MEMORANDUM **April 13, 1988**

MEMO NO. NL025IM

TO: Carl Wootten / Sid Alpert

FROM: Norman Latker NL

SUBJECT: Mouse Patent - The Washington Post and New York Times, April 13, 1988

These two news articles report on a new area of protection that is particularly relevant to university research. I would suggest that you make the articles available to your staff (including Technical Liaison Officers) with a suggestion that they alert investigators in this area of research of the new opportunities that arise from the Patent Office decision.

cc: Lowell Harmison

NL/im

THE NEW YORK TIMES - APRIL 13, 1988

Mouse Patent Is Issued to Harvard, World's First for Higher Life Form

By KEITH SCHNEIDER
Special to The New York Times

WASHINGTON, April 13 — Calling it a "singularly historic event," the United States today issued to Harvard University the world's first patent for a higher form of life, a mouse created by researchers at the Harvard Medical School through techniques of genetic manipulation.

The United States Patent and Trademark Office issued patent No. 4,736,866 for "transgenic nonhuman mammals" developed by Dr. Philip Leder, a 53-year-old geneticist at Harvard Medical College in Boston, and Dr. Timothy A. Stewart, 35, a former Harvard researcher who is a senior scientist at Genentech Inc., a leading biotechnology company in south San Francisco.

The two scientists isolated a gene that causes cancer in many mammals, including humans, injected it into fertilized mouse eggs and developed a new breed of genetically altered mice. Because half the females develop cancer, the altered breed serves as a more effective model for studying how genes contribute to the development of cancer, particularly breast cancer, said Dr. Leder.

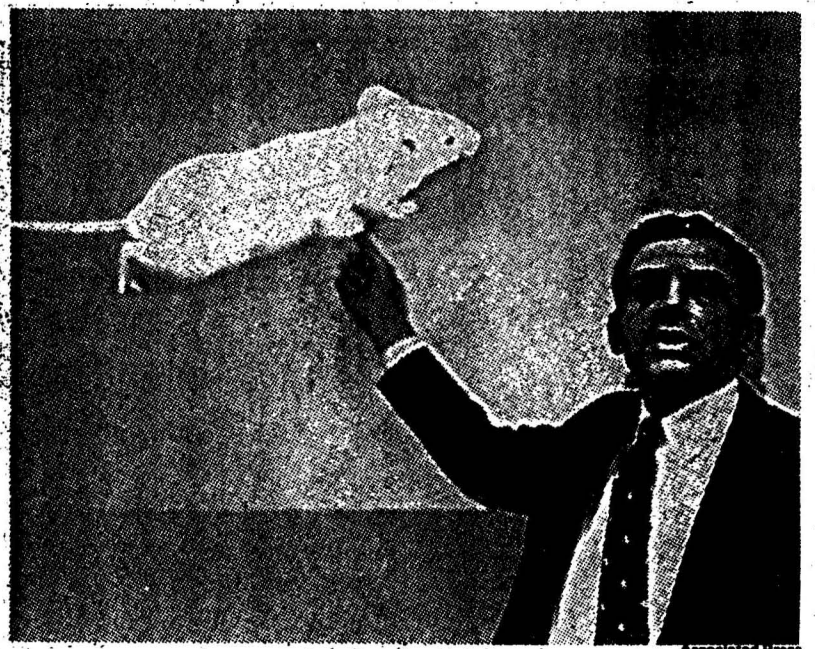
Range of Benefits Seen

Other experts said the invention presented scientists with a more efficient biological system for testing new drugs and therapies to treat cancer, and for determining whether chemicals and other toxic substances found in food or the environment are harmful.

The announcement elated researchers and biotechnology industry executives who said it would attract more investments for research and lead to safer and more effective biological inventions medicine, agriculture, forestry and other industries. But critics, including several powerful members of Congress, protested the decision, arguing that a handful of officials appointed by the Reagan Administration had in a single act determined a new and important public policy in defiance of a request from Congress to delay the action and without a public debate.

Donald J. Quigg, the Assistant Secre-

Continued on Page A22, Column 5



Associated Press

Dr. Philip Leder, a geneticist at Harvard Medical School in Boston, with a photograph of a genetically engineered mouse in 1986.

Mouse Patent Is Issued to Harvard, World's First for Higher Life Form

Continued From Page A1

tary of Commerce, who is also Commissioner of Patents, said the approval of the first animal patent was a logical and lawful extension of previous decisions by the 198-year-old agency. In 1930 the first patent for a crop plant was approved. In 1980 the Supreme Court ruled that scientists could patent genetically altered microorganisms. A year ago the Patent Office announced that it would allow inventors to patent new forms of animal life created by gene-splicing and other biological technologies.

Would Speed Cancer Research

Mr. Quigg said the potential of the altered mice to hasten the development of treatments for cancer was an important factor in granting Harvard the first animal patent, which allows the inventor the exclusive right to use a product for 17 years. "I know I'm not supposed to get on a soapbox," he said in an interview today, "but how can anybody say this kind of development is unethical or wrong?"

But some members of Congress protested, and in a letter to be sent later this week after more signatures are sought called on the Patent and Trademark Office to refrain from issuing another animal patent. The Patent Office said 21 patent applications for genetically engineered animals are pending.

Both the House and Senate are considering legislation that would impose a moratorium on approving patents for genetically altered animals. The moratorium would be in force until Congress has more thoroughly considered a range of economic and moral issues raised in the last year by farm groups, religious leaders, animal welfare organizations and environmental groups.

"The Patent Office has been given no clear and certain signal from Congress that the unrestricted patenting of animals is acceptable public policy," said the letter, which was signed by Representative Charlie Rose, Democrat of North Carolina, sponsor of the proposal in the House, and more than 20 other members of Congress.

Quickening Pace in Field

The Patent Office decision recognizes the quickening pace of developments in biotechnology, particularly in creating and duplicating new forms of animals. Along with genetically engineered pigs, cattle and sheep that have been produced in laboratories across the country, scientists are also beginning to transform aquatic species.

The genetically altered mice produced at Harvard carry multiple copies of a single cancer-causing gene, C-Myc, that is ubiquitous in mammals. Dr. Leder and Dr. Stewart isolated the gene from mice, and altered its function by tampering with the portions of the chromosome that surround the gene and regulate its behavior.

The result was that they engineered C-Myc to express itself in the mammary tissue of female mice to cause breast cancer. Half of the females in the gene-altered breed develop breast cancer within 10 months of their birth, said Dr. Leder.

Dr. Leder said the development of the patented mouse started in 1982 and application for a patent was made in 1984. "I'm involved in trying to understand and to do something about a terrible problem, namely cancer," said Dr. Leder.

THE WASHINGTON POST - APRIL 13, 1988

Mouse Patent May Bolster Research Efforts

New Genetic Techniques Could Reduce Drug Costs

By Malcolm Gladwell
Washington Post Staff Writer

The patent awarded yesterday to Harvard University for a genetically engineered mouse—the first patent ever for an animal—could open up a large new market for genetically altered animals used in drug research and development.

Officials at the Patent Office are considering patent applications for 21 genetically altered animals. Some—like the Harvard mouse, genetically altered to provide a more effective model for research into breast cancer—cover improved versions of laboratory animals. Other pending patent applications concern revolutionary techniques to allow for the use of animals in the production of pharmaceuticals.

Industry experts said that with the guarantee of patent protection for the fruits of research and development, the number of companies doing research—and the amount of money spent on it—could skyrocket in the next few years. The result could be dramatically lower costs for producing drugs.

"Patent protection is the lifeblood of the pharmaceutical and biotechnology industries," said Steven Holtzman, chief operating officer of the Ohio-based Embryogen Corp., one of a handful of companies nationwide that have been developing genetically altered animals for laboratory and commercial use. "This means that we finally have the same protection as everyone else."

"The stakes have now been raised," said Don Hudson, president of the Worcester, Mass.-based Transgenic Sciences Inc. "This patent decision gives everyone much more incentive to enter this field."

The Harvard patent covers any mammal that contains a piece of DNA that normally

See MOUSE, F2, Col. 3

Patent May Bolster Research

MOUSE, From F1

occurs in humans and that results in breast cancer. (DNA, or deoxyribonucleic acid, is a basic material in the chromosomes of the cell nucleus and is a vital component of all living matter.) Researchers at the Harvard Medical School's department of genetics have developed techniques to insert these cancerous genes into mice embryos, enabling a female mouse to develop what essentially is human breast cancer.

An animal with cancer genes would allow for more sophisticated and effective testing of carcinogens and potential drug therapies, permitting scientists to study breast cancer in a living system and test drugs without involving human patients.

Officials of Du Pont Co., the Delaware-based chemical company that owns the rights to the Harvard mouse, said that although they had no plans to get into the mouse breeding business, they would entertain offers from other firms wishing to breed and sell the mice to commercial laboratories. The mice now are only available free to government and university researchers in the cancer field.

Industry sources said that a number of the other pending animal patent applications could have enormous commercial potential, particularly in the area of using animals to produce commercially valuable proteins and industrial enzymes.

For example, Integrated Genetics Inc. of Framingham, Mass., in combination with researchers at the National Institutes of Health, has filed for a patent for a female mouse that has been altered to secrete the human protein TPA, which has enormous commercial value as a drug used in the treatment of heart attacks.

The company hopes that by applying the same techniques to goats, sheep or cows, they could produce a cost-effective manufacturing alternative for a drug that now costs $2,200 a dose—largely because of the high cost of conventional protein manufacturing techniques.

"The potential is here to lower the cost of producing TPA 100 times," Hudson said. "Right now it's being produced in a $50 million plant the size of football field. You could produce the same amount in 100 farm animals."

Hudson's firm, Transgenic Sciences, is working on inserting commercially valuable human genes into the reproductive organs of chickens so that they could be harvested cheaply and easily from eggs.

Before the Patent Office's announcement, questions had been raised about the commercial future of the animal biotechnology industry because of a movement in Congress and among environmental groups for a moratorium on the granting of animal patents. Richard Godown, president of the Industrial Biotechnology Association, said that such a moratorium could have had the effect of driving firms overseas.

Dr. Robert Bender, Director
Associate Vice President for
Academic Affairs
University of Illinois
363 Administration Building
506 E. Wright Street
Urbana, IL 61801

April 11, 1988

Dear Dr. Bender:

I am able to present the proposal that Sid Alpert mentioned during our recent meeting, as we have now concluded our negotiation with University Patents. We have executed a letter of intent which will lead to a final agreement by April 30, 1988. Accordingly, this letter represents our formal proposal to the University of Illinois setting forth the terms and conditions under which we propose to act as your agent to provide technology management services.

We propose an arrangement along the lines of the previous University of Illinois - University Patents, Inc. Servicing Agreement, but with additional, and we believe very valuable, services.

In exchange for a first refusal right to obtain the exclusive authority to license on behalf of UI, the rights UI may acquire in inventions arising from research at the UI/UC campus, we will provide the UI/UC campus with the following services:

(i) A professional technology transfer individual, at our expense, to be located on the UI/UC campus with UI/UC paying office expenses. This individual's responsibilities will include providing patent related educational services for campus Investigators, interviewing Investigators to search out new inventions and help prepare invention disclosures; providing liaison for our headquarters' personnel making on-campus visits for Investigator interviews and licensing efforts; helping Investigators work with our electronic data base system (described below); and, generally being available to respond to technology transfer and research proposal inquiries from campus Investigators and Administrators.

(ii) Access to our electronic data base system. As described at our recent meeting, this system will enable us to widen the scope of our licensing activities on your behalf.

Further, on a purely voluntary basis, the system will enable your Investigators to solicit research funding from industry and have access to additional, non-traditional funding sources. In addition, and again on a voluntary basis, we plan to promote the licensing of software and biologic and engineering materials, such as monoclonal antibodies, through the data base system. This service will be available at no cost to UI other than our normal 40% share of royalty income from licensed technologies, together with a 15% share of overhead obtained from research grants generated through the system, in order to help defray system costs.

(iii) We shall bear the expense of filing patent applications throughout the world for elected inventions, prosecuting the patent applications and maintaining patents issuing therefrom. In addition, we shall bear the costs of licensing and other services, except as noted above and except that foreign filing, prosecution and maintenance costs will be deductible from royalties or other income derived from elected inventions.

(iv) As to timing, we propose a six-months evaluation period from our receipt of a complete disclosure, at which time we will notify UI of election or non-election, or request an extension which UI may, in its sole discretion, grant or refuse. Our election will require us to file a patent application for the elected invention. As to incomplete disclosures, we suggest that this be handled as set forth in Section 2.6 (a) of the UI/UPI Agreement.

(v) With respect to inventions subjected to our agreement, we propose a 40/60 division of royalty income, paying over to UI 60%. In addition, we will pay directly to your employee inventors the sum of $250 at the time a United States patent application is filed. We will distribute income to UI on a quarterly basis.

(vi) We propose an initial term of this agreement of three years, subject to automatic one-year rollovers, or renegotiation at the end of such initial term.

With respect to the UI/Chicago campus, we propose either of the following:

(i) The same arrangement as for the UI/UC campus except that the technology transfer professional will be allocated to the UIC campus in the same portion as the UIC research budget is to the UI/UC research budget, or alternatively.

(ii) A nonexclusive arrangement for the same term as noted above. This will permit, but not require, the submission of disclosures to us from UIC inventors. Upon such disclosure, the foregoing terms (as well as others to be set forth in a final agreement), will become effective. We will not supply on-campus technology transfer activities, except as may be incidental to licensing inventions that are subject to our agreement.

(iii) Electronic data base services will be available to UIC under either alternative under the terms noted above.

We trust that the foregoing summary of terms and conditions will provide your Intellectual Property Committee with sufficient details upon which to act. Obviously, if additional information is required, we will supply it immediately. Also, as noted above, the "boiler plate" provisions will be basically those as set forth in the existing UI/UPI Servicing Agreement. Incidentally, we will operate the group of employees that handle UI work as a subsidiary company under the designation "UPI", and have obtained from University Patents, Inc. the right to its full name upon its shareholders' approval. We plan to use the same personnel as University Patents, Inc. now employs, supplemented as we discussed at our recent meeting, by additional personnel in a variety of fields. Of course, as the need arises, other USET employees with appropriate backgrounds may be employed to facilitate handling UI inventions in the most expeditious way.

If you have any questions or comments regarding the foregoing, I invite your direct inquiry to me. If you would like to have a proposed agreement for consideration now, we will be pleased to provide same. I look forward to our continuing relationships with your committee, the Intellectual Property Committee, and the University of Illinois at large.

Sincerely,

Norman J. Latker, Esq.
Vice President for
Legal and Technology Affairs

NL024IM

MEMORANDUM **April 7, 1988**

MEMO NO. NL023IM

TO: Lowell Harmison

FROM: Norman Latker

SUBJECT: Telephone conversations with Bill Regan - Columbia University; Julia Stefanelli - Center for Innovative Technology; Gary Lang - Washington Technology; George Stadler - Chancellor Fund

Bill Regan called - advised that he would be in Washington Monday, **April 18th**. He is interested in a position with USET. I made a **tentative** appointment with him subject to **your availability**.

Julia Stefanelli - Miss Stefanelli is with the Center for Innovative Technology in Virginia (CIT). CIT manages some of the technology from five Virginia universities. They are interested in knowing what services we offer that might assist them in licensing their technology. I will meet with them to determine if there are any mutual interests.

Gary Lang - Mr. Lang called and introduced himself as a founder of CORPTECH, a company that has put together a very large industry database of services and products available. Mr. Lang has left CORPTECH and is in the process of creating a similar database limited to the Washington area. He suggests that the CORPTECH database has missed many of the regional start-up companies because of their national focus. He is looking for start-up money. Since a Washington regional database could be of interest to our existing and potential clients, I agreed to review his business plan.

George Stadler - I spoke to you about George before. He is one of the earliest architects of a blind venture pool for bringing early stage technology through feasibility and prototype testing. He is looking for investors for his Chancellor fund, the business plan for which I had shown you earlier. Prior to going out on his own, he was the vice president for Technology Management at Research Corp. and has some information regarding their present course of action. In addition, he and his partner, Mitch Stanley, may be interested in employment at USET. George is going to be available in Washington during the week of April 18th. I have made a **tentative** engagement to meet with you on the **20th** subject to you **availability**.

NL/im

UPI - week of 4-11

Drummer - 4-13

cc: Wootten
Alpert
Soubara

MEMORANDUM **April 7, 1988**

MEMO NO. NL022IM

TO: Lowell Harmison

FROM: Norman Latker NL

SUBJECT: GKSS (European Strategy)

EM To Norm/Frank

We are arranging to meet with GKSS during the week of June 13 to 17 in McLean. GKSS is a German research center which conducts pre-industrial research and development with approximately $200 million dollars of funding from the German Federal Ministry for Research and Technology. With INRA as UPI's French client, GKSS could give USET a stream of technology from $600 million of European R&D. Given we conclude UTC/UPI's pursuit of the British Technology Group as a client, this could go to $1 billion.

GKSS' Institutes of Technical Installations, Chemistry, Physics and Materials Technology are devoted to doing research and development on nuclear reactor safety, materials, underwater technology, environmental research and technology and meteorological research. The results of all their research and development are made available through licensing and publication.

I presume GKSS has contacted us because they are having difficulty finding licensees for their technology in the United States. Their March 15th letter proposes that USET/UTC be their exclusive licensing agent in the United States for a commission to be negotiated including a percentage of any down payments or royalties paid by a licensee. GKSS indicates that the percentages in existing UTC agreements would be satisfactory. This is virtually the same deal UPI has already made with INRA.

They specifically indicate that a technology liaison officer is unnecessary since they have resources to prepare and provide us with a dossier of each invention containing a technical description, main applications, advantages compared to existing technologies, state-of-development, patents and patent applications, photographs of prototype of pilot plant, related scientific publications, test results and performance data and a list of available proprietary information such as design drawings and specifications.

I believe this to be a significant opportunity which we should pursue vigorously as part of our European strategy. At very most, the only resources we need to promise to obtain this important stream of technology is our UPI/UTC technology licensing services. We would gain the possibility of return from licenses and a significant stream of technology for the TIC technology information service.

If you have any other thoughts on the meeting we are pursuing for the week of June 13 through 17, please advise.

NL/im

Please identify specifics of GKSS i.e.
(1) • 1st R of F in U.S. & what other conditions
• Agent ideal contract
• ... matl exchange

(2) What the plan for implement?
(3) with items 1 & 2 done — then licensing & follow is ...

S. Sabara

MEMORANDUM **April 6, 1988**

MEMO NO. NL0120M

TO: Lowell Harmison

FROM: Norman Latker NL

SUBJECT: Center for Advanced Research and Biotechnology - (CARB)

The attached article (*Regardie's*, April 1988) discusses the creation of CARB. CARB is one of the five centers being run by the Maryland Biotech Institute (MBI). As you know, we met with the MBI people on March 30th. Wayne Swann reports that they have virtually agreed to becoming a USET client under the Maryland UTC agreement. No additional commitment of resources was made. Given that the transaction with MBI is completed, USET will manage all the technology coming out of the MBI system including CARB. This should include technology resulting from collaborative projects at CARB involving NIH and NBS investigators. I view this as a major step forward in gaining a foothold in the federal lab system.

NL/im

into an expanse of green space that Molitor calls the largest such area near a metropolis in the northeast corridor. Much of that land is farmland. More than 100,000 acres, or one-third of the total area in the county, is currently being farmed. In addition, 260 horticultural businesses generate $135 million in sales annually.

"We recognize that people have the right to use their property as they see fit, but the attitude of the commission is that it should be preserved at all costs," says Molitor. "Right now it's a legacy to the future population." Molitor calls the commission's attitude a "masterstroke."

Few masterstrokes compare, however, with the Shady Grove Life Sciences Center. "That kind of complex will provide a continuing education base here," says Molitor. "It's an example of the county capitalizing on its medical resources."

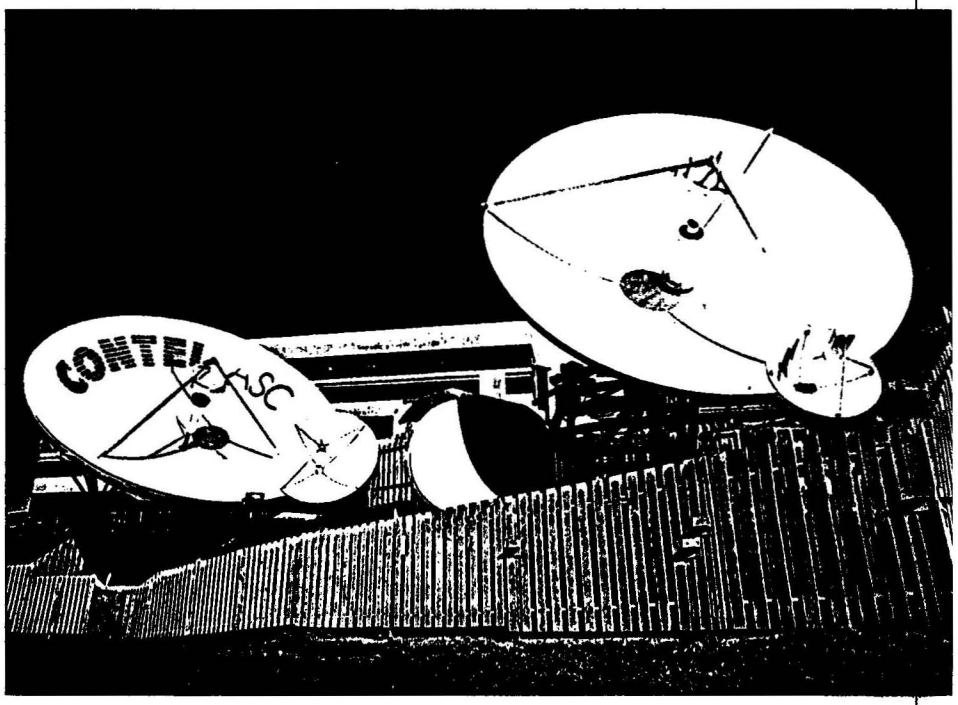
The Life Sciences Center, located along the I-270 corridor, will bring a university presence to the county. Few areas without a major research facility have risen to national technological importance. To fill the Life Sciences Center, the county sought one university, and as Walt Plosila, the president of the Montgomery County High Technology Council says, "We got two."

By this fall the University of Maryland and Johns Hopkins University will both be establishing classroom facilities at the center. In addition, a building for the Center for Advanced Research in Biotechnology, a giant project being implemented by the county, the National Bureau of Standards, and the University of Maryland, is under way.

The center may be the only major biotechnology research facility in the nation. Bounded by the satellite campuses of two major universities, it's expected to become a bridge between the public agencies and private companies in the area. "One of the most important functions of the Life Sciences Center will be to serve as a conduit for the transfer of technology from academic and federal sources into the private sector," says Plosila. In addition, the county expects it to serve several other functions, such as to provide continuing education programs for the county's already highly educated population and to attract other medical firms to the area.

The three masters programs that Johns Hopkins began to offer in temporary facilities already have as many as 300 enrolled. Since 10 percent of the county's work force has jobs in high-tech fields, that figure should rise significantly when classes move into the university's new building.

With the Life Sciences Center under construction and a growth policy based on long-range needs being considered by the county council, Montgomery County has turned its attention to the other side of the development coin, in an uncompromising study of the county's infrastructure.



The county is a haven for telecommunications.

GROWTH MEANS more traffic for any area, and Montgomery County is no exception. Already its roads are overburdened. But if any county can buy its way out of a tight squeeze, this one can. A massive budget of $1 billion over the next six years has been slated for road improvements. That figure exceeds what most other counties will spend, not to mention a few states.

Nevertheless, Molitor and his commission predict that a serious look at light rail transportation, van pools, and Ride-On—or "quick"—buses will be necessary.

One of the recent major road improvements has been the widening of I-270 which has made way for Washingtonian Center, a 4.5 million-square-foot mixed-use office, retail, and residential project.

Almost one-third of the road improvement budget will be spent on building Interstate 370, a highway that will lead to the 1,200-acre Life Sciences Center and the surrounding research parks that the county is planning.

All of these changes are part of the county's plan to become a national leader in the biotechnology and high-technology industries. The bedrock of the plan will be laid by the county's attention to research and educational resources, its infrastructure, and its insistence upon balanced growth. Molitor's Commission on the Future will provide the details; he depends upon the newly arriving and expanding companies to spring for the vitality.

Jim Troy *reported on Howard County in the March issue of* Regardie's.

PHOTOGRAPH: KIT WALLING

Vital Signs

DEMOGRAPHICS

Population

1980	579,053
1990 (projected)	695,000
2000 (projected	767,000

Population by age group

Under 17	177,368
18 to 24	73,229
25 to 34	115,834
35 to 44	93,876
45 to 64	146,753
65 and older	58,511

Total personal income ..... $16.9 billion

Per capita income	$24,100*
Median HH income	$43,871*
Size of labor force	399,960
Unemployment rate	2.4%

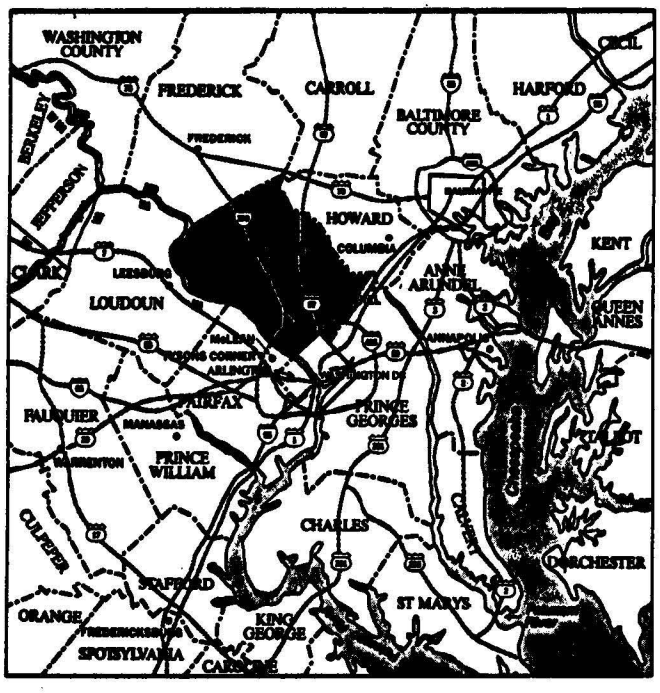
Number of workers and average weekly wage by industry*

Services	123,917	$455
Trade	83,897	$324
Government	68,445	$441
Construction	25,629	$474
FIRE	25,205	$474
Transportation/communications/ utilities	8,679	$536
Manufacturing	16,895	$529

GEOGRAPHY

Description: Montgomery County lies north of DC and southwest of Baltimore. The Potomac River separates Montgomery from Fairfax and Loudoun counties on the west, and Frederick and Howard counties border it to the north. I-270 crosses the county from north to south.

Square miles ..... 496 **Acres of parkland** 27,395



SOURCES: *Montgomery County Office of Economic Development, Maryland-National Capital Park and Planning Commission, Maryland Department of Employment and Training, Montgomery County Board of Education, Census Bureau, Claritas, area employers.*

EDUCATION

Number of public schools (elementary, middle, high)	155
Public school enrollment	96,269
Total public school budget	$520.8 million
Expenditure per pupil	$5,409
Average SAT scores	Verbal: 468 Math: 520
High school graduates	87.3% (of population)**
College graduates	42.8% (of population)**

Postsecondary school enrollment

Montgomery College (three campuses)	19,491
University of Maryland (Shady Grove)	1,370
Columbia Union College	1,236

ECONOMY

Largest employers and number of employees

IBM Corporation	8,300
Marriott Corporation	4,870
Chesapeake & Potomac Telephone Company	4,450
Giant Food Corporation	3,500
Vitro Corporation	3,340
Retail sales	$6 billion*
Number of hotel rooms	6,347
Sales tax	5%
Corporate tax	7%
Business personal property tax	$2.08/$100 assessed value
Real estate tax	$3.23/$100 assessed value
Size of federal government contracts	$2.3 billion*

REAL ESTATE

Existing office space ..... 33.6 million square feet

Ten largest office parks under construction

- **West•Farm Technology Park** (West•Group), 247 acres
- **Washingtonian Center** (Ackerman & Company), 212 acres
- **Quince Orchard Corporate Park** (Quadrangle Development Corporation), 200 acres
- **Westmont** (Tower Construction), 200 acres
- **Gateway Corporate Center** (Lee Sammis Associates), 100 acres
- **Metro Park North** (Trammell Crow), 80 acres
- **270 Corporate Center** (Bellemead Development Corporation), 58 acres
- **Tech Park 270** (Mulligan/Griffin & Associates, Incorporated), 46 acres
- **Avenel Business Park** (B. F. Saul), 45 acres
- **Decoverly** (Mulligan/Griffin & Associates, Incorporated), 41.5 acres

Number and value of commercial building permits ... 281 permits valued at $492 million

Number of single-family houses	171,327*
Number of condominiums	20,044
Number of new housing starts	6,272
Median new house price	$166,445*
Median resale house price	$127,370*

FOOTNOTE: *1987 figures unless otherwise noted. *1986 figures; **1980 figures*

3

2020

The Commission on the Future prepares Montgomery County for the 21st century

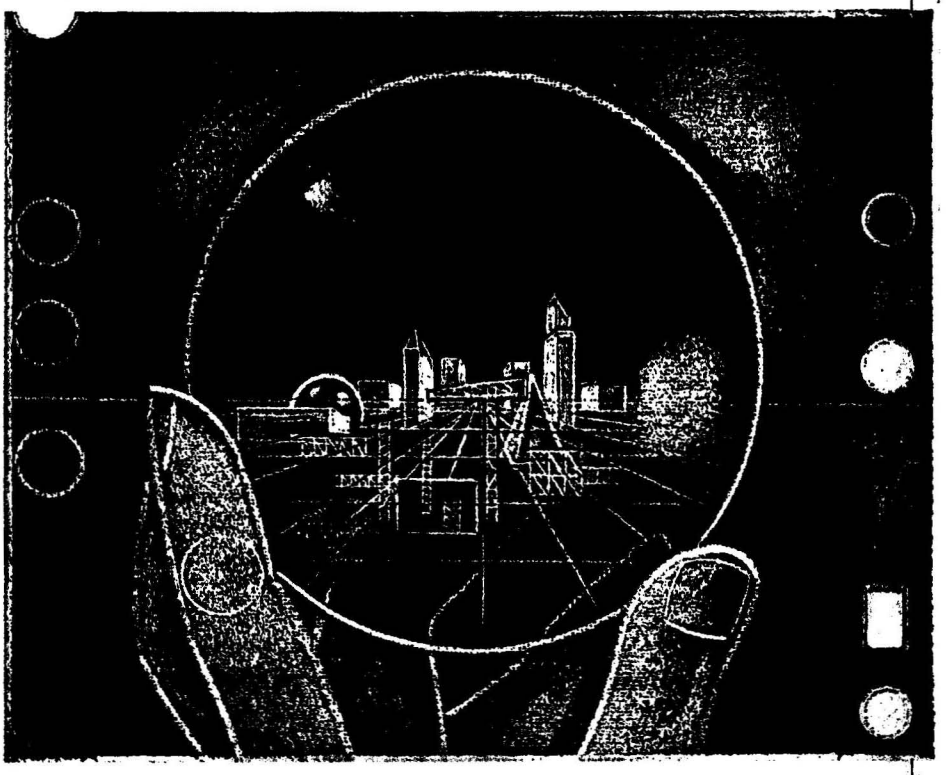
GRAHAM MOLITOR isn't as well-known as Jeanne Dixon. He doesn't issue predictions on who Liz Taylor's next husband will be, nor does he consult a crystal ball when he has a question about the future.

But Molitor does keep his eye on the future, and right now he's peering 30 years ahead to predict the fortunes of Montgomery County. Molitor is the chairman of the county's Commission on the Future, a far-reaching initiative for a county that's already perched on the cutting edge of technological and economic growth.

As the president of Public Policy Forecasting, Incorporated and the vice president of the World Future Society, Molitor is comfortable studying the statistics and quantitative indicators that show where current county trends are heading. "We're trying to step back from the present political pressure and come up with some vision, based on reality, of what Montgomery County will be like in the year 2020," says Molitor. "This is intended to become a document that sets out some bold strokes for the future."

Molitor is referring to a voluminous report, to be issued this spring, that's based on material gathered from numerous interviews with county leaders, elected officials, heads of civic organizations, and newspaper editors. Molitor grimly acknowledges the size of the project, but insists, "It really will be condensed into one readable report."

The report will say that Montgomery County enjoys a level of success that few other municipalities across the country have achieved. In 1987 alone the county realized 700 new or expanding businesses and more than 14,700 additional jobs. The county's already high average household income grew by 6.5 percent to $65,000.



Although the county is currently a mecca for biomedical and other high-technology industries, Molitor expects its high-tech economy to move even further ahead as public and private partnerships between businesses, educational institutions, and the county take shape.

But success is not without its problems, and Molitor intends to steer the commission away from tossing laurels and toward evaluating the county's problems realistically. When the commission first met, it drew up a generic list of issues, which it then winnowed to six. People, jobs, and housing were the first priority on the list, according to Molitor, followed by education, traffic, and the cost of health care.

"By any scale, Montgomery rates very high," says Molitor. "But it faces the problems of success. The rapid population growth and availability of jobs is driving the county. The challenge is to keep up the pace."

THE COUNTY IS RESPONDING to the challenge with a broad economic and social program, setting the year 2020 as its target for completion. The county's intention is to harness current growth while avoiding the pitfalls of no-growth or uncontrolled urban sprawl.

One of the county's recent gains has been its evolution from a bedroom community of Washington DC into an independent source of employment for its residents. Many of the 14,700 new jobs that the county provided last year were outside the beltway, which gave local workers the opportunity to live close to their places of employment. This

BY JIM TROY

4

ILLUSTRATION: ANDRZEJ DUDZINSKI

change has had a great impact across the county. Once stagnant business districts such as Silver Spring and Wheaton are regenerating. Bethesda, a quiet suburb just 10 years ago, has expanded into a first-class location for corporate headquarters.

"There's some consternation about the intensity of development in those areas, but I see the changes as an enormous improvement," says Molitor. "The commission believes that more residences should be brought into the emerging business communities to provide the sense of mixed development."

For instance, during this first phase of Silver Spring's development, a number of new office buildings have already begun to rearrange the contour of the city's skyline. Residential and retail renovation will follow.

Silver Spring is one of several urban districts in the county where residents have a parochial tax to pay for additional maintenance and promotion. A restaurant guide, a "fun run," and a revamped Silver Spring Day are planned for the summer months.

Montgomery County is monitoring the development it allows in Silver Spring and in other areas—including the I-270 and Route 29 corridors—much more closely, partly because it has the luxury of many choices. The county's annual growth policy document outlines the exact areas where the county will foster more growth. "We're taking a rifle shot approach to development," says Deborah Boudreau, of Montgomery County's Office of Economic Development. "We want to make sure that our infrastructure is in place in an area before we develop it."

One of the OED's targets is Germantown, at the northern end of the I-270 corridor, where Marriott Corporation has chosen to build its new headquarters, pending the county's final approval. Marriott is planning approximately three million square feet of staged development at the corner of Route 118 and I-270; the development will house approximately 10,000 employees. "Some people will say that now Germantown is on its way, but the necessary groundwork on an economic and planning level had already been firmly established," says Gregory Myers, the president of Eisinger Development Group and a Montgomery County developer with two projects in the Germantown area. "Of course Marriott's proposals legitimize the area and help focus on Germantown's new identity."

For the past five years Germantown has enjoyed tremendous residential growth, but its commercial growth has lagged. Marriott's entrance should change all that. The pace of countywide nonresidential construction has quickened from $206 million in 1982 to $492 million in 1987.

Approximately 251,000 square feet of office space was absorbed in Bethesda in 1987, and another 700,000 is on the drawing board. According to Myers, who has been involved in projects at both ends of the I-270 corridor, including several in Bethesda, "The first-class quality of commercial development, and the staying power of the companies involved is excellent in Bethesda. When you put that together with the location, the residential component, and the nightlife you've got a great place to work."

Bethesda serves as a business location to much of Montgomery County's service sector, including law firms, real estate firms, and lending institutions.

Interstate 270, a six-lane swath bordered a mile deep by high-technology companies, became known as Satellite Alley several years ago, because of the number of telecommunications companies that have sprung up along its path. But new biomedical firms are jostling with the telecommunications companies for bragging rights.

Along Route 29, which stretches north toward Baltimore, *USA Today* has built a communications center, joining another communications giant, AT&T. Transportation issues will probably inhibit growth along that corridor, but several new projects, including West•Farm, a 247-acre corporate park, will add to the list of topflight office parks.

Vitro Corporation located along Route 270

IN ITS EFFORT to become mature and self-sufficient the county has had to plan more thoroughly for balanced, managed growth and to referee the three-way tug-of-war between residential development, commercial development, and parkland retention. By some accounts it isn't doing a bad job. The northern portion of the county recedes

PHOTOGRAPH: KIT WALLIN

Alpert
Wootten
Sabora

MEMORANDUM **April 6, 1988**

MEMO NO. NL021IM

TO: Lowell Harmison

FROM: Norman Latker

SUBJECT: Follow-through on Strategy for Pursuing University and Federal Laboratory Clients

Pursuant to your April 6 instructions, I met with Jay Liverman and instructed him to start inputting the following existing information into the MAPINFO System:

1. Identification of the University

2. Key Personnel

   a) Technology Manager
   b) Grants and Contracts Manager
   c) Responsible Policy Officials

3. Annual R&D Budget

   Comment: I located two NSF databases that are on disc that provide the gross R&D budget for 400 universities. The budget is broken out into federal and non-federal portions, and is apportioned to 22 different scientific disciplines. Unfortunately, the same information does not exist for federal laboratories. However, I am obtaining the gross R&D budget for each federal agency's intramural program and the person responsible for identifying these numbers at each agency. This person may be able to define the numbers further. In addition, we have materials that define the mission of the 300 laboratories we would probably be most interested in.

4. The University's Commitment to Technology Management

   a) Do they have an in-house staff
   b) Do they have an agreement with Research Corp.
   c) Have they indicated an interest in outside assistance.

   Comment: This information will be inputted on a university-by-university basis.

I am developing an initial bargaining position including a new standard service agreement after review of all the existing UPI/UTC agreements. I will try to address thresholds of resources available from USET in developing this position.

You have not indicated how you wish to proceed in developing a new USET pamphlet and slide show. While I can provide the initial direction for these items, the logistics of completion will require the use of some consulting services.

All the above can proceed only as the information I have requested becomes available.

NL/im

4/12 Norm note comments & return to me

cc S. Alpert
C. Wootten
S. Sauvara

MEMORANDUM **April 4, 1988**

MEMO NO. NL017IM

TO: Lowell Harmison

FROM: Norman Latker NL

SUBJECT: Strategy for Pursuing Additional U.S. University and Federal Laboratory Clients

Lowell, this is a first try at a game plan. I have been pursuing "pieces" of it as time permitted. Pursuing the resulting plan cannot be undertaken without your agreement to assign people and resources to it. It does not seem to me a job to be undertaken by one person.

The Steps:

1. <u>Identifying the entire U.S. universe of possibilities</u>.

Comment - For the time being, I recommend limiting our targeted efforts to U.S. universities and federal laboratories. If a possible foreign client volunteers itself into USET, we can adapt the plan to the circumstances. We have two such volunteers before URI and UTC now, BTG in Britain and GKSS in Germany. Further, it would be very difficult to target foreign universities or government labs because it is unclear which could make a deal like their U.S. counterparts (are there foreign laws similar to P.L. 96-517 or P.L. 99-502? - I don't know yet). This should be their responsibility

The identification of the U.S. universe is in most part done, as I have a complete list of universities that have indicated an interest in technology management. No such list exists for the federal laboratories, but we do have the physical location and research assignment of these laboratories identified and a few indications of interest.

2. <u>Identify the most likely individual to champion technology management services to his/her university or federal laboratory</u>.

Comment - This is partially done. We have a list of individuals directly responsible for technology management at most universities and to the extent they exist, many of the same type contacts at federal laboratories. In cases where we can determine that this individual is protecting his own in-house authority, we will <u>not</u> want to make contact. We could wait to identify contacts until after we have selected our potential client list, but given the present state of development of the contact list and the fact we might be able to use it for other purposes (selling software packages), I recommend completing its compilations.

3. Organize the above information (and other categories of information about potential clients) so it can be easily accessed by appropriate USET officials.

Comment - This is intent of the consulting arrangement we are negotiating with Jay Liverman.

4. Develop criteria to establish a list of high potential clients.

Comment - The criteria should include accessing at least the following factors:

a) Personal USET/UTC/UPI connection to a potential client. This would include direct access to the president of a university or the director of a federal laboratory.

b) Size of research budget and the threshold at which we should be interested. UTC was using 40 M per site to determine initial interest. 40 M seems reasonable to me. However, if we could package sites around a USET resource, we could lower the dollar threshold of interest per site. We know 1986 R&D budgets for at least 100 universities, and should be able to access the rest (including federal laboratories) from public domain information. This information should be input into the database Jay Liverman is assisting with.

c) Type of research and a determination that technology may result from the research. The research could be too fundamental. Nuclear physics?

d) Commitment to technology management:

1. Do they have an in-house staff? Is it any good? Will they fight against outside services? (Example - U. of Illinois, Chicago Campus.)

2. Do they deal with Research Corp. as their only approach. Those that do, are good targets of opportunity.

3. Have they given an indication that they are seeking outside assistance?

4. Is there any interest in technology management at all?

e) Proximity to existing USET/UTC/UPI/TIC resources.

f) Identify obvious factors that would increase USET costs.

Comment - Examples where circumstances suggest cost problems:

1) The Veterans Administration has a number of small research laboratories scattered through the entire country. UTC was talking to V.A. (I attended later meetings) and knows the location and R&D budget for each laboratory. UTC doesn't know what resources are available to pursue this opportunity.

2) The University of Maryland Medical School in Baltimore has orally requested UTC for a proposal similar to that negotiated with University of Maryland College Park Campus.

3) The University of Massachusetts has asked UTC for a proposal to manage the university's two campuses located at opposite ends of Massachusetts under conditions similar to those negotiated by the other UTC clients.

4) UPI and USET have offered the University of Illinois one man-on-campus for both their two major campuses. The university has asked for the proposal in writing two weeks from the March 24 meeting at Champaign.

5. Appoint individual(s) to establish a list of the highest potential clients.

Comment - The draft USET Business Plan has a list of potential targets that I constructed on known facts (copy attached) It is subjective but did take into consideration some of the criteria suggested above. In addition, we have at a minimum four requests for proposals before USET on the basis of the preliminary work done by UTC/UPI. They are the Universities of Massachusetts, Maryland Medical and Illinois and the Veterans Administration.

6. President of USET makes an election of potential targets from those presented to him based on the criteria above.

7. Appoint an individual(s) to develop in parallel to the process of 1-6 an initial USET bargaining position for use in approaching identified contacts and negotiating with the president's selected targets.

Comment - The initial negotiating position should address at least the following:

a) USET's right to a first right of refusal to a client's technology.

Comment - You have expressed reservation as to whether UPI/UTC contracts provide the rights you desire for USET. If they do not, a new standard contract needs to be developed. However, this should be done after UPI/UTC are permitted to defend their contracts which could be

based on hard negotiation by their clients and the reality of the market place given the chips USET puts on the table. Last, you should understand that standard formats take time to develop through interactive reviews.

b) The availability of Technology Liaison Officers on client sites.

Comment - You have expressed reservation about using TLO's as a bargaining chip at all sites. Your chosen negotiator must be able to address this one way or another since it is now being suggested as a key difference between USET/UTC/UPI and Research Corp. and we will be quizzed on this point wherever we go.

c) The availability of an interactive electronic information system to attract industry licensees and collaborators, as well as assisting the technology manager in maintaining easy access to client technology information for internal use.

Comment - While the form of this is still in development, it seems clear that USET resources are committed to producing a product that can be promised to clients in the future.

d) The sale or license of client created software on an "as is" basis.

Comment - While I understand you wish to pursue this, it is still unclear what investment of resources USET will need to make and what refund can be expected on that investment. I would speculate a full position to this if we move forward. You suggested a TIC person. I am not sure how he could be brought into the technology stream from a UPI/UTC client. Would a person centrally located in McLean be better?

8. <u>In parallel to development of our bargaining position, an individual(s) should be appointed to develop a marketing program for USET/UPI/UTC technology management service</u>.

Comment - This program should include at least:

a) A UTC type pamphlet
b) A UTC type slide show

This might be an assignment for Joan Markessini or some other media type consultant with an assist from me.

9. <u>Given the President's selection of potential clients, an initial bargaining position and a marketing program, a negotiating team should be selected to move into action</u>.

Comment - Given that we have four requests for proposals and an additional two from foreign managers of technology, we need to provide some structure for response even on an ad hoc basis now. In the case new initiatives, if the negotiating team has definitive guidelines to begin with, alterations can be brought back to you for closure or redirection.

In conclusion, I suggest re-reading the underlined portions of 1 through 9 to refresh your understanding of the recommended decision making process. In order to get to Action Item 9, you need to give some policy guidance on key questions, i.e., contract, TLO's, software, marketing program, negotiating team, etc. Even with such guidance, additional resources need to be assigned to develop the tools to pursue potential clients, that have not already been flushed out by UPI/UTC.

If we do not proceed under some ordered fashion, we will need to proceed to hammer out a policy and process on a case-by-case basis over a long period of time triggered by volunteered involvement with USET. With no cookie cutter approach, our present order of resources will be strained. Further, proceeding case-by-case will slow the amount of technology going into the TIC information system. Note that the NTIS source contracts seem to be standards.

I have clearly avoided many suggestions on who should undertake the various parts of the process. That is your call. However, management of a process this complex requires:

a) Identification of an individual with a definitive assignment

b) A time deadline to complete the assignment and

c) Allocation of the resources necessary to meet the assignment.

NL/im

the technology information system will be one of the system's primary attractions. Further, as noted, we anticipate that this catagory will be supplemented by inputs from all potential USET clients who wish to use the technology information system as an adjunct to their own technology management capability but are not ready to negotiate a first right of refusal to their technology with UTC. USET

Given that inquiries from potential collaborators will be generated by the information system the Corporation should be in an ideal position to assist the parties in consummating collaborative projects.

The $300,000 1988 cost allocated to this Division on Appendix B is intended to cover some staff costs and development of a plan of operation for future years. To the extent that subject matter falling within the mission of the Division arises in the 1988, staff acquired with UTC and UPI will handle its disposition.

5. The Market for USET

Given the acquisition of both UTC and UPI, USET will have the following nucleus of clients:

UTC clients	UPI clients
Georgia Tech	University of Rhode Island
University of Maryland	New York University
University of Connecticut	University of Pennsylvania
Kansas State	University of Colorado
University of Iowa	University of Illinois
Princeton	Medical College of Pennsylvania
	INRA (French national Agricultural Research Institute)

These clients have a combined annual research budget of approximately $1.2 billion.

Without any aggressive marketing program we have reason to believe through various contacts that the following organizations are interested in becoming USET clients:

University of Massachusetts	Colorado State
Washington University at St. Louis	University of Hawaii
Northwestern University	University of South Florida
Michigan State	Veterans Administration
Pennsylvania State	Vanderbilt University (Tenn)

Bethesda Naval Medical Research Institute
Uniformed Services University of the Health Sciences (USUHS)
Armed Services Institute of Pathology
Medical University of South Carolina
University of Maryland Medical School

We estimate that the combined annual research budget of these organizations to be between $1 to $1.5 billion.

MEMORANDUM **April 4, 1988**

MEMO NO. NL018IM

TO: Lowell Harmison

FROM: Norman Latker

SUBJECT: Conversations with Howard Bremer and Kathleen Terry

Bremer:

Today I spoke to Howard Bremer the Patent Counsel for the Wisconsin Alumni Research Foundation (WARF). Howard is planning to retire in four months, but advised that he intends to remain in the Madison area and possibly work for a law firm and provide consulting services to WARF. He definitely is not interested in moving to Washington. He did indicate his possible availability for consulting in various areas of interest to USET, i.e., soliciting new clients, training and conferences, technology evaluation, general university relations. Howard is a known quantity in the university network and his involvement with USET would be a major plus. He indicated that he would be in Washington during the week of April 11th to 15th. I suggest that we set up a meeting for you with him.

Terry:

I also spoke to Kathleen Terry today. She has already been invited to interview for the Kansas State TLO position on April 18th. She volunteered that her strong points are relating to university research faculty and licensing. I told her that the way we are now organized licensing will probably be undertaken at headquarters and the major portion of contacts with the research faculty left with the TLO's. She asked whether licensing duties would still bring her in contact with the faculty. I indicated that they would in situations where we had an interest in pursuing licensees. Given that, she suggested a greater interest in the licensing position than the TLO position. She indicated she would consider a move to Washington. She will be in Washington and available April 26th. I set up a tentative meeting in McLean for that date subject to your availability.

NL/im

MEMORANDUM **March 29, 1988**

MEMO NO. LH048IM

TO: Norman Latker

FROM: Lowell Harmison

SUBJECT: Federal Programs Business Plan

I would like a business plan that addresses each of the major topics. You may add and/or delete as appropriate to fully describe the content of what needs to be done to successfully implement these federal programs.

Attachment

LH/im

NL

MEMORANDUM **March 29, 1988**

MEMO NO. NL014IM

TO: L. Harmison / J. Karnowski

FROM: Norman Latker

SUBJECT: Report on Trip to Univ. of Illinois - 3/24/88

The purpose of the trip was primarily to lunch and meet with the University's Ad Hoc Group on technology management services which was created to gather facts and make a recommendation to the university on how best to manage technology resulting from university research given that the UPI contract was near conclusion.

The Ad Hoc Group was made up of:

Robert Bender - Vice President for Finance - Champaign-Urbana Campus
Jill Tarzian, Attorney - Chicago Campus
Charles Sklava_____ - _____, Office of Technology Development - Chicago Campus
Dillon Mapother - Associate Vice Chancellor for Research - Champaigne-Urbana Campus
Peter (?) - Office of the Treasurer - Champaigne-Urbana Campus.

The air travel plans were aborted in Chicago because of bad weather. So, Sid Alpert, Bob Siegel (UPI licensing attorney) and I drove the 130 miles to the university, giving us three hours to discuss UPI, etc. During this period, I learned that the UPI and UTC management and licensing techniques and styles were nearly identical and certainly compatible. That's important in many respects but very important to know as we proceed with developing the EDP. Further, Sid and Bob were very professional in attitude and performance. They both would be valuable assets to USET. During the discussion of the status of a number of cases, I was reminded by illustration of the long period of time and perseverance required to bring inventions to the market due to forces outside the control of the technology manager. In addition, in discussing the individual cases in the UPI portfolio, it is clear that while they are not producing income, licensees are actively pursuing their development. The Illinois insecticide and herbicide, the plasma panel, the plastic battery, etc., could very well be big future hits since they are being actively pursued by industry.

Other points of interest:

1. Sid was very high on the technology he brought back from UPI's new French client.

2. He was less sure about what was shown to him by the British Technology Group (BTG).

3. He advised that BTG said that if UPI was being acquired by the same group as UTC, BIG would be very interested in pursuing an arrangement with us since BTG was favorably impressed by Carl.

4. Sid openly admits being out of money and very concerned about delay completing the acquisition.

5. We developed a very good strategy for the afternoon meetings.

At the meeting Sid opened and among other things emphasized my strong personal connections to Illinois and technology management credentials and your government connections and important policy background. He then turned the meeting over to me. I passed out the folder we used in San Diego and the attached proposal you had seen at UTC. I then explained the points and the pass-out in greater detail. I emphasized that the Washington headquarters would bring new licensing experts into the system, that the EDP would enhance outreach and the TLO would increase reporting of quality technology.

The group spoke very favorably of

a) The man-on-campus

b) The EDP

c) The solicitation of collaborative research funds

d) The strengthening of UPI's resources

e) The sale of tangible products, i.e., software and biologics.

The Director of Technology at the Chicago campus, however, clearly indicated a preference that our services be provided on a non-exclusive basis. This is clearly driven by his desire to manage the Chicago campus in-house. (Sid and Bob later told me that Chicago has been in breach of the UPI contract for a year and a half, but emphasizes there is nothing coming out of Chicago anyway because they believe the quality of research is poor.)

Sid indicated that we would put our proposal in writing in two weeks.

After this meeting we meet with Dr. Judith Liebman, the Vice Chancellor for Research who is probably the decision maker on the technology management services for the Champaign campus. She spoke very favorably about the USET involvement because she was concerned about the UPI resource situation. She also

emphatically indicated that the Champaign campus would not undertake in-house management of its technology. This, however, does not rule out the possibility of Research Corporation as the final selection. However, she indicated that she thought the Research Corp. proposal was disingenuous.

My conclusion - the likelihood of retaining the Champaign campus (where nearly all the activity comes from) is very good especially since Dr. Liebman seemed to be very supportive of UPI. However, one member of the ad hoc group expressed the belief that all the campuses should be handled in the same manner. If Chicago will only accept a non-exclusive contract, they could force the choice of Research Corp. It doesn't seem likely to me that UPI could have prevailed in the situation without our presence since repeated references were made to their depleting resources.

NL/im

UNIVERSITY SCIENCE, ENGINEERING
& TECHNOLOGY, INC.
PROPOSAL TO U OF I - MARCH 24, 1988

I. The USET Organization

°A wholly owned subsidiary of Maxwell Communications, U.S. (a major publishing/printing firm located in Greenwich, CT)

°Senior Management

President - Dr. Lowell T. Harmison (formerly Deputy Assistant Secretary for Health - U.S. Public Health Service)

Vice President - Norman J. Latker, Esq. (formerly Director, Office of Federal Technology Management, U.S. Dept. of Commerce)

°University Technology Corp. (recently acquired by USET) - a technology management company

°Telescan Corp. (recently acquired by USET) - an interactive data-base service supplier

°University Patents, Inc. (agreement in principal for USET to acquire the technology management function of UPI)

II. USET's Goals

Services aimed at facilitating the use of Government investment in R&D

°Technology Management Services

°Technology Information Services

°Development of an interactive electronic information system specifically geared to University clients for:(i) marketing technology including software, (ii) obtaining R&D funding (iii) supplying a turnkey interactive technology management system for USET clients' use.

III. USET Proposal to U of I

°Provide Technology Management Services for the UIUC campus as a continuation of UPI services (using current UPI personnel with supplementary support) - this will include licensing of software, as desired

°Provide a full time on-campus technology liaison officer at UIUC - functions to include:

(i) Pre-disclosure (patent) education
(ii) Help investigators prepare D.O.I.'s
(iii) Help investigators prepare input to data base
(iv) Follow-up D.O.I.'s
(v) Facilitate visits by HQ personnel

°Provide Technology Information Services to UIUC campus

°Licensing on 60/40 basis

°"Exclusivity" and other terms on same or similar basis as current UPI agreement

°Provide opportunity for UI Chicago to accomplish technology transfer as desired (i.e., no "exclusivity")

cc: R. Carlin

via fax 1. X dollars for each invention accepted.

2.

MEMORANDUM **March 16, 1988**

MEMO NO. NL012IM

TO: Lowell Harmison / J. Karnowski

FROM: Norman Latker NR

SUBJECT: USET Services

Arrangements are now underway to meet with two possible USET clients. Tentative meetings have been made with the University of Illinois on March 24th and the Maryland BioTechnology Institute (MBI) on March 30th. These arrangements will predictably require USET to describe what services they intend to make available. You need to address the areas that we can legitimately identify as available or possibly available services.

As openers, I suggest consideration of the following:

1) A man on campus.

(Yes) In the case of MBI, Wayne Swann has already suggested his availability on the basis that MBI is a part of the University of Maryland complex and is close to his office. . Further, with additional USET staff in Washington, it would appear that we could take on MBI as a client with no out-of-pocket expense. MBI is very important as an entry into NIH, NBS, Naval Medical, etc.

Yes <50K In the case of Illinois, they are expecting a man on campus to compete with a Research Corporation offer to provide such service.

(Yes) 2) An interactive electronic information system to attract industry participation.

under our main frame control

This should be no problem since we are pursuing the development of such a system at TIC.

3) Solicitation of industry R&D collaborators prior to the identification of any technology.

(Yes) I would anticipate that such solicitation would be in most part undertaken through the electronic information system. Given an interested industry collaborator, USET would assist in developing collaborative research and development agreements for a percentage of the overhead paid by the collaborator.

4) A R&D venture pool.

I see this as a blind pool from which USET would use R&D dollars at the client's site to test the feasibility of USET selected client inventions and pursue, if merited, the construction of their prototypes. This service is farthest from reality given the need to develop a selection system and determine where dollars will come from. Could Maxwell Foundation dollars be spent here?

5) Sale or Licensing of Software.

Very few technology management organizations have undertaken the management of software in the belief that it required dedicated manpower for maintenance and debugging. However, some organizations are successfully selling software for internal use by the purchaser on an "as is" basis. In addition, these organizations will license industry on on "as is" basis for further sale to the public if the licensee will assume responsibility for maintenance and debugging. Given a client base of 12 universities and a tangible product, there is reason to believe that this could be an immediate money making business with the right personnel. TIC enhances the possibility of success if we could show the software for sale or licensing through their interactive information system. Display of the software has been a major barrier to its sale in the past.

6) Consulting Services.

This would entail, as a minimum, advise on problems clients have with the federal agencies or industry. In addition, as already noted, it would involve drafting of collaborative agreements for clients willing to pay us a share of the overhead charge to industry collaborators.

NL/im

For Mr. N. Latker

UNIVERSITY SCIENCE, ENGINEERING
& TECHNOLOGY, INC.
PROPOSAL TO U OF I - MARCH 24, 1988

I. The USET Organization
°A wholly owned subsidiary of Maxwell Communications, U.S. (a major publishing/printing firm located in Greenwich, CT)
°Senior Management
President - Dr. Lowell T. Harmison (formerly Deputy Assistant Secretary for Health - U.S. Public Health Service)
Vice President - Norman J. Latker, Esq. (formerly Director, Office of Federal Technology Management, U.S. Dept. of Commerce)
°University Technology Corp. (recently acquired by USET) - a technology management company
°Telescan Corp. (recently acquired by USET) - an interactive data-base service supplier
°University Patents, Inc. (agreement in principal for USET to acquire the technology management function of UPI)

II. USET's Goals
Services aimed at facilitating the use of Government investment in R&D
°Technology Management Services
°Technology Information Services
°Development of an interactive electronic information system specifically geared to University clients for: (i) marketing technology, (ii) obtaining R&D funding (iii) supplying a turnkey interactive technology management system for USET clients' use.

III. USET Proposal to U of I
°Provide Technology Management Services for the UIUC campus as a continuation of UPI services (using current UPI personnel with supplementary support)
°Provide a full time on-campus technology liaison officer at UIUC - functions to include:
(i) Pre-disclosure (patent) education
(ii) Help investigators prepare D.O.I.'s
(iii) Help investigators prepare input to data base
(iv) Follow-up D.O.I.'s
(v) Facilitate visits by HQ personnel
°Provide Technology Information Services to UIUC campus
°Licensing on 60/40 basis
°"Exclusivity" and other terms on same or similar basis as current UPI agreement
°Provide opportunity for UI Chicago to accomplish technology transfer as desired (i.e., no "exclusivity")

Faxed to Fraser, Wooten
" " Jack

MEMORANDUM **March 15, 1988**

MEMO NO. NL011

TO: Lowell Harmison / Jack Karnowski

FROM: Norman Latker NJL

SUBJECT: TIC/NCTR Project

You asked some important questions regarding the TIC/NCTR project.

1. Status of NCTR data collection and input into TIC:

   Daphne Lambright has collected all the faculty profile and technology information at NCTR but none of it has been inputted into the TIC information system. Inputting is awaiting TIC's completion of the generic template being developed at TIC. As Richard advised you in his project plan, the generic template will be completed in six weeks. If you accept the six-week development period for the generic input template, we have the corresponding period to recommend the specific input template that we are developing. I would note that faculty profile templates already have been developed for the Michigan, Texas and Western New York systems that I mentioned to you previously and there are also numerous existing technology templates.

2. You asked for a listing of the information that NCTR has requested to input into the TIC Information System when up and running:

   I spoke to Richard and he will put this together for us shortly.

3. We discussed briefly Daphne Lambright's cost analysis of inputting the faculty profile and technologies at each UTC client university. Copy of the analysis is attached.

   The bottom line of Daphne's analysis is an estimate of 35 man weeks to input the faculty profile and technologies of the kind collected at NCTR. However, it is important to note that much of this information is already being accumulated by the TLO's at the universities. It is therefore possible that the conversion costs could be minimal and could result in a savings due to enhanced productivity by substituting the electronic information system for the paper system now being utilized. I have given Daphne's analysis to UTC for their reaction.

   I asked Daphne what duties she would undertake through the visits she noted in the analysis. She advises that the visits are intended to train the university inputter on how to use the system. She suggested that the visits may not be necessary given the capabilities of the inputter.

NL/im

DATE: March 9, 1988

TO: Norm Lacker

FROM: Daphne Lambright, TIC

RE: Cost/Time Estimate for Technology Project Entry

Here is my estimate of the time needed to enter Technology Project information. First, I present my assumptions/formulas for estimating time required. Then, I illustrate how to factor in the assumptions using an example. Finally, I summarize the information and present sample travel expenses. If there are variables or options you would like to see added please let me know. I look forward to hearing your comments.

ASSUMPTIONS/FORMULAS

Take the Total University R&D Budget

- Subtract the Overhead/Indirect Costs (% varies with each university but I am using 50%)

= Equals Working R&D budget

- Subtract Privately Sponsored Research (Dupont, Monsanto, etc.) I am using 30%.

= Equals Public R&D budget

- Subtract Non-Science and Technology projects/grants (Humanities, Business, etc.) I am using 20%

= Equals Available Science and Technology Budget (ASTB).

From the Available Science and Technology Budget (ASTB) you can estimate an annual:

Number of Principal Investigators = ASTB/$75,000

Number of Ongoing Research Projects = ASTB x 2

Number of Potential Technologies = Number of Projects x 50%

Number of Patents = Number of Potential Technologies x 1%

The University's Technology Liason Office will be performing the actual tasks outlined below. I will provide onsite technical assistance on the average of once every two months.

A) Amount of time required to enter Potential Technologies only (beginning with the initial disclosure process)

1) Screen submission to ensure it represents an available science and technology project, verify its completeness and assign keywords (15 min. per submission)

2) Enter the appropriate information into the database (15 min. per submission = 750 words)

3) Generate Government Reports if gov't sponsored (15 min. per submission)

4) Submit to UTC LE for action (50% rejected or delayed for some reason)

5) Interview Principal Investigator for ES and TP report preparation (30 min. per P.I.)

6) Generate Executive Summary and review with P.I.(1 hr per accepted disclosure submission)

7) Generate Technical Package and review with P.I.(1.5 hr. per accepted disclosure submission)

8) Submit ES and TP to UTC LE

B) Amount of time required to enter all available Science and Technology Projects/Grants (beginning when the grant is awarded but not including initial disclosure)

1) Screen grant to ensure it represents an available science and technology project (5 min. per grant)

2) Enter the appropriate grant/project information into the database (Investigators, Project Title and Summary) (15 min. per project)

An Example using a University with a $110,000,000 total research budget.

Total R&D budget	$110,000,000
minus overhead/indirect costs (50%)	- 55,000,000
Equals Working R&D budget	$55,000,000
minus privately sponsored research (30%)	- 16,500,000
Equals Public R&D budget	$38,500,000
minus nonscience/technology research (20%)	- 7,700,000
Equals Available Science and Technology Budget	$30,800,000

Number of P.I.'s = 30,800,000/75,000 = 410 P.I.'s annually

Number of Projects = 410 x 2 = 820 projects/grants annually

Number of Potential Technologies = 820 x 50% = 410 new potential technologies annually

Number of Patents Awarded = 410 x 1% = 4 patents annually

A) Time required to enter Potential Technologies only (beginning with initial disclosure)

1) Screening, Verification and Keyword Assignment
   15 min x 410 potential technologies = 103 hrs.

2) Computer entry of data
   15 min x 410 potential technologies = 103 hrs.

3) Generate Government Reports
   15 min x 410 potential technologies = 103 hrs.

4) Submission to UTC LE for action
   50% x 410 potential technologies = 205 accepted technologies

5) Interview P.I.
   30 min x 205 accepted technologies = 103 hrs.

6) Generate Executive Summary
   1 hr x 205 accepted technologies = 205 hrs.

7) Generate Technical Package
   1.5 hr x 205 accepted technologies = 308 hrs.

8) Submit ES and TP to UTC LE

Total Time for A = 1130 hrs.
Man Weeks = 28 weeks
Man Months = 7 months

B) Time required to enter all available science and technology projects and grants (beginning when grant is awarded but not including initial disclosure submission)

1) Screen projects/grants to ensure they are available science and technology projects
   5 min x 820 projects/grants = 68 hrs.

2) Enter appropriate project information into database
   15 min x 820 projects/grants = 205 hrs.

Total Time for B = 273 hrs.
Man Weeks = 6.8 weeks
Man Months = 1.7 months

TOTAL TIME to enter all available science and technology grants/ projects (B) and all potential technologies (A) = 1403 hrs.

Total Man Weeks for both A and B = 35 weeks
Total Man Months for both A and B = 8.8 months
Number of Onsite Visits = 4

Expenses Incurred with Onsite Technical Assistance

For each 2 day visit:

Airline Travel $500/round trip	= $500
Lodging @ $70/day	= 140
Meals @ $50/day	= 100
Local Travel @ $40/day	= 80
Salary @ 250/day	= 500
Total Expenses per visit	= $1320

Estimate one visit every two months for each university

SUMMARY

Therefore 5 Universities with combined R&D budgets of $550 million and each with an average R&D budget of $110 million will require approximately 35 man weeks for each university to enter all available science and technology projects/ grants and requiring me to travel 2-3 times each month in order to visit each university once every two months.

If we only enter potential technologies (A) only 28 man weeks will be necessary for each university.

For each 2 day visit:

USET, Inc.
1413 Research Blvd.
Rockville, MD 20850
301-738-0213

Mr. William Broad
The Department of Science News
The New York Times
229 West 43rd Street
New York, NY 10026

March 8, 1988

Dear Bill:

I enjoyed your March 5th 1988 article regarding the Narin method for measuring the quality of patented ideas. I am enclosing a presentation that I made that touches on the same subject.

On Page 5 you will note that over 900 patents issued to U.S. universities in 1987; that is four times the 230 patents that issued in 1976. On Page 6 it is noted that unlike other federally funded research performers these patents were filed at no cost to the taxpayer. The fact that the patents are being paid for by the universities, with the hope of reimbursement from its licensees, suggests that they are patents that were filed only after very careful consideration. Based on this, I would suggest that this group of patents is on the same level of quality or higher than attributed to Japanese patents. In addition to that you should note that the 900 university patents are the product of only 10% of the government's investment in R&D, but are estimated to be 36% of the patents produced by that investment.

The rest of the presentation suggests that if the federally funded universities are producing this kind of result, then Congress should determine whether the conditions under which other performers are funded is the factor creating the disproportionate performance.

Sincerely yours,

Norman J. Latker
Vice President
Legal and Technology Affairs

Enclosure

NL007IM

only after very careful consideration. Based on this, I would

N.Y. Times MAR. 5, 1988

Novel Technique Shows Japanese Outpace Americans in Innovation

By WILLIAM J. BROAD

Starting more than a decade ago, Japan has been achieving a level of innovation greater than that of the United States, according to conclusions based on an experimental technique for analyzing the quality of patents.

The technique, which is being used by Federal and private scientists, is based on the fact that all patents cite prior work to establish their novelty and links to previous ideas. The technique assumes that the importance of a patent is reflected in how often other inventors cite it. The method analyzes networks of citations, separating seminal ideas from insignificant ones in a patent system cluttered with millions of inventions.

Gap Is Seen as Growing

It is the first method to try to measure the quality of patented ideas.

The technique, which the scientists have applied to patents granted in the United States, shows that starting as early as 1976, patents awarded Japanese inventors were cited more frequently than those awarded Americans, and that the gap between Japanese and American patents appears to be growing.

The findings are considered tentative, even by those who developed the technique. Critics say cultural differences might bias the results.

Some Patents Cited 100 Times

Further, the findings say nothing about the ability to conduct the kind of fundamental research that probes the riddles of nature, fuels technical invention and wins Nobel Prizes.

Nevertheless, the work contradicts the stereotype of Japan as a nation of imitators and shows that the drive for high-level technical excellence in Japan is at least a decade old.

The findings mean that Japanese patents on innovative ideas are widely recognized by other inventors around

Continued on Page A13, Column 1

apan Seen Ahead of U.S. in Innovation

Continued From Page A1

the world. Some Japanese patents have been cited 100 or more times in derivative patents. Some of the original Japanese innovations are evident in the broad array of consumer goods and gadgets that have won wide acceptance, including such things as cars, computers, copiers, cameras, televisions, stereos and video cassette recorders.

Examples of some highly cited Japanese patents include one for an improved antibiotic that was awarded to Takeda Chemical Instustries in 1978 and thereafter cited at least 98 times. It has unusually strong action against a wide variety of microorganisms, including various types of bacteria.

Another example is a patent for an improved automobile carburetor awarded to the Nissan Motor Company in 1975 that to date has been cited at least 53 times. The idea was electronic control of the air-fuel mixture with precision and efficiency. It worked by first having electronic sensors measure engine temperature, engine speed, throttle opening and even atmospheric pressure and then having an electronic device compute the best fuel-air mixture for those conditions. The result was better fuel economy and less pollution in exhaust fumes.

'At the Leading Edge'

A third example is a patent for an electronic musical instrument awarded to a company of the Yamaha group in 1975 that to date has been cited 50 times. This centered on a new kind of electronic keyboard system whose circuits were very simple yet able to generate rich tones that mimic traditional instruments.

"The Japanese position in patented technology is strong, growing, and based on high-quality, high-impact technology," according to an interim report by Computer Horizons Inc., a consulting company in Haddon Heights, N.J., that helped pioneer the technique in collaboratiion with the National Science Foundation, a Federal agency based in Washington. The report, prepared for the science foundation, concluded that the Japanese patents were "at the leading edge of modern developments in technology."

The finding contradicts the stereotype of the Japanese.

The patent technique, though experimental, is considered so promising that it is being used by the science foundation and several European governments.

The Japanese, too, have shown interest. "It was standing room only," recalled Francis Narin, president of Computer Horizons, who has lectured on the process in Tokyo.

Having tested and refined the technique over five years, Dr. Narin and his colleagues at Computer Horizons are now applying it to a science foundation study, "Identifying Areas of Leading Edge Japanese Technology," due out in April or May. Parts of it have already been made public in an interim report, however, and related findings have appeared in a Computer Horizons study done for the British Government's Department of Trade and Industry.

The analytic technique relies on the fact that patent examiners, when awarding patents, list relevant earlier patents.

Quality Is What Stands Out

The new studies of such citations show that patents awarded to Japanese inventors are far and away the most highly cited. This rate has nothing to do with the dramatic rise in the number of patents granted in the United States to Japanese, which now account for nearly 20 percent of all American patents. Rather, it speaks to quality.

The interim report to the science foundation noted that Japanese inventors have 30 to 50 percent more patents than could be expected statistically among the most highly cited few percent of American patents. The study also said that the patents are concentrated in the "hottest areas" such as the fields of semiconductor electronics, photography, photocopying, pharmaceuticals, pharmaceutical chemistry and automotive technology.

The report for the British Government by Computer Horizons noted that

"Japanese citation performance is better than that of any other country," suggesting "the excellence of Japanese technology."

The period in which the various analyses starts is 1975, the first year in which American patent records were completely computerized. It extends to 1983, the latest year in which new patents have attracted a statistically significant number of citations.

A science foundation report made public in December, "International Science and Technology Data Update," gives a preliminary glimpse of Computer Horizon's overall analysis for that period. It shows an index based on statistical averaging in which the number 1.0 represents the "expected" representation among highly cited patents based on a nation's overall number of patents. In the analysis, Japan comes out on top with 1.34, the United States second with 1.06, Britain third with 0.94, France fourth with 0.80, and West Germany last with 0.79.

When the numbers are broken down on a year-by-year basis, the gap between Japanese and American patents appears to be growing, although Dr. Narin of Computer Horizons cautioned that the statistical significance of the trend was uncertain.

Kind of Esthetic Charm

Computer Horizon's interim report found no clear link between the number of patents a Japanese company received and the rate at which its patents were cited. Companies with relatively few patents, like Aisin Seiki, an automobile parts company, performed just as well if not better than companies like Hitachi, Mitsubishi, and Fijitsu, Japan's multifaceted industrial giants. "The impressive Japanese citation performance is quite uniform across the major patenting companies," the report concluded.

The findings on Japan's innovation performance and the patent-citation method itself are considered experimental by Federal researchers.

"It's still tentative," said Carlos Kruytbosch, director of the Science Indicators Unit at the science foundation. One aspect of the method that needed exploration, he said, was the significance of high citations. In addition to bright ideas with marketplace potential, he said, high rates might indicate a kind of esthetic charm. "A highly cited idea might be technically elegant but impractical to produce at reasonable cost," Dr. Kruytbosch said.

Faulted for Cultural Bias

In general, science foundation is extremely cautious in using "science indicators" like the new technique, recommending that several different ones be compared to get the best possible overview of science productivity.

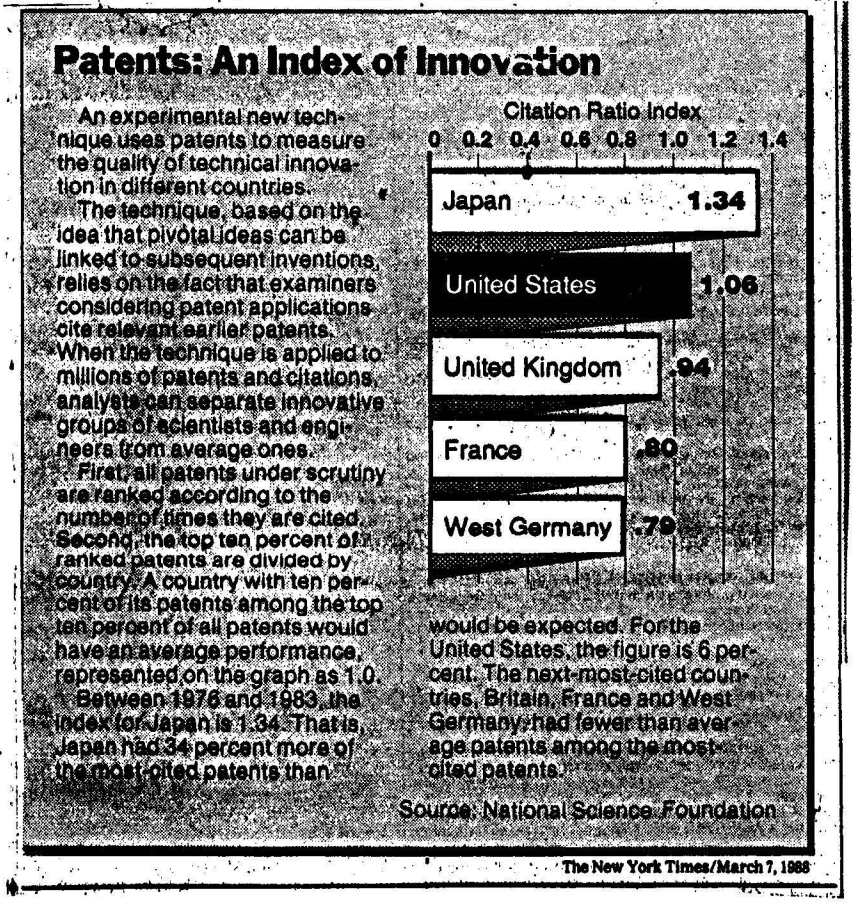
Daryl Chubin, a senior analyst at the Congressional Office of Technology Assessment, said the patent-citation method was especially prone to misinterpretation when used to make international comparisons, since cultural differences could bias the results. For instance, he said, many American inventors were failing to file patents because the process is "such a bureaucratic mess."

He added: "I don't see anything wrong with the technique. It's another

But a science foundation official working with Computer Horizons said bureaucratic impediments would probably effect all inventors applying for American patents, no matter what their nationality.

For its part, Computer Horizons is confident its work is delivering a detailed, new assessment of the Japanese drive for innovative excellence at a time of increasing concern about the international balance of technological power.

"We don't claim it's perfect," said Michael B. Albert, vice president of Computer Horizons. "But as far as we can tell, there's nothing to equal it."



MEMORANDUM **March 4, 1988**

MEMO NO. NL006IM

TO: Dr. Lowell Harmison

FROM: Norman Latker

SUBJECT: Carl Wooten

At the SUPA meeting on March 1, 1988, Dave Strevel and Jake Maczugo asked me to meet with them. They advised me that:

1) The TLO's were advising that payments to UTC client universities for their TLO's was slipping - Carl called March 4th and advised he was sending payments to the universities.

2) The TLO's advised Carl that the interactive electronic information system was not functioning and it was not being used.

3) Chuck Huestis had advised Carl not to hire Eddie Horne as it brought nepotism into the office. Later, Huestis was assigned to bring Eddie's performance up to standard.

4) Carl had designated that certain UTC furniture be left behind for Chuck Huestis.

5) Just prior to our closing on UTC, Chuck Huestis was given an additional 9000 shares of UTC stock. He previously had 1000 shares.

NL/im

M E M O R A N D U M

TO: Lowell Harmison/Jack Karnowski

FROM: Norm Latker NJL

SUBJECT: Report on SUPA Meeting - February 28, 1988

DATE: March 2, 1988

As openers, I am happy to report that we generated at a very minimal cost an enormous amount of enthusiasm about USET among the 266 attendees at SUPA including our newly acquired employees. (Attendance list is attached.) Out next challenge will be maintaining that enthusiasm while we organize and design what we intend to sell.

Here are some of the things that were undertaken:

1) On Sunday (3:00 p.m.) the UTC LE's and TLO's Susan Saibana, Sid Alpert, Carl Wootten and I met in my suite for 2.5 hours introducing one another, discussing the UTC reporting and licensing process and the development of an interactive electronic information system.

2) SUPA cocktail party at 5:30 p.m. Sunday - Talked to many. Was approached by many looking to join USET as employees.

3) On Sunday evening I went to dinner with the technology managers from the University of California, Wisconsin and Washington University in St. Louis for the purpose of building good will with these big hitters.

4) On Monday morning I announced at the plenary session the creation of USET and made available our folders which were sucked up nearly immediately. A copy of the announcement I gave is attached.

5) At 11:30 on Monday, I gave a presentation to the plenary session called "Washington in Review" which is attached. If you like it, we may want Maxwell to publish it. It needs some editing. My delivery was less than good, but I know it was well received by many anyway. Conceptually, it is one of my best pieces. If you have time, read it.

6) I took Bill Regan of the University of Columbia to lunch at 12:30 Monday and had a very interesting conversation on his approach to selling funded R&D projects. He is interested in coming to USET. I asked him to put together a plan on how he would want to operate and invited

interactive electronic information system.

him to Washington to talk to us after March 15. Bottom line is -- that for some reason Columbia charges industry less overhead than government for sponsored research projects. He got the university to give him the differential to run his office until he went into the black. If other universities function in a similar manner, we could use Bill to convince them to give us the differential to run a technical management office. Bill also seems to have a flair for organization. He put together an Ivy League technical management group that meets periodically to resolve common problems. We discussed possible regionalization. Incidentally, Sid Alpert has some problem with Bill.

7) After lunch met with Sid Alpert on the projects you asked him to look into -- good conversation. We took a first cut at a regionalization plan that he'll deliver to you. It needs work but not bad stuff. Sets out best major university targets based on regional USET offices. You've seen many on the list already. Sid wants to stay in Connecticut at least for now -- some of the regionalization concepts are driven by that desire. On the law firm concept -- Sid wants that in Connecticut too. I resisted because we need <u>at least</u> Sid in Washington. Location is problem. Sid wants to be in law firm outside of USET. I would be "of counsel" to the law firm. Could be a viable option. <u>Very</u> clear from SUPA attendance that lawyers are hanging around <u>all</u> over. Also remember 900 patents issued to universities in 1987. See my discussion of patent statistics in my speech.

8) SUPA cocktail party from 5-7 p.m. on Monday evening -- lots of enthusiasm from morning announcement, speech, UTC people mixing, etc.

9) All UTC people met together for the first time Monday afternoon and discussed their progress -- I purposely did not attend -- Jake and Dave reported the meeting to me Tuesday morning -- Bottom line -- TLO's told Carl that his electronic information and matching system doesn't work and no one is using it. (Carl said nothing to me about the meeting.) More important -- payments to universities are slipping -- Jack should take care of that <u>immediately</u>. Jake and Dave reported other problems which I will advise on separately. They were pleased with our delegation letter.

10) USET cocktail party 7-10 Monday -- very successful -- over 100 people visited -- difficult to talk to them all but lots of enthusiasm. the following indicated an interest in services:

Medical College of Wisconsin (Milwaukee, WI)
University of Florida (Gainsville, FL)
Battelle-Pacific Northwest Labs (Richland, WA)

New York Medical College (Vahulla, NY)
University of British Columbia (Vancouver, BC)
Simon Frusen University (Vancouver, BC)

Some insights from the above:

1) SUPA is a good place for the disparate parts of USET to retreat in the future. We did a lot for espirit de corps.

2) Two of the TLO's appear to be winners; the other two are question marks -- all need to be proven by performance, but it's not clear that goals have been spelled out well enough.

3) Eddie did little to improve his status.

4) Carl showed that he has a significant and important outreach that we need to keep intact. However, his management skills still remain doubtful. Jack, Dave and John indicated that Carl was considerably chastened by our intervention and was on his best behavior at SUPA. Carl seems to have a general problem dealing with subordinates.

5) Everyone has a different opinion on how to develop the electronic information system (EIS). The two computer people, Dave and Bob (the TLO from Georgia Tech), were decidedly skeptical primarily on the basis that if a subscriber looked for something and found nothing, they would not look again. While there was extensive discussion on the EIS, there were no new ideas. Susan Saibara is strictly a marketer and does it by rote. Needs lots of preparation. A need for an EIS seems clear from the fact that two systems were on display at SUPA which I asked Susan Saibara to report on. Further, there were 43 industry outreach people in attendance. In addition, the Genentech outreach person indicated in his SUPA presentation that his staff spends 85% of their time looking.

6) Two industry people indicated they were having problems completing deals at HHS, which suggests the need for our consulting service.

7) The representative from the Agriculture Department indicated they have 35 collaborative agreements in progress.

UNIVERSITY SCIENCE, ENGINEERING AND TECHNOLOGY, INC.

San Diego, California
Monday, February 29th

Dear SUPA Meeting Attendees:

At today's meeting you heard about **USET**, the new University Science, Engineering and Technology corporation and some of its planned activities. USET helps to solve the problem of moving university, federal laboratory and industry technology to the market place. This is to acquaint you with those efforts.

USET will provide a number of services aimed at facilitating the use of the results of Government investment in research and development. We know that universities in particular have had difficulty locating the resources and staff necessary to manage these results.

Changing Government policy has provided a supportive environment for universities and USET. The primary thrust of government efforts to increase commercialization of federally financed R&D results has been toward decentralizing technology management by permitting the creating organization and its investigators, whether at a university or federal laboratory, to own, and thereby benefit from application of their technology. These policy changes were driven by the realization that successful transfer must be a win-win situation in which all participants must benefit from the result. This was accomplished through legislative changes that permit federally-funded universities and federal laboratories to license technology on an exclusive, royalty-bearing basis. The legislation creates a powerful incentive by also requiring that part of the royalty return be shared with the inventors that produced it.

In addition, increased global competition points to a need for USET. Corporations increasingly seek product innovations from the outside as a response to foreign competition. Traditionally, new products or product improvements have come from internal research and development and/or acquisitions of small companies. The commercialization of federally funded research will provide new product opportunities.

USET's clients will include universities, federal laboratories and industry. Initially, universities and government laboratories will serve as the primary source of technology and research expertise. As USET grows, these interactions will change to find new innovative ways of technological management and exchange.

Technology Management - The primary concern of our effort will be accessing the technology stream of clients who want USET to assist them in managing their technology. This will broadly involve identifying promising technology, evaluating it for commercial potential, creating intellectual property protection, when appropriate, and granting licenses in the technology in return for private sector guarantees to develop, participate in or contribute resources to further development.

USET will assist the client's investigators in identifying technology with commercial potential and projects that may produce such technology. Technology and project disclosures will be personally marketed to private sector users with predetermined technology interests with a boost from our interactive electronic technology information system.

USET has acquired University Technology Corporation (UTC) and is now in the process of creating an interactive electronic information system to serve their clients.

Technology Information - As noted, this effort will initially focus on enhancing the marketing of technology gathered by the Technology Management efforts by creating an interactive electronic technology information system. This system will include not only identified technology, but as indicated, projects that investigators believe may produce useful technology for which they are seeking private supplemental or alternative funding to federal funding. When completed, we will also provide a turnkey interactive technology management system to those who wish to manage their own technology.

Technology Development - This effort will be aimed at finding entrepreneurs to initiate new businesses or assist existing business with marketing products created by USET clients. USET believes that a successful new product start-up can be as rewarding as marketing arrangements limited to royalty return.

We also plan to provide consulting services to facilitate the innovation process by producing collaborative research agreements, business plans and access to patent services.

These major activities will offer clients a breadth of valuable assistance.

We believe that the creation of USET will accelerate the already favorable environment in universities, Federal Laboratories and the private sector to the management of their technology.

We will be interested in hearing from you at:

University Science, Engineering Technology, Inc.
8000 West Park Drive
McLean, Virginia 22102
Telephone: 703-821-2030

7/15

Bill. For your eyes only please. Norm

M E M O R A N D U M

TO: Lowell Harmison/Jack Karnowski

FROM: Norm Latker NJL

SUBJECT: Report on SUPA Meeting - February 28, 1988

DATE: March 2, 1988

As openers, I am happy to report that we generated at a very minimal cost an enormous amount of enthusiasm about USET among the 266 attendees at SUPA including our newly acquired employees. (Attendance list is attached.) Out next challenge will be maintaining that enthusiasm while we organize and design what we intend to sell.

Here are some of the things that were undertaken:

1) On Sunday (3:00 p.m.) the UTC LE's and TLO's Susan Saibana, Sid Alpert, Carl Wootten and I met in my suite for 2.5 hours introducing one another, discussing the UTC reporting and licensing process and the development of an interactive electronic information system.

2) SUPA cocktail party at 5:30 p.m. Sunday - Talked to many. Was approached by many looking to join USET as employees.

3) On Sunday evening I went to dinner with the technology managers from the University of California, Wisconsin and Washington University in St. Louis for the purpose of building good will with these big hitters.

4) On Monday morning I announced at the plenary session the creation of USET and made available our folders which were sucked up nearly immediately. A copy of the announcement I gave is attached.

5) At 11:30 on Monday, I gave a presentation to the plenary session called "Washington in Review" which is attached. If you like it, we may want Maxwell to publish it. It needs some editing. My delivery was less than good, but I know it was well received by many anyway. Conceptually, it is one of my best pieces. If you have time, read it.

6) I took Bill Regan of the University of Columbia to lunch at 12:30 Monday and had a very interesting conversation on his approach to selling funded R&D projects. He is interested in coming to USET. I asked him to put together a plan on how he would want to operate and invited

him to Washington to talk to us after March 15. Bottom line is -- that for some reason Columbia charges industry less overhead than government for sponsored research projects. He got the university to give him the differential to run his office until he went into the black. If other universities function in a similar manner, we could use Bill to convince them to give us the differential to run a technical management office. Bill also seems to have a flair for organization. He put together an Ivy League technical management group that meets periodically to resolve common problems. We discussed possible regionalization. Incidentally, Sid Alpert has some problem with Bill.

7) After lunch met with Sid Alpert on the projects you asked him to look into -- good conversation. We took a first cut at a regionalization plan that he'll deliver to you. It needs work but not bad stuff. Sets out best major university targets based on regional USET offices. You've seen many on the list already. Sid wants to stay in Connecticut at least for now -- some of the regionalization concepts are driven by that desire. On the law firm concept -- Sid wants that in Connecticut too. I resisted because we need <u>at least</u> Sid in Washington. Location is problem. Sid wants to be in law firm outside of USET. I would be "of counsel" to the law firm. Could be a viable option. <u>Very</u> clear from SUPA attendance that lawyers are hanging around <u>all</u> over. Also remember 900 patents issued to universities in 1987. See my discussion of patent statistics in my speech.

8) SUPA cocktail party from 5-7 p.m. on Monday evening -- lots of enthusiasm from morning announcement, speech, UTC people mixing, etc.

9) All UTC people met together for the first time Monday afternoon and discussed their progress -- I purposely did not attend -- Jake and Dave reported the meeting to me Tuesday morning -- Bottom line -- TLO's told Carl that his electronic information and matching system doesn't work and no one is using it. (Carl said nothing to me about the meeting.) More important -- payments to universities are slipping -- Jack should take care of that <u>immediately</u>. Jake and Dave reported other problems which I will advise on separately. They were pleased with our delegation letter.

10) USET cocktail party 7-10 Monday -- very successful -- over 100 people visited -- difficult to talk to them all but lots of enthusiasm. the following indicated an interest in services:

Medical College of Wisconsin (Milwaukee, WI)
University of Florida (Gainsville, FL)
Battelle-Pacific Northwest Labs (Richland, WA)

New York Medical College (Vahulla, NY)
University of British Columbia (Vancouver, BC)
Simon Frusen University (Vancouver, BC)

Some insights from the above:

1) SUPA is a good place for the disparate parts of USET to retreat in the future. We did a lot for espirit de corps.

2) Two of the TLO's appear to be winners; the other two are question marks -- all need to be proven by performance, but it's not clear that goals have been spelled out well enough.

3) Eddie did little to improve his status.

4) Carl showed that he has a significant and important outreach that we need to keep intact. However, his management skills still remain doubtful. Jack, Dave and John indicated that Carl was considerably chastened by our intervention and was on his best behavior at SUPA. Carl seems to have a general problem dealing with subordinates.

5) Everyone has a different opinion on how to develop the electronic information system (EIS). The two computer people, Dave and Bob (the TLO from Georgia Tech), were decidedly skeptical primarily on the basis that if a subscriber looked for something and found nothing, they would not look again. While there was extensive discussion on the EIS, there were no new ideas. Susan Saibara is strictly a marketer and does it by rote. Needs lots of preparation. A need for an EIS seems clear from the fact that two systems were on display at SUPA which I asked Susan Saibara to report on. Further, there were 43 industry outreach people in attendance. In addition, the Genentech outreach person indicated in his SUPA presentation that his staff spends 85% of their time looking.

6) Two industry people indicated they were having problems completing deals at HHS, which suggests the need for our consulting service.

7) The representative from the Agriculture Department indicated they have 35 collaborative agreements in progress.

SUPA Announcement

USET is a start-up company fueled by private funding and incorporated in Delaware but conveniently housed in the Washington, D.C. area.

Our goal is to provide a comprehensive group of services to assist universities, federal laboratories and industry to facilitate their interaction in the management of technology.

One of our first actions has been to acquire two companies that have staffs trained in fostering that interaction. I think you are all aware of Carl Wooten's UTC which is now a component of USET. In addition, USET will shortly acquire the electronic information staff that developed and marketed the Telescan stock analysis program which has 20,000 users.

Initially our focus will be on enhancing the services provided by UTC to its clients, but we would be happy to hear from others who have an interest in that kind of service. In addition, we will be offering consulting services to industry who need assistance in negotiating cooperative R&D arrangements with the federal labs under P.L. 99-502.

In the future we will be offering an interactive electronic information system to our UTC client base and to anyone else wishing to manage their own technology and also assistance in new start-ups and further development based on ~~other~~ equity positions.

For more details please pick up one of our folders, but please note we will not be in our McLean, VA offices until after March 15.

We also invite you to an open bar and hors d'oeuvres in the Marlin Club which is shown on the hotel map of their grounds at 7:00 - 9:00 tonight to visit with the USET staff.