AUTM

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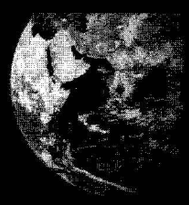

Recollections:

AUTM

Bayh-Dole

AUTM 30 years of innovation

Recollections: Celebrating the History of AUTM and the Legacy of Bayh-Dole

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Printed in the USA.

Introduction

For the those of you lucky enough to attend the 2004 AUTM Annual Meeting℠ in San Antonio, you know firsthand the synergy, camaraderie and boundless enthusiasm that permeated this event. Nowhere was this more apparent than during the plenary session marking the 30th anniversary of the founding of the association. A very special lineup of technology transfer luminaries and AUTM founders — such as former U.S. Senator and co-author of the Bayh-Dole Act Birch Bayh and AUTM Founder and Bayh-Dole Advocate Howard Bremer, J.D., Wisconsin Alumni Research Foundation — highlighted this once-in-a-lifetime celebration. Attendees of this momentous event were privileged to hear personal accounts of the humble beginnings of the association, as well as the struggle that marked the passage of Bayh-Dole.

Time would not permit us to hear from every one of the special people on the stage that day. But this history is too precious to be lost forever. So, among these pages, we are pleased to present you with a small slice of this historic event by reproducing excerpts from the speeches that were given, or in some instances, prepared for the plenary session.

As I read this document, I realized how much more this publication is than just an historical account. These stories offer inspiration and hope to the technology transfer professionals everywhere who will carry on the legacy of these great and visionary men.

I also feel such gratitude to these visionaries for having the foresight and courage of their convictions to make so much possible. And although we can surely never fully express our deep appreciation for their great work, let me say, on behalf of all the AUTM members, thank you.

Ann Hammersla, J.D., AUTM President
Massachusetts Institute of Technology

A Quick History of Bayh-Dole

By Joseph P. Allen

Also present at the plenary session celebrating the 30th anniversary of AUTM was Joseph P. Allen. Allen, who was president of the National Technology Center from 1995 until earlier this year, presented a well-received "Quick History of Bayh-Dole." Throughout this booklet, you will find pertinent quotes from key players in the Bayh-Dole Act's birth that Allen used to illustrate his remarks.

Still collaborating: Joe Allen, former president of NTTC, (left) confers with Birch Bayh, former U.S. senator and co-author of the Bayh-Dole Act of 1980, during the 2004 AUTM Annual Meeting plenary session.

Joseph P. Allen, who is currently with the WV High Technology Foundation, was named president of the National Technology Transfer Center in 1995. Prior to joining the NTTC, he served as director of the Office of Technology Commercialization in the U.S. Department of Commerce. The office provided policy and guidance for developing and implementing technology transfer laws. There he was involved in the passage of major commercialization laws, including the 1986 Federal Technology Transfer Competitiveness Act, which opened federal laboratories to doing R&D partnership with U.S. industry. Allen was the key negotiator in several international agreements, including the U.S.-Japan Science and Technology Agreement, which brought U.S. international agreements into alignment with U.S. technology transfer laws. He was a professional staff member of the U.S. Senate Judiciary Committee, where he guided the Bayh-Dole Act of 1980 into enactment. In 1999, he received the prestigious Bayh-Dole Award from AUTM for his service in technology management. Recently, he co-authored Technology Transfer for Entrepreneurs, *published by Praeger Press.*

Bayh-Dole First Introduced*

"A wealth of scientific talent at American colleges and universities — talent responsible for the development of numerous innovative scientific breakthroughs each year — is going to waste as a result of bureaucratic red tape and illogical government regulations....."

"Unless private industry has the protection of some exclusive use under patent or license agreements, they cannot afford the risk of commercialization expenditures. As a result, many new developments resulting from government research are left idle."

— Sen. Birch Bayh's introductory statement, Sept. 13, 1978

Plenary Session: Celebrating 30 Years of AUTM and the Bayh-Dole Act

By Birch Bayh

During the 2004 AUTM Annual Meeting, former U.S. Senator Birch Bayh shares his account of the development, passage and impact of the Bayh-Dole Act.

It is quite an honor to have the opportunity to share my thoughts with you this afternoon. It is particularly meaningful to share the stage with the founders of your internationally recognized organization. I feel a kinship with those who started this new professional society these many years ago. They had a dream and a vision, and, today, we are grateful that their vision has come true.

Tom Brokaw has recognized those American citizens of the World War II generation as what he rightly calls the Greatest Generation. Today, we are honoring the founders of AUTM, who can be called the Greatest Generation of a Technology-Driven World. They not only founded AUTM, they also fundamentally changed the American economy when they laid the groundwork for coupling our research universities with innovative American companies. Today, with almost 25 years of hindsight, this relationship is too often taken for granted. This is a serious mistake. All too many Americans are unaware that the technology explosion that they take for granted didn't just happen.

Like the generation that won both our political and economic freedom in World War II, succeeding generations also have a duty to defend these hard-won freedoms or they begin slipping away. This is also true of the technological inheritance that the founders of AUTM have given us. The need to protect this inheritance is the theme that I would like to share with you today.

When we began the struggle to pass what came to be known as the Bayh-Dole Act, I felt like the old Hoosier farmer I once heard about. It seems that a Chicago banker got lost on the back roads of Indiana on his way to an important meeting. Finally, realizing that he had no idea where he was and that his confusion was getting worse, the banker saw a farmer turning his cows out to pasture. Stepping out of his Cadillac, he hailed the farmer asking, "How do I get to Indianapolis?" Pausing for a good long minute the farmer replied, "Well, if I was you, son, I sure wouldn't start from here."

Like the banker, we didn't have any choice but to start from "here." "Here," in 1978, was not a very pleasant place. It seemed to us as though many of our citizens had lost confidence in America's ability to right itself both politically and economically.

Our journey out of the wilderness began with a call to my office in the summer of 1978 from Ralph Davis of Purdue University. Like many other universities, Purdue was making cutting-edge discoveries with federal dollars, but the government's policy of taking patents away from universities killed the incentives necessary for innovative companies to develop new ideas. We invited Ralph to my office to discuss the problem. Ralph brought along Howard Bremer [an attorney at the Wisconsin Alumni Research Foundation] and Norman Latker [department patent counsel with the Department of Health, Education and Welfare] — two individuals whose vision would be critical to our success.

One lesson we should underscore right here is: Don't underestimate your power in Washington. Your senators and congressmen take their constituent universities very seriously. Whenever Purdue contacted my office, we responded because I saw Indiana's universities as important cornerstones to our prosperity. The same is true for all states.

The result of that meeting with Howard, Norm and Ralph was the introduction of new legislation. I asked Sen. Bob Dole to join me, and the battle began. While Bob and I didn't always see eye to eye, we both agreed that the U.S. could no longer afford to waste billions of dollars on university and small-business research.

My opening statement for the first hearing on Bayh-Dole is still timely: "The United States has built its prosperity on innovation. That tradition of unsurpassed innovation remains our heritage, but without continued effort, it is not necessarily our destiny. There is no engraving in stone from on high that the U.S. shall remain No. 1 in international economic competition. In a number of industries, we are no longer even No. 2. New incentives and policies are needed to reverse this trend. The University and Small Business Patent Procedures Act (this was the original name of Bayh-Dole) will be a step in the direction of encouraging innovation and productivity in the United States..."

It is in everyone's interest to ensure that the fruits of American inventive genius are delivered to the marketplace as quickly as possible and are not simply left to gather dust at the Patent and Trademark Office because of indifference or bureaucratic delays.

Standing squarely in our way was Adm. Hyman Rickover, father of the nuclear navy. To the admiral, allowing universities and small businesses to own inventions made with government support made no sense. Adm. Rickover asked to testify against our bill.

While we had strong backing on the Judiciary Committee because of the calls from the universities and small companies in support of our efforts, someone as formidable as the admiral could shake that support. We needed effective counter witnesses. We turned to your founders. Howard Bremer and Niels Reimers [Stanford University] agreed to testify and did an outstanding job. They were our first pillars. The other essential pillars were equally strong testimony from our small-business witnesses. Combining universities and small businesses was the key to our success.

Illustrating the power of this combination, I remember one afternoon when I was at my desk on the Senate floor, and an excitable Joe Allen [a Congressional staffer at the time] came bounding up to report some good news. "Senator, we just got two more sponsors. Senators Kennedy and Thurmond just signed on," he beamed. Well, getting Ted Kennedy and Strom Thurmond to agree was certainly an achievement, but I couldn't help but kid Joe by asking, "Are you sure this bill makes sense?"

As you know, the task of enacting legislation, like making sausage, is not for the dainty. We would pass one hurdle, only to face an even greater one. What kept us going was a deep belief that what we were doing was important for the nation's future. The more we looked into the problem of renewing American innovation, the more vital it became to free our universities from mindless bureaucratic red tape. It was equally important to allow those who were really driving our economic growth, entrepreneurial small businesses, to secure federal funding without jeopardizing ownership of resulting products.

Let the Game Begin*

"Prior to the effective date of the IPA, Dec. 1, 1968, no invention made at the University of Wisconsin with funds from DHEW had been licensed to industry — one invention not falling under the IPA was licensed after that date."

— Testimony of Howard W. Bremer, WARF

"In my opinion, government contractors — including small businesses and universities — should not be given title to inventions developed at government expense. That is the gist of my testimony. These inventions are paid for by the public and, therefore, should not be available for any citizen to use or not as he sees fit."

— Testimony of Adm. Hyman B. Rickover, "Father of the Navy"

— Hearings before the Senate Judiciary Committee on the University and Small Business Patent Procedures Act (May 16 and June 6, 1970)

Another factor in our determination to press on was that the core group who started this organization never lost faith, even when it cost them personally. It is not every day that a civil servant risks his career for an ideal. Yet this is what happened to Norm Latker when he ran afoul of his political bosses because of his support of our efforts. He lost his job. Bob Dole and I were proud to stand by him in his time of need and to get his job restored.

We finally succeeded in passing the bill because of the active university and small-business support we received. Through Howard Bremer's efforts, the University of Wisconsin made Rep. Bob Kastenmeier aware of the impact Bayh-Dole could have on his district. Bob was chairman of the house subcommittee with jurisdiction over patent policy, and he offered to accept our patent policy in exchange for our accepting administration proposals in other areas of intellectual property reform. We accepted.

Small businesses persuaded the White House to sign the bill. Even so, as you heard previously, bureaucratic resistance continued trying to undermine the law until two years after passage. Norm Latker succeeded in putting the administrative procedures of Bayh-Dole in place. The legal and policy framework was in place to help this bold experiment produce. And produce you did!

AUTM has done a great job of capturing the impact that Bayh-Dole has had over the years. At a time of significant job loss, universities should be proud that 450 new companies were formed from university technologies in your last survey, and more than 4,000 since passage of the law. You also launched 569 new commercial products in FY02 alone. Technology transfer in FY99 involving the licensing of inventions from universities, teaching hospitals, research institutes and patent-management firms added approximately $40 billion to the domestic economy and was responsible for creating 260,000 jobs. Experts like Alfred Berkeley III here today see university technologies as significant drivers of the Nasdaq stock market.

I must admit that I was very proud to read the thoughts expressed in the *Economist* in December 2002 that said: "Possibly the most inspired piece of legislation to be enacted in America over the past half century was the Bayh-Dole Act of 1980. Together with amendments in 1984 and augmentation in 1986, this unlocked all the inventions and discoveries that had been made in laboratories throughout the United States with the help of taxpayers' money. More than anything, this single policy measure helped to reverse America's precipitous slide into industrial irrelevance."

The just-issued report of the President's Council of Advisors on Science and Technology lists as its first recommendation, "Existing technology transfer legislation works and should not be altered." To that I say, Amen!

However, it is being altered. We have seen that DARPA [Defense Advanced Research Projects Agency] and now Homeland Security are consciously moving away from Bayh-Dole for their technology transfer practices. Articles are constantly appearing questioning whether Bayh-Dole is sophisticated enough for the current challenges facing R&D agencies. The old siren call of more centralized technology-management schemes (that is bureaucrats in Washington) are once again being heard. This trend must be stopped and reversed.

Let me challenge you, the present and next generation of AUTM. Policy-makers are sincerely trying their best to secure our future. They need and deserve your input. Never think that you can sit idly by and assume that someone is making your case for you. Don't assume that members of Congress and their staffs understand the fragile structure that supports our current success. One of our biggest concerns in writing Bayh-Dole was selecting an agency to oversee and protect it. Frankly, today, I do not see an effective countermeasure in the executive branch to those who are chipping away at the base of Bayh-Dole.

Let's be blunt. You must defend yourselves. We must say to the revisionists, stop! And, we must take the steps to see that they do. This is the task before you today if you hope to pass on the torch that these previous innovators have successfully handed to you. Don't underestimate your weapons. Don't fear the struggle. One advantage you have is that you now have a documented record that providing incentives to university and small-business innovators works. You performed in the hard, cold light of day. You have succeeded year after year, always reaching higher than before. You have proven again and again that, while it may appear to be messy to some, relying on the entrepreneurial character of America remains our best bet. Decentralized technology management still runs rings around systems relying on centralized government bureaucracy.

Let me share another story. Twenty-five years after President Lincoln made the Gettysburg Address, a prominent minister was chosen to read the speech at the battlefield. Dignitaries were gathered from around the country. Fearful of making any mistake in the well-known text, the minister worked for weeks to memorize the address.

Finally, the moment of truth came, and he recited a letter-perfect rendition to the massed audience.

Later a crowd gathered around him offering their congratulations for a job well-done. Out of the corner of his eye, the minister spied an old man who alone was not beaming. Finally, the man slowly approached the minister. "Son," he said, "You made an awful mess of Lincoln's talk." Taken aback, the minister replied, "Well, I'll have you know that I gave it line for line as President Lincoln did himself. What makes you think it was wrong?"

The old man replied: "You see, sir, I was right here when Lincoln spoke. You said the right words, but you still got it all wrong. You see, when you said, 'Government by the people, of the people and for the people,' you emphasized *government*. Son, Abe Lincoln emphasized the *people*."

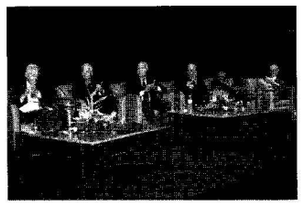
Bayh-Dole didn't emphasize the *government*, it emphasized the *people*. And you of AUTM are the people. The people of AUTM have made it possible for Bayh-Dole to exceed our wildest dreams. Let me challenge you here today, each of you, to stand up, join together, to combat those bureaucrats who threaten the future of Bayh-Dole. Let us send a clear message. Get back behind your desks and permit the American free-enterprise system to ensure that the future of Bayh-Dole is as glorious as its past. Together we can do this. We must.

One final thought. I have mentioned the Bayh-Dole bill several times. In all honesty, if we consider the countless efforts that made it possible to pass this legislation, it should be called the Joe Allen bill.

Birch Bayh is a partner in the Legislative and Regulatory Group of Venable LLP's Government Division, Washington, D.C. Since serving the state of Indiana as a U.S. senator from 1963 until 1981, Bayh has been representing individuals, corporate clients and public entities before all three branches of government during a law career that has spanned more than 20 years. During his Senate career, he served on the Judiciary Committee, the Appropriations Committee and the Environment and Public Works Committee. He also served as chair of the Senate Select Committee on Intelligence, the Senate Appropriations Subcommittee on Transportation and the Senate Subcommittee on the Constitution. Bayh also chaired the National Alcohol Fuels Commission and the Office of Technology Assessment Study on the Patent System. In addition to his work on behalf of the Bayh-Dole Act, Bayh authored two amendments to the Constitution — the 25th Amendment, which covers the presidential and vice presidential succession, and the 26th Amendment, which lowers the voting age to 18 — and is author of Title IX to the Higher Education Act, which mandates equal opportunities for women students and faculty.

Musings

By Howard Bremer, J.D.



Founding members and long-time leaders reminisced about early days of AUTM during the 2004 AUTM Annual Meeting opening plenary session. From left to right: Howard Bremer, J.D., Wisconsin Alumni Research Foundation; Norm Latker, J.D., Browdy and Neimark; Niels Reimers; Earl Freise, Ph.D.; Larry Gilbert, J.D., California Institute of Technology; and Ray Snyder, J.D., M.B.A.

In contrast to AUTM's *growing pains* over the last few years, generated by the university sector's success under the Bayh-Dole Act, as well as the acceptance of *technology transfer as a recognized profession*, the early years of SUPA could be categorized as experiencing survival pains. There were mixed feelings among its members as to whether another university-oriented organization was needed and whether the fledgling organization, *absent institutional support and membership*, could, in fact, survive.

We, on this stage, as well as many others, are pleased to see that the faith and efforts of the beginning few culminated in the growth and influence of AUTM that we witness here today.

The road was not easy. It could be considered to comport with Hannibal's comment in trying to cross the Alps to carry the battle to Rome: "If we cannot find a way, we must make one."

SUPA/AUTM did just that, through *education, persistence and perseverance, often in the face of what seemed like insurmountable odds.* Beginning as early as 1976, not an insignificant part of SUPA's activities was the participation in crafting and supporting, through given testimony and writings, as well as key collaborations and education, many activities and legislative efforts that became the evolution of the Bayh-Dole legislation and the ultimate establishment of a *uniform federal patent policy*. In the period beginning in about 1976 through the ultimate passage of the Bayh-Dole Act in 1980, a literal plethora of legislative bills was introduced into Congress to achieve that end. Each had its proponents and each had strong opponents, not the least of which were various government agencies, the most active of which were what is now the DOE [Department of Energy], NASA [National Aeronautics and Space Administration] and DOD [Department of Defense]. The opponents literally had a leg up on the university sector in that the rhetoric of the opposition lent itself readily to what I term as *sloganeering*. For example: "What the government pays for (namely research and invention derived from federal support) it should own." Also, "What the public pays for (in terms of tax dollars) should be available to the public free of charge." And in addition to that: "The public should not have to pay twice — first to support the research and then again in the form of assessed royalties." And, even further: "Permitting the universities to take title to inventions is a big giveaway of federal and taxpayer property." Even Ralph Nader made such accusations.

Needless to say, in this gathering, the case for the benefits from technology transfer does not lend itself to such simple statements. The education of the opposition to merely accept, but not necessarily embrace, the concepts underlying technology transfer was a long, slow and arduous task.

Even after the passage of the Bayh-Dole Act, several of the opposing government agencies drafted regulations under the act as a *voluntary gesture* — regulations, which upon close review, would have had the effect of controverting the act. Even today, the sloganeering goes on in some quarters.

Over the First Hurdle*

"The bill is designed to promote the utilization and commercialization of inventions made with government support....

Ultimately, it is believed that these improvements in government patent policy will lead to greater productivity in the United States, provide new jobs for our citizens, create new economic growth, foster increased competition, make government research and development contracting more competitive, and stimulate a greater return on the billions of dollars spent each year by the government on its research and development programs."

— Senate Judiciary Committee Report, Dec. 12, 1979, on S. 414, unanimously approved and reported to the Senate

SUPA also engaged in its early years in the judicial process through the filing or support of amicus briefs in the *[Parker v] Bergy and [Diamond v] Chakrabarty* cases — the latter case being the one to establish that life forms were patentable subject matter — and the *Dawson Chemical Co. v Rohm and Haas Co.* case, the decision in which an apparent loophole in process patent protection was closed. The SUPA/AUTM historical pamphlet, which was in your registration packet [*30 Years of Innovation*, also available on the AUTM Web site at http://www.autm.net], contains the names of many who made important contributions to SUPA/AUTM, including the list of its presidents. There are others whose names do not appear and who made significant contributions in the early and formative years.

In recognition, I will give you a few of those names:

- *William Fornell, University of Minnesota*, who was to have been SUPA's second president but could not accept the position because of an apparent conflict.
- *Bill Burke, University of Georgia, vice president for Eastern Region*, who actively promoted SUPA's agenda, arranged meetings and did whatever task he was asked to do.
- *Jesse Lasken, assistant to general counsel, National Science Foundation*, who was a major factor in drafting analytical papers and position papers that served to "sell" the concepts and precepts of a uniform federal patent policy, SUPA's interests and legislative initiatives.

- *Two of AUTM's past and deceased presidents: Roger Ditzel, University of California, and Ed MacCordy, Washington University.* Each of these gentlemen did yeoman's service on AUTM's behalf and was in attendance at that Case Western meeting 30 years ago.
- *Ray Snyder, University of Missouri,* who served in many capacities for SUPA and AUTM and still today is a strong advocate of the university sector's views and agenda in the ABA [American Bar Association]. Ray was one of the first aboard at SUPA's organization.
- *Allen Moore,* the organizer of the meeting at Case Western Reserve University in 1974, during the course of which SUPA was founded, and who challenged the university sector to get involved.
- *Vladimir Dvorkovitz, Dvorkovitz & Associates,* who gave SUPA many opportunities to have a forum in its lean financial years.
- *David Eden, special assistant to Betsy Ancker-Johnson, Ph.D.,* when she was assistant secretary for science and technology in the Department of Commerce and got SUPA members involved in legislative activities.
- *And last, but certainly not least, Mary Spores, Northwestern University,* who was SUPA's secretary for many years and kept the organization and its officers on an even keel with a real devotion to that duty and to keeping SUPA a viable organization.

Since this is, in a sense, a memorial gathering, it would be fitting to add many other names to this list who have contributed so much to the organization during the course of its existence. However, our focus and charge was to address the early years, which I have attempted to do in reciting the few names I have given you.

Let me close with an adaptation from a line in Lincoln's Gettysburg Address, which too was given as a memorial: "The world will little note nor long remember what we say here today, nor the names of those who have brought us where we are, but we should not forget what they did."

On a lighter note, the hallmark of the SUPA/AUTM learning and advocacy experience can be summed up by a few lines from the ballad of Pretty Boy Floyd: "As through this world you wander you'll meet lots of crooked men — some will rob you with a six-gun and some with a fountain pen."

A past president and early member of AUTM, Howard Bremer, J.D., emeritus patent counsel, Wisconsin Alumni Research Foundation, was instrumental in the passage of the Bayh-Dole Act and its predecessor, the Institutional Patent Agreement. For more than 20 years, in addition to his duties at WARF, Bremer spent countless hours lobbying for legislation, testifying before Congress, educating the public and mentoring others in the technology transfer profession. In addition, his contributions to AUTM are unparalleled and continue today. He serves on the AUTM Journal™ *Editorial Advisory Board; co-authored the latest* AUTM Educational Series™, *"Academic Technology Transfer: Driving Public Use of University Research;" and continues to represent AUTM nationally and abroad as a spokesperson and staunch supporter of AUTM and technology transfer. In 1980, Bremer received the first ever Birch Award (now the Bayh-Dole Award) from AUTM's predecessor SUPA.*

The Early Years

By Earl J. Freise

Other members of this plenary session panel have addressed issues and the background leading up to the enactment of the Bayh-Dole Act. I'd like to give my perspective as to the circumstances and environment that led to the need for and formation of the Society of University Patent Administrators, now AUTM.

In the mid-1970s, many research universities were required to develop and operate institutional patent management procedures in order to receive approval for an Institutional Patent Agreement from the government. The implementation of such procedures often fell to the sponsored research office at those institutions that did not have established patent programs such as MIT, Stanford or Wisconsin Alumni Research Foundation. Such was my situation at Northwestern University, where one of my responsibilities as a staff member in the sponsored research office was to act as liaison with the government on patent issues. Needless to say, I, like many of my colleagues at other universities, was anxious for help and knowledge in how to represent our faculty and our institution in patent and licensing matters. Therefore, when the idea of a society or association to provide networking and education in the area of university patents and inventions was proposed by George Pickar, Ph.D., I approached the administration at Northwestern University and asked that they become a supporting institution. They agreed and provided a payment of $100 to found the society.

At the first organizational meeting of SUPA at the Pick Congress Hotel in Chicago in 1975, the bylaws for the society were approved by the individuals attending the organizational meeting. Since I lived in the Chicago area, but at some distance from the hotel, I left before the organizational meeting was finished. The next day I received a phone call informing me that I had been elected to fill the position of secretary/treasurer. Obviously, I learned a lesson to never leave early from a meeting where elected offices or job assignments are being decided.

In the early years, the annual meetings of SUPA were held in conjunction with meetings that Vladimir Dvorkovitz's technology transfer company organized. He graciously provided meeting space and was a strong supporter of the society in its formative years. While SUPA had established a $10 initiation fee and annual dues of $30, as treasurer, I could not justify sending out invoices for renewal annual dues in the first few years since the society was not incurring any significant costs for its operating expenses or the annual meeting. I just couldn't see asking members for $30 each year when the society was not providing any services or training programs. How things have changed! Finally, Larry Gilbert put together some notes and how-to materials on patents and licensing and SUPA issued them as one of its first set of training materials.

One other fortunate event occurred in the early years. Since I didn't have the time or necessary desire to serve as secretary/treasurer for the organization, I asked my administrative assistant at Northwestern, Mary Spores, to take over the day-to-day paperwork and the maintenance of the membership records and accounts. She subsequently became the secretary/treasurer and served very well in that role during the growth years of the society.

I must say that I am absolutely amazed and astounded by the vitality and breath of activities that AUTM and its members provide today. In many ways, it is much more than I had ever envisioned in the 1970s. The extensive workshops and training activities are the core of the organization and am delighted to have played some small role in fostering the founding of an organization that can provide these much-needed activities. I can't wait to see what AUTM will be like in another 30 years.

No One Said it Would Be Easy*

"Dear Colleague:

When the Senate takes up S.414, a bill to establish a uniform federal patent policy for small businesses and nonprofit organizations, we intend to offer an amendment extending this policy to all government contractors."

— Feb. 5, 1980, to all senators from Senators Cannon, Stevenson, Packwood and Schmitt

"This is the worst bill I have seen in my life."

— Sen. Russell Long to Bayh's staff

Founding member Earl Freise, Ph.D., retired in 1999 after nearly 40 years in the academic sector. His career started as a full-time faculty member in materials science at Northwestern University in 1962. After a brief stint in industry with Western Electric, he returned to Northwestern in the newly formed Office of Sponsored Programs. Part of his duties was to liaise between faculty and patent attorneys and government agencies and potential commercial parties at a time — the early 1970s — when successful technology management programs were rare and many research office administrators handled the patent programs. Consequently, when the idea surfaced to form an organization devoted to the education and exchange of information among university patent administrators in 1973, Northwestern supported the effort. In addition to being a founding member, Freise went on to serve as the organization's first secretary/treasurer and later served as vice president for the Central Region, as well as chair of the Nominating Committee. Throughout the rest of his career, both at the University of North Dakota and the University of Nebraska – Lincoln, Freise continued to work for technology transfer and patent programs.

George Pickar and the Formation of AUTM

By Lawrence Gilbert, J.D.

Sometime in 1973 I received a call from Gene Mann, the then director of sponsored programs at the University of Miami. Gene asked if I would be willing to spend a few days at his university to consider the merits of forming at UM a technology transfer office.

I accepted, spoke with various deans and department heads about their programs, the size of their research budgets and other such details. I gathered the data and submitted a report to Gene in which I recommended that a program be adopted.

Little did I know that Gene had an ulterior motive in requesting that report. An old buddy of his, George Pickar, Ph.D., had recently retired from the law school at Miami and was looking for something to do. With my report in tow, Gene promptly hired George as the first director of the Office of Technology Transfer.

I Think I Can, I Think I Can, I Think I Can*

"What sense does it make to spend billions of dollars each year on government-supported research and then prevent new developments from benefiting the American people because of dumb bureaucratic red tape?"

— News From Birch Bayh, April 23, 1980, on the approval of S. 414 (Bayh-Dole) by the U.S. Senate on a 91-4 vote

During the following year, George contacted me frequently about forming a new organization solely to support technology transfer at universities. I wasn't really interested because I had made a commitment to head the LES [Licensing Executives Society] Technology Transfer Committee. Did we really need another organization? If nothing else, George was persistent. Would I support it, if he proposed the idea at an upcoming Case Western Reserve University meeting to be held in October of 1974? A private meeting was held there, and seven brave souls agreed to commit $100 each to legally form the organization and establish a banking account. George took on that responsibility, incorporated it in Florida and established a banking account there.

Although George became the first president, in truth, he did not seek it. He tried to pass that on to me, but I refused and instead nominated George. The rest is, as they say, AUTM.

Founding Member Lawrence Gilbert, J.D., is the director of technology transfer, California Institute of Technology, where he has been responsible for the formation of more than 60 startups based upon or associated with university research. Gilbert was formerly the director of patent licensing for Massachusetts Institute of Technology. His prior experience includes patent consultant to various universities, including Boston University, Brandeis, Tufts and the University of Massachusetts Medical Center and as the director of Patent and Technology Administration of Boston University. He is a member of the Executive Committee of the MIT/Caltech Enterprise Forum and formerly a member of the board of directors of the Southern California Biomedical Council and a member of the Advisory Committee of the Business Technology Center, a high-tech incubator sponsored by the Los Angeles County Community Development Commission. Throughout his career, Gilbert has been a frequent lecturer on patent and licensing matters and written several articles in the field.

The Evolution of Modern Technology Transfer

By Norman J. Latker, J.D.

In 1885, after Louis Pasteur saved a boy with rabies, patients flocked from all parts of the world to his office, but it was too small to receive them. The next year, before the Academy of Sciences, Pasteur declared, "There is a need for prophylactic measures against rabies. An anti-rabies vaccine should be created." The request from the father of microbiology resulted in an extensive, international public subscription generating a fantastic burst of generosity that built the Pasteur Institute as a clinic for rabies treatment, a research center for infectious disease and a teaching center, with Pasteur as director.

But, in subsequent years, as the early and fundamental discoveries in the life sciences evolved, it became clear that the resources necessary to bring them to practical life exceeded what their investigators could provide through their own efforts.

Indeed, Professor and Inventor Frederick Cottrell recognized "...a number of meritorious patents given to the public absolutely freely have never come upon the market chiefly because what is everybody's business is nobody's business." This observation led Cottrell to donate his patents and their royalty return from his electrostatic precipitator to fund the creation of the Research Corporation in 1913 to serve as the technology transfer agent for investigators isolated from the commercial marketplace.

In 1925, Professor Harry Steenbock made a similar donation of his vitamin D patents to fund the creation of the Wisconsin Alumni Research Foundation limited to serve as the technology transfer agent only for investigators at the University of Wisconsin at Madison. These targeted services were intended to provide greater attention to reported inventions than previously provided by universities.

During these early years of the century, the services of Research Corporation and WARF were clearly limited by their resources. The majority of investigators were left to determine on their own whether to pursue moving their discoveries into practical life.

The huge increase in funding of research and development by the federal agencies proposed by presidential science adviser Vannevar Bush following World War II brought with it the establishment of a patchwork of different policies covering the ownership of inventions resulting from this funding. Outside the Department of Defense, the policies were heavily weighted in favor of government ownership, resulting in either dedication to the public or nonexclusive licensing of the government's patent rights.

By the 1960s, it was clear to the science management at the National Institutes of Health that the department's title policy was an impediment to industry development of the life-science inventions resulting from NIH funding.

The problem was dramatized by increasing numbers of invention-ownership disputes involving inventions assigned without notice to NIH to industrial developers by NIH-grantee investigators motivated, as was Pasteur, to see their direct application to practical life.

Professor Charles Heidelberger, Ph.D., and the University of Wisconsin, after being publicly accused by Sen. Russell Long's staff of confiscating ownership of 5FU, a breakthrough cancer chemotherapy drug, and licensing it to an industry developer, successfully convinced the department that minimal government funds were involved in its conception.

Professor Robert Guthrie, a department grantee and the inventor of the then preferred test for PKU (Phenylketonuria) being marketed by an industrial developer under license, after being publicly pilloried for confiscating the invention, assigned ownership to the department.

These cases had a further chilling effect on industry involvement as they suggested that any amount of government funding touching an industry invention could result in a similar claim of right by the government.

Thereafter, in 1968, the Government Accounting Office added additional urgency to resolving the problem, by reporting that, due to department patent policy, inventions resulting from all of NIH's medicinal chemistry grants could not find the necessary industry support to continue development.

Over the First Hurdle*

"The bill is designed to promote the utilization and commercialization of inventions made with government support....

Ultimately, it is believed that these improvements in government patent policy will lead to greater productivity in the United States, provide new jobs for our citizens, create new economic growth, foster increased competition, make government research and development contracting more competitive, and stimulate a greater return on the billions of dollars spent each year by the government on its research and development programs."

— Senate Judiciary Committee Report, Dec. 12, 1979, on S. 414, unanimously approved and reported to the Senate

Finally, in 1969, responding to increasing internal pressure, the department changed its patent policy and established a uniform institutional patent agreement that left ownership to grantee institutions that agreed to staff a technology transfer office to manage and license these rights when they requested an agreement. The conditions attached to these agreements reflected the accepted practices of Research Corporation and WARF. The National Science Foundation followed with similar changes in 1972. Thereafter, DHEW [Department of Health, Education and Welfare] and NSF staff responsible for IPA policy joined together in a long series of interagency discussions aimed to establish the IPA policy throughout the government agencies.

In 1974, the newly established IPA holders formed the Society of Patent Administrators to enhance outreach to industry so as to overcome industry's continuing resistance to development of government-funded inventions because they were not made in the companies' laboratories.

In that same year, members of the society found their political legs by assisting in preventing the inclusion in legislation creating the Energy Research and Development Agency of a requirement for government ownership of inventions resulting from its funding.

By 1976, 75 IPAs had been negotiated and executed with institutions that received well more than 50 percent of the annual DHEW extramural funding, and GSA [General Services Administration] regulations expanding the IPA policy to the rest of the government agencies, not otherwise covered by statute, were accepted by the interagency Federal Council for Science and Technology and published for comment.

Also in 1976, NIH Director Donald Frederickson agreed, with the consent of the FCST, to permit the University of California and Stanford to administer the Cohen-Boyer gene-splicing patent under their IPAs. Stanford's nonexclusive licensing of Cohen-Boyer to dozens of commercial concerns sparked the start of the biotech industry.

Notwithstanding the clear record of increasing licensing by IPA holders, DHEW Secretary Joe Califano instituted a 1977 "reassessment" of the department IPA policy that stopped further invention processing on the ground that the introduction of new technology into the marketplace was escalating the price of health care, which required department oversight. Legislation was introduced in the Senate to provide the department with this oversight authority at the same time.

Simultaneously, Sen. Gaylord Nelson of Wisconsin initiated hearings to discuss the legality of IPAs and the GSA regulations expanding their use to all government agencies.

The Califano and Nelson actions served as the flashpoint for organizations having IPAs to pursue legislation to assure continuance of the 1969 department policies and their further expansion by the GSA regulations to other federal agencies having conflicting policies. Led by the University of Wisconsin, Stanford University, the University of California and Purdue, the IPA community, over a period of two years, was so successful in making their views known to the Congress that Bayh-Dole passed the Senate by a vote of 91-4.

Some suggest that the primary purpose for Bayh-Dole is the production of income for those who participate in the conception and delivery of inventions to the marketplace. I do not believe that was the primary motivation of the act's architects. Income, which was a distant possibility at the time of enactment, was viewed only as a collateral benefit of success. The act is structured so as to assist investigators in their pursuit of direct application of their discoveries to practical life up to the point of either success or definitive failure.

As such, investigators intuitively understand that the act provides to them the possibility of their advancing mankind, as Pasteur did, which explains their growing enthusiasm to participate.

Early AUTM member Norman Latker, J.D., has spent the last decade as managing attorney for Browdy and Neimark, a 35-person law firm specializing in intellectual property law. In addition, Latker has worked in several governmental agencies, including the Department of Commerce, Small Business Administration and the Department of Health Education and Welfare. It was while serving as department patent counsel for DHEW (predecessor to the Department of Health and Human Services) that Latker teamed with Howard Bremer, J.D., to negotiate the Institutional Patent Agreement, a precursor to the Bayh Dole Act, which Latker also helped to construct. While director of the Office of Federal Technology Policy at Commerce, Latker supervised the development of the Bayh-Dole implementing regulations and the Technology Transfer Act of 1986. In 1983, AUTM awarded Latker with the Birch Award for "unselfish commitment to establish and preserve the values of the technology transfer process." Latker is also the recipient of honorary doctor of law degrees from the universities of Illinois and Wisconsin.

AUTM/SUPA: A Brief History

By Ray E. Snyder, J.D., M.B.A.

There actually were a number of historical acts and events that long predated the formation of the Society of University Patent Administrators (now known as AUTM) that should be placed into context for a proper understanding of why AUTM exists today.

In the years prior to WWII and for several years thereafter, the licensing of intellectual property did not amount to much. There were a few exceptions, like the catalytic cracking of oil; but for the most part, the royalties generated were insignificant by today's standards.

In this same time span, patents were generally not very highly regarded. Many companies reckoned that, if they infringed another's patents, there was always a chance that they would not get caught. Or, if they did get caught, the damages would not be more than a slap on the wrist. When Howard Markey was appointed to the U.S Court of Customs and Patent Appeals — now the U.S. Court of Appeals for the Federal Circuit — all that changed. Markey believed that patents should be respected and enforced, and infringement became a very perilous activity.

The U.S. Supreme Court has also had an indirect hand in the formation of SUPA. The *U.S. v Dubilier* case, decided in 1933, dealt with the ownership of patent rights, in addition to other things. In essence, the court held that, in the absence of a written agreement, there was no obligation of an employee to assign the title to his invention to his employer — the employer retained only a shop right. You can bet that every major employer in the country corrected that situation in a hurry. Some employers have even gone so far as to claim employee inventions not made in, or even related to, the course of their employment. In today's world, the outcome may depend on the employee's bargaining power. However, if anyone now goes to work for a large employer in a technical capacity, it is unlikely that he will receive his first paycheck until this matter is resolved.

The significance of the *Dubilier* case to the universities became apparent in the post-Sputnik era when the federal government started to fund a large part of the universities' research. The attitude of the government sponsors generally was: If the company employers require the assignment of employee inventions and, if Uncle Sam is now paying the bills, why should not the inventions be assigned to Uncle Sam? It is difficult to argue with this logic.

The picture becomes clouded when one realizes that the U.S. government issues the patents on the inventions in the first place. To turn around and then take title to the selfsame patents is a little like a bank writing checks to itself on its own account. It may be legally possible to do so, but no one should be deluded into thinking that anything valuable is created thereby. An invention only takes on value when someone does something with it.

Not all government agencies required the assignment of inventions. At one time, the National Institutes of Health sent out a letter to all of its university and other institutional customers asking what was their policy on dealing with patents. Of the 18 or 19 universities that responded, all were given an Institutional Patent Agreement, which allowed them to retain title to their own patents. The NIH, in return, received a nonexclusive license for its own use, or shop right. It often pays to read and respond to one's mail.

The Department of Defense also had a less than rigid patent policy. This was demanded by its company contractors, which were reluctant to give up their patent rights, especially if they included background patent rights.

Other than these examples, the government agencies adopted a fairly rigid stand and demanded the assignment of any invention made in the course of research that they sponsored. In a few specific cases, an agency would release title to a university, but more often the agency's policy hinged on the intransigence of the person running their program.

This then was the environment within the government with which the universities had to contend.

At the 1973 annual meeting of the National Council of University Research Administrators, part of one afternoon was devoted to patents. Most of this involved the compliance with government requirements. Not an exciting undertaking. The truly significant part of this meeting was the principal luncheon speaker, Betsy A. Johnson, Ph.D. At that time, Johnson held the post of deputy secretary of commerce, and part of her duties included the oversight of the U.S. Patent and Trademark Office. The theme of her speech was astounding. She said that the government's treatment of the universities' inventions was disgraceful, and why did we not get together and do something about it.

That was invitation enough. Thus was formed the Society of University Patent Administrators. Within two years, there were more than 50 members.

In 1975, The Energy Research and Development Administration (the precursor to the Department of Energy) held some hearings on the government's patent policies. By this time, the government had taken title to more than 27,000 patents and the government's own statistics were quite revealing. Less than 4 percent were licensed to anyone. In a few cases, a professor who had developed and patented a piece of apparatus for use in his own laboratory was required to take a license. This counted in the 4 percent. Also, many of the licenses were royalty-free. The best that could be said for the government's patent program was that it was not working.

The Bayh-Dole Act had its start with the first oil crisis. The story as related by Ralph Davis (an AUTM founding member) was that a professor at Purdue University had invented a process for converting corn stover into a burnable liquid fuel (not Gasahol), and a number of companies had expressed an interest in developing the process. The research work had been sponsored by the Department of Agriculture, which held title to the invention, and it was necessary to obtain a release. This dragged on and on until all of the interested companies were long gone. This was Sen. Birch Bayh's introduction to the problem.

Apparently, someone in Kansas had a similar experience, which brought Sen. Robert Dole into the fray. This author recalls one invention made at the University of Missouri that brought the problem into focus. Two professors reported the invention, and no federal funding was involved. However, one graduate student who worked in the same laboratory had a National Science Foundation fellowship. On the strength of this involvement, NSF demanded title to the invention. The number of incidents like these began to multiply, and by the time the Bayh-Dole Act was introduced, it had 21 co-sponsors.

It became clear that there was a real interest in developing and bringing to market some of the universities' scientific achievements.

Thus, the goals of SUPA were clear to the members. The variegated and inconsistent government policies had to be changed! For a group of people who were trained and hired to deal with technical matters, this dabbling into politics was a real departure. Once dedicated to the task, it was amazing how effective these people could be.

There were a few individuals within the government who saw merit in what the universities were trying to do. Norm Latker, department patent counsel for the

Department of Health, Education and Welfare (predecessor to the Department of Health and Human Services), actually became a friend and supporter of the universities' cause. This did not set well with then DHEW Secretary Joe Califano, and Latker lost his job. Joe Allen initially served on Sen. Bayh's staff, and he too understood well what needed to be done. Allen and Latker have continued to be long-time supporters.

The Bayh-Dole Act was passed in 1980 arid signed by President Jimmy Carter in 1981. This was almost seven years after the formation of SUPA.

It is still a little early to measure the ultimate impact of this act. That it is having an impact cannot be denied. It is also worth noting that, in the passage of this legislation, no political contributions were made, no funding was required, and no one within the government, the universities, or the general public received a dime.

There may also have been a matter of fortunate timing. About the time the act was passed, there was the beginning of a groundswell in the formation of new enterprises, which is unabated today. At a technology exchange meeting in Dallas in 1985, David Birch of the Massachusetts Institute of Technology revealed that, in the month of September in 1983, more new jobs were created by new enterprises in the United States than were created by all of the Fortune 500 companies in the prior year, or by all of the European Economic Community in the prior 10 years. To many universities, the idea of a startup company was still beyond their charters, if not downright repugnant. In time this attitude has mellowed and probably every state in the Union has jumped on the bandwagon. If you are going to educate young people for the new economy, why not find out what it is all about? And have some fun in the process. While the success rate for new enterprises generally is still low, the success rate for university startups is considerably higher, and the few that succeed more than make up for all the losers. The chances for success are immeasurably increased if the participants have a vested interest in such enterprise. That is the American way, and that brings us to where we are today.

Founding member Ray Snyder, J.D., M.B.A., was a patent licensing consultant for more than 20 years serving various institutions such as Loyola University of Chicago, California Polytechnic State University, Northern Illinois University, University of Hawaii, Rensselaer Polytechnic Institute, Vanderbilt University, San Diego State University, Northwestern University, Michigan State University and University of Missouri. In addition, Snyder has taught physics and lectured on licensing; served as an expert witness on patents, licensing and royalties; and held management positions in industry.

As presented during Joseph P. Allen's "A Quick History of Bayh-Dole" during the 2004 Annual Meeting.