総合科学技術会議
知的財産戦略専門調査会

資料10

《松見委員提出資料》

米国の産学官連携
― 事例紹介 ―

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2008年2月22日

米国の産学官連携

① Scienceは連邦政府、知の応用／産業化は州政府が、各々支援

② 産学官連携 ⇒ 地域イノベーション

③ 産学連携プロジェクトの知財マネジメント

大学　　：　知財保有、申請・維持コスト負担
州政府　：　知財維持コスト支援
企業　　：　fist refusal right 保有

米国の産学官連携

④

	役割	メリット
州政府	・インフラ整備（研究施設など）	・教育振興
	・アーリーステージ資金サポート	・雇用創出
		・産業／経済発展
大学	・知の提供	・研究資金確保
	・大学施設／資源の提供	・学生への魅力増大
		・共同研究現場での人材育成
		・知財保有
		・技術の事業化、社会還元
企業	・市場を見据えた知の活用、事業化	・R&Dパイプラインの上流部分（技術が不明瞭な段階）での
	・資金サポート	大学の協力
		・大学研究施設の利用
		・大学研究資源（人と知）の利用
		・大学生へのアクセス
		・パートナー企業とのセミオープンイノベーション、
		情報交換、人的交流

State University of New York at Albany, College of Nanoscale Science and Engineering (CNSE)

1. 2001年IBMが1億ドルを寄付、州政府からの5千万ドルと併せ、CNSEをスタート。
2. 以降の、企業との大型共同研究例：SEMATEC / 4億ドル、東京エレクトロン / 3億ドル、Applied Materials / 3億ドル。
3. 共同研究企業：IBM、SEMATEC、 Applied Materials、Intel、AMD、Honeywell、Dow Chemical、ソニー、東芝、東京エレクトロン、荏原製作所他合計250社。
4. 大学の中のIBMオフィスに150人常駐、300人に拡大予定、SEMATECは50人（150人に拡大）、東京エレクトロンは40人、Applied Materialsは20人、各々大学に常駐し、大学との共同研究に従事。常駐者間の交流も有益。

University of California Los Angeles, California Nanosystems Institute (CNSI)

1. 2000年にカリフォルニア州政府が1億ドルを投資して設立、最近、更に幹細胞基礎研究に3億ドル予算配分。
2. 目的：産学連携による、大学の技術の事業化と、大学の技術の地域経済活性化への活用。
3. 共同研究パートナー：Intel、AMD、マイクロン、Hewlett Packard、BASF、Sun、Siemens、Applied Materials、日立、NEC、東大、九大、北大。
4. Intel、マイクロンなどの研究員が大学キャンパスに在住。
5. 企業にとってのメリット：長期的研究のリスク軽減/大学での発見の利用/大学施設の共有/キャンパス在住他社研究員との交流。

提言

- 具体的事例の創造

1. 地域にて
2. 有力企業、中小企業、大学、地方自治体で。海外グループの参加も歓迎
3. 小規模でも可
4. 環境或いはライフサイエンスをテーマに
5. 国や日本経団連にても支援を

College of Nanoscale Science and Engineering of State University of New York at Albany (CNSE)

別添資料

The College of Nanoscale Science and Engineering (CNSE) began as a combined vision of government, academia and industry. The common goal was to propel New York State to a leadership position in technology and economic development. Four key drivers: (1) select an overarching discipline (nanotechnology), (2) invest in state-of the-art infrastructure, (3) focus on world-class hands-on education and training and (4) leverage public-private partnerships.

College of Nanoscale Science and Engineering of State University of New York at Albany (CNSE)

Corporate partners have access to state-of the art laboratories, supercomputer center, shared-user facilities and an array of scientific centers serving their long and short term technology.

CNSE assists companies to overcome technical, market and business development barriers through technology incubation, pilot prototyping and test-bed integration support, leading to targeted deployment of nanotechnology-based products.

Highlights of growth and development of CNSE of SUNY at Albany

	state government/university	industry
Apr.2001	$50 million funding for launching CENN	$100 million funding by IBM for launching CENN
Jul.2002		creation of $405 million Int'l SEMATECH North Center
Nov.2002	$50 million NanoFab 300S at CENN	$300 million Tokyo Electron Technology Center America at CENN
Jan.2004	Creation of CNSE (CENN, a part of CNSE)	
Jan.2005		$400 million ASML R&D Center at CENN

Highlights of growth and development of CNSE of SUNY at Albany

	state government/university	industry
May2005	$500 million Center for Semiconductor Research	
Jul.2005	$500+ million International Venture for Nanolithography initiative at CENN	
Sep.2005		$300 million Applied Materials research center at CENN
Jan.2006	$435 million for establishing Institute for Nanoelectronics Discovery and Exploration, $75 million for NanoFab 300NE and $45 Million for NanoFab 300N	$50 million EUV Resist Test Center by SEMATECH

Highlights of growth and development of CNSE of SUNY at Albany

	state government/university	industry
Oct.2006	$30 million aid for relocation of Vistec Lithography HQ,R&D/mfg operations from Cambridge, UK	Vistec to establish joint R&D Operations at CENN
Jan.2007	$750,000 award for CNSE/Vistec joint research	
May2007	$300 million funding to help SEMATECH purchase advanced semiconductor process equipment	SEMATECH's relocation of HQ to CNSE, $25 million funding for research at SUNY, and $300 million commitment of contribution

California NanoSystems Institute (CNSI) of UCLA

別添資料

CNSI was established in December 2000 through a State of California initiative to create Institute of Science and Innovation requiring it to forge partnerships with industry as a way to accelerate technological changes for society in general and advances for the peoples of California in particular.

UCLA consistently ranks among the top five universities nationally in total research-and-development spending, receiving more than $820 million a year in competitively awarded federal and state grants and contracts. For every $1 state taxpayers invest in UCLA, the university generates almost $9 in economic activity, resulting in an annual $6 billion economic impact on the Greater Los Angeles region.

California NanoSystems Institute (CNSI) of UCLA

CNSI Governing Board members include deans of Physical Sciences, School of Engineering, Math and Physical Sciences, Life Sciences and School of Medicine.

CNSI Advisory and Oversight Board members include representatives of Hewlett-Packard, Intel, BASF, Microsoft, Abraxis BioScience, FEI Company, National Institute for Materials Science of Japan and National Research Council Canada.

California NanoSystems Institute (CNSI) of UCLA

CNSI's industry partners are Hewlett-Packard, Intel, BASF, Abraxis BioScience, Keithley, NEC and Solarmer Energy.

State government funded $150 million for CNSI infrastructure only.

There are 4 residents from Intel, 1 from MICRON, 1 from AMD and 1 from IBM in UCLA campus.

California NanoSystems Institute (CNSI) of UCLA

Grants and contracts to UCLA school of engineering by major corporations:

FY2006-2007 $7,695,495 by Intel, Solarmer Energy, Nanoelectronics Research Corp, IBM, Honeywell, Raytheon, National Semiconductor Corp. etc

FY2005-2006 $7,071,606 by Intel, Solarmer Energy, Apollo Dynamics, Hewlett-Packard, Toyota, Honeywell, Lockheed Martin, Boeing etc

FY2004-2005 $6,949,827 by STMICROELECTRONICS, Canon, Honeywell, Southern California Edison, Raytheon, Toyota, IBM etc