

HB

92

ALASKA STATE LEGISLATURE

Rep. Lesil McGuire, Chair
Rep. Tom Anderson, Vice-Chair
Rep. John Coghill
Rep. Nancy Dahlstrom
Rep. Pete Kott
Rep. Les Gara
Rep. Max Gruenberg



State Capitol, Room 120
Juneau, AK 99801-1182
(907) 465-4990
Fax (907) 465-6592

House Judiciary Committee

Memorandum

To: Leg. Legal
From: Vanessa Tondini, Committee Aide
House Judiciary Committee
Date: March 22, 2005
Re: CS Request

Please create a final draft House Judiciary Committee Substitute for work order # 24-LS0344\I, HB 92, incorporating the attached amendment. The bill was passed out of committee today.

If you have any questions, please call me at 4990.
Thank you!

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Conceptual Amendment #1 - PASSED

to CS HB 92 (EDU)
version "I"

by Rep. Gara

Retain parts of the "piercing the corporate veil rule" in cases of fraud or wrongful conduct.

(Amend to not allow the Univ. to escape liability in cases of fraud or wrongful conduct.)

Also, please provide an accompanying legal memo stating/certifying ~~that~~ ^{the intent of} that this amendment is in fact met in this version of the bill and that instrumentalities (good) will be allowed and that "bad" (see above) ~~will~~ ^{will} not.

FISCAL NOTE

STATE OF ALASKA
2005 LEGISLATIVE SESSION

Fiscal Note Number: 1
 Bill Version: CSHB 92(EDU)
 (H) Publish Date: 4/18/05

Revision Date/Time (Note if correction): _____ Dept. Affected: University of Alaska
 Title: University of Alaska and Corporations RDU _____
 Sponsor: Representative Kelly Component _____
 Requester: _____ Component No. _____

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
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CHANGE IN REVENUES ()						
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2005) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2006 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

The bill limits the university's legal liability to the amount that the university invested into a separate corporation for the purpose of advancing the public purpose of the university. This bill would create no additional cost for the University.

Prepared by: Pat Pitney
 Division: University of Alaska
 Approved by: Pat Pitney
 Agency: University of Alaska

Phone 450-8191
 Date/Time 4/15/05 1:53 PM
 Date 4/15/2005CS

SPIN-OFF COMPANY MODELS FOR UNIVERSITIES: *Hands Off, Hands On, or Up-to-Your-Neck*

Prepared by:

K. Diane McLean

Director, Intellectual Property & Licensing
Deputy Director, Office of Sponsored Programs
University of Alaska Fairbanks

Universities that are able to accept equity in start-up businesses, usually accept the equity in lieu of up-front licensing fees. Most universities have policies dictating whether or not the university will accept a seat on the start-up's board and define triggers for stock divestiture. Many universities try to hold the stock for as short a time as is reasonable. The desired technology is licensed to the start-up for reasonable commercial terms. Sometimes the inventing faculty member is given a leave of absence during the new business' startup phase. Agreements are often made that allow the start-up access to university facilities.

There are typically three approaches used by universities to spin-off companies: Hands Off (U. of Washington uses this one.), Hands On, or the Up-to-Your-Neck approach. The Hands off Approach requires the faculty member to develop his/her own business plan, find venture funding and pay all other start-up costs. The university negotiates with a representative of the company (not the faculty member to avoid conflict of interest) for the technology license. Typically, the deal has a low or no up-front fee that is balanced by higher than usual royalties down the road and the university receiving equity in lieu of the up-front money. In that case, the university's costs are the patenting and maintenance fee payments while waiting on a royalty stream to begin.

With the Hands on Approach the university may review the faculty member's business plan, go with them to help acquire venture capital, and maybe provide a little funding. Otherwise it would be the same as the Hands Off Approach.

With the Up-to-Your-Neck approach the university puts together the business management team or provides a business incubator. The university provides substantial funding and other start-up support for the business.

Typically universities that regularly enter into start-ups or have ownership in other corporations use a research foundation/corporation as the intermediary. These foundations come in all sorts of flavors. Some universities run all their research awards through the foundation. Others use the foundation to handle IP, development and entrepreneurial activities, etc.

Universities that handle start-ups thoughtfully and well attract high energy, innovative faculty who, in turn, attract top-notch students. (Students often tend to settle near communities where they attended school.) Start-ups can provide training grounds for students and valuable collaborators for university faculty, as well as economic development opportunities. There are a number of successful models for handling start-ups.

Westlaw

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Piercing the Corporate Veil
Stephen B. Preseer
Current through the February 2005 Update

Chapter 2. State Law on Piercing the Veil

Correlation Table; Index

§ 2:2. Alaska

The Supreme Court of Alaska has recently indicated that it is appropriate to pierce the corporate veil where a dominant shareholder siphons off assets from his corporation to meet his personal expenses when by doing so, even temporarily, he leaves corporate obligations to employees unpaid. [FN1] In an earlier case the court had held that "draining" of corporate assets by shareholders resulting in "inadequate capital to satisfy corporate debts" amounted to "wrongdoing" sufficient to justify piercing the veil. [FN2] It thus appears that Alaska has adopted something like a continuing "undercapitalization" test for piercing the veil. [FN3] This would put Alaska among those jurisdictions where it is relatively easy to pierce the veil.

This conclusion about the ease of piercing the veil in Alaska is further supported by a 1983 case, *McKibben v. Mohawk Oil Co., Ltd.* [FN4] In that case the Alaska Supreme Court, in a parent-subsidary context, seemed to indicate that veil-piercing could be supported under *either* (1) a "wrongful conduct" theory, "when the parent uses a separate corporate form to defeat public convenience, justify wrong, commit fraud or defend crime," [FN5] or (2) under a "mere instrumentality" theory when liability is imposed "simply because the two corporations are so closely intertwined that they do not merit treatment as separate entities." [FN6]

The eleven specific tests the Supreme court said should be applied in determining whether a subsidiary was a "mere instrumentality" of its parent, [FN7] are precisely those applied by Powell in his 1931 treatise, [FN8] although the Alaska Supreme Court did not cite Powell, but rather to an earlier Alaska Supreme Court opinion. The failure to cite Powell himself is particularly noteworthy, since Powell had used the "mere instrumentality" factor as only one of three that had to be present before he thought the corporate veil ought to be pierced. Powell's other two factors were (1) his "injustice" test, which was basically the same as the Alaska court's "wrongful conduct" test, and (2) his "harm" test, which required that the plaintiff demonstrate that the defendant's wrongful conduct proximately caused him actual harm. [FN9] By allowing the veil to be pierced when only one of Powell's three factors was present, then, the Alaska court greatly liberalized Powell's approach. [FN10]

One year earlier than *McKibben*, however, in a more expansively reasoned opinion that qualifies as a leading case on piercing the veil in Alaska, *Eagle Air v. Corroon & Black/Dawson & Co.* (1982), [FN11] the Alaska Supreme Court explained the general principles [FN12] that governed veil-piercing both in the case of subsidiary corporations [FN13] and in the cases of individually owned corporations. [FN14] In *Eagle Air*, the court implied that *both* what it referred to as the "control" test and the "additional element of fraud or wrongdoing" must be present to pierce the veil. [FN15]

In the 1987 *Klondike* case, [FN16] the court reiterated its position that *both* key tests for piercing the veil needed to be satisfied before the court could act. The *Klondike* court cited the *Eagle Air* opinion for the holding that "a shareholder could be held personally liable for a corporate obligation if he controlled the corporation (as determined by six control factors) [FN17] and used the corporate form to defeat public convenience, justify

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wrong, commit fraud or defend crime." [FN18] This suggests that Alaska may be among those jurisdictions that simply apply the Powell "control" and "injustice" tests, but the facts of Klondike, and the alternative approaches suggested in McKibben leave the piercing law in Alaska subject to much uncertainty.

The willingness of the Alaska courts to look beyond formal corporate status, and to do so in a manner that does not rely on rigorous application of fixed standards or tests is also manifest in a line of cases applying the "doctrine of corporate disregard." According to a statement of this doctrine in the supreme court's opinion in *Husky Oil N.P.R. Operations, Inc. v. Sea Air Motive Inc.* (1986), [FN19] two corporations may be treated as one "simply because the two corporations are so closely intertwined that they do not merit treatment as separate entities." [FN20]

The doctrine of corporate disregard had been earlier applied in the case of parent/subsidiary corporations, [FN21] but in *Husky Oil* the court extended it to the case of what it called "brother/sister" corporations, which it defined as "corporations sharing a common nucleus of shareholders." In the case at bar, the president of the "brother corporation" owned 96 percent of the stock of the "sister" corporation, the "sister," which purported to be a fuel retailer, had "no fuel storage equipment, no trucks, and no personnel who handle fuel." [FN22] Indeed, the sister corporation had "no employees," had not "had any for years," and did not have a payroll. It had no accounts receivable or accounts payable, and though it apparently filed "a corporate return" it listed its income as "0," and, in particular, did not list any income from the fuel sale allegedly made to the brother corporation. [FN23] On these facts the supreme court ruled that summary judgment should have been given that the "sister" was the "alter ego" of the brother, and that fuel which the sister purportedly purchased from a wholesaler was actually bought by the brother. Thus, the charge the sister corporation made to the brother of 50 cents per gallon over the wholesale price could be disregarded in an "actual cost" contract. [FN24]

The *Husky Oil* court's language that the "corporate disregard" doctrine could be invoked when there was a demonstration that two corporations "were so closely intertwined that they do not merit separate treatment," was reiterated by the supreme court in a 1990 case, *Smith v. Merchant Enterprises, Inc.*, [FN25] although the court there gave no guidance as to what facts ought to be deemed to satisfy the "closely intertwined" test.

A final Alaska Supreme Court case, decided just two months after the 1990 case invoking the doctrine of "corporate disregard," may even be read as hinting that Alaska could soon adopt undercapitalization alone as a rationale for piercing the veil. In *Murat v. F/V Shelikof Strait* (1990), [FN26] without citing either *Klondike* or *Eagle Air*, much less Powell, but citing McKibben in passing, the court observed that "it remains the general rule that inadequate capitalization, while an important factor, is not alone sufficient to justify piercing the corporate veil." [FN27] The *Murat* court immediately stated in a footnote: "We note with interest, however, that a number of commentators, and a few courts, have suggested that grossly inadequate capitalization should be considered a separate and independent basis for 'piercing the corporate veil,' rather than simply one factor in a multi-factor test." [FN28] The *Murat* court went on to say "We need not definitively answer this question here," because the only question before it was whether there was some evidence of adequate capitalization sufficient to withstand a motion for summary judgment.

Because of the recent Alaska Supreme Court decisions which seem to ignore the Powell requirements implicitly referred to in the *Klondike* and *Eagle Air* cases, and given the hint thrown out in *Murat* that grossly inadequate capitalization alone might be enough, in an appropriate case, to justify piercing the veil, the future of limited liability in Alaska does not appear to be particularly auspicious. [FN29]

[FN1] *Klondike Industries Corp. v. Gibson*, 741 P.2d 1161 (Alaska 1987).

[FN2] *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000, 1004-1005 (Alaska 1982).

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[FN3] See Ch 1, at §1:9.

[FN4] *McKibben v. Mohawk Oil Co., Ltd.*, 667 P.2d 1223 (Alaska 1983) (disavowed by, *Wien Air Alaska v. Bubbel*, 723 P.2d 627 (Alaska 1986)).

[FN5] *McKibben v. Mohawk Oil Co., Ltd.*, 667 P.2d 1223, 1229 (Alaska 1983) (disavowed by, *Wien Air Alaska v. Bubbel*, 723 P.2d 627 (Alaska 1986)), citing *Jackson v. General Elec. Co.*, 514 P.2d 1170, 1172-1173 (Alaska 1973); and *Elliott v. Brown*, 569 P.2d 1323, 1326 (Alaska 1977). The language about use "to defeat public convenience, justify wrong, commit fraud or defend crime," comes originally not from the Alaska case cited, but from *U.S. v. Milwaukee Refrigerator Transit Co.*, 142 F. 247, 255 (C.C.N.D. Wis. 1905). In § 1:1, this was referred to as "the most commonly quoted general rule" for determining when the corporate veil ought to be pierced. That this is the "general rule" in Alaska was made clear also in *Croxton v. Crowley Maritime Corp.*, 817 P.2d 460 (Alaska 1991).

[FN6] Citing again *Jackson v. General Elec. Co.*, 514 P.2d 1170, 1173 (Alaska 1973).

[FN7] *McKibben v. Mohawk Oil Co., Ltd.*, 667 P.2d 1223, 1230 (Alaska 1983) (disavowed by, *Wien Air Alaska v. Bubbel*, 723 P.2d 627 (Alaska 1986)). Citing the *Jackson v. General Elec. Co.*, 514 P.2d 1170, 1172-1173 (Alaska 1973), these were said to involve whether:

- (a) The parent corporation owns all or most of the capital stock of the subsidiary.
- (b) The parent and subsidiary corporations have common directors or officers.
- (c) The parent corporation finances the subsidiary.
- (d) The parent corporation subscribes to all the capital stock of the subsidiary or otherwise causes its incorporation.
- (e) The subsidiary has grossly inadequate capital.
- (f) The parent corporation pays the salaries and other expenses or losses of the subsidiary.
- (g) The subsidiary has substantially no business except with the parent corporation or no assets except those conveyed to it by the parent corporation.
- (h) In the papers of the parent corporation or in the statements of its officers, the subsidiary is described as a department or division of the parent corporation, or its business or financial responsibility is referred to as the parent corporation's own.
- (i) The parent corporation uses the property of the subsidiary as its own.
- (j) The directors or executives of the subsidiary do not act independently in the interest of the subsidiary but take their orders from the parent corporation in the latter's interest.
- (k) The formal legal requirements of the subsidiary are not observed.

[FN8] F. Powell, *Parent and Subsidiary Corporations*, § 1 (1931), discussed in §1:6. See, e.g., *Mid America Title Co. v. Transnation Title Ins. Co.*, 332 F.3d 494, 495 (7th Cir. 2003), cert. denied, 124 S. Ct. 959 (U.S. 2003) ("Arizona courts require a showing that the corporations [1] share a 'unity of control' and that [2] observance of the corporate form would sanction a fraud or promote justice.").

[FN9] See Ch 1, at §1:6.

[FN10] As discussed in §1:6, Powell's three factors are not clearly distinct, and, in particular, much "wrongful conduct" or "injustice" seems to be implicit in the listing of "mere instrumentality" tests. Still, in the *McKibben* case itself, while there was "gross undercapitalization," identity of directors and officers, commingling of offices, and several other indicia that the parent totally dominated the subsidiary, there was some evidence of adherence of corporate formalities, and it is unclear whether Powell's "injustice" test could have been satisfied.

On the other hand, the essential claim in *McKibben* appears to have been for the tort of conversion, and it may be that the plaintiff could have demonstrated that the subsidiary was thinly capitalized and otherwise manipulated in order to commit torts. If he could have shown this, of course, it would have constituted the sort of abuse covered

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by the "injustice" test. See §1:6.

Nevertheless, the McKibben case may be an example of easy cases making bad law. By opening the door to a liberalization of the Powell standard the Alaska Supreme Court may have seriously undercut the policy of encouraging the use of the corporate form, by providing a means for piercing the veil when contract creditors might have been fully knowledgeable about the "mere instrumentality" nature of a subsidiary, and still chosen to contract with the subsidiary on that basis. To allow them to pierce, even when they were in a position to take, or may have taken economic precautions against the risks involved would seem to be not only inconsistent with most traditional piercing the veil learning, but also economically inefficient.

[FN11] *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000 (Alaska 1982).

[FN12] The court in *Eagle Air* began by saying that "In general, a subsidiary corporation is considered an entity separate and distinct from its parent," *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.* 648 P.2d 1000, 1003 (Alaska 1982), citing *Volkswagenwerk, A. G. v. Klippan, GmbH*, 611 P.2d 498, 505 (Alaska 1980), and "a corporation is considered an entity separate and distinct from its shareholders." *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000, 1003 (Alaska 1982), citing *Quinn v. Butz*, 510 P.2d 743, 757-58 (D.C. Cir. 1975).

[FN13] *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000, 1003 (Alaska 1982), citing *General Const. Co. v. Tyonek Timber, Inc.*, 629 P.2d 981 (Alaska 1981); *Volkswagenwerk, A. G. v. Klippan, GmbH*, 611 P.2d 498, 505 (Alaska 1980), *Bendix Corp. v. Adams*, 610 P.2d 24 (Alaska 1980); *Jackson v. General Elec. Co.*, 514 P.2d 1170 (Alaska 1973).

[FN14] *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000, 1003 (Alaska 1982), citing *Uchitel Co. v. Telephone Co.*, 646 P.2d 229, 33 U.C.C. Rep. Serv. 1678 (Alaska 1982); *Shepherd v. Boring Sea Originals*, 578 P.2d 587 (Alaska 1978); *Elliott v. Brown*, 569 P.2d 1323 (Alaska 1977).

[FN15] *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000, 1004 (Alaska 1982).

[FN16] *Klondike Industries Corp. v. Gibson*, 741 P.2d 1161 (Alaska 1987).

[FN17] The supreme court had indicated in *Eagle Air* that while the 11-factor test, drawn from the unacknowledged Powell treatise, was to govern in the search for "control" for parent-subsidiary corporations, in the case of individually-owned corporations, a six-factor test, specified in *Uchitel Co. v. Telephone Co.*, 646 P.2d 229, 235, 33 U.C.C. Rep. Serv. 1678 (Alaska 1982) was to be used. These six factors were:

- (a) Whether the shareholder sought to be charged owns all or most of the stock of the corporation;
- (b) Whether the shareholder has subscribed to all of the capital stock of the corporation or otherwise caused its incorporation;
- (c) Whether the corporation has grossly inadequate capital;
- (d) Whether the shareholder uses the property of the corporation as his own;
- (e) Whether the directors or executives of the corporation act independently in the interest of the corporation or simply take their orders from the shareholder in the latter's interest;
- (f) Whether the formal legal requirements of the corporation are observed.

Quoted *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000, 1004 (Alaska 1982). These six factors are, of course, simply adoption of those of the eleven Powell factors applicable to individually-owned corporations. See §1:6.

[FN18] *Klondike Industries Corp. v. Gibson*, 741 P.2d 1161 (Alaska 1987), citing *Eagle Air, Inc. v. Corroon and Black/Dawson and Co. of Alaska, Inc.*, 648 P.2d 1000, 1004-1005 (Alaska 1982) (emphasis supplied).

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[FN19] Husky Oil N.P.R. Operations, Inc. v. Sea Airmotive, Inc., 724 P.2d 531 (Alaska 1986).

[FN20] Husky Oil N.P.R. Operations, Inc. v. Sea Airmotive, Inc., 724 P.2d 531, 534 (Alaska 1986), quoting from Jackson v. General Elec. Co., 514 P.2d 1170 (Alaska 1973).

[FN21] Jackson v. General Elec. Co., 514 P.2d 1170 (Alaska 1973).

[FN22] Husky Oil N.P.R. Operations, Inc. v. Sea Airmotive, Inc., 724 P.2d 531, 533 (Alaska 1986).

[FN23] Husky Oil N.P.R. Operations, Inc. v. Sea Airmotive, Inc., 724 P.2d 531, 533 (Alaska 1986).

[FN24] As the court remarked:

Money passed directly from [the brother] to [the wholesaler]. Fuel passed directly from [the wholesaler] to [the brother]. To the extent that [the sister] acted at all, it acted on behalf of [the brother]. [The sister] did not receive the 50 cents per gallon it supposedly charged to [the brother], nor do its records indicate that any money is owing to it Therefore, for purposes of this case, [the brother] purchased fuel at wholesale from [the wholesaler].

Husky Oil N.P.R. Operations, Inc. v. Sea Airmotive, Inc., 724 P.2d 531, 534 (Alaska 1986).

[FN25] Smith by Smith v. Marchant Enterprises, Inc., 791 P.2d 354, 1990 (Alaska 1990).

[FN26] Murat v. F/V Shelikof Strait, 793 P.2d 69, 1990 (Alaska 1990).

[FN27] Murat v. F/V Shelikof Strait, 793 P.2d 69, 78 (Alaska 1990).

[FN28] Murat v. F/V Shelikof Strait, 793 P.2d 69, 79 (Alaska 1990), citing Hackney & Benson, "Shareholder Liability for Inadequate Capital," 43 U Pitt L Rev 837, 883-890 (1982); Note, "Inadequate Capitalization As a Basis for Shareholder Liability: The California Approach and a Recommendation," 45 S Cal L Rev 823, 830-836 (1972); Note, "Limited Liability: A Definitive Judicial Standard for the Inadequate Capitalization Problem," 47 Temp LQ 321, 338-351 (1974).

[FN29] Further thoughts on the direction in which Alaska veil-piercing ought to move appear in Strauss, "Control and/or Misconduct: Clarifying the Test for Piercing the Corporate Veil in Alaska," 9 Alaska L Rev 65 (1992). For a case in which the Alaska Supreme Court rigorously refused to allow "reverse-piercing" of the corporate veil by a parent corporation seeking to limit wrongful death liability see Croxton v. Crowley Maritime Corp., 817 P.2d 460 (Alaska 1991).

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States Stride Forward

.....➔
Solutions in Governors'
State of the State Messages
Bridge Party Lines
.....

By Laurie Clewett

According to the pundits, the United States is a nation divided: it's the "reds" versus the "blues"; the tax-and-spend, big-government liberals versus the tax-cutting, small-government conservatives.

The reality, however, is that governing in the 21st century—especially governing at the state level—requires leaders who are willing to let go of traditional stereotypes in order to help move their communities forward. Despite some ideological differences, the nation's governors—Democrats and Republicans alike—face similar challenges as they try to adapt state government to the realities of a rapidly changing world. And, to a large extent, they are turning to similar strategies and solutions.

...➔



Not Your Father's Government

Governing at the state level is no longer just a matter of making sure the lines at the Department of Motor Vehicles aren't too long. From global trade agreements to biotechnology, from cloning to electronic voting, today's state officials face a host of complex challenges and opportunities.

But too often, they find themselves working within bureaucratic structures and legal frameworks that haven't kept pace with the changes. This dilemma was evident in many of the governors' state of the state addresses this year.

"Today, the marketplace is regional, national and global—with a level of speed and complexity not seen before in human history," said Utah Gov. John Huntsman Jr. "We either rise to meet the competitive challenges of today or we fall behind."

As Huntsman called for reform of the state's tax system, he noted, "The last time we had a major revision in the tax code was in 1959—before I was even born. The personal computer didn't exist. The word 'Internet' hadn't entered our lexicon. Our economy relied on mining, not microchips. Eisenhower was president. It is time for change."

Similarly, Kentucky Gov. Ernie Fletcher also called for tax reform, noting that "the current telecom tax structure was designed in the era of the crank phone and Alexander Graham Bell ... Our corporate license tax was established in 1906—11 years before the Soviet Union was established. Superpowers may come and go, but Kentucky's tax code is apparently forever."

"We must ... reform and reorganize the structure of government itself," said California Gov. Arnold Schwarzenegger. "We need a 21st century government to match a 21st century world."

Despite these challenges, overall, the governors' annual addresses were optimistic. While a few described the state of their state as challenging, most of the 47 governors who delivered speeches in January and early February portrayed their state's condition as strong or on the mend.

Like last year, education and economic development continued to top the list of priorities. Health care was an equally prominent theme this year. The governors also paid considerable attention to improving government performance, public safety and justice, the environment and natural resources, and infrastructure.

K-12 Education

Every governor mentioned education as a priority—not surprisingly, given the percentage of state budgets that go toward funding it. Most governors framed their discussions of education in terms of its role in preparing the future and current work forces. "Education is the number one economic development issue here

and everywhere else," said Colorado Gov. Bill Owens. "Public education, K-12, is the top priority of state government."

"Educational excellence is not an option in the knowledge-based economy of the 21st century," said Virginia Gov. Mark Warner. "It is an imperative."

Discussions of K-12 education focused largely on funding. About half the governors announced increased funding, and some highlighted the need to revisit the funding formula (Arkansas, Indiana, Kansas, Missouri, Montana, New Mexico, New York, North Dakota and Texas). Fourteen governors called for property tax reform, although not all within the context of education funding (Iowa, Indiana, Maine, Massachusetts, Missouri, Nevada, New Hampshire, New Jersey, New York, Rhode Island, South Dakota, Texas, Vermont and Wisconsin).

Teacher pay was another common theme, with at least 14 governors calling for salary increases. Eight governors (seven Republicans and one Democrat) proposed linking teachers' pay to their performance, rather than just length of tenure (Alabama, California, Idaho, Minnesota, Nevada, Rhode Island, Texas and Wisconsin).

The governors also focused on early childhood education, accountability measures, and school choice, specifically charter schools. Other common themes included the need to strengthen high school curricula—especially in math and science—to prepare students for college, and increasing the number of high school graduates.

"Today, the marketplace is regional, national and global—with a level of speed and complexity not seen before in human history. We either rise to meet the competitive challenges of today or we fall behind."

—Gov. John Huntsman Jr. (Utah)

Higher Education

The governors also acknowledged that, in today's economy, a high school degree just isn't enough.

"If we're only going to build an economy that depends upon a high school graduate, then, my friends, we are going to build an economy that will see to it that every single Arkansas student will be stuck in poverty," Gov. Mike Huckabee told the legislature. "We have to ensure that every Arkansan has something beyond the 12th-grade year, whether it's vocational and trade training or whether it's a full university degree. Higher education is not a luxury. It is a necessity in tomorrow's economy. In fact, it is a necessity in today's economy," he said.

About two-thirds of the governors highlighted some aspect of higher education—often stressing the need for increased state funding and support for financial aid and scholarships. "If we do not reverse the decade-long disinvestment in post-secondary education, and pay more attention to retraining lower wage workers, it is only a matter of time before a future governor stands where I'm standing and says 'The state of our state is in decline,'" declared Oregon Gov. Ted Kulongoski.

Approximately half of the governors emphasized the role of the state's universities in the economy and economic development—largely through their involvement in research and development. "Virtually every business I talk to either has a link or is looking to develop one with our universities," said North



Dakota Gov. John Hoeven. "That includes research and development for new products and services, ongoing education and work force training, and access to an exceptional quality of life. To truly build the best business environment, we must link our campuses to the private sector."

Economic Development

Like several other governors, Hoeven pinned many of his hopes for economic development on the state's "centers of excellence." "Centers of Excellence are partnerships between higher education and business to create new, good paying jobs," he explained. "These hubs of research and technology commercialize their work into products and services, and they provide a nucleus for business clusters across our state." These centers—and many of the governors' other economic development proposals—often focus on new and emerging technologies, from stem cell research to renewable energy to nanotechnology.

"Economists now predict that 75 percent of the S&P Fortune 500 companies in the year 2020 will be comprised of companies that don't even exist today," Hoeven said.

Some governors focused on courting niche industries, such as the tourism or film industries. Illinois Gov. Rod Blagojevich set his sights on the \$100-billion-a-year homeland security industry, announcing a new division within the Department of Commerce and Economic Opportunity "whose sole purpose is to encourage companies that make homeland security products to either come to Illinois or expand in Illinois." "I'm asking our universities to work with us to develop a curriculum that trains our students to work in the homeland security industry," he added.

Along with the role of technology, the governors also recognized the role of globalization in today's economy. "Job creation in the 21st century economy can't be business as usual," said Colorado Gov. Owens. "Competition is global, and it's fierce." They proposed standard economic development tools like tax

credits and incentives, venture capital funds, skills training for workers, and international trade efforts, along with measures to improve the state's business climate, such as cutting or reforming taxes and eliminating regulatory barriers. Nine governors called for reform of the workers' compensation system (Colorado, Delaware, Hawaii, Illinois, Missouri, Oklahoma, Rhode Island, Texas and West Virginia).

The governors also stressed the role of small businesses and entrepreneurs. "The bottom line is we want to see more little businesses make it," said South Carolina Gov. Mark Sanford. "The entrepreneur with a dream, the lady who puts a second mortgage on the house to start the business that had to wait until after the kids finished school, the fellow covered in grease still repairing lawn mowers at half past seven on Friday—these are all economic heroes and they deserve our help."

Health Care

One of the biggest barriers to small businesses' success, they said, is the rising cost of health care. Every governor mentioned health care in his or her address, with most focusing on the growing affordability crisis.

"Health care costs continue to soar, and that affects all Kansas families and all Kansas businesses," said Gov. Kathleen Sebelius. "This trend will only accelerate in years to come, consuming public resources that would otherwise be spent on schools, roads, and economic development."

"There is just no reason why the richest nation in the world can't provide health care to all its people," said Washington Gov. Christine Gregoire. "This is a national problem that begs for a national solution. We can't truly solve this problem at the state level. But we can make a difference."

They offered solutions such as importing prescription drugs, creating a statewide purchasing pool, encouraging low-cost insurance plans for the uninsured and small employers, tax credits for small businesses that offer insurance, and allowing small businesses to buy into the state's insurance plan. Rhode Island Gov. Donald Carcieri created a Health Care Cabinet; Nevada Gov. Guinn announced a new Nevada Commission on Medical Research and Health Care; West Virginia Gov. Joe Manchin III appointed a state pharmaceutical advocate; New Hampshire Gov. John Lynch created a task force to explore innovative solutions; and Illinois Gov. Blagojevich announced a partnership between the state and local chambers of commerce.

About half the governors focused specifically on Medicaid and how to deal with the fact that it is consuming an ever-greater share of state budgets. "We're spending more on Medicaid this year than we did for the entire state budget in 1986," said Ohio Gov. Bob Taft. "It is squeezing out all other areas of state government. ... We must tame the Medicaid monster."

"Without aggressive action we cannot properly fund education, or any of our other public policy priorities," said Missouri Gov. Matt Blunt.

Some governors, in the name of fiscal responsibility, announced difficult cuts to Medicaid funding, benefits or eligibility. Others vowed to protect benefits or increase funding to keep up

Continued on page 36



States Stride Forward

Continued from page 25

with the growing demand. However they decided to address the problem, the governors agreed it is not going away any time soon. In order to address long-term health care costs, many governors emphasized prevention efforts—including screening programs for various diseases—and “healthy living” initiatives, such as efforts to reduce obesity and smoking, increase exercise and improve nutrition. “We have to decide that there is a better approach to health care than just pouring money into trying to treat sick people,” said Huckabee.

Other health-related subjects included children’s health care, long-term care, medical malpractice insurance, mental health and substance abuse treatment, technology and worker shortages.

Smarter Government

Another prominent theme was the need to make government more efficient and effective. “Too often these days, politicians shout at each other about ‘big government’ and ‘small government,’” said Arizona Gov. Janet Napolitano. “In Arizona, we are showing that what matters is smart government, efficient government, effective government.”

“From paper clips to pharmaceuticals, driving down the cost of government and creating more value for the people of Kansas is the order of the day,” said Sebelius.

Although most states’ finances are better than they have been for several years, the governors seem to have learned a few lessons from the recent recession: extra revenue should not necessarily be funneled

into new programs; adopting business practices and innovative budgeting processes can help states identify and fulfill their priorities; states should save for a rainy day; and some government services are, in fact, essential.

“Unfortunately, in the 1990s, state government let [the people] down,” said Wisconsin Gov. Jim Doyle. “At a time when the national economy was booming and state revenues were soaring, the state’s rainy day fund sat empty. A culture of overspending developed. The state’s bureaucracy grew bigger—and slower to respond to the needs of everyday people.”

Republicans and Democrats alike stressed the need to limit or reduce government spending (although perhaps not to the same degree), and for the most part, members of both parties refused to raise taxes.

Other Priorities

Issues related to public safety and justice also were high on the governors’ agendas. Most of the chief executives acknowledged members of the military and the National Guard serving in Iraq and Afghanistan, and 17 proposed some sort of benefit for active service members or veterans, such as life insurance, income tax exemptions, tuition assistance and financial or other support. Thirteen of the 14 governors who mentioned drug or substance abuse singled out methamphetamine. Several of them proposed copying Oklahoma’s anti-meth law, the strictest in the nation.

Other topics included funding for law enforcement personnel, drunk driving, domestic violence, sex offenders, DNA testing, homeland security funding, communications interoperability, sentencing reform and natural disasters.

When it comes to the environment and natural resources, water issues topped the list of concerns. The governors primarily focused on water quality, but for those in the drought-stricken West, the issue was adequate supply. Another prominent topic was energy—both the effect of high energy costs and the potential economic effect of developing new and traditional energy sources. Fifteen governors highlighted renewable energy initiatives, including wind, ethanol and other biofuels, hydrogen and solar. The Midwestern governors, in particular, emphasized renewable energy as an economic development tool. The governors also mentioned land preservation and air quality, and several Western governors discussed issues related to endangered species and wildlife protection.

Perhaps as confirmation that state finances are, in fact, improving, the governors focused more on infrastructure and capital improvements this year. More than half of them proposed transportation projects, while others called for investments in housing, energy and telecommunications.

Human services and social policy were not major themes in this year’s speeches, but 10 governors did call for improvements in their state’s child protective services. Others mentioned issues such as child support, homelessness, welfare reform, faith based services, affirmative action and services for the disabled.

To be sure, there were some noticeable differences between the parties, especially in social policy. For example, all four governors who proposed health savings accounts were Republicans (Georgia, Minnesota, Rhode Island and Texas), as were those who discussed abortion (Missouri and Texas). All three who discussed child care were Democrats (Arizona, Iowa and Wisconsin), as were the two who proposed laws to ban work place discrimination against gays and lesbians (Delaware and Oregon). Republican Gov. Bob Riley of Alabama was the only one who discussed the definition of marriage, which he called a union between a man and a woman.

But these issues accounted for a very small portion of the governors’ focus. When it comes to the bread-and-butter issues of state government—education, health care, economic development, and public safety—the Democrats and Republicans sounded remarkably similar. Whatever the political reality may be on the ground, in their agendas, at least, the governors have more in common than they have differences.

—Laurie Clewett is the managing editor of *State News*.

Governors focused more on infrastructure and capital improvements this year. More than half of them proposed transportation projects, while others called for investments in housing, energy and telecommunications.

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101


State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM

January 13, 2005

SUBJECT: Bill relating to University of Alaska's relationships with other corporations (Work Order No. 24-LS0344\A)

TO: Representative Mike Kelly
Attn: Heath

FROM:  Theresa Bannister
Legislative Counsel

This memo accompanies the bill described above.

1. Issues. I have not found any obvious constitutional problems with the bill's provisions as long as the purchase of the shares or the membership is for a public purpose of the University (as required in the bill). Under art. IX, sec. 6, of the state's constitution, public money may only be transferred for a public purpose. Whether a public purpose is being served must be decided as each case arises and in the light of the particular facts and circumstances of each case.¹ And the test for public purpose depends on the character of the use to which the property will be put, not on the nature of the entity that will handle the property.² With regard to for-profit corporations, purchasing shares as an investment may serve the public purpose of preserving and increasing state money, but purchasing shares to achieve a commercial purpose of the corporation could be questionable unless the commercial purpose also achieved a public purpose.

The bill handles the potential conflict with other statutes caused by limiting the University's liability by removing the applicability of those statutes. This is done by the "notwithstanding" clause.

2. Corporations covered. The work order did not indicate which corporations it applies to beyond the two broad categories. With regard to for-profit corporations, did you have in mind corporations from other states or limited liability companies? With regard to nonprofit corporations, did you have in mind corporations from other states, and did you want the corporation to be qualified as a nonprofit corporation under federal tax laws?

If I can be of further assistance, please advise.

TLB:med
05-027.med

Enclosure

¹ DeArmond v. Alaska State Dev. Corp., 376 P.2d 717, 721 (Alaska 1962).

² See Lien v. City of Ketchikan, 383 P.2d 721, 722 (Alaska 1963).

Mark R. Hamilton, President
Phone: (907) 450-8000
Fax: (907) 450-8012
EMAIL: sypres@alaska.edu



UNIVERSITY
of ALASKA
Many Traditions One Alaska

202 Butrovich Building
910 Yukon Drive
P.O. Box 755000
Fairbanks, AK 99775-5000

April 11, 2005

The Honorable Mark Neuman
Chair, House Education Committee
House of Representatives, State Capitol
Juneau, Alaska 99801-1182

Dear Representative Neuman:

Thank you for hearing HB 92 in committee last week. I understand you have some concerns regarding this bill and have asked how important it is to the university.

Actually, this bill is very important, particularly in light of the university's re-energized mission to make research a viable industry in Alaska. I am sure you are aware of the recent successes UA has had in attracting outside private and public money to the state. In fact, research now provides Alaska with over 2,300 jobs and an \$80 million per year payroll.

Outside entities are beginning to recognize the unique advantages Alaska possesses for a myriad of research interest. UA is seeing rapid growth in research dollars for everything from biomedical research to electronic miniaturization.

Research is often an entrepreneurial enterprise and researchers throughout the United States are often given the opportunity to profit from their area of expertise. Universities often join with their faculty to help incubate potential enterprises that may come from the intellectual endeavors of their researchers. Unfortunately, Alaska's indemnity laws are cumbersome in this regard and it would leave the university over exposed to law suits for those who may be in search of deep pockets.

I was told there were questions in committee regarding safeguards to keep the university from entering into unwise investments. This is an excellent point, and I would like to assure you that any investments the university makes must pass approval from the sponsoring campus, the university president, and the eleven member board of regents who deliberate through a public process.

I believe this bill is clearly in the best interest of the state of Alaska especially as we move closer to the exciting economic opportunities of the 21st century. That is why I respectfully request your support for Representative Kelly's bill.

Sincerely,



Mark R. Hamilton
President

MRH/pc

cc: Representative Mike Kelly

MEMORANDUM

DATE: 6 April 2005

TO: House Education Committee, Chair Mark Neuman

FROM: Craig Dorman, Vice President for Research and Academic Affairs,
University of Alaska Statewide System

RE: Comments re HB92 from

Thank you for the opportunity to testify briefly last evening on the proposed change to AS 14.40.458, University Corporate Relations. Per your request, I will briefly reiterate my points:

The authorization requested is limited to ownership of stock, or membership in a corporation, that would "advance the mission of the University of Alaska, pursuant to the policies of the Board of Regents". Thus, such ownership or membership would be undertaken only to advance the instructional and research responsibilities of the university, and not principally as a money-making enterprise.

The motivation for participation in ownership of a corporation derives basically from PL- 96-517 of 1980 (and amendments in PL 98-620 of 1984), commonly referred to as the Bayh-Dole Act. This Act permits universities to elect ownership of inventions made under federal funding, and to become directly involved in the commercialization process. In the quarter century since its enactment, this Act has fundamentally changed university-industrial relationships, and has resulted in the introduction of many new technologies into public use. While there are a variety of ways that universities can transfer their technology to industry, the incubation of new small businesses has proven very successful in enhancing local, state and national economic development, particularly in the vicinity of university campuses. As part of that incubation process, universities may encourage and even assist their faculty to take an equity interest in bringing one of their inventions or ideas into public use; and since under Bayh-Dole the ownership of the invention accrues to the university (with sharing rights as detailed in the testimony of Judge Greene), universities may (and many do) elect to invest their non-general fund resources to encourage such activity. All such arrangements are conducted as business arrangements with full review by University General Counsel, and the proposed provision in AS 14.40 seeks to limit the University's liability to the obligations specified in those agreements.

The university is seeking this provision at this time because of recently enhanced emphasis on support of state needs, and in particular our interest in supporting diversified economic development in the state. As I have stated in earlier testimony to the House and Senate Finance Committees, nationally, industry conducts 70% of R&D, and universities conduct 14%. In Alaska, UA conducts

55% of R&D, and industries only 10%. This disparity suggests the need for even greater diligence on the part of UA than is typical for universities, in taking an active role in the development and incubation of new business. Recent actions to this end include both external and internal reviews of our technology transfer procedures, the formation of the Business Enterprise Institute (BEI) at the College of Business and Public Policy at UAA, the establishment of the Office of Electronic Miniaturization and search for a Vice Chancellor for Research and Economic Development at UAF, and UAF collaboration with local groups in Fairbanks in the establishment of the "NanookTech Technology Accelerator".

BEI and NanookTech are examples of entities that may evolve into non-profit corporations in which the university may wish to participate. As with stock ownership, the intent of the proposed change to AS 14.40 is to limit the university's liability to those obligations to which it explicitly agrees as a condition of its membership. Another example, which I briefly mentioned during my oral testimony, is the Alaska Ocean Observing System (AOOS), one of a number of such regional systems around the U.S., as recommended by the U.S. Commission on Ocean Policy. AOOS is designed to support safety of life at sea, improved weather forecasting, fisheries, and safety of marine transportation, and the University has played a leading role in its establishment and development. As AOOS and the associated national associations and federal funding mechanisms mature, it will likely become a 501(c)(3) corporation, and again the University would like to be able to continue to participate without the fear of liability reaching beyond its explicit obligations as a member.

SPECIAL COMMITTEE ON EDUCATION
REP. NEUMAN, CHAIR

CONTINUED TESTIMONY OF MARY E. GREENE
ASSOCIATE GENERAL COUNSEL
UNIVERSITY OF ALASKA

I appreciate the opportunity to present a fuller explanation of some of the questions posed by members to me during the meeting held April 5, 2005, at 5:30 p.m.

One of the questions raised concerned why the University of Alaska should be treated differently than other corporations. There are several reasons. First, unlike most corporations, the University is a constitutional corporation created in Article VII, section 2 of the Alaska Constitution. That makes the University a part of the state unlike other corporations. The property of the State and the University is owned by the people of Alaska, not by a few shareholders. The University's mission is to serve the public interest, not provide dividends to investors like other corporations. Public money and public assets would be tapped if a plaintiff was able to pierce the corporate veil and reach University assets in addition to the money the University invested as a shareholder.

The effort of the University to avoid potential liability beyond those funds it voluntarily invests in a corporation is very much like the state's actions when it creates a state corporation or authority and refuses to pledge the credit of the state. That says to creditors of the authority or state corporation that they can only look to the assets the legislature has placed in the authority or corporation to pay the debts of the authority or corporation. The legislature has frequently used this tool to protect state assets while at the same time promote economic development or create a service that serves the public interest. For example, the legislature refused to pledge the credit of the state in the creation of the Alaska Railroad Corporation (AS 42.40.690), the Alaska Housing Finance Corporation (AS 18.56.170), corporations organized under the Business and Industrial Development Corporation Act (AS 10.10.190), the Alaska Student Loan Corporation (AS 14.42.260), the Alaska Medical Facility Authority (AS 18.26.150), Regional Electrical Authorities (AS 18.57.110), the Knik Arm Bridge and Toll Authority (bonds) (AS 19.75.241), state and municipal port authorities (AS 29.35.640), Regional Resource Development Authorities (bonds) (AS 30.13.090), Adak Reuse Authority (bonds) (AS 30.17.240), the Alaska Natural Gas Development Authority (AS 41.41.400), Alaska Energy Authority (bonds) (AS 44.83.130), the Alaska Municipal Bond Bank Authority (bonds and notes) (AS 44.85.130), and the Alaska Industrial Development and Export Authority (bonds) (AS 44.88.120). HB 92, if enacted, would do no more for University investments than the legislature has done in these instances. It would allow the University to voluntarily invest funds where the Board of Regents authorizes the investment AND the investment advances a public purpose. Those voluntarily invested funds would, of course, not be protected. They would be available for the payment of the corporation's debts. But a clever plaintiff would not be able to go beyond that

corporation's assets to the other assets of the University. That is, the University would not have to pledge its credit by investing in a project that advances a public purpose.

If granted this protection, the University could help its faculty develop their research ideas into marketable goods and promote the economic development of Alaska. It could participate in worthwhile non-profit corporations that meet a public purpose. It could do so without risking the public's money that is invested in the University.

Thank you.

Mary E. Greene

Associate General Counsel

UNIVERSITY OF ALASKA RULES REGARDING PATENTS

How patents and royalties are allocated depends on whether the inventor belongs to a union and how the invention was created, i.e., with University resources, independently, or with University sponsorship. This summarizes the various rules.

United Academics members:

For a faculty member who is a member of the United Academics union (almost all faculty researchers in the University fall within this category):

- If the faculty member creates the invention independently without use of University resources or time, the faculty member will own the patent and has the right to determine the disposition of the invention and the royalties paid. The faculty member and the President may agree that the patent may be pursued by the University and the net proceeds shared.
- If the faculty has used University support in creating the invention, the patent belongs to the University and the net proceeds after deduction of expenses to obtain the patent and to market the invention are shared under this formula:

Total Net Proceeds	To Inventor	To department	To UA
First \$10,000	100%	0	0
\$10,001-19,999	80%	20%	0
\$20,000-250,000	40%	25%	35%
\$250,000 +	20%	20%	60%

ACCFT members and UA staff:

The rules for patent ownership for faculty members of the ACCFT union and University staff employees follow:

- If the faculty member or employee creates the invention independently of the University, the creator owns the patent.
- If there is use of University resources or grant funds and contracts obtained by the University, the patent is owned by the University. The royalties for the patents owned by the University are shared with the inventor under this formula:

Total Net Royalty Per Invention	Inventor's Share	University Share
First \$10,000	100%	0%
> \$10,000	50%	50%

Exceptions:

The University may not share the proceeds under either formula if there are restrictions placed on the money that was used to create the invention, such as requirements of grants or third party contracts.



THE FIRST TWO DECADES OF THE BAYH-DOLE ACT AS PUBLIC POLICY

by Howard W. Bremer,
November 11, 2001

At the outset it is interesting to note that the length of time the Bayh-Dole Act has been in effect is now the approximate time that it took to achieve its passage.

This presentation is given in the context of a plaque affixed near the entrance to the National Archives in Washington, D.C. The plaque reads:

"the heritage of the past is the seed that brings forth the harvest of all the future"

Today, we are witnessing 20 years of living with the Bayh-Dole Act and, I believe, can truly celebrate the technology transfer harvest that sprang from the seeds of efforts to revise government patent policies.

Whereas, technology transfer, as we know it today was little understood or practiced 20 years ago, it is now a recognized profession both within and outside of the university community. Of all the controversial subjects which have been addressed by members of Congress and discussed by newspaper editors and columnists over the years none appears to be less understood than the allocation and disposition of rights to inventions arising from government-funded research and development. In addition, the U.S. patent system has always seemed to be mysterious to the lay public as well as its duly elected representatives. In the words of Howard Markey, Chief Judge of the Court of Appeals for the Federal Circuit"no institution has done so much for so many with so little public and judicial understanding as has the American patent system." That dichotomy on disposition of rights to inventions and the lack of understanding of the operation and contribution of the patent system to the benefit of the public persists today.

What were the origins of technology transfer and the Bayh-Dole Act?

PRESENTATION TO NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND GRANT COLLEGES

Nov. 11, 2001
Washington, D.C.

I. Concept

Technology Transfer—the transfer of research results from universities to the commercial sector—is closely linked to fundamental research activities in United States universities, and, now, globally.

The concept is said to have its origin in a report entitled "Science—The Endless Frontier" which was written by Vannevar Bush for the President of the United States in 1945. At that time the success of various projects had demonstrated the importance of university-conducted research to the national defense effort.

Vannevar Bush, however, recognized the value of university research as a means for enhancing the economy by increasing the flow of knowledge to be used by industry through support of basic science.

Dr. Bush's report became instrumental in providing a substantial and continuing increase in funding of basic research by the federal government. It stimulated the formation of the National Institutes of Health (NIH), the National Science Foundation (NSF), and the Office of Naval Research (ONR). Because of the success of these and other governmental agencies in utilizing universities to conduct research, the funding of basic research is now considered to be a vital role of the federal government.

II. Technology Transfer Defined

Long before the Vannevar Bush concept, but without federal support for their research efforts, United States universities had been engaged in the transfer of technology, although that specific term may not have been applied to their activities.

Their greatest technology transfer efforts have probably been expended in preparing papers on research results for publication in scientific journals. Another area involves the activities of the Extension Services, particularly the Agricultural Extension Services, which communicates a great variety of useful information, largely technical, but also in social and economic fields, to many users, both rural and urban.

Another area of communication of information lies in the continuing education programs, e.g. in law, medicine, pharmacy, engineering, to keep professionals in those fields abreast of the latest developments.

Technical consultants provide technology transfer in both directions—the consultant imparts information to whomever is engaging him while the consultant, in turn, can expect some professional enrichment from that activity.

Still another means for transferring technology is by making a tangible product of research available to others with or without a view toward commercialization. For example, seedling plants for propagation by others, appropriate fragments of tissue for tissue culture, cell lines, hybridomas, and seeds as well as mechanical or electronic prototypes and computer programs.

Thus, technology transfer occurs in many ways—through writings, the simple spoken word, the physical transfer of a tangible product of research or through the relative complexity of an intellectual property licensing program.

Although all of these forms of technology transfer have been and are being practiced today in the university sector in the United States and now many other countries the focus of this presentation is upon the transfer of technology as represented by the transfer of a property right as the result of ownership of the intellectual property generated during the conduct of research. Such ownership may be manifested by patents, copyrights, trademarks, trade secrets or a proprietary right in the tangible products of research.

III. Intellectual Property

A. Constitutional Basis

The fundamental basis for the university technology transfer programs in the

United States lies in the Constitution of the United States in the language of Article 1, Section 8 of that document:

"The Congress shall have Power—To promote the Progress of Science and useful arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respecting Writings and Discoveries."

Under this specific power the present patent statute, Title 35 of the United States Code (35 U.S.C.) was enacted. It is significant that the face of a U.S. patent document contains the following statement:

"—these Letters Patent are to grant unto the said claimant(s)—the right to exclude others from making, using, or selling the said invention throughout the United States."

and that 35 U.S.C. 261 characterizes this right to exclude as a property right. The technology transfer function is in great part based upon the recognition of and the specific provision for that very special property right.

B. Nature of University Research

The universities were, of course, organized as teaching institutions with any research conducted being directed to that end. Little thought or impetus was given to the transfer of the results of that research to the public other than through the academically acceptable route of publication in scientific journals. In fact, a researcher who accepted corporate support was thought by his academic colleagues to have been diverted from his basic research to serve corporate interests. The perception then was because the researcher had accepted corporate money his research would no longer be directed to the seeking of new knowledge but by the money-driven need to solve current problems in the real world, even to the development of products and processes to a market-ready condition.

That was the prevailing attitude at the University of Wisconsin when, in 1924, it was suggested that a plan be developed to make use of patentable inventions generated by faculty members which would:

- (1) protect the intellectual property of the individual taking out the patent;
- (2) insure proper use of the patent; and at the same time
- (3) bring financial help to the University to aid in its further research efforts.

The fears that the implementation of such a plan would divert the university researcher from his basic research did not materialize. There was no great rush toward patenting; there was no mass movement toward applied research tied directly to product development; nor was there any pronounced change in the researchers' attitudes. University research then, as now, remained essentially basic in character and directed primarily to the seeking of new knowledge.

The generation of inventions is almost never the main objective of basic research. If inventions do flow from that research activity, it is a largely fortuitous

happening that takes place because the researcher, or perhaps, an associate, has the ability to see some special relationship between his scholarly work product and the public need. It is from the recognition of this connection, which can convert a discovery or invention into a patentable invention, that innovation arises.

It was not too many years ago that there was little appreciation of the value of intellectual property generated during the course of research being conducted on the university campus or of the value of that intellectual property to the university if properly transferred to the private sector for development and marketing through appropriate arrangements. In fact, on numbers of campuses those activities would have even been unwelcome as an incursion into academic pursuits as was the early experience at Wisconsin. Nevertheless, prior to the legislative initiatives under which, today, most universities engage in the protection and licensing of intellectual property, several universities and organizations carried out such practices with the attendant opportunity to generate funds to aid in supporting research efforts. Prominent among such institutions were the University of California, Iowa State University, Battelle Development Corporation, Research Corporation, which represented a number of universities and the University of Wisconsin through its patent management organization the Wisconsin Alumni Research Foundation established in 1925.

C. The Government Vector

During the early history of the United States very little technical development work was done by the Government and therefore, as a practical matter, the question of the Government owning a patent never arose. Gradually, federal agencies began to undertake the practical kind of development work which led to inventions. Since prior to World War II almost all Government-financed research and development work was conducted in federal laboratories by full-time Government employees, there was a small but recurring problem of what to do with inventions resulting from such work—inventions which, if made by private parties, would have become the subject of patent applications.

This situation changed rapidly during and after World War II when the technological demands imposed by more and more sophisticated military requirements, as well as the increasing complexity of support services, made it quickly evident that there were not sufficient resources within the Government to undertake all the scientific projects necessary to a winning war effort. The absolute necessity to utilize the best technical ability available, regardless of its locus, spawned a rapid proliferation of Government-sponsored and -funded research and development contracts.

The proper disposition of rights to patents resulting from this work was theoretically as important then as now but was never seriously addressed as a major problem because of the exigencies of wartime needs.

The basic issue was whether the Government should always take the commercial rights to patentable inventions generated under a Government-sponsored contract or from Government-funded research or whether such rights would be better left with the contractor or grant recipient to permit utilizing the patent system for transferring the technology developed to the public sector for its use and benefit.

Post World War II the rapid technological strides made under the impetus of a wartime footing and the obvious necessity for continuing technological superiority, at least in defense-oriented efforts, made it imperative to continue to provide public support for science. Nor was this support limited to the military. For example, in 1950 Congress finally provided an annual budget of \$15 million

for the National Science Foundation to conduct basic scientific research at universities.

During this same period, hundreds of millions of dollars were appropriated by the Government in the area of medical research in the beginnings of an all-out attack on disease.

With the rapid expansion of scientific projects being undertaken and supported by the Government, the same shortage of technical ability and facilities continued to prevail as had been experienced under the pressures of World War II. Since the Government could not do all the necessary work in its own facilities, qualified private companies, universities and nonprofit organizations were sought out to perform many of the programs through contractual arrangements. In each arrangement, the same old problem of ownership of patent rights existed but was seldom, if ever, directly addressed. In the case of universities and other non-profit organizations, few were engaged at the time in patenting the results of research and in technology transfer activities. Since one of the prime objectives of such an institution was to support its respective research efforts and since the government was a ready source of funds for supporting such efforts, the prevailing attitude was simply to accept the readily available government support with little thought being given to the underlying property rights and the value of those rights in the long term.

The Government itself had not developed a uniform patent policy for all of its agencies regarding the disposition of rights in intellectual property generated during the course of research supported by those agencies. In fact, there was no existing statutory authority which gave the agencies the right to hold patents or license technology. Such acts were viewed as objectives of the agency mission. Consequently, each governmental agency which supported a research and/or development effort, through either or both of contractual or grant arrangements, developed its own policy. The ultimate result was that many and varied policies evolved to the point that there were some 26 different agency policies. Also, since to support a given research project, funds from different agencies were often co-mingled within universities, the most restrictive agency policy became the controlling policy.

Operating under the various agency policies, the Government had accumulated in its patent portfolio about 30,000 patents of which only about 5% had been licensed to industry with an even smaller percentage reflected in products or processes in commercial use. Thus, with the Government, as represented by its agencies, adopting, in general, a non-exclusive licensing policy the experience of licensing Government-owned patent had without question been one of non-use of the technology. For example, in 1978 the National Aeronautics and Space Administration (NASA) reported that through 1978 it had had 31,357 contractor inventions reported to it. Of those, title had been waived to the contractor in 1,254 cases, or less than 4%. The results of NASA's own licensing program were said to have been disappointing representing a commercialization rate of less than 1%. In contrast, the rate of commercialization of the waived inventions was consistently in the 18-20% range. Therefore, the intended benefits which were to flow to the public in the form of new products and processes as a result of federal support of research both within the government itself and in the university sector were left unrealized.

Moreover, under the agency policies then in place, Government ownership of a patent was in a sense an anomaly. The patent system was created as an incentive to invent, develop, and exploit new technology to promote science and useful arts for the benefit of the public. When the government held title to those many inventions under the policy that the inventions should be freely available to all, much the same as if the invention had been disclosed in a publication, the

patent system could not operate in the manner in which it was intended. The incentive inherent in the right to exclude conferred upon the private owner of the patent, and which is the inducement to development efforts necessary to the marketing of new products or the use of new processes, was simply not available. What is available to everyone is of interest to no one.

The ineffectiveness and inadvisability of such agency policies and their adverse effect on the public benefit should have been apparent.

D. Government Policy—Move Towards Uniformity

In 1963, Jerome Weisner, President Kennedy's Science Advisor, recognized a need for some guidelines to effect a more uniform Government policy toward inventions and patents on a Government-wide basis. The results of Dr. Weisner's study culminated in the Policy Statement issued on October 10, 1963 by President Kennedy to establish Government-wide objectives and criteria, subject to existing statutory requirements, for the allocation of rights to inventions as between the Government and its contractors, which would best serve the overall public interest while encouraging development and utilization of the inventions.

The ensuing studies and experience culminated in the issuance of a revised Statement of Government Patent Policy by President Nixon on August 23, 1971. The thrust of that statement was:

A single presumption of ownership of patent rights to government-sponsored inventions either in the government or its contractors is not a satisfactory basis for government patent policy and, that a flexible, government-wide policy best serves the public interest.

The considerations basic to the Statement of Government Patent Policy were the following:

(1) The Government expends large sums for the conduct of research and development which results in a considerable number of inventions and discoveries.

(2) The inventions in scientific and technological fields resulting from work performed under Government contracts constitute a valuable national resource.

(3) The use and practice of these inventions and discoveries should stimulate inventors, meet the needs of the government, recognize the equities of the contractor, and serve the public interest.

(4) The public interest in a dynamic and efficient economy requires that efforts be made to encourage the expeditious development and civilian use of these inventions. Both the need for incentives to draw forth private initiatives to this end, and the need to promote healthy competition in industry must be weighed in the disposition of patent rights under government contracts. Where the contractor acquires exclusive rights, he remains subject to the provisions of the antitrust laws.

(5) The public interest is also served by sharing of benefits of

Government-financed research and development with foreign countries to a degree consistent with our international programs and with the objectives of U.S. foreign policy.

(6) There is growing importance attaching to the acquisition of foreign patent rights in furtherance of the interest of U.S. industry and the Government.

(7) The prudent administration of Government research and development calls for a Government-wide policy on the disposition of inventions made under Government contracts. The policy must recognize the need for flexibility to accommodate special situations.

Although there is evidence that the guidelines did bring the patent practices of the Agencies into greater harmony, divergent policies still existed and there was a strong presumption, if not evidence, in terms of the transfer of technology to the public sector, that the more restrictive the policy of the Agency, i.e. the more an Agency was inclined to take title to inventions and patents generated under its funding, the less was the likelihood that the technology would be transferred for the public benefit.

E. Institutional Patent Agreements

During the period from 1963 to 1971, while experience with the Weisner-Kennedy effort was being gained, further efforts were being made to persuade several federal agencies, specifically the Department of Health, Education and Welfare (now Health and Human Services [HHS]) and the National Science Foundation, to enter into Institutional Patent Agreements, (IPAs) with universities. The policies of both of these agencies permitted a waiver of rights to the inventions made with their funds (referred to as an 8.2(b) grant of greater rights). However, on the very few occasions where such a waiver was granted, it was under such restrictive provisions that it presented an unworkable basis for transferring technology to the private sector. No commercial firm was willing, under the conditions imposed under many of the waivers, to risk the expenditure of the necessary development funds.

Subsequently, after five years of negotiation, the then Department of Health, Education and Welfare, in 1968, issued its first new IPA to the University of Wisconsin. This was followed in 1973, after another five years of effort, by an Institutional Patent Agreement between the National Science Foundation and the University of Wisconsin. The first ever of such agreements with that agency.

That evidence of not only the availability of an IPA, but that those two agencies would actually grant them, appeared to provide some impetus to universities to engage in the technology transfer business. Nevertheless, some of the provisions of the IPAs available from those two agencies were unacceptable under some universities' policies, while many other governmental agencies still clung tenaciously to the policy of taking title to all inventions made with funds they had supplied.

Fundamental to the success of technology transfer under the IPAs was the certainty that the universities would be the owner of the inventions made under those agreements. That factor and, in addition, the ability of universities to grant exclusive licenses were instrumental to the subsequent willingness of private sector industry to engage in licensing arrangements with universities that had IPAs.

Although limited to two agencies, the NIH and NSF, the IPAs were not only important as manifesting a change in the attitude of those agencies and potential licensees but, more importantly, as establishing, through negotiation, terms and provisions which were carried into and set the tone for the legislative effort which resulted in the passage of Public Law 96-517, the Patent and Trademark Law Amendments Act, in 1980 (the Bayh-Dole Act). In fact, that law is often looked upon as a codification of the terms and provisions of the IPAs.

F. The Bayh-Dole Act

The passage of the Bayh-Dole Act was the reward for almost 20 years of effort by the non-profit sector to stimulate the transfer of technology through the vehicle of the patent system. It was the culmination of the many pieces of legislation introduced over many years that had sought to establish a uniform patent policy within the government. It should be considered a landmark piece of legislation in that, after many false starts and unsuccessful efforts it was, finally, a recognition by Congress:

- (1) that imagination and creativity are truly a national resource;
- (2) that the patent system is the vehicle which permits the delivery of that resource to the public;
- (3) that placing the stewardship of the results of basic research in the hands of universities and small business is in the public interest; and, significantly,
- (4) that the existing federal patent policy was placing the nation in peril during a time when intellectual property rights and innovation were becoming the preferred currency in foreign affairs.

The most significant feature of the Bayh-Dole Act was that it changed the presumption of title in and to any invention made in whole or in part with the use of government-supplied funds from the government to the universities.

This was the final step in establishing the strong university-industry connection which today exists in the United States.

It is also not universally recognized that the Bayh-Dole Act provided, for the very first time, statutory authority for the Government to apply for, obtain and maintain patents on inventions in both the United States and foreign countries and to license those inventions on a non-exclusive, partially exclusive or exclusive basis. Even where the government contractor (a university or other non-profit entity or a small business) chooses to retain title to an invention under the Bayh-Dole Act the government always receives an irrevocable royalty-free license to practice such invention for governmental purposes. The government also reserved march-in rights for non-performance. In the face of such circumstances there is, in reality, a university-industry-government relationship.

IV. The Economic Climate

To more fully appreciate what has evolved through the sequence of events which has been enumerated, it must be kept in mind that through this period, the economy of the country as a whole, as well as the economy of each state, was and still is in transition. Today, universities operate in an economic climate which:

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(1) is knowledge based—not capital based (although, without question, availability of capital is a necessity);

(2) is entrepreneurially based—witness the large numbers of new companies created in recent years;

(3) involves world markets—the international aspect of protection for intellectual property generated through the research function must be a consideration;

(4) reflects continuous and often radical technology changes;

(5) is becoming more decentralized—making state and local options and initiatives more significant;

(6) is an economy of appropriateness not one of scale—i.e., merely increasing the size of a production plant will not necessarily reduce the cost of product or increase its quality;

(7) is increasingly competitive on a global scale—witness the advent of the European economic community and other geographic economic blocks.

In view of this continually evolving economic climate, and since new products arise from new fundamental ideas as well as from new applications of existing technology, the necessity for supporting research is evident. However, support of research is not enough. That support must be coupled with a creative technology transfer capability because inventions are of little value to society unless and until they are utilized by society. To quote Thomas Edison:

"The value of an idea lies
in the using of it."

With the passage of the Bayh-Dole Act and, in the same year, the decision of the United States Supreme Court in the Chakrabarty Case, which stood for the proposition that merely because something was alive (in that case a bacterium) it was not precluded from being patentable, along with the evolution of genetic engineering concepts, the universities were literally propelled into an awareness of the potential economic value of the technology that was being generated in their research programs.

Because the government has been and still is the primary source of the funds supporting the research effort at universities, the passage of the Bayh-Dole Act permitted the universities to position themselves, through the establishment or expansion of technology transfer capabilities, to transfer the technology generated during the course of government-funded research to the public, generally through the licensing of an industrial partner, for the public's use and benefit—the transfer of a property right.

The patent system is the most viable means for accomplishing the transfer of technology since it offers protection to the intellectual property base while at the same time providing an incentive to the industrial partner because of the right it conveys to exclude other than the licensee from practicing the invention patented. Consequently, full and careful consideration must be given to the making of any policy which will affect the transfer of technology that has been generated by government-funded research. In addition, careful consideration must also be given to any proposed changes in patent laws including treaty accommodations, which could adversely affect technology transfer capabilities.

The most pertinent question to ask is:

In whose hands will the vestiture of
primary rights to inventions serve to
transfer the inventive technology most
quickly to the public for its use and
benefit?

In the U.S. the answer has been the university-private sector partnership.

In the United States five events, led by the passage of the Bayh-Dole Act, reshaped government patent policies which, in turn, shaped university technology transfer as we practice it today.

- (1) The passage of the Bayh-Dole Act itself.
- (2) The issuance in 1982 by the Office of Management and Budget (OMB) policy guidance to federal agencies for implementing that Act.
- (3) The issuance of a Presidential Memorandum on Government Policy under which federal agencies were directed to extend the terms and provisions of the Bayh-Dole Act to all government contractors.
- (4) The amendment of the Bayh-Dole Act by Public Law 98-620 to remove some politically-motivated restrictions on exclusive licensing placed in the original Act (PL96-517).
- (5) Publication of rulemaking by the Department of Commerce. This did not occur until 1987.

Also in this same period, one should not overlook the establishment in 1982 of the Court of Appeals for the Federal Circuit which, under the able leadership of Chief Judge Howard Markey, gave further impetus to the value of patents and a uniformity to their interpretation which put to rest the disparities which existed among the Judicial Circuits and had led to forum shopping in patent litigation.

These events, led by the passage of the Bayh-Dole Act created the revolution in university technology transfer.

That reshaping of government patent policies has had a highly significant effect upon the academic sector because of the extensive federal support for research carried out in that sector and particularly for basic research. The relative amounts of research dollars in the university sector by source of those funds and by the performers of that basic research presents an interesting contrast.

(double-click on graphs to view enlarged versions)



V. The Impact of the Bayh-Dole Act

How can the practical impact of the Bayh-Dole Act on university technology transfer be measured?



The number of institutions engaged in technology transfer efforts has increased dramatically.

Since we are dealing for the most part with the transfer of technology from a protected base, i.e., patents and other forms of intellectual property protection, an obvious answer is to look at the change in the number of patents issued to universities and other non-profit entities, e.g. teaching hospitals, since the effective date of the Bayh-Dole Act in 1981.

In addition, because more institutions have the technology transfer programs,



a greater number of institutions are receiving patents. The growth and trend lines are evident. The university sector now receives about 3% of all United States origin patents issued.



The real measure of technology transfer is not, of course, the number of patents which the university sector holds, but the amount of technology represented in and by those patents which has been transferred to the private sector for further development into products and processes useful to mankind. In a study conducted in 1989 among executives in various industries, it was shown that a number of industries relied heavily on research conducted at universities for new products or for shortening the time necessary to bring a product or process into commercial use.

Although this was a study published in 1989 there are no indicators that this reliance has changed. In fact, with the downsizing in corporate America it would not be at all surprising that there is greater reliance on the university sector.



What has been the licensing experience?



The most recent licensing survey by the Association of University Technology Managers (AUTM) shows a continuing growth in patenting and licensing activities by the university sector. At the end of fiscal year 1999, the university sector reported almost 18,617 active licenses or options.

The patenting and licensing activities are, of course, based upon the number of invention disclosures received and the patent applications filed. The invention disclosures received have been increasing every year and in 1999 reached 12,324.



The number of new applications filed, as might be expected, have also increased year-to-year to a total of 5,545 new applications in 1999.



As a result of these patenting and licensing activities, university and hospital (teaching hospitals usually connected with universities) have experienced growing royalty income that reached 862 million dollars in 1999. For the most

part these monies, after sharing with the inventor or inventor group, are utilized to support further research within the university or hospital.



Another significant outgrowth of the university technology transfer programs are the number of new start-up companies which have been formed that find their basis in the technology generated during the course of basic research. The most visible example of this phenomenon has been in the field of biotechnology. In fact, the biotech industry evolved from basic university research. Since 1980 at least 2,922 new companies have been formed based on license from an academic institution, including 344 reported formed in 1999. With universities taking an equity position in such companies the potential for financial return over and above a royalty stream is increased. Moreover, the start-up companies offer the opportunity to enhance local or regional employment.



The impact of the Bayh-Dole Act is also seen in other indicators. For example, I believe that an excellent indicator which parallels the growth of the technology transfer function in the university sector is the growth of the membership in the Association of University Technology Managers (AUTM).

After the passage of
the Bayh-Dole Act,
and particularly after

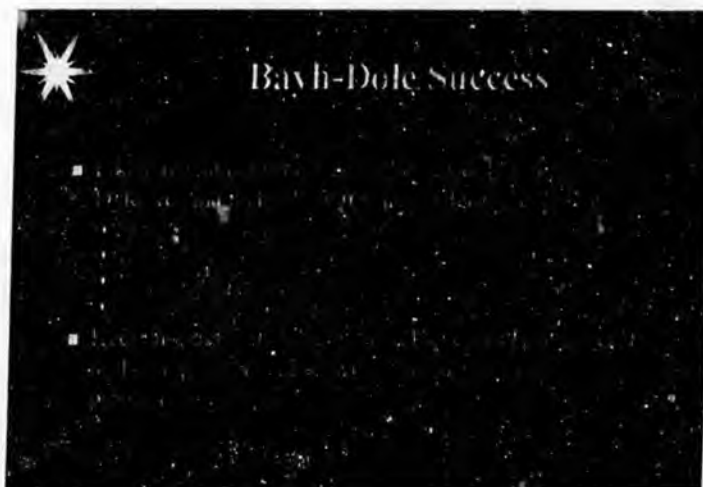
the effective date of that Act in 1981, there has been a dramatic increase in the number of members to the current approximately 2700.



Growth in membership from overseas has also dramatically increased as countries recognize the contributions that their universities can make modeled on the United States experience.

Several things contributed to the success of the Bayh-Dole Act and the transfer of technology under it.

- (1) The continuing support for basic research by the federal government,
- (2) the ownership of the inventions by the universities as opposed to the government,
- (3) the inventor remains in the development picture, and
- (4) the uniformity to handling of intellectual property generated with federal support regardless of the federal agency from which the support funds were obtained.



One important factor, which is often overlooked, is that the success was achieved without cost to the taxpayer. In other words, no separate appropriation of government funds was needed to establish or manage the effort. In fact, it has been estimated that the economic benefits flowing from the universities' licensing activities adds about \$41 billion to the United States economy.

Significant as that dollar amount is, it should not be overlooked that university inventions, arising, as most of them do, from basic research, have led to many products which have or exhibit the capability of saving lives or of improving the lives, safety and health of the citizens of the United States and around the world. In that context their contribution to society is immeasurable.

VI. The Heritage of the Bayh-Dole Act

The Bayh-Dole Act can be given credit for focusing congressional interest on intellectual property-oriented legislation. With that focus established, the years since have seen many pieces of such legislation introduced. Some have become law, most have not. Of these, the Federal Technology Transfer Act (FTTA) of 1986 can be considered to have been a direct result of the Bayh-Dole Act and experience by universities under it. The FTTA was intended to promote the utilization of technology generated in government owned and operated laboratories. The FTTA was built on certain fundamental principles.

- (1) The federal government will continue to underwrite the cost of much important basic research in scientifically promising areas that takes place in the United States.
- (2) Transferring this research from the laboratory to the marketplace is primarily the job of the private sector, with which the federal government should not compete.
- (3) The federal government can encourage the private sector to undertake this effort by judicious reliance on market-oriented incentives and protection of proprietary interests.

That the university sector has made a tangible contribution to the competitiveness of the United States in a global market through the technology transfer function cannot be denied. The seminal piece of legislation which made that contribution possible was the Bayh-Dole Act. Without doubt, the objectives of the Act has been realized. Through operation under that Act:

- (1) Small business, which is frequently the test bed for embryonic university technologies, has benefited to a very large extent;
- (2) the government is comforted in knowing that taxpayer dollars, which support the bulk of basic research in the university sector, have lead to the development of products and the use of processes that have advanced the quality of life for its citizens.
- (3) industry can rely on a source of technology, data and information and a pipeline of manpower which fulfills its needs and feeds the production processes.

In sum, all sections of society enjoy both the protection and benefits afforded under the Bayh-Dole Act and its progeny. Moreover, academic institutions, after the government, provide the second largest share of academic R & D support. Because of the commingling of funds for the support of research the university sector's stake in the Bayh-Dole Act and operation under it is very direct.

We must understand that no matter how much money we spend on research and development the findings are not going to benefit the public unless there are suitable incentives to invest in commercialization. And because no one knows which venture will succeed, we must strive for a society and an environment ruled by the faith that the guarantee of reasonable profits from risk-

taking will call forth the endless stream of inventions, enterprise and art necessary to resolve society's problems.

In the Bayh-Dole Act, Congress made a determination that private (not government) ownership of inventions, motivated by the prospect of financial gain would lead to more efficient commercialization and distribution of federally funded technology.

We must not fail to recognize and to remember that the Bayh-Dole Act and the opportunities as well as the obligations which it presents to the university sector represents a blend of science and law – the two most important forces that have shaped our society as it exists today. These are and will continue to be the fundamental building blocks for the betterment of the human condition.

Endnotes

Vannevar Bush held the following positions in government: Chairman, National Defense Research Committee 1940; Director-Office of Scientific Research and Development 1941; Chairman-Joint Research and Development Board 1946-47; Member-Research and Development Board of National Military Establishment 1944-48

See Resume of U.S. Technology Policies—Dr. Betsy Ancker-Johnson-Les Nouvelles (Journal of the Licensing Executives society) Dec. 1976, Vol. XI No. 4, P. 186; Statement before the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, Dec. 11, 1976. (This latter document also contrasts the experience of universities in licensing patents owned by them some or most of which may have resulted from research supported in whole or part by Federal monies.)

Presidential Memorandum and Statement of Government Patent Policy (F.R. Vol. 28, No. 200, October 12, 1963).

Presidential Memorandum and Statement of Government Patent Policy (F.R. Vol. 66, No. 166, August 26, 1971).

For historical interest re Institutional Patent Agreements and early DHEW practice see Report to the Congress on "Problem Areas Affecting usefulness of Results of Government-Sponsored Research in Medicinal Chemistry" by the Comptroller General of the United States, August 12, 1968.

P.L. 96-517, Patent and Trademark Amendments Act of 1980. This law amended Title 35 United States Code by adding Chapter 18, Sections 200-212.

Diamond, Commissioner of Patents v. Chakrabarty, 206 USPO 193, U.S. Supreme Court. (A companion case to Chakrabarty was *In re Bergy* [1950USPQ 344 (1977)] which held that "the fact that microorganisms . . . are alive. . . is without legal significance for purposes of the patent law." Certiorari was granted for both Bergy and Chakrabarty but Bergy was then dismissed as moot.)

§ 200. Policy and objective. "It is the policy and objective of the congress to use the patent system to promote the utilization of inventions arising from federally supported research or development; to encourage maximum participation of small business firms in federally supported research and development efforts; to promote collaboration between commercial concerns and nonprofit organizations, including universities; to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise; to promote commercialization and public availability of inventions made in the Unites States by United States industry and labor; to ensure that Government obtains sufficient rights in federally supported inventions to meet the needs of the Government and protect the public against nonuse or unreasonable use of inventions; and to minimize the costs of administering policies in this area "

OMB Circular A-124 was subsequently codified as 37CFR Part 401.

The Presidential Memorandum was incorporated into the text of OMB Circular A-124 on March 24, 1984.

PL-98-620, The Trademark Clarification Act amended Chapter 18 of Title 25 U.S.C.

Final rules were published on March 18, 1987 (52FR8552) and subsequently codified at 37CFR Part 401.1-401.16.

Court of Appeals for the Federal Circuit established effective October 1, 1982.