by NTIS both foreign and domestic (1.5 million records).

We have not explored in detail the possibility of extracting and reformatting licensable technology from Orbit/BRS electronic databases such as ~~Rapra~~ RAPRA and Aqualine because Orbit/BRS are vendors selling access on conditions imposed by the database creator.

9) Biomedical Business International (BBI) (Macmillan)

BBI solicits abstracts of new medical products and processes for disclosure in their newsletters. We do not know the extent to which they have gained the cooperation of relevant technology sources but ~~we believe it to be minor~~. Indeed, they solicit abstracts from USET periodically without much success.

10) U.S. Government Laboratories

In 1986, federal laboratories were given the authority for the first time to license their technology. These laboratories are actively creating the infrastructure to proceed and a few have appointed technology managers who function much like university technology managers. Over a period of time this area will be extremely fertile grounds for technology disclosure, aimed at industry but presently is in a state of flux.

~~Last, USET recently signed the Smithsonian Institution as an exclusive client.~~

While the above list of technology sources is not complete, it does suggest that the critical mass for a licensable technology database could be reached rapidly.

C. Competitors

All private businesses offering services based on an accumulation of licensable technology do so as follows:

1) Solicit abstracts of current technology on a specified format;

2) Create a searchable proprietary database, and

3) Sell hardcopy access to only technology areas that subscribers have indicated an interest in.

Another characteristic that is not entirely common to the

companies reviewed is a conference capability. Conferences are structured around sources of technology interested in licensing and those looking for new technology. Both the technology sources and the lookers pay to attend. Not only does the conference supplement income, it also builds the business's database.

The following are companies generally following the approach described above:

companies reviewed is a conference capability. Conferences are structured around sources of technology interested in licensing and those looking for new technology. Both the technology sources and the lookers pay to attend. Not only does the conference supplement income, it also builds the business's database.

The following are companies generally following the approach described above:

Regis McKenna, Inc., Palo Alto, CA
Technology Catalysts, Washington DC
NERAC, Tolland, CN
Lloyd Patterson, International, Ormond Beach, FL
Dr. Dvorkowitz & Associates, Ormond Beach, FL
Technology Insights, Englewood, NJ
TECHSTART International, New York, NY
(alliance partner Arthur Anderson Company)
BBI (Macmillan), Tustin, CA

Each company has some characteristics that distinguish them from the others.

Technology Insights and BBI disclose their technology by newsletter. BBI limits itself to the Life Sciences and also has a conference capability.

Technology Catalysts claim that its database has much technology from small businesses and also has a conference capability. Technology Insights puts great emphasis on reviewing the patent Office's weekly Gazette for new patents with high technology potential.

Lloyd Patterson has only twenty one clients which he services on a very personal basis including small conferences. ~~Subscriptions are $30K per client annually.~~

NERAC searches not only its own database, but other on-line databases to address specific technology problems. Most of NERAC emphasis is "batch" searching to solve technology problems. Subscriptions are $6K annually.

Dr. Dvorkowitz is franchising his database overseas and solicits a great deal of foreign technology. Dr. Dvorkowitz, who is 72 years old, recently sold his conference capability. Subscriptions are $10K annually.

While, in theory, all the companies have access to all technology sources, it does not appear that any one company has attempted to pursue all sources. There appears to be little evidence that the federal laboratories are being tapped to any great extent. NERAC, Patterson, and Technology Catalysts appear uninterested in universities. There is a surprising amount of technology available from industry sources.

With the possible exception of Technology Catalysts, there is no evidence that these companies have tapped the SBIR abstracts.

As best as could be determined, all the companies are running in the black. While this is in no means an exhaustive study of the companies reviewed, it will assist in designing any service we intend to provide around a technology database.

With the possible exception of Technology Catalysts, there is no evidence that these companies have tapped the SBIR abstracts.

As best as could be determined, all the companies are running in the black. While this is in no means an exhaustive study of the companies reviewed, it will assist in designing any service we intend to provide around a technology database.

Dvorkowitz Associates and Lloyd Patterson, International are interested in being acquired. Each claims to have a database with over 20,000 technologies. ~~Of greater interest is their contacts to technology sources~~. NERAC and Technology Catalysts appear to be the more aggressive competitors. Their interest in being acquired is unknown.

Not much is known about Regis McKenna, though all their activity seems focused on the electronic industry. ~~They claim an extensive proprietary database in that area. Subscriptions to reports on technology alliances in the semiconductor industry are $1K.~~

D. Value-Added to Planned USET Licensable Technology Database

1. Better access to a greater number of technology sources (i.e., Pergamon Journals, universities, foreign licensing agents, government laboratories, etc.).

2. More efficient creation and, therefore, a larger electronic database from hardcopy through use of new optical scanning technology.

3. Inclusion of SBIR database.

4. Inclusion of energy-related invention database.

5. Availability of technology management and up-load software as incentive for technology source cooperation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

7. Screening and reformatting of existing electronic databases for licensable technology made more efficient by T.I.C. sorting software.

If MCC proceeds with the licensable technology database gathered from the technology sources identified, we believe that the following factors will make it superior to that in the hands of competitors:

C:\WP50\BUSPLAN:Rev5

USET BUSINESS PLAN

C:\WP50\BUSPLAN:Rev5

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes identified from MCC other electronic or hardcopy databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

1. Creation of a New Database of Licensable New Products and Processes

A. The Basic Premise for Creating the New Database.

Industry and entrepreneurs everywhere have recognized that they are in the midst of a worldwide explosion of new technology that may enure to the benefit of their competition unless they themselves can pursue its application. At the same time governments who fund research are creating new incentives to

and processes will need the assistance of larger industry partners or venture partners to reach the marketplace. In most part, the small business-awardees have been left to their own devices to find partners. However, abstracts of the 10,000 awards made from the time the U.S. SBIR program started in 1984

and processes will need the assistance of larger industry partners or venture partners to reach the marketplace. In most part, the small business-awardees have been left to their own devices to find partners. However, abstracts of the 10,000 awards made from the time the U.S. SBIR program started in 1984 to date are publicly available in hardcopy and have been accumulated for inclusion in our database from the 11 Federal agencies participating in the program. This database discloses technology in which 11 Federal agencies have chosen to invest over $1.5 billion dollars. ~~Incredibly~~ Surprisingly the database is not presently available from any on-line vendor. In addition, we have accumulated the abstracts of 8000 energy-related products and processes that the National bureau of Standards has evaluated and recommended for further funding and development to the U.S. Department of Energy from ~~inception of the program in~~ 1976 to date. This database is also not presently available from any on-line vendor.

Finally, there is a growing number of large industrial firms that have begun licensing technology that they perceive to be in excess of their needs. For instance, some of this technology is valuable industrial processes being used by the creating company but believed to have other uses. There is no known single source for hardcopy disclosures of this class of technology.

There is a rapidly growing cottage industry feeding off parts of the above described database for the purpose of selling

information services to industry. Technology sources indicate they are uneasy dealing with this group because "they have no staying power". There is clearly no single credible entity in the worldwide business of identifying the finite number of organizations attempting to license technology and then selling

information services to industry. Technology sources indicate they are uneasy dealing with this group because "they have no staying power". There is clearly no single credible entity in the worldwide business of identifying the finite number of organizations attempting to license technology and then selling industry access to the accumulated technology database. The preliminary findings of a market study conducted on behalf of USET is headed to a conclusion that industry would be very interested in purchasing such a database. This is not surprising since the database will create savings over that which they would have to incur to find the same information themselves.

B. Identification of Sources with Licensable Technology

For a number of months we have been attempting to identify a core of licensable technology sources who are likely contributors to a database which can be demonstrated to have "staying power". It is not predictable in advance how many of those identified would cooperate with MCC if we decided to proceed. However, it is clear that many have technology managers that pursue outreach programs that ~~at least~~ include hardcopy dissemination of technology available for licensing. These existing hardcopy abstracts could clearly serve as the initial critical mass to support the marketing of a licensable technology database. However, future additions would necessarily proceed more slowly much like the addition of new journals to Pergamon Press.

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest, i.e., source, inventors, technical description, advantages over prior art, patent coverage, etc. Given staff that can accurately

Since these disclosures are emanating from different sources there is no uniform format. However, our review indicates that virtually all disclosures cover common fields of interest, i.e., source, inventors, technical description, advantages over prior art, patent coverage, etc. Given staff that can accurately identify these fields, new optical scanning technology which permit machine identification of fields can create an electronic database with a uniform format. Our experiments with this scanning technology while converting the 10,000 SBIR abstracts to electronic form has produced near 100% accuracy and is not resource intensive.

If we proceed, it seems likely as we gain credibility that we could convince some technology sources to manage their technology with software being developed by T.I.C. which includes an up-load to our electronic database. This could be done immediately after [redacted] the software is available with technology from the ten clients USET exclusively manages.

With the above in mind the following is a list of potential licensable technology sources:

1) <u>175 U.S. Universities</u>

We have identified 175 U.S. universities who each have an annual R&D budget falling between 8.8 and 440 million dollars. In addition, we have identified the technology management contacts including telephone numbers and

addresses at 150 of these universities. Many of the technology managers are familiar with USET personnel, which we hope will foster their cooperation. Clearly the 10 USET clients in the listing are obligated to participate. Further, in a dry run we contacted a small number of non-

addresses at 150 of these universities. Many of the technology managers are familiar with USET personnel, which we hope will foster their cooperation. Clearly the 10 USET clients in the listing are obligated to participate. Further, in a dry run we contacted a small number of non-clients and were able to solicit abstracts of over 300 technologies.

b) 305 U.S. and Foreign Industrial Concerns Who Have Indicated Their Desire to License Company Technology

We have identified the technology management contact including telephone number and address at each of 305 businesses who have announced their interest in licensing their excess technology in Licensing Executive Society publications. In a dry run we accumulated a number of abstracts from technology conferences.

c) Foreign Sources of Licensable Technology with Agreement with USET

The British Technology Group--serves as the nonexclusive licensing agent for the United Kingdom's government funded research institutes.

GKSS--A German Funded environmental research institute that licenses its own technology.

INRA--A French funded agricultural research institute that licenses its own technology.

GKSS--A German Funded environmental research institute that licenses its own technology.

INRA--A French funded agricultural research institute that licenses its own technology.

A) Foreign Sources of Licensable Technology Who Have Not Been Contacted

Licensingtorg--The designated exclusive licensing agent for all technology from USSR funded research institutes.

Invar--The designated nonexclusive licensing agent for France's government funded research institutes.

JITA--The designated exclusive licensing agent for Japan's government funded research institutes. (JITA's technology has been disclosed to the Dvorkowitz proprietary database.)

Technical Research Centre of Finland--Licenses technology from 35 research institutes funded by the Finnish government.

AKADIMPEX--Licensing agent for Hungary's government funded research institutes.

Austrian Trade Commission--Nonexclusive licensing agent for Austrian businesses.

Canadian Patents and Developments Ltd.--Exclusive

Austrian Trade Commission--Nonexclusive licensing agent for Austrian businesses.

Canadian Patents and Developments Ltd.--Exclusive licensing agent for Canadian research institutes and some Canadian universities.

Israeli Industry Center for R&D (MATIMOP)--Nonexclusive licensing agent for Israeli businesses.

Italian Trade Commission--Nonexclusive licensing agent for Italian businesses.

Swedish National board for Technical Development--Swedish licensing agent--claims to cover all sources of technology in Sweden.

3) The Small Business Innovation Research Program (SBIR)-- The U.S. SBIR program was created in 1982 by Public Law 97-219. The law requires that all federal agencies set aside 1 1/4% of their annual R&D budget to fund development of promising technology in the hands of small businesses. Since 1983 approximately $1.5 billion dollars has been spent on 10,000 awards. A description of each award and the technology involved is

available from each funding agency. All 10,000 announced awards have been accumulated from the 11 agency contact points and are now being converted into an electronic database. Since only 1 of 8 submissions from small businesses are granted

available from each funding agency. All 10,000 announced awards have been accumulated from the 11 agency contact points and are now being converted into an electronic database. Since only 1 of 8 submissions from small businesses are granted funding, industry should be very interested in the technology that survived the government evaluation and screening process. As noted, while hardcopy is publicly available, no on-line vendor is managing the database.

4) The D.O.E Energy Related Inventions Program

The D.O.E. program was created by statute in 1976. The law creates a funding program to develop energy related inventions brought to the attention of D.O.E. In practice the evaluation and recommendations for funding have been assigned to the National Bureau of Standards who has evaluated and recommended funding of approximately 8,000 technologies in the last 10 years. We have the hardcopy abstracts of these technologies and are proceeding to convert them into an electronic database. Recent legislation has expanded NBS's evaluation service to all other inventors. How this authority will be implemented remains to be seen but could result in an increase in evaluated technologies.

8) Existing Electronic Databases Disclosing Technology

Before listing the possibilities of using existing databases, it is important to discuss the problems they entail. First, with one exception, none of the

8) Existing Electronic Databases Disclosing Technology

Before listing the possibilities of using existing databases, it is important to discuss the problems they entail. First, with one exception, none of the accessible databases are limited to licensable technology. Further, none appear to be limited to new products and processes. They all appear to commingle scientific and technology results which are not limited to new products and processes. these problems plus the fact that they are generally not user friendly, makes existing databases difficult to deal with.

However, to the extent that the information on such an electronic database can be obtained on a media that can be leased and moved to a MCC site with no copyright or other conditions attached, disclosures of licensable new products and processes can be screened out, reformatted and used in our database. This can be ~~more~~ efficiently ~~is enabled~~ handled by the sorting software being developed at T.I.C.

The following NTIS databases meet this access test and are being acquired to screen for licensable technology and reformatting:

Federal Research In Progress Database--Summaries of

U.S. government funded research and engineering projects currently underway at 10 Federal agencies. (70 K records) Project description includes title, starting date, investigator, performing and sponsoring organization and detailed abstract.

U.S. government funded research and engineering projects currently underway at 10 Federal agencies. (70 K records) Project description includes title, starting date, investigator, performing and sponsoring organization and detailed abstract.

Federal Applied Technology Database--Contains abstracts of selected processes, instruments, materials, equipment, software, and techniques generated by federal laboratories (14 K records).

Bibliographic Database--Contains the abstracts from all technical reports announced by NTIS both foreign and domestic (1.5 million records).

We have not explored in detail the possibility of extracting and reformatting licensable technology from Orbit/BRS electronic databases such as Rupra and AQualine because Orbit/BRS are vendors selling ~~entire~~ access on conditions imposed by the database creator ~~(i.e., Rupra and Aqualine)~~.

9) Biomedical Business International (BBI) (Macmillan)

BBI solicits abstracts of new medical products and processes for disclosure in their newsletters. We do not know the extent to which they have gained the cooperation of relevant technology sources but we

believe it to be minor. Indeed, they solicit abstracts from USET periodically without much success.

5) The Pergamon Journals

editors

believe it to be minor. Indeed, they solicit abstracts from USET periodically without much success.

5) The Pergamon Journals

editors

~~Editions~~ of the Journals could as part of the review process ask authors whether the paper submitted described any new product or process which he or his organization was interested in licensing or further developing. If so, an abstract of that paper could be created for inclusion in our database. The submitter's incentive to participate would be explained as possible royalty return or additional research funding from industry.

10) U.S. Government Laboratories

In 1986, federal laboratories were given the authority for the first time to license their technology. These laboratories are actively creating the infrastructure to proceed and a few have appointed technology managers who function much like university technology managers. Over a period of time this area will be extremely fertile grounds for technology disclosure, aimed at industry. We already know ~~that the Department of _____ has~~ entered into _____ agreements.

Last, USET recently signed the Smithsonian Institution as an exclusive client.

While the above list of technology sources is ~~far from~~ not complete, it does suggest that the ~~optical~~ critical mass for a licensable

Last, USET recently signed the Smithsonian Institution as an exclusive client.

While the above list of technology sources is ~~far from~~ not complete, it does suggest that the ~~optical~~ critical mass for a licensable technology database could be reached rapidly.

C. Competitors

All private businesses offering services based on an accumulation of licensable technology do so as follows:

1) Solicit abstracts of current technology on a specified format;

2) Create a searchable proprietary database, and

3) Sell hardcopy access to only technology areas that subscribers have indicated an interest in.

Another characteristic that is not entirely common to the companies reviewed is a conference capability. Conferences are structured around sources of technology interested in licensing and those looking for new technology. Both the technology sources and the lookers pay to attend. Not only does the conference supplement income, it also builds the business's

database.

The following are companies generally following the approach described above:

database.

The following are companies generally following the approach described above:

Regis McKenna, Inc. (~~Center for Technology Licensing~~, Palo Alto, CA)

Technology Catalysts, Washington DC

NERAC, Tolland, CN

Lloyd Patterson, International, Ormond Beach, FL

Dr. Dvorkowitz & Associates, Ormond Beach, FL

Technology Insights, Englewood, NJ

TECHSTART International, New York, NY (alliance partner Arthur Anderson Company)

BBI (Macmillan), Tustin, CA

Each company has some characteristics that distinguish them from the others.

Technology Insights and BBI disclose their technology by newsletter. BBI limits itself to the Life Sciences and also has a conference capability.

Technology Catalysts claim that its database has much technology from small businesses and also has a conference capability. Technology Insights puts great emphasis on reviewing the patent Office's weekly Gazette for new patents with high technology potential.

Lloyd Patterson has only twenty one clients which he services on a very personal basis including small conferences. Subscriptions are $30K per client annually.

Lloyd Patterson has only twenty one clients which he services on a very personal basis including small conferences. Subscriptions are $30K per client annually.

NERAC searches not only its own database, but other on-line databases to address specific technology problems. Most of NERAC emphasis is "batch" searching to solve technology problems. Subscriptions are $6K.

Dr. Dvorkowitz is franchising his database overseas and solicits a great deal of foreign technology. Dr. Dvorkowitz, who is 72 years old, recently sold his conference capability. Subscriptions are $10K.

While, in theory, all the companies have access to all technology sources, it does not appear that any one company has attempted to pursue all sources. Their appears to be little evidence that the federal laboratories are being tapped to any great extent. NERAC, Patterson, and Technology Catalysts appear uninterested in universities. Their is a surprising amount of technology available from industry sources.

With the possible exception of Technology Catalysts, there is no evidence that these companies have tapped the SBIR abstracts.

As best as could be determined, all the companies are running in

the black. While this is in no means an exhaustive study of the companies reviewed, it will assist in designing any service we intend to provide around a technology database.

Dvorkowitz Associates and Lloyd Patterson, International are

the black. While this is in no means an exhaustive study of the companies reviewed, it will assist in designing any service we intend to provide around a technology database.

Dvorkowitz Associates and Lloyd Patterson, International are interested in being acquired. Each claims to have a database with over 70,000 technologies. Of greater interest is their contacts to technology sources. NERAC and Technology Catalysts appear to be the more aggressive competitors. Their interest in being acquired is unknown.

Not much is known about Regis McKenna, though all their activity seems focused on the electronic industry. This claims an extensive proprietary database in that area. Subscriptions to reports on technology alliances in the semiconductor industry are $7K.

D. Value-Added to Planned USET Licensable Technology Database

1. Better access to a greater number of technology sources (i.e., Pergamon Journals, Universities, Foreign licensing agents, Government laboratories, etc.)

2. More efficient creation and therefore, a larger electronic database from hardcopy through use of new optical scanning technology.

3. Inclusion of SBIR database.

4. Inclusion of energy-related invention database.

3. Inclusion of SBIR database.

4. Inclusion of energy-related invention database.

5. Availability of technology management and up-load software as incentive for technology source corporation.

6. Superior database sorting and retrieval software to more efficiently serve subscribers.

7. Screening and reformatting of existing electronic databases for licensable technology made more efficient by T.I.C. sorting software.

MASTER copy

C:\WP50\BUSPLAN:Rev4

USET BUSINESS PLAN

MASTER copy

C:\WP50\BUSPLAN:Rev4

USET BUSINESS PLAN

This is in response to your request for a "plan" to:

1) Create a database of licensable new products and processes identified from MCC other electronic or hardcopy databases, and

2) Improve the P&L of the USET license brokerage business including the possibility of a joint venture with another organization.

1. Creation of a New Database of Licensable New Products and Processes

A. The Basic Premise for Creating the New Database.

Industry and entrepreneurs everywhere have recognized ~~or are beginning to recognize~~ that they are in the midst of a worldwide explosion of new technology that may enure to the benefit of their competition unless they themselves can pursue its application. At the same time governments who fund research are encouraging exchange of scientific and

creating new incentives to

inclusion in our database. participating in the program. This database is not presently available from any on-line vendor.

technical information especially between business and government research institutions. This is being done to speed the better application of research and ~~better~~ justify the government investment. These ~~discernible~~ facts have created an unprecedented environment in which government supported

(2)

technical information especially between business and government research institutions. This is being done to speed the better application of research and ~~better~~ justify the government investment. These ~~discernible~~ facts have created an unprecedented environment in which government supported research institutions who own their technology are under increasing pressure ~~locking~~ ~~for increased~~ to collaborate with industry manufacturers in order to complete the innovation process and produce jobs.

Because the scientific journals are not the normal or most timely way of communicating new products or processes to industry or entrepreneurs, institutions are government funded research ~~bypassing~~ ~~slowly~~ supplementing additional hardcopy disclosures of their technology to attract industry. Some, ~~and by no means~~ but not all such disclosures, are ~~slowly~~ by finding their way into some Government managed electronic databases. ~~But often so.~~ In the U.S., ~~the NTIS database is~~ ~~slowly~~ ~~available~~ to on-line vendors. The evidence seems to suggest that the NTIS database does not have much credibility with industry. An incomplete an ill-defined database is being sold by NTIS in electronic form

In addition to the support provided to research institutions, Governments like the U.S. have recently started funding small businesses to test the feasibility of technology concepts and further develop prototypes of new products and processes that have been determined to be useful to the government and the public. Most of these small business products and processes will need the assistance of an industry partner or venture partners to reach the marketplace. In most part, the small business-awardees have been left to their own devices to find partners. However, abstracts of ~~all~~ the 10,000 awards made from the time the U.S SBIR program started in 1984 to date