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**HOUSE OF REPRESENTATIVES
COMMITTEE ON
INFORMATION TECHNOLOGY
ANALYSIS**

BILL #: HB 531
RELATING TO: Technological and Economic Development
SPONSOR(S): Representative Andrews and others

TIED BILL(S):

ORIGINATING COMMITTEE(S)/COMMITTEE(S) OF REFERENCE:

- (1) INFORMATION TECHNOLOGY YEAS 1 NAYS 7
 - (2) TRANSPORTATION & ECONOMIC DEVELOPMENT APPROPRIATIONS
 - (3) COUNCIL FOR LIFELONG LEARNING
 - (4)
 - (5)
-

I. SUMMARY:

“Technology transfer” the process by which technology, knowledge, and/or information developed in one organization or in one area or for one purpose is applied and utilized in another organization, in another area, or for another purpose.” See <http://www.trecc.org/html/tech.html>. Technology transfer is typically from an entity (*i.e.*, a business, a governmental entity, or an educational institution) that does not have either the *capability* or the *goal* of commercializing (*i.e.*, bringing to market) the technology, knowledge or information.

Transferring university-based or university-developed technology to the private sector is an important element to a successful high-tech economic development model. Bringing private industry together with university leaders to address real-world issues results in benefits for the universities (*e.g.*, sale or licensing of its technology, funding for additional research, etc.), benefits for the private sector (*e.g.*, ability to develop and commercialize new products and markets), and benefits for the citizenry at large (*e.g.*, increased product choice, increased supply of high-skilled jobs, etc.). A number of existing initiatives are focused on technology transfer in Florida, including the technology transfer divisions of Florida’s universities, Enterprise Florida and other economic development entities, and the Florida Research Consortium. The Florida Research Consortium (“FRC”) is a not-for-profit strategic partnership between all of Florida’s universities (including the University of Miami) and the private sector. As an umbrella organization operating on a statewide basis, the Consortium is focused on coordinating and enhancing Florida’s competitive positions in technology transfer, advanced research & development, etc. The FRC does not rely on any public funding.

HB 531 would create a new governmental program, the Commission on Intellectual Capital, Technology Transfer and Leading Edge Business Development, within the Board of Education. The commission would be made up of government officials and individuals from the private sector. The commission’s purpose would be to promote technology transfer. The bill would also require the commission to submit an annual report and plan detailing the commission’s activities and goals.

HB 531 would take effect upon becoming a law.

II. SUBSTANTIVE ANALYSIS:

A. DOES THE BILL SUPPORT THE FOLLOWING PRINCIPLES:

- | | | | |
|-----------------------------------|------------------------------|----------------------------------------|-----------------------------------------|
| 1. <u>Less Government</u> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> |
| 2. <u>Lower Taxes</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 3. <u>Individual Freedom</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 4. <u>Personal Responsibility</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 5. <u>Family Empowerment</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |

For any principle that received a "no" above, please explain:

HB 531 is inconsistent with the principle of less government. It would create a new governmental entity to perform functions that are duplicative of the duties of existing entities. The bill would authorize employment of personnel necessary to staff the commission at state expense. Certain of the responsibilities that the bill would assign to the commission are currently being performed within state universities and other entities.

B. PRESENT SITUATION:

Florida's universities play a significant role in maintaining and strengthening Florida's economy, particularly in high-technology sectors. Much of today's leading-edge technology was developed at universities and other government research facilities. A key goal of properly functioning research and development policy is to ensure that state-sponsored research is driven by commercial needs and that technology developed through state-sponsored research is effectively transitioned to the private sector. This process is called technology transfer.

What is Technology Transfer?

Technology transfer in general terms "is the process by which technology, knowledge, and/or information developed in one organization or in one area or for one purpose is applied and utilized in another organization, in another area, or for another purpose." See <http://www.trecc.org/html/tech.html>. Technology transfer is typically from an entity (i.e., a business, a governmental entity, or an educational institution) that does not have either the *capability* or the *goal* of commercializing (i.e., bringing to market) the technology, knowledge or information.

For present purposes, research can be divided into two broad categories: base research and applied research. *Base research* is "pure research." Its purpose is to explore new areas and answer fundamental scientific questions. For instance, discovering new materials to replace silicon in today's microprocessors might be considered base research. A significant amount of base research does not lead to practical commercial products. However, when the results of base research have commercial promise, further research is necessary to devise a useful commercial product. This is *applied research*. Applied research takes the knowledge gained by base research and develops it into useful products. Once applied research takes the shape of a useful product or technology, it can be patented, licensed, sold or otherwise transferred to the private sector.

Effective technology transfer policies produce a synergy between entrepreneurs and researchers. Much applied research is the product of public-private partnerships. The private sector often funds applied research in whole or in part. In many cases, private businesses fund research directed at specific questions they want answered. In other cases, commercial technologies are developed completely within a research facility and are "spun off" by the researcher into a new company. A successful working relationship between researchers and entrepreneurs creates new jobs, new products and spurs economic growth. This result has been played out in several other areas of the country such as Silicon Valley, the 128 Corridor in Boston, and the Research Triangle in North Carolina.

How does Technology Transfer Occur in Florida?

There are numerous existing government programs targeted at university research that help promote technology transfer. These include technology transfer offices at state universities, Divisions of Sponsored Research in state universities, the Incubator Facilities Program, and Research and Development Authorities.

- **Technology Transfer Offices at State Universities** -- Each state university has an office of technology transfer whose purpose is to assist faculty, staff and students in moving their innovative technologies into commercial use in the public and private sector. These offices help researchers license their technologies, which in turn produces research income for state universities. These offices also serve as a point of contact for members of the public who are interested in sponsoring research at a university and help create "spin off" companies from university-based research. Technology transfer directors meet collectively in the Technology Transfer Directors Group. Two members of the technology Transfer Directors Group serve on the board of the FRC.
- **Division of Sponsored Research at State Universities** -- Section 240.241, F.S., authorizes each state university, with the approval of the Department of Education, to create divisions of sponsored research which administer and promote research programs at the university. Universities are required to set policies to regulate the activities of divisions of sponsored research and administer their research programs to achieve maximum effectiveness for the state. Each Division is supervised by the university president, who is authorized to appoint a director and staff and to enter into research contracts with private entities and the federal government. Each university president serves on the board of the FRC.
- **Incubator Facilities Programs** -- Section 240.540, F.S., authorizes any university-based research and development park to provide incubator facilities to eligible small businesses to provide support, technical assistance, equipment and an on-site location to help these businesses grow. Incubator facilities may also provide assistance to businesses in the community that are not located in the research park. Section 240.3341, F.S., allows community colleges to have incubator facilities.
- **Research and Development Authorities** -- Sections 159.701-.7095, F.S., provide for the creation of county-based research and development authorities for the purpose of promoting the R&D programs at a public or private university. Capital projects creating the R&D park may be undertaken in conjunction with a university. All R&D parks must be approved by the Board of Education. Currently, UCF, FSU, FAMU, USF, FAU, and UNF have established R&D parks.

Coordinating Research at Florida's State Universities

Section 240.706, F.S., creates the Leadership Board for Applied Research and Public Service which is staffed by the Institute of Science and Public Affairs at Florida State University. The board's purpose is to focus and coordinate applied research throughout the State University System (SUS). The board is responsible for:

- providing strategic direction and planning that supports a coordinated approach to applied research in the state;
- addressing SUS policy matters relating to applied research
- serving as a clearinghouse for services requested by public officials
- providing analysis, endorsements, and support for funding and fiscal initiatives involving applied research.

The board has created Florida ExpertNet [<http://expertnet.org>], a web-based network of applied research and expertise available in Florida's research universities. The network allows users to do a comprehensive search of research groups and university faculty researchers, identify research centers and institutes, and locate information on funded research projects.

The Florida Research Consortium

Florida's universities, including the University of Miami, have recently come together with private industry in Florida to form the Florida Research Consortium ("FRC"), an entity similar in scope to the highly successful Georgia Research Alliance. An initiative recommended by the Information Technology Services Development Task Force, the FRC is made up of representatives from Florida's 11 public universities and the University of Miami, executives from technology companies doing business in Florida, and members of the Technology Transfer Director's Group (*i.e.*, the individuals actually responsible to technology transfer at the member universities), and Enterprise Florida. The FRC does not depend upon public funding for its existence.

The mission of the FRC is to:

- Identify specific science and technology disciplines where Florida has the greatest potential to achieve economic and academic success
- Establish new, and enhance existing, leading-edge technology-based research programs at Florida's universities, including by enhancements of facilities and equipment.
- Attract leading scholars and researchers in technology-based disciplines to Florida's universities in order to build Florida's knowledge base.
- Promote the work of technology transfer offices at member universities.
- Promote collaboration between academic and industrial researchers, scientists and engineers
- Advise the Legislature and the Governor on strategic policy initiatives for expanding and strengthening Florida's high-tech industries.

Because the FRC is a strategic partnership between all of Florida's universities and the private sector, resolution of issues, rather than occurring as a mandate, are addressed through a collaborative process. Importantly, because of the partners involved, the FRC will provide a means for the current lack of consensus among university officials and industry leaders to be collaboratively addressed. The FRC is coordinating the work of the various constituent parts and will promote "best practices" in technology-transfer based economic development. In addition to all of Florida's universities and the private sector, the Governor and the Board of Education have endorsed the FRC as a public-private partnership to help in growing Florida's technology industries.

See Beatrice E. Garcia, "State Unveils Research Initiative," *Miami Herald* (Oct. 3, 2001); Jim Ash, "Bush Pushes Research, Technology," *Palm Beach Post* (Oct. 3, 2001).

The Georgia Research Alliance

To help facilitate research and technology transfer, Georgia's state universities and business community have formed the Georgia Research Alliance (GRA). Founded in 1990, the GRA is a public-private partnership of the state's research universities, businesses, and state government. The GRA was not created by statute. The GRA's purpose is to foster economic development in Georgia by expanding and leveraging the research capabilities of private and public research universities and to assist in the development and expansion of scientific and technology-based industry.

The GRA has targeted three strategic areas: communications technology, commerce and business. University-based research parks have been formed to help researchers and businesses collaborate. A primary goal is to bring together leading scholars, graduate students, and businesses to promote cutting edge research and solve private sector problems.

The GRA has been a great success. More than \$276 million in state research funds have leveraged nearly three times that much in private funds, totaling near \$1 billion. Research relationships between universities and private industry increased 800%. Venture capital contributions in Georgia have significantly increased.

C. EFFECT OF PROPOSED CHANGES:

HB 531 would create a new governmental entity, the Commission on Intellectual Capital, Technology Transfer, and Leading Edge Business Development within the Board of Education's Office of the Secretary. The commission would be independent from the Board of Education, but the Board would be responsible for ensuring the commission is appropriately staffed. The commission would consist of 10 members from the Board of Education, the Council for Education Policy, Research and Improvement, Enterprise Florida, Workforce Florida, and six leaders from technology companies and venture capital companies. The commission would be staffed and managed by the Technology Research and Development Authority

The commission would be formed by July 1, 2002, and would be required to meet at least twice a year. Additionally, the commission could create advisory committees and working groups.

The purposes of the commission would be to: foster and facilitate technology-based research; promote product development and commercialization; create new Florida companies and expand existing Florida-based companies; coordinate the efforts of various state government groups that are directed towards economic development and university research; develop a set of criteria for targeting and funding enhancements to universities and vocational programs.

The commission would be charged with developing a plan to accomplish several goals, including targeting industrial development in Florida; facilitating collaboration among universities and the private sector; accelerating the commercialization of technology developed through university research; and investigating whether Florida's public employee conflict of interest rules impede technology transfer. The commission would be required to submit an annual report to the Legislature describing its activities and achievements. The report would also recommend changes the Legislature could make to enhance Florida's economic development potential.

HB 531 would take effect upon becoming a law.

D. SECTION-BY-SECTION ANALYSIS:

This section need be completed only in the discretion of the Committee.

III. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT:

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

No new revenues would be generated as a result of this bill.

2. Expenditures:

If HB 531 is enacted, there will need to be sufficient funding allocated from within the Board of Education to pay the additional costs of the commission and its staff, salaries and benefits for commission staff, and travel expenses for commission staff. However, until an economic impact analysis of those costs is performed, no reliable estimate of those costs can be made.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The private sector could benefit greatly from improved technology transfer, but the activities of the commission appear to overlap with those of the Florida Research Consortium, a public-private partnership that has already been formed.

D. FISCAL COMMENTS:

See comments under "Expenditures" in part III. A. 2. above.

IV. CONSEQUENCES OF ARTICLE VII, SECTION 18 OF THE FLORIDA CONSTITUTION:

A. APPLICABILITY OF THE MANDATES PROVISION:

HB 531 would not require counties or municipalities to incur any expense or take any action requiring either to incur any expense.

B. REDUCTION OF REVENUE RAISING AUTHORITY:

HB 531 would not reduce the authorities of counties or municipalities to raise revenues.

C. REDUCTION OF STATE TAX SHARED WITH COUNTIES AND MUNICIPALITIES:

HB 531 would not reduce the percentage of any state tax shared with counties or municipalities.

V. COMMENTS:

A. CONSTITUTIONAL ISSUES:

None.

B. RULE-MAKING AUTHORITY:

None.

C. OTHER COMMENTS:

None.

VI. AMENDMENTS OR COMMITTEE SUBSTITUTE CHANGES:

The bill was considered by the Committee on Information Technology during its 2/6/02 meeting. A strike-all amendment was offered by Representative Andrews and unanimously approved by vote of all members of the Committee. After Representative Andrews explained the bill, as amended, and answered questions asked by Committee members concerning the bill, as amended, the members of the Committee voted 1 yea to 7 nays to disapprove the bill.

VII. SIGNATURES:

COMMITTEE ON INFORMATION TECHNOLOGY:

Prepared by:

Richard H. Martin

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Staff Director:

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