FY 2007-2008 PLAN AND BUDGET

FOR THE EXPENDITURE OF REVENUES AVAILABLE FROM THE BOARD OF REGENTS SUPPORT FUND

WITH AN OVERVIEW OF PRELIMINARY RESULTS OBTAINED

SUBMITTED TO THE

GOVERNOR AND LEGISLATURE

IN ACCORDANCE WITH THE CONSTITUTIONAL PROVISIONS OF

ARTICLE VII, SECTION 10.1

ADOPTED

FEBRUARY 22, 2007

BY THE

BOARD OF REGENTS

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LIST OF CHARTS

CHART

ATTACHMENTS

OVERVIEW OF RESULTS

from the Investment of Board of Regents Support Fund Money in Higher Education

- **$694,820,000 GENERATED IN NEW EXTERNAL FUNDING** (through 6/30/2006)
  From federal, private, and other non-Support Fund sources

- **AN ADDITIONAL $275,940,000 GENERATED IN EXTERNAL CONTRIBUTIONS**
  For Endowed Chairs and Professorships

- **2,628 EXTERNAL AWARDS**
  From federal, private, and other non-Support Fund sources

- **237 $1 MILLION CHAIRS AND 24 $2 MILLION CHAIRS** for eminent scholars endowed at 24 universities

- **1,760 $100,000 PROFESSORSHIPS** endowed at 34 campuses

- **1:1.69 RATE OF RETURN** for all projects funded since 1987
  For every Support Fund dollar invested, $1.69 has been returned to the State

- **134 PATENTS ISSUED; 68 PATENT APPLICATIONS PENDING**

- **8,596 PUBLICATIONS** in refereed journals

- **LaSIP** (Regents/BESE/NSF/Louisiana Legislature) produces rising student scores on statewide tests

- **EXPANDED UNIVERSITY COLLABORATION** to increase research competitiveness for federal R&D money

PLAN AND BUDGET
FOR THE EXPENDITURE OF REVENUES AVAILABLE FROM THE BOARD OF REGENTS SUPPORT FUND FISCAL YEAR 2007-2008

PREFACE

The Governor, Legislature, and public should recognize that a sound educational system at all levels and in all disciplines--which is well-supported on a consistent basis--is crucial to enhancing academic programs and units and promoting economic development, the two goals of the Constitutional amendment which created the Louisiana Education Quality Support Fund (hereinafter referred to as Board of Regents Support Fund). The four programs of the Board of Regents Support Fund pursue different but related strategies in the quest to achieve these goals. All disciplines are eligible to compete in the Graduate Fellows, Enhancement, and Endowed Chairs Programs, thus reflecting the Board's broad and long-range commitment to strengthen all disciplines and, in so doing, to promote long-term economic development through the enhancement of higher education in general. Competition in the Research and Development (R & D) Program has generally been restricted to those disciplines where the promotion of basic and applied research is essential for near-term economic development, although, beginning in FY 2004-05, one of the R & D subprograms has focused on research efforts in the arts, social sciences, and humanities. (See section 5.4 below.)

I. INTRODUCTION

According to Article VII, Section 10.1, of the Louisiana Constitution, at least sixty days prior to each regular session of the Legislature the Board of Regents must submit to the Governor and the Legislature a proposed plan and budget for the expenditure, during the coming fiscal year, of money available to higher education from the Board of Regents Support Fund. Higher education's portion of these funds may be spent for "any or all" of the following purposes: (1) endowment of chairs for eminent scholars (hereinafter referred to as the Endowed Chairs Program); (2) recruitment of superior graduate students (the Graduate Fellows Program, including Traditional Graduate Fellows and Graduate Fellowships for Teachers); (3) carefully defined research efforts (the R & D Program, including the Research Competitiveness Subprogram, the Industrial Ties Research Subprogram, and the Awards to Louisiana Artists and Scholars [ATLAS] Subprogram); and (4) enhancement of the quality of academic, research, or agricultural departments or units within a university (the Enhancement Program, including the Traditional Enhancement Program, the Undergraduate Enhancement Program, the Endowed Professorships Program, the Enhancement Program for Two-Year Institutions, the Louisiana Systemic Initiatives Program [LaSIP], the Undergraduate Scholarships Program, and the Post-Katrina Support Fund Initiative). A more extensive discussion of the Board's use of the Support Fund to ameliorate the effects of Hurricane Katrina and Rita appears in Section 5.5.7 of this Plan and Budget.

1.1 BOARD OF REGENTS SUPPORT FUND PROJECTION, FY 2007-2008

The Revenue Estimating Conference projects that the amount of money to be available for higher education from the Louisiana Education Quality Trust Fund in FY 2007-2008 will be $31,500,000.

1.2 BUDGET RATIONALE AND PREAMBLE

In deliberations about the Board of Regents Support Fund Plan and Budget for FY 2007-2008, the Board again noted the persistence of three related Support Fund issues requiring long-range strategic planning:

- Steadily increasing demands for Support Fund resources under all four Program components with concomitant increases in proposal quality and outstanding results achieved, including the leveraging during the grant period of $1.69 in non-State money for every Support Fund dollar awarded;

- The State's expanding emphasis on economic development and diversification through Vision 2020 and the Post-Katrina Initiative; and,

- Unusually great and increasing demands for resources to create endowments--for both eminent scholars and professorships.

Additionally, the Board feels the need to direct some money from Support Fund programs to assist higher education institutions in the recovery and rebuilding efforts necessitated by the hurricanes. Nevertheless, it is vital that robustness be maintained in all four interrelated Support Fund components. While the Board lauds the growth in private philanthropy reflected in the increased applications for endowed chairs and professorships, the Regents are also mindful that significant cuts in budgets for Enhancement, R & D and Recruitment of Superior Graduate Students would jeopardize the viability of these components and hence impair the overall quality of the Support Fund programs. Endowed chairholders and professors must have basic infrastructural equipment, supportive cutting-edge research in affected departments and units, and top quality graduate students in order to achieve the results expected of them.

1.3 TOTAL AVAILABLE BUDGET, FY 2007-2008: $31,500,000

Since the inception of the BoRSF Program, the Board and its staff have traditionally used the figure projected by the State Treasurer's Office for funds available for BoRSF expenditures as the basis for the plan and budget. The Treasurer's estimate has generally been conservative, and in many years the discrepancy between the estimate and the amount ultimately available for expenditure has been sizeable. Accordingly, at its meeting of January 24, 2003, the Board approved a policy relative to the annual projection of plan and budget funds available designed to stabilize budgetary planning and make it more rational.

POLICY RELATIVE TO THE ANNUAL PROJECTION OF PLAN AND BUDGET FUNDS AVAILABLE

> Beginning with FY 2004-05, the total funds budgeted in each BoRSF plan and budget shall be computed as follows: the income actually received from the Support Fund for distribution during the most recently completed fiscal year shall be compared with the Treasurer's estimate for that fiscal year. The difference between the income actually received and the amount estimated shall, as applicable, be added to or subtracted from the amount projected by the Treasurer's Office to be available for the year in which the new BoRSF plan and budget is being prepared.

While the use of this policy did result in a more realistic figure, it retained the conservative Treasurer's estimate as a beginning point, and desperately needed funds remained unexpended. Accordingly, the Board, at its December 8, 2005 meeting, decided to use the Revenue Estimating Conference's projected figure in preparation of the FY 2006-07 plan and budget. The Board reaffirmed this posture for the FY 2007-08 Plan and Budget.

1.4 ADOPTION OF FY 2007-2008 PLAN AND BUDGET

Based on the fiscal estimate provided by the Revenue Estimating Conference and consistent with the Strategic Plan for the Board of Regents Support Fund, the following plan and budget for FY 2007-2008

were adopted by the Board of Regents at its meeting of February 22, 2007. (See Section 2 for a discussion of the Strategic Plan.)

2. LONG-RANGE PLANNING AND EVALUATION

2.1 LONG-RANGE PLANNING

In FY 1987-88 the Board of Regents determined that, in addition to the Constitutionally-required annual plan and budget which set forth short-term programmatic goals and fiscal objectives, a comprehensive overview of tactics and strategies was required to accomplish fully the interrelated purposes and goals of the Support Fund. The short-term activities outlined in the annual plans and budgets could then be shaped by these long-term goals.

The first such plan evolved from a carefully researched "White Paper" prepared by the Louisiana Stimulus for Excellence in Research (LaSER) Committee. Titled Strategic Plan for Higher Education's Portion of the Louisiana Education Quality Support Fund, it was adopted in 1988. Cognizant of changes in economic conditions which affected academic issues, the Board in 1993 adopted a revised plan, titled Board of Regents Support Fund Long-Range Strategic Plan for Higher Education. It maintained the central themes and strategies of the earlier plan, and adjusted to changing conditions and lessons learned from seven years of experience. In 1999 the Board adopted a third revised plan to guide the Support Fund through FY 2005-06. In the wake of Hurricanes Katrina and Rita, the Board extended that Strategic Plan through FY 2006-07, and at its meeting of June 22, 2006 adopted the FY 2007-08 through FY 2013-14 Strategic Plan . The current Plan continues the approach of balancing continuity based on effectiveness, with revisions reflecting "lessons learned."*

2.2 LONG-RANGE EVALUATION

To ensure that the Board of Regents Support Fund achieves its goals, the Board, beginning in FY 1990-91, implemented a systematic comprehensive evaluation process. This process involved four stages: (1) collection of background information; (2) submission to the Board by project directors of annual and/or final project reports; (3) submission of additional information one year after project termination; and (4) an evaluation by out-of-state experts of individual projects as well as the overall program. In the spring of 1994 such an evaluation was conducted by a distinguished panel of out-of-state experts. The Panel concluded that the Board of Regents Support Fund Program "is effectively and efficiently administered, that it is addressing some of the State's economic development and higher education infrastructure needs, and that it has been successful in attracting federal funds to the State."**

With the opportunity to see the various Support Fund programs in operation over a period of years, new insights have been gained. Accordingly, the Board has instructed the staff, in conjunction with the Evaluation Subcommittee of the Board of Regents Support Fund Planning Committee, to engage in a thorough revision of the long-range evaluation system. That process began with the comprehensive review of the Endowed Chairs Program during the summer and fall of 1998. The Endowed Chairs review culminated in the March, 1999 adoption of the Board of Regents Endowed Chairs Policy, which in January, 2002 of recommendations designed to elevate the program's accomplishments. The FY 2001-02 review of the

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*Copies of the 1988, 1993, 1999, and 2006 Strategic Plans are available in the Board's office.
**This Panel's report is available in the Board's office.

Research and Development Program led to recommendations intended to improve and strengthen this already highly successful program. In each instance, insights from the review led to the adoption of measures that will further strengthen these programs and thus maximize their positive impact on Louisiana higher education. All Support Fund Programs are thus continually evaluated to assure their efficiency.

3. AN OVERVIEW OF PRELIMINARY RESULTS OBTAINED

Significant benefits have begun to accrue to the State as a result of the investment of this money in higher education. The results reported herein are even more impressive when one understands that: (1) realization of the full benefit of investment in higher education is a long-term proposition, and final results only become obvious after a period of many years; (2) reported results include only **benefits derived during the life of the grants awarded,** and do not attempt to measure the many benefits which accrue to affected institutions after the conclusion of the relatively brief time of Support Fund contracts; and (3) no specific benefits beyond the initial private match are claimed as a result of the Endowed Chairs for Eminent Scholars Program, and no specific external grants are attributed to the Recruitment for Superior Graduate Students program.

Annual and/or final reports have been used since the inception of the Board of Regents Support Fund Program to monitor the progress of all projects. A few of the most significant achievements are described in the following sections.

3.1 STATEWIDE RESULTS

* **$970.8 million in external funds has been generated** from Federal, private, and industrial sources as a result of the Board of Regents Support Fund investment in higher education, thereby significantly increasing the total monies available for higher education. This represents a **return of $1.69 for every Board of Regents Support Fund dollar invested** in higher education since the inception of the programs. The figure reflects only dollars generated during the life of the awards--additional revenues were/will be generated after the expiration of the awards.

* **Increased collaboration and coordination of efforts between Regents and BESE,** as evidenced by the renewal of the $37 million joint LaSIP effort to reform K-12 and undergraduate instruction in math and science, the subsequent funding of the Delta Rural Systemic Initiative, and the joint efforts of the two boards to improve education through the Blue Ribbon Commission on Teacher Quality. (See Attachment I for descriptions of these projects.) Those collaborative efforts also contributed to the funding of Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) by the U.S. Department of Education for $15 million over a six-year period.

* **2,628 grants and/or contracts have been awarded** to Louisiana universities from external funding agencies directly as a result of Board of Regents Support Fund investments.

* An analysis performed by the Louisiana Department of Economic Development concluded that, for all completed Industrial Ties Research Subprogram projects, **48% had either been successfully commercialized or were in the process of commercialization.** Forty-five percent (45%) of those projects that were successfully commercialized are protected by a patent and/or license. Additionally, **almost 60% of all completed projects reported significant to moderate industrial interaction.**

* **Increased institutional collaboration has resulted, as evidenced by the multi-million dollar, multi-institutional grants awarded to the Board of Regents on behalf of statewide university consortia for research reform initiatives.** Their purpose is to increase the amount of federal research and development money awarded to Louisiana scientists and engineers statewide. (See descriptions of awards in Attachment I.)

* **134 patents have been issued, and another 68 applications are pending.**

3.2 RESULTS FROM SELECTED PROJECTS

See Attachment II for brief summaries of the achievements of several selected projects.

3.3 MULTIPLIER EFFECTS

Using the input/output table constructed by the Bureau of Economic Analysis in the U. S. Department of Commerce and housed in the Department of Economics at LSU, one can estimate the "multiplier" effects that such an infusion of new dollars creates on the Louisiana economy in terms of new revenues, income, and jobs for Louisianians.

The effect of the $970.8 million in new revenues generated from Board of Regents Support Fund projects is estimated as follows:*

- **approximately $1.985 billion in new revenues to Louisiana firms and organizations;**
- **approximately $802.37 million in new income for Louisiana citizens; and**
- **approximately 34,670 new jobs for Louisianians.**

4. LEVERAGING BOARD OF REGENTS SUPPORT FUND MONEY, EXPANDING BOARD OF REGENTS SUPPORT FUND OPPORTUNITIES, AND PROMOTING MULTI-INSTITUTIONAL COOPERATION AND COLLABORATION

As early as FY 1988-89, the Board was co-sponsoring research projects with the National Science Foundation (NSF) and supporting the development of scientific research and educational infrastructure in Louisiana under NSF's Experimental Program to Stimulate Competitive Research (EPSCoR). In FY 1991-92, the Board decided to dedicate a portion of the Board of Regents Support Fund monies as matching commitments for two new statewide, multi-institutional initiatives to be submitted in national competitions for Federal funds in areas which coincide with Constitutionally prescribed Board of Regents Support Fund activities. The reasons for, and goals of, this decision were fourfold:

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*These estimates were determined through application of a formula developed by Dr. Loren Scott of LSU-BR, who authored "The Impact on the Louisiana Economy of $66.5 Million in Outside Research Funding at LSU," January 1990.

- To continue and accelerate the leveraging of Federal money with Board of Regents Support Fund investments--as is being accomplished by principal investigators of individually-funded Board of Regents Support Fund projects described in Attachment II of this Plan and Budget;

- To expand opportunities available under the Board of Regents Support Fund Programs;

- To reinforce the building of infrastructure that had begun under the traditional Board of Regents Support Fund Programs, which is necessary to enable Louisiana's universities to compete more successfully for Federal research money; and,

- To promote multi-institutional collaboration and cooperation among Louisiana's colleges and universities.

The FY 1991-92 Board of Regents Support Fund Plan and Budget described the dedication of Board of Regents Support Fund money as State matching commitments for these multi-year Federal grant proposals then in preparation (FY 1990-91) under the auspices of the Board of Regents. Each proposal required significant State matching money as a condition of funding.

4.1 FUNDED PROPOSALS: JOINT BOARD OF REGENTS SUPPORT FUND/FEDERAL PROGRAMS WITH STATEWIDE IMPACT

The Board was successful in the competitions described above. These efforts served to solidify a partnership between the Support Fund and the National Science Foundation. This partnership has grown over the years to include relationships with the National Aeronautics and Space Administration, the Department of Defense, the Department of Energy, the Department of Commerce, the Environmental Protection Agency, and the National Institutes of Health. Support Fund obligations for these federal grants appear below in chart form. (See Chart I.) A more detailed description of each grant, including the federal funds received from each, can be found in Attachment I.

The Board's decision to augment the Support Fund by using a part of it to pursue federal matching grants opportunities has borne significant fruit. It has enabled the State to progress from a point in 1985-86 at which it could not receive even minimal support from NSF for research collaborations to the current situation, which finds Louisiana among the elite of EPSCoR states in terms of successful research-related activities. The current pending effort aimed at continuing this successful trend is described below.

CHART I

FEDERAL MATCHING GRANTS PROGRAM
FOR JOINT STATE AND FEDERAL PROJECTS WITH SYSTEMIC AND/OR STATEWIDE IMPACT
BY TYPES OF SUPPORT FUND ACTIVITY, MONETARY COMMITMENT, AND DURATION

FEDERAL GRANT	TYPE OF SUPPORT FUND ACTIVITY	AMOUNT OF ANNUAL MATCHING COMMITMENT	AMOUNT OF TOTAL MATCHING COMMITMENT	FYs IN WHICH COMMITMENT IS APPLICABLE	TOTAL LENGTH OF COMMITMENT IN YEARS
NSF/EPSCoR* LaSER Implementation	TR ENH: 30% R&D: 70%	Yr. 1 $685,043 Yr. 2 440,202 Yr. 3 191,791	$1,317,036	1988-89 through 1990-91	3*
NSF/SI LaSIP	TR ENH, UG ENH, PLEx: Prorata	$1 Million	$5 Million	1991-92 through 1995-96	5
NSF/EPSCoR LaSER Advanced Development Program	TR ENH: 1/3 GR FEL: 1/3** ITRS: 1/3	$1.2 Million	$4.8 Million	1991-92 through 1994-95	4
NASA/ LaSPACE	RCS: 60% GR FEL: 40%**	$100,000	$500,000	1991-92 through 1995-96	5
NSF/SI LaCEPT	TR ENH: 100%	$500,000	$2.5 Million	1992-93 through 1996-97	5
DOE/EPSCoR Implementation	TR ENH: 60% RCS: 40%	$519,795	$1,039,590	1993-94 through 1994-95	2
DOD/EPSCoR Planning	TR ENH: 100%	$ 25,000	$ 25,000	1993-94	1
NASA/EPSCoR Implementation	TR ENH: 50% RCS: 25% GR FEL: 25%**	$500,000	$1.5 Million	1994-95 through 1996-97	3
1993 DEPSCoR Implementation	TR ENH: 50% RCS: 25% GR FEL: 25%**	Yr. 1 $166,666 Yr. 2 166,666 Yr. 3 166,667	$500,000	1994-95 through 1996-97	3
NSF/SI Teaching Scholars	TR ENH: 100%	$ 50,000	$250,000	1994-95 through 1998-99	5
NSF/EPSCoR LaSER Systemic Initiatives	TR ENH: 60% UG ENH: 10% R&D: 20% GR FEL: 10%**	$1 Million	$3 Million	1995-96 through 1997-98	3
DOE/EPSCoR Implementation Renewal	TR ENH: 10% R&D: 70% GR FEL: 20%**	$800,000	$3.2 Million	1995-96 through 1998-99	4
NSF/SI LAMP	TR ENH: 100%	Yr. 1 $200,000 Yrs.2-5 $500,000	$2.2 Million	1995-96 through 1999-2000	5
NASA LaSPACE Renewal	RCS: 50% GR FEL: 50%**	$100,000	$400,000	1996-97 through 1999-2000	4
1995 DEPSCoR Implementation	TR ENH: 50% R&D: 25% GR FEL: 25%**	Yr. 1 $551,439 Yr. 2 311,740 Yr. 3 311,972	$1,175,151	1996-97 through 1998-99	3
NSF/SI LaSIP Renewal	TR ENH: 100%	$1 Million	$5 Million	1996-97 through 2000-01	5
NASA/EPSCoR Implementation Renewal	TR ENH: 50% RCS: 25% GR FEL: 25%**	$500,000	$1 Million	1997-98 through 1998-99	2
NSF/SI Delta Rural SI	TR ENH: 100%	$200,000	$1 Million	1997-98 through 2001-02	5

CHART I (CONTINUED)

FEDERAL GRANT	TYPE OF SUPPORT FUND ACTIVITY	AMOUNT OF ANNUAL MATCHING COMMITMENT	TOTAL MATCHING COMMITMENT	FYs IN WHICH COMMITMENT IS APPLICABLE	TOTAL LENGTH OF COMMITMENT IN YEARS
LaCEPT Supplemental	TR ENH: 100%	$100,000	$300,000	1998-99 through 00-01	3
1997 DEPSCoR Implementation	TR ENH: 50% R&D: 25% GR FEL: 25%**	$250,000	$750,000	1997-98 through 1999-2000	3
NSF/EPSCoR New Cooperative Agreement	TR ENH: 75% R&D: 25%	$1 Million	$3 Million	1998-99 through 2000-01	3
1999 DEPSCoR Implementation	TR ENH: 100%	Yr. 1 $65,998 Yr. 2 61,900 Yr. 3 61,900	$189,798	1999-2000 through 2001-02	3
EPSCoT	TR ENH: 100%	$300,000	$300,000	1999-2000	1.5
NASA/EPSCoR Continuation Funding	TR ENH: 100%	$250,000	$250,000	1999-2000	1
NASA/EPSCoR Preparation Grant	TR ENH: 100%	$100,000	$100,000	1999-2000	1
NASA LaSPACE Continuation	TR ENH: 100%	$200,000	$1,000,000	2000-01 through 2004-05	5
EPA/EPSCoR 2000	TR ENH: 100%	Yr. 1 $255,261 Yr. 2 244,739	$500,000	1999-2000 through 2000-01	2
LAMP Phase II	TR ENH: 100%	$500,000	$2.5 Million	2000-01 through 04-05	5
NSF/EPSCoR Research Infrastructure Improvement	TR ENH: 100%	$1 Million	$3 Million	2001-02 through 2003-04	3
NASA/EPSCoR 2000	TR ENH: 100%	$700,000	$2.1 Million	2001-02 through 03-04	3
EPA/EPSCoR 2001	TR ENH: 100%	Yr. 1 $250,000 Yr. 2 244,542	$494,542	2002-03 through 2003-04	2
NSF/EPSCoR Research Infrastructure Improvement II	TR ENH: 100%	$1 Million	$3 Million	2003-04 through 2005-06	3
DOE/EPSCoR Implementation 2004	TR ENH: 100%	$400,000	$1.2 Million	2004-05 through 2006-07	3
NASA/EPSCoR 2000 Renewal	TR ENH: 100%	$493,280	$986,560	2004-05 through 2005-06	2
LAMP Phase III	TR ENH: 100%	$500,000	$2.5 Million	2005-06 through 09-10	5
NASA LaSPACE Continuation II	TR ENH: 100%	$200,000	$1 Million	2005-06 through 2009-10	5
NASA/EPSCoR 2006 (pending)	TR ENH: 100%	$400,000	$1.2 Million	2006-07 through 2008-2009	3
NSF EPSCoR Proposal (pending)	TR ENH: 100%	$1 Million	$3 Million	2006-07 through 2008-2009	3
DOE EPSCoR Implementation Renewal (pending)	TR ENH 100%	$400,000	$1.2 Million	2007-08 through 2009-10	3

*The 13 research projects that were a part of the first NSF/EPSCoR award received Board of Regents Support Fund money for two years prior to receiving NSF support in January of 1989 (FY 1988-89), for a total of five years and $3,374,355 in Board of Regents Support Fund money. This chart reflects only years three through five of Board of Regents Support Fund money (or $1,317,036), since only that period of State support that coincides with Federal Support can be counted a part of the State's matching commitment. (See Section 4.1.1.)

** Because of the nature of the Graduate Fellows Program, money for this component must be committed in the fiscal year prior to expenditure. For this reason, th first year's Graduate Fellows portion of matching funds committed to a particular project was usually actually charged to Enhancement or R&D, or prorated betwee the two program components. (Chartlpb.07 C:JW and 06-07P/B)

4.2 PENDING PROPOSALS: JOINT BOARD OF REGENTS SUPPORT FUND/FEDERAL PROGRAMS WITH STATEWIDE IMPACT

4.2.1 National Aeronautics and Space Administration (NASA) Experimental Program to Stimulate Competitive Research (EPSCoR)

The goal of the National Aeronautics and Space Administration (NASA) Experimental Program to Stimulate Competitive Research (EPSCoR) is to improve the infrastructure and capacity for aerospace-related research and education in Louisiana.

Current and Prior Awards:

Louisiana has participated in NASA EPSCoR since 1994, when the Board of Regents received the first award under this program. Total federal obligations under NASA EPSCoR total $6,836,236, matched by cost sharing of $5,936,560 from the Board of Regents Support Fund.

The current NASA EPSCoR project was awarded funding in August, 2001.

Duration:	5 years
Participants:	Dillard, LSU-BR, LUMCON, Tulane, ULL, UNO, and Xavier
NASA Award:	$ 3,086,236
Support Fund Match:	$ 3,086,560
Institutional Cost Share:	$ 2,312,059
Total Project:	$ 8,484,855

Pending Proposal:

The NASA EPSCoR program supports two components: a 'core' infrastructure development component and a research project component. NASA issued a solicitation for the EPSCoR Phase III infrastructure component on December 21, 2006. A solicitation for the research project component is expected later this year. Results from these competitions will not be known until mid-year 2007.

4.2.2 National Science Foundation (NSF) EPSCoR

Initiated by the National Science Foundation (NSF), EPSCoR is designed to assist researchers and institutions in states that have historically received lesser amounts of Federal R&D funding to become more competitive for federal research funds.

Current and Prior Awards:

Louisiana has participated in the EPSCoR program since 1985, when the Board of Regents received an NSF EPSCoR Planning Grant. In 1989, Louisiana was successful in competing for the first of a series of six NSF EPSCoR implementation awards, with a total federal obligation of nearly $32.6 million, matched by cost sharing amounting to $20.1 million from the Board of Regents Support Fund.

The current EPSCoR Research Infrastructure Improvement project was awarded funding in May, 2004.

Duration:	3 years
Participants:	LSU-BR, LSUHSC-NO, Tulane, ULL, ULM, UNO, Xavier

NSF Award:	$ 9,000,000
Support Fund Match:	$ 3,000,000
Institutional Cost Share:	$ 1,500,000
Total Project:	$13,500,000

This project supports a major research effort entitled "Center for BioModular Multi-scale Systems" which is a joint effort of teams of researchers at the institutions listed above. In addition to the center, the NSF EPSCoR award supports several smaller-scale infrastructure-building programs and also provides funding for staffing the EPSCoR office at the Board of Regents, which administers and coordinates the State's EPSCoR efforts.

Pending Proposal:

The Board's proposal submitted in response to the NSF EPSCoR solicitation is under review. Results from this competition are expected in April, 2007.

4.2.3 U. S. Department of Energy (DOE) EPSCoR Implementation Renewal

DOE EPSCoR supports basic research in fossil energy, energy efficiency and renewable energy, fusion energy, materials science, chemistry, biological and environmental science, high energy and nuclear physics, and advanced computer science. Support is provided through statewide implementation grants.

Current and Prior Awards:

Louisiana was awarded a DOE EPSCoR implementation grant in 1993, which continued until 2000. Three research cluster projects, a teacher education project, and a human resources development project were supported, involving 11 institutions in the State. The total federal obligation amounted to $4,612,933, matched by cost sharing of $4,239,590 from the Board of Regents Support Fund.

The current DOE EPSCoR project, entitled "Ubiquitous Computing and Monitoring System for Discovery and Management of Energy Resources," was awarded funding in August, 2004.

Duration:	3 years
Participants:	ULL, LSU-BR, SU-BR
DOE Award:	$ 1,200,000
Support Fund Match:	$ 1,200,000
Institutional Cost Share:	$ 1,528,448
Total Project:	$ 3,928,338

Pending Proposal:

DOE has issued a solicitation for a competitive three-year renewal for this project. Results from this competition are expected mid-year of 2007.

It is important to note that all Federal/State cooperative endeavors expand the opportunities and increase the amount of funding available under the traditional Board of Regents Support Fund Program components. Depending upon the number of such endeavors funded in a given fiscal year, the additional amount has ranged from about $2.6 million to about $8 million per year.

4.3 SPECIAL EFFORTS TO PROMOTE THE SUBMISSION OF MULTI-DISCIPLINARY, MULTI-INSTITUTIONAL PROPOSALS

The Board has long recognized the potential of multi-disciplinary and/or multi-institutional projects to enhance academic quality and promote economic development, as well as to make the most prudent use of scarce State resources. Accordingly, the Board has encouraged these kinds of proposals since the inception of the Board of Regents Support Fund, not only in the joint Federal/State efforts described in Sections 4.1 and 4.2 of this Plan and Budget, but also in the proposals submitted under the traditional Board of Regents Support Fund Program components. The best known manifestation of the Board's support of proposals of this type was an $800,000 award to fund the Louisiana Academic Library Network (LaLINC) proposal, which has computerized databases and linked academic libraries throughout the State.

To further emphasize its belief in the potential of multi-disciplinary, multi-campus efforts to achieve Board of Regents Support Fund goals and promote the best interests of the State, in its most recent solicitation for proposals, as well as in the 1993, 1999, and 2006 revisions of the Strategic Plan, the Board specifically encouraged the submission of collaborative efforts which would provide statewide benefits. Beginning with its FY 2000-01 budget, and continuing in FY 2007-08, the Board has set aside funds from the Traditional Enhancement program each year for the funding of these types of projects. The Board reaffirms the eligibility and encourages the submission of multi-disciplinary, multi-institutional proposals in all Board of Regents Support Fund Program components for FY 2007-2008. Consistent with the increased emphasis being placed on interdisciplinary research throughout the academic community and the increase of quality proposals submitted in this category, the Board first increased the funds available for awards in this category to $950,000 in the plan and budget for FY 2004-05. The $950,000 level will be maintained for FY 2007-08. Any unexpended multi-disciplinary money will revert to discipline-based Traditional Enhancement. (See Section 5 below.)

5. BOARD OF REGENTS SUPPORT FUND PROGRAM COMPONENTS

5.1 BUDGETARY CONTINGENCIES

If Board of Regents Support Fund money for higher education is greater than the $31,500,000 projected, overages shall be returned to the Traditional Enhancement Program until its allocation reaches $7,415,000. Any amount thereafter shall be returned to the Traditional and Undergraduate Enhancement components and the Research and Development subprograms on a pro-rata basis. In the event that reductions are necessary, they are to be made on a pro-rata basis among the Undergraduate Enhancement and the Enhancement Program for Two-Year Institutions program components.

5.2 ENDOWED CHAIRS FOR EMINENT SCHOLARS - $3,220,000

Overview/Rationale

The Endowed Chairs for Eminent Scholars Program, introduced in 1987, is designed to enhance the recruitment and retention of distinguished university faculty at institutions throughout Louisiana. Through the 2005-2006 fiscal year, 261 chairs have been funded at twenty-four institutions, and the program has generated a total endowment (counting private match) of $285 million.

The program pairs a 60% private-sector match with a 40% Board of Regents award to endow a chair to be filled by a scholar of high renown and great ability. The Board endows chairs in any discipline at two levels: $1 million total endowment ($600,000 match/$400,000 BoRSF) and $2 million total endowment ($1.2 million match/$800,000 BoRSF).

The competition established to determine endowment awards is rigorous and highly selective. A panel of out-of-state experts reviews proposals on an annual basis, and recommends for funding those most representative of and able to achieve the goals of the program. Stringent rules governing the selection of the faculty recipient are designed to ensure his or her excellence. An endowed chair must be filled through a national search and the committee conducting the search must include at least one individual recognized as an expert in the field of the chair, but who is not affiliated with the institution, the private donor, or the Board of Regents. While a chair recipient may be selected from within the affected campus, this may only be done when a national search has documented the national and/or international eminence of the prospective chairholder.

As the national search guarantees the past reputation of the chairholder, periodic peer reviews of the chairholder are intended to assure continued accomplishment. Chairholders are held to standards of performance which require that they maintain a continuing record of scholarly and creative endeavors, leadership activities, exceptional teaching, attraction of high-quality students and enhancement of the State's economy.

Important Historical Milestones

- Funds first awarded in 1987
- Has been budgeted at ≥ $3.2 M since 1990
- "First-come, first-served" replaced by Competitive Process in 1993
- Legislative supplemental appropriations, beginning in FY 1995-96 and continuing in most years since then, have enabled the funding of 84 additional chairs
- Comprehensive Reviews conducted in 1993 and 1998; Recommendations adopted for significant strengthening, especially in 1999
- "Special Provisions for Public Four-Year Campuses with Less than Three Eminent Scholars Chairs" adopted in 2001 - allowed public, four-year institutions with fewer than three chairs to invert the 60:40 private funds/public funds ratio, but retained the principle of competition without favor - through FY 2005-06 when the "special provisions" expired, nine chairs, (three from Northwestern State University, two from Louisiana State University - Shreveport, and one each from Louisiana State University - Alexandria, Southern University - Baton Rouge, Southern University - New Orleans, and Grambling), were funded under its aegis. One additional proposal from Southern University - New Orleans is currently under consideration.

5.3 RECRUITMENT OF SUPERIOR GRADUATE STUDENTS - $3,598,500

The Recruitment of Superior Graduate Students (RSGS) Program provides resources to select departments to bring top-quality students to their graduate programs. Through the 2005-2006 fiscal year, the Board of Regents has provided over one thousand graduate fellowships to a spectrum of departments at fourteen institutions in Louisiana. About 10% of these fellowships have been awarded to programs specifically targeting in-service teachers in mathematics and science disciplines pursuing master's degrees in Education. While the economic and cultural impact of these fellowships is difficult to quantify, it is clear that the program has contributed highly educated

employees to Louisiana industry, expert teachers at levels from kindergarten to college, and a community of enthusiastic, energetic, and dedicated students to further the educational and research agendas at colleges and universities across the State.

Since 1993 two subprograms have comprised RSGS: Traditional Graduate Fellows and Graduate Fellowships for Teachers (GFT). The Traditional subprogram primarily supports excellent doctoral-level programs, but also allows stipends for students at master's-level programs of distinction. The GFT subprogram offers support to pre- and in-service teachers seeking master's degrees in science and/or mathematics. To apply for GFT awards, an applicant institution must offer a program that can be completed in one academic year plus an additional summer, to allow teachers to finish within a single year's sabbatical from the classroom. Fellowship recipients, further, must pledge to teach in a Louisiana school system for at least one year after completing the master's degree, to insure that Louisiana students reap some of the benefits of the State's support of these teachers. Together the GF and GFT subprograms provide a comprehensive opportunity for departments across the State to receive assistance in the training and support of graduate students.

Timely implementation of the Graduate Fellows Program requires the following schedule: year one, awarding the grant; year two, recruiting by awardees of superior graduate students; and year three, disbursing funds committed under the grant. For example, colleges and universities that submit successful proposals during the current fiscal year (FY 2006-07) will have a full year (FY 2007-08) during which to recruit students who, in turn, will enroll in Louisiana universities' graduate programs for the first time in the fall of 2008 (FY 2008-09).

The $3,598,500 budgeted for this category for FY 2007-2008, therefore, is entirely for previous obligations, including: (a) $645,000 for fourth-year funding of graduate fellows who began their course of study in AY 2004-2005; (b) $826,500 for third-year funding of graduate fellows who began their course of study in AY 2005-2006; (c) $928,000 for funding of second-year graduate fellows who began their course of study in AY 2006-2007; and (d) $1,199,000 (including $250,000 for the SREB Minority Scholars Program) for funding of graduate fellows who will begin their course of study in AY 2007-2008. This information is included in the current year's plan to notify the Governor and the Legislature that an amount of approximately $3.6 million will have been committed from the FY 2008-2009 Support Fund prior to the time that the annual plan and budget are submitted for that year.

In keeping with the conceptual framework to use Support Fund money to enhance all areas of higher education, all disciplines are eligible to compete in the Graduate Fellows Program. Those disciplines accorded a higher priority for Louisiana's economic development are eligible to compete every year. To determine the eligibility of specific disciplines in the Graduate Fellows Program for FY 2007-2008, see Chart II.

resulting situation does present an unprecedented opportunity for faculty and students to participate in the recovery and rebuilding of both urban and rural areas.

To facilitate this endeavor, the Board established, at its December 8, 2005 meeting, a five-year program to be funded through an annual allocation of approximately $5 million from the Board of Regents Support Fund. Although it involves the redirecting of substantial funds from established BoRSF programs, it is essential to addressing priorities that have emerged since the storms. Utilizing monies unspent in the FY 2005-06 competitions, in addition to budget adjustments in established programs and revised budget projections, the Initiative has significant potential for leveraging of BoRSF funds to attain federal and private monies. Thus, the total money available to the Initiative should be significantly more than the approximate $5 million per year provided through the BoRSF.

Subsequent to the submission of the FY 2006-07 Plan and Budget, the Board's staff conducted several meetings with campus representatives, ultimately resulting in a call for White Papers from the campuses which indicated their priority needs, as well as their thoughts relative to the development of the Initiative. The Board's staff forwarded these White Papers to a panel of experts selected under the auspices of the American Academy for the Advancement of Sciences (AAAS). AAAS hosted interviews during September 2006 in which campus representatives responded to detailed questions arising from their White Papers.

AAAS issued final reports in November 2006 which recommended the following: (1) that the P-KSFI be subdivided into Primarily Research and Primarily Education subprograms and (2) that the disciplines eligible for funding be limited to biological sciences, material sciences, and information technology. After responses to the report were received from the campuses in December 2006, the Board ultimately approved the request for proposals for the Initiative at its meeting of January 25, 2007. The program will operate on a competitive basis, and be subject to peer review by out-of-state consultants, as is standard for BoRSF programs, but will otherwise be much broader in scope and impact. The Initiative will adopt a cross-program approach, encompassing all the constitutional mandates of the BoRSF, making funds available at all levels and for a myriad of activities.

5.5.8 SUMMARY OF FY 2007-08 ENHANCEMENT EXPENDITURES

Prior Commitments -	Traditional and Undergraduate	$ 300,000
	Federal Matching Grants	$ 2,100,000
	LaSIP Renewal	$ 500,000
	Post-Katrina Initiative	$ 4,200,000
New Awards -	Federal Matching Grants	$ 400,000
	Undergraduate	$ 1,620,000
	Endowed Professorships	$ 2,680,000
	Two-Year Institutions	$ 1,080,000
	Undergraduate Scholarships	$ 1,000,000
	Traditional	$ 4,784,500
ENHANCEMENT PROGRAM TOTAL		**$18,664,500**

5.6 ADMINISTRATIVE EXPENSES - $800,000*

Act 675 of 1989 established the following restrictions with respect to the amount of Support Funds money that may be used to administer the Board of Regents Support Fund Programs:

> No more than 3% of the annual total amount appropriated to each board or eight hundred thousand dollars, whichever is smaller, shall be appropriated for such purposes to each board, subject to a thorough review with the goal of limiting such costs to those necessary and proper. . . .

This legislation was modified by Act 698 of 2001, which specifies that:

> Costs attributable to the Board of Regents for use of external peer-review consultants for purposes of review, evaluation, and assessment of program proposals are recognized as costs appropriately borne by the respective Support Fund programs and shall be paid from the category of expenditure related to the program for which the review, evaluation, and assessment applies.

Accordingly, each program component whose expenditures are itemized in sections 5.3 through 5.5 of this Plan and Budget will incur expenditures for the professional services of out-of-state consultants estimated as follows:

Recruitment of Superior Graduate Students	$ 20,000
Research and Development	$150,000
Enhancement, including the Post-Katrina Initiative	$185,000

These amounts estimated above will be deducted from the total amounts available for expenditure in the respective program components. As discussed in Section 5.2 (pp. 11-12) above, estimated consultant costs for the Endowed Chairs for Eminent Scholars Program are added to the regular allocation in order to preserve the $400,000 units necessary for the endowments.

*Legislation passed during the 2006 Session allows an actual amount of $959,425 to be expended in this category. $159,425 of this amount will come from the Reserve Fund, and thus is not charged against the FY 2007-08 Plan and Budget.

6. OVERVIEW OF FY 2007-2008 BUDGETARY ALLOCATIONS BY PROGRAM COMPONENT

The following chart provides an overview of FY 2007-2008 Board of Regents Support Fund budgetary allocations for new projects and previous commitments.

CHART V

AN OVERVIEW OF BOARD OF REGENTS SUPPORT FUND BUDGETARY ALLOCATIONS BY PROGRAM COMPONENT, FY 2007-08			
	TOTAL SUPPORT FUND ALLOCATION	**ALLOCATION FOR NEW PROJECTS**	**ALLOCATION FOR PREVIOUS COMMITMENTS**
ENDOWED CHAIRS	$ 3,220,000	$ 3,220,000	$ 0
GRADUATE FELLOWS	$ 3,598,500	$ 900,000*	$ 3,598,500
RESEARCH	$ 5,217,000	$ 2,385,000	$ 2,832,000
ENHANCEMENT**	$ 18,664,500	$11,564,500	$ 7,100,000
SUBTOTALS	$30,700,000		
ADMIN. COSTS	$ 800,000		
GRAND TOTAL	$31,500,000		

*Because allocations for the Graduate Fellows Program must be determined two years in advance of when students first arrive on campus, the FY 2007-2008 allocation for new graduate fellowships was determined in FY 2005-06 and set forth for the first time in the FY 2006-07 Plan and Budget. Thus, this allocation for new projects must come from the FY 2008-09 budget and has not been included in the subtotal and grand total figures in this chart. See Section 5.3 for a detailed explanation of the timing of the allocation process for this Board of Regents Support Fund Program component.

**Enhancement figures include funds used for Federal Matching Grants opportunities and for the Post-Katrina Support Fund Initiative.

(PlanBud.07 C:JW)

ATTACHMENT I

FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
NSF/LaSER: The Louisiana EPSCoR Program	FY1989-90 – FY1992-93	STI-8820219	NSF	3 years	$1,945,312	$3,374,355

Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis.
Description/Purpose: 1) To increase the competitiveness of Louisiana scientists and engineers in the Federal R & D marketplace, 2) to effect permanent improvements in the quality of science and engineering in Louisiana, 3) to develop human resources in Louisiana in the sciences and in engineering, and 4) to ensure that improvements achieved continue with State and/or private support beyond the end of the grant period.

NSF LaSER Advanced Development Proposal (ADP)	FY1991-92 – FY1994-95	EHR-9108765	NSF	3 years	$3,700,000	$4,800,000

Participating Institutions: A significant number statewide, organized into research clusters; grant funds awarded on a competitive basis.
Description/Purpose: 1) To increase the competitiveness of Louisiana scientists and engineers in the Federal R & D marketplace, 2) to effect permanent improvements in the quality of science and engineering in Louisiana, 3) to develop human resources in Louisiana in the sciences and in engineering, and 4) to ensure that improvements achieved continue with State and/or private support beyond the end of the grant period.

Louisiana Systemic Initiatives Program (LaSIP) in Math and Science Education	FY1991-92 – FY1995-96	TPE-9150043	NSF	5 years	$10,000,000	$10,000,000 ($5 million each from Regents and BESE)

Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis.
Description/Purpose: To reform statewide – from kindergarten through college – methods of instruction and learning in mathematics, science, and engineering education.

NASA Training Grant (LaSPACE)	FY1991-92 – FY1995-96	NGT-40039	NASA	4 years	$600,000	$500,000 (NASA and BOR portions awarded directly to LSU)

Participating Institutions: A consortium of sixteen campuses; grant funds awarded on a competitive basis.
Description/Purpose: To develop the infrastructure for aerospace research to competitive levels, while improving the quality of aerospace research and education.

Louisiana Collaborative for Excellence in the Preparation of Teachers (LaCEPT) Program	FY1992-93 – FY1996-97	DUE-9255761	NSF	5 years	$4,000,000	$2,500,000

Participating Institutions: Centenary, Grambling, LSU-BR, LSU-S, LA Tech, Loyola, McNeese, Nicholls, ULM, NSU, SLU, SUBR, SUNO, ULL, UNO, Xavier
Description/Purpose: To improve the quality of undergraduate teacher preparation programs in mathematics and science and to increase substantially the number of mathematics and science educators.

U.S. Department of Energy/EPSCoR Program	FY1993-94 – FY1994-95	DE-FC02-91ER75669	DOE	2 years	$1,039,590	$1,039,590

Participating Institutions: Grambling LA Tech, LSU-BR, Loyola, McNeese, SUBR, Tulane, ULL, ULM, UNO, Xavier
Description/Purpose: To develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This proposal was the result of a one-year $99,454 planning grant awarded to the Board by DOE.

FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Defense Experimental Program to Stimulate Competitive Research (DEPSCoR) Planning Program	FY1993-94	DAAH04-93-G-0466	DOD	1 year	$50,000	$25,000

Participating Institutions: A significant number statewide
Description/Purpose: To prepare a statewide plan for increasing the State's capacity to perform defense-related research and technology transfer.

1993 DEPSCoR Implementation Program	FY1994-95 – FY1996-97	Grant Numbers vary	DOD	3 years	$2,400,000	$500,000

Participating Institutions: Dillard, Grambling, LSU-BR, LSUHSC-NO, SUBR, SUNO, Tulane, ULM, UNO, Xavier
Description/Purpose: To conduct research and educate scientists and engineers in Louisiana in areas important to national defense.

NASA EPSCoR Program	FY1994-95 – FY1996-97	NCCW-0059	NASA	3 years	$1,500,000	$1,500,000

Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier
Description/Purpose: 1) To improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State's capability to perform federally-funded aerospace research; and 2) to support three multi-institutional research cluster projects.

NSF Teaching Scholars Program	FY1994-95 – FY1998-99	DUE-9255761 (Supplement)	NSF	5 years	$500,000	$250,000

Participating Institutions: Centenary, LA Tech, Loyola, Nicholls, SLU, SUBR, SUNO, ULL, ULM, UNO, Xavier
Description/Purpose: To increase the number of minority teachers by providing a financial supplement to the Teaching Scholars program for Historically Black Colleges and Universities (HBCUs).

NSF/EPSCoR LaSER Systemic Improvement Program (SI)	FY1995-96 – FY1997-98	OSR-9550481	NSF	3 years	$4,400,000	$3,000,000

Participating Institutions: Grambling LA Tech, LSUHSC-S, LSU-BR, Loyola, SUBR, SUNO, Tulane, ULL, UNO, Xavier
Description/Purpose: 1) To stimulate systemic and sustainable improvements in the science and technology enterprise by creating centers of research excellence in the State, improving the infrastructure for scientific and engineering research and education in Louisiana, and enhancing human resources development in the sciences and engineering, thereby increasing the State's capability to perform federally-funded research of economic importance to Louisiana; and 2) to create real and meaningful research linkages between the State's Historically Black and Majority White Campuses and Universities through Joint Faculty Appointments. This proposal continued the efforts begun under the EPSCoR ADP award described above.

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Building Research Partnerships with Audio/Video Conferencing Facilities	FY1996-97 – FY1998-99	EPS-9632665	NSF	2 years	$494,198	$0

Participating Institutions: LA Tech, LSU-BR, LSU Ag, LSUHSC-NO, NSU, SLU, SUBR, Tulane, ULL, ULM, UNO
Description/Purpose: To promote research partnerships by establishing an inter-institutional audio/video (A/V) research communications network across Louisiana. The A/V network will enhance collaborative exchanges within and among the State's EPSCoR and EPSCoR associated schools and to promote new research partnerships by eliminating geographical (distance/separation) barriers.

LaSERnet II Backbone for Institutions of Higher Education in Louisiana	FY1997-98 – FY1999-00	EPS-9720147	NSF	2 years	$552,893	$0

Participating Institutions: LA Tech, LSU-BR, LSUHSC-S, LSUHSC-NO, SLU, SUBR, Tulane, ULL, ULM, UNO
Description/Purpose: To provide researchers in the State with a high-speed intra-state backbone for sharing resources and access to broad-band (Internet II) service and direct vBNS (very Broadband Network Service) connectivity.

U.S. Department of Energy/EPSCoR Program Renewal	FY1995-96 – FY1998-99	DE-FC02-91ER75669	DOE	4 years	$3,473,402	$3,200,000

Participating Institutions: Grambling LA Tech, LSU-BR, Loyola, McNeese, SUBR, Tulane, ULL, ULM, UNO, Xavier
Description/Purpose: 1) To increase research competitiveness and capabilities of Louisiana scientists and engineers in areas of importance to the State and the U.S. Department of Energy; 2) to educate and recruit individuals, especially minorities and women, to work in these areas in Louisiana; 3) to provide new technologies that lead to economic development in the State; and 4) to support three multi-institutional research cluster projects.

Louis Stokes Louisiana Alliance for Minority Participation (LS-LAMP) Program	FY1995-96 – FY1999-00	HRD-9550765	NSF	5 years	$5,944,914	$2,249,280

Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO
Description/Purpose: To increase the number of underrepresented minorities receiving B.S. degrees in science, engineering, and mathematics in Louisiana from the baseline rate of 610 annually to an annual rate of 1,110.

NASA LaSPACE Renewal Program	FY1996-97 – FY1999-00	NGT-40039	NASA	4 years	$600,000	$400,000 (NASA and BOR portions awarded directly to LSU)

Participating Institutions: A consortium of sixteen campuses; grant funds awarded on a competitive basis
Description/Purpose: To continue the development of the infrastructure for aerospace research to competitive levels, while improving the quality of aerospace research and education.

FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Louisiana Systemic Initiatives Program (LaSIP) Renewal in Math and Science Education	FY1996-97 – FY2000-01	ESR-9634088	NSF	5 years	$7,000,000	$10,000,000 ($5 million each from Regents and BESE)
Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis. **Description/Purpose:** To continue the education reform efforts begun under the original LaSIP program.						
1995 DEPSCoR Implementation Program	FY1996-97 – FY1998-99	Grant Numbers vary	DOD	3 years	$2,350,303	$1,500,000
Participating Institutions: LSU-BR, LSUHSC-NO, SLU, Tulane **Description/Purpose:** To continue previous efforts to conduct research and educate scientists and engineers in Louisiana in areas important to national defense, thus improving the State's research infrastructure.						
NASA EPSCoR Program Renewal 2 years	FY1997-98 – FY1998-99	NCC5-167	NASA	2 years	$1,000,000	$1,000,000
Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier **Description/Purpose:** A renewal program to 1) continue to improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State's capability to perform federally-funded aerospace research; and 2) to continue the support of three multi-institutional research cluster projects.						
Delta Rural Systemic Initiative in Science, Mathematics, and Technology	FY1997-98 – FY2001-02	ESR-9700041	NSF	5 years	$10,000,000 ($2.46 million is Louisiana's share)	$2,000,000 (divided equally between BOR and BESE)
Participating Institutions: A significant number; all campuses are eligible to compete. **Description/Purpose:** To complement and supplement current statewide math and science education reform initiatives such as LaSIP and LaCEPT. A tri-state effort involving Louisiana, Mississippi, and Arkansas, it concentrates on professional development programs for teachers, pre-service enhancement programs for educators, leadership institutes for administrators, and acquisition of supportive hardware and software in an effort to impact 64 counties and/or parishes (22 school districts in 21 parishes within Louisiana) that are rural and have major economic problems.						
Louisiana Collaborative for Excellence in the Preparation of Teachers (LaCEPT) Program Supplemental Award	FY1998-99 – FY2000-01	DUE-9816194	NSF	3 years	$600,000	$300,000
Participating Institutions: Grambling, LSU-BR, LSU-S, LA Tech, Loyola, Nicholls, NSU, SLCC, SLU, SUBR, SUNO, ULL ULM, UNO, Xavier **Description/Purpose:** To improve the quality of undergraduate teacher preparation programs in mathematics and science and to increase substantially the number of mathematics and science educators; to evaluate the effectiveness of the initial five-year award (FYs 1993-98).						

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
1997 DEPSCoR Implementation Program	FY1997-98 – FY1999-00	Grant numbers vary	DOD	3 years	$1,770,504	$750,000

Participating Institutions: LSU-BR, Tulane, ULL
Description/Purpose: To continue previous efforts to conduct research and educate scientists and engineers in Louisiana in areas important to national defense, thus improving the State's research infrastructure.

NSF/EPSCoR New Cooperative Agreement (NCA)s	FY1998-99 – FY2000-01	EPS-9720652	NSF	3 years	$3,000,000	$3,000,000

Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis.
Description/Purpose: 1) To enhance the competitiveness of science and engineering (S&E) faculty of the State's higher education institutions by making them more competitive in gaining national research and development support, engaging them in science and technology transfer activities with business and industry, and helping them educate effectively large numbers of S&E students at both graduate and undergraduate levels; 2) to create real and meaningful linkages between the State's HBCUs and MWCUs through the Joint Faculty Appointments Program; and 3) to foster economic development in the state by facilitating, through various initiatives, interaction between business & industry, universities, and state government. This proposal continued the efforts begun under the EPSCoR ADP and SI awards previously described.

1999 DEPSCoR Implementation Program 3 years	FY1999-00 – FY2001-02	Grant numbers vary	DOD	3 years	$1,459,473	$189,798

Participating Institutions: LSU-BR, LA Tech, UNO
Description/Purpose: As in past DEPSCoR awards, the individual research projects funded through this award enhance the statewide research infrastructure improvement efforts.

Experimental Program to Stimulate Competitive Technology (EPSCoT)	FY1999-00 – FY2000-01	60NANB9D0005	Dept. of Commerce	2 years	$250,000	$300,000

Participating Institutions: A significant number statewide
Description/Purpose: To develop and implement regional and statewide strategies to accelerate commercialization of university-based technologies, thus contributing to the economic development of the State.

NASA EPSCoR Program Continuation Funding	FY1999-00	NCC5-167	NASA	1 year	$400,000	$250,000

Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier
Description/Purpose: A renewal program to 1) continue to improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State's capability to perform federally-funded aerospace research; and 2) to continue the support of three multi-institutional research cluster projects. This award is the sixth-year continuation of the NASA EPSCoR Program and NASA EPSCoR Program Renewal previously described.

FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
NASA EPSCoR Preparation Grant Program	FY1999-00	NCC5-393	NASA	1 year	$225,000	$100,000

Participating Institutions: A significant number statewide. Funds are competitively awarded.
Description/Purpose: To allow Louisiana researchers to initiate contacts and promote collaborative research programs with NASA Centers and Enterprises, and begin research activities in areas of strategic importance to NASA in preparation for submission of a statewide proposal to NASA EPSCoR in 2001.

NASA LaSPACE Continuation	FY2000-01 – FY2004-05	NGT5-40115	NASA	5 years	$1,281,250	$1,000,000

Participating Institutions: A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis.
Description/Purpose: This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewal described previously.

EPA EPSCoR 2000 Program –Coastal Monitoring	FY1999-00 – FY2000-01	R-82778501-0	EPA	2 years	$483,939	$500,000

Participating Institutions: LUMCON, Tulane (all data obtained will be made available to scientists and students throughout the state.)
Description/Purpose: To establish and maintain a series of instrument platforms by which university scientists can monitor environmental variables in coastal Louisiana for research and educational needs, thus increasing the State's capability to compete for and perform federally-funded environmental research.

Louis Stokes Louisiana Alliance for Minority Participation (LS-LAMP) Phase II	FY2000-01 – FY2005-06	HRD-000272	NSF	5 years	$5,000,000	$2,500,000

Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO
Description/Purpose: To continue to increase the number of underrepresented minorities in Louisiana receiving B.S. degrees in science, engineering, and mathematics.

NASA EPSCoR Preparation Grant Program Renewal	FY2000-01	NCC5-393	NASA	1 year	$225,000	$0

Participating Institutions: A significant number statewide. Funds are competitively awarded.
Description/Purpose: To continue the efforts described above for the NASA EPSCoR Preparation Grant.

NASA EPSCoR Program Continuation Funding (year seven) 1 year	FY2000-01	NCC5-167	NASA	1 year	$400,000	$0

Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier
Description/Purpose: This award is the seventh-year continuation of the NASA EPSCoR Program previously described.

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Video to the Desktop: A Louisiana Model	FY2000-01 – FY2001-02	EPS-0083089	NSF	2 years	$494,450	$0

Participating Institutions: LA Tech, LSU-BR, LSU Ag, LSUHSC-NO, LSUHSC-S, NSU, SLU, SUBR, Tulane, ULL, ULM, UNO
Description/Purpose: To promote research partnerships by establishing an inter-institutional H.323 research communications (videoconferencing) network, which will operate over existing Internet lines instead of over telephone lines, and allow desktop-to-desktop multimedia communications.

Louisiana EPSCoR Research Infrastructure Improvement (RII)	FY2001-02 – FY2003-04	EPS-0092001	NSF	3 years	$9,000,000	$3,000,000

Participating Institutions: A significant number statewide, including LA Tech, LSUHSC-NO, UNO, Grambling, LSU-BR, SUBR, Tulane, Xavier, NSU, ULM. A portion of the grant funds will be awarded on a continuing, competitive basis
Description/Purpose: This award funds the "Micro/Nano Technologies for Advanced Physical, Chemical, and Biological Sensors" research consortium in addition to a variety of initiatives to enhance the competitiveness of science and engineering (S&E) faculty of the State's higher education institutions. This proposal continues the efforts begun under the EPSCoR ADP, SI, and NCA awards previously described.

NASA EPSCoR 2000	FY2001-02 – FY2003-04	NCC5-573	NASA	3 years	$2,100,000	$2,100,000

Participating Institutions: LSU-BR, LUMCON, Tulane, Dillard, ULL, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.
Description/Purpose: 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support three multi-institutional research projects.

EPA EPSCoR 2001 Program – Climate Change	FY2002-03 – FY2003-04	R-82642001-0	EPA	2 years	$494,195	$494,542

Participating Institutions: LUMCON, UL-Lafayette, LSUBR
Description/Purpose: To enhance Louisiana's capability for understanding and predicting the effects of climate change on the state's coastal ecosystems, thus increasing the State's capability to compete for and perform federally-funded environmental research.

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Louisiana's Strategic Infrastructure Improvement (LSII)	FY2003-04– FY2005-06	EPS-0346411	NSF	3 years	$9,000,000	$3,000,000

Participating Institutions: A significant number statewide, including LSU-BR, LSUHSC-NO, SUBR, Tulane, ULL, ULM, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.
Description/Purpose: This award funds the "Center for Bio-Modular Multi-Scale Systems" in addition to a variety of initiatives to enhance the competitiveness of science and engineering (S&E) faculty of the State's higher education institutions. This proposal continues the efforts begun under the EPSCoR ADP, SI, NCA, and RII awards previously described.

NASA EPSCoR 2000 Renewal	FY2004-05 – FY2005-06	NCC5-573	NASA	2 years	$986,236	$986,560

Participating Institutions: LSU-BR, LUMCON, Tulane, Dillard, ULL, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.
Description/Purpose: A two-year renewal of the NASA EPSCoR 2000 Program to 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support multi-institutional research projects.

DOE EPSCoR Implementation 2004	FY2004-05 – FY2006-07	DE-FG02-04ER46136	DOE	3 years	$1,200,000	$1,200,000

Participating Institutions: ULL, LSU-BR, SUBR.
Description/Purpose: To develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This award funds the multi-institutional, multidisciplinary research project entitled "Ubiquitous Computing and Monitoring System (UCoMS) for Discovery and Management of Energy Resources."

LAMP Phase III	FY2005-06 – FY2009-10	HRD-0503362	NSF	5 years	$2,500,000	$2,500,000

Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR; SUNO, SUSBO, Tulane, ULL, UNO
Description/Purpose: To continue to increase the number of underrepresented minorities in Louisiana receiving B.S. degrees in science, engineering, and mathematics, and to transition at least 30% of these graduates to graduate school by 2010.

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
NASA LaSPACE Continuation II	FY2005-06 – FY2009-10	NNG05GH22H	NASA	5 years	At least $1,280,000	$1,000,000

Participating Institutions: A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis.
Description/Purpose: This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewals described previously.

ATTACHMENT II

RESULTS FROM SELECTED PROJECTS

RESULTS OF SELECTED PROJECTS

ENHANCEMENT

NASA teamed with LSU and student groups from four universities for a launch that carried the first flight of the High Altitude Student Platform, or HASP, to the near-space environment of the upper atmosphere. Student teams from **LSU, University of Louisiana at Lafayette,** Texas A&M and the University of Alabama designed and developed space experiments for the HASP test-fly. An 11 million cubic-foot NASA scientific balloon carried the reusable HASP facility, which was built by LSU's Department of Physics and Astronomy with support from a BoRSF Enhancement Grant and a grant from Louisiana Space (LaSPACE), which is jointly funded by NASA and the BoRSF.

The 1,800 pound balloon craft was launched from Ft. Sumner in New Mexico on September 5, 2006 on an 18 hour and 12-minute flight that ended just south of the Grand Canyon. The student payloads were recovered, allowing the students to perform detailed analysis and modify the experiments for re-flight, if necessary.

The **LSU** Coastal Studies Institute's Earth Scan Laboratory, a receiving and processing facility for environmental data from earth orbiting satellites, is one of the nation's leading university facilities with capabilities for the capture, analysis, and archiving of data from 10 satellites. A BoRSF Enhancement Grant enabled the establishment of a separate teaching lab with state-of-the-art hardware and software for training undergraduate and graduate students and researchers at LSU and other state universities.

In collaboration with **Southern University** and the **University of New Orleans,** the LSU contingent is using the Lab's satellite measurements to develop ecological models to predict coastal change over the next 50 years. *(In June 1988, a BoRSF grant provided the initial funding for the establishment of the LSU Earth Scan Laboratory, the first university-based satellite data receiving station in the nation established wholly by state funds).*

Equipment purchased for **Dillard University's** Visual Religious Art Program resulted in DVDs of presentations by invited speakers, a renewal of student interest in undergraduate research, and collaborations between students from the Art and the Religious Studies departments. The syllabi of two courses have been redesigned so students from both courses can work together, and a Forum and Exhibit on World Religions was scheduled for this Fall.

A BoRSF Enhancement Grant funded the purchase and installation of infrastructure, equipment and supplies toward the establishment of a Forensic Chemistry Laboratory in the **McNeese State University** Chemistry Department. The lab affords students the use of tools that span the gamut of forensic investigations and exposes them to state-of-the-art methodologies and techniques. The first forensic chemistry program at a Louisiana public university, it was developed in response to a growing interest in the use of science in the solution and prevention of crime and in close collaboration with the Southwest Crime Laboratory.

At the start of its third year, the program had already graduated three majors, all female Louisiana natives, one an African-American. One graduate is working on an MS degree at McNeese and another is employed at a Louisiana crime lab.

An advanced computational analysis core facility funded by a BoRSF Enhancement Grant is enhancing learning for some 500 **LSU-Shreveport** undergraduate students per semester. The high-end technology-powered computing facilities are essential for processing large quantities of data generated in a variety of fields, spanning from physical and life sciences to engineering and business.

Through this project, with its computational environment that supports the rapid conversion of theory into practice, students who wish to pursue careers in industry gain exposure to high-demand skills. It also offers increased opportunities for students and faculty to participate in collaborative research with industrial and institutional partners.

Chemical terrorism detection equipment purchased through a BoRSF Enhancement Grant to **LSU-Eunice** is representative of that found in environmental and state public health laboratories responsible for detecting and confirming the presence of chemical warfare agents. The equipment inventory includes a gas chromatograph that detects chemical war agents and other chemicals within mixtures and is the only one of its kind in southwestern Louisiana.

The equipment is extremely important to science majors, for professional training in fire science, environmental protection, and emergency response. As of last June, some 300 students had been trained to identify chemical terrorism problems and to develop a successful chemical terrorism security compliance program. Additionally, faculty are able to conduct research in new areas and to develop collaborative projects with colleagues in other disciplines.

By the conclusion of a two-year BoRSF Enhancement Grant to build a collection of Cajun and Creole Music at the **University of Louisiana – Lafayette,** over 7,000 items of both commercially-released and non-commercial recordings had been amassed. Other donated materials included promotional photographs and posters from music companies, photos of musicians, books about Louisiana music and musicians, and educational booklets and pamphlets.

Equipment has been purchased for preservation and digitization projects, public listening and viewing work stations, and storage. Reference and research requests have been received from musicians, faculty and students; folklorists, librarians, the Public Radio International program, NPR's *American Routes*, and the New York School of Theatre. The project is thus contributing to Louisiana's development and diversification, particularly in the area of cultural tourism.

A BoRSF Enhancement Grant played a key role in the selection of the **LSU Health Sciences Center in New Orleans** as one of only 19 sites awarded an NIH grant for studying ways to enhance patient safety. The award, coupled with the institution's Minimally Invasive Simulation Operating Room, was attributable to equipment purchased by the LEQSF grant. *The equipment was purchased prior to Katrina, destroyed by Katrina, and replaced with a donation from the LSU School of Medicine Alumni Association.)* Due in part to this project, LSUHSC has also been awarded a patent for a significant upgrade of its simulator operating system, which will play in important role in recruiting students and physicians into the N.O. area.

Approximately half of therapeutically important drug substances are either natural projects or directly derived from natural products. The **University of Louisiana – Monroe** has been making considerable success in establishing a new, internationally competitive Marine Natural Products Research program in its College of Pharmacy. A BoRSF Enhancement Grant used to purchase a high tech system has significantly elevated the investigations of researchers who in 2005 were awarded two grants totaling over $1 million. The identification of new anticancer drugs produced by tobacco plants and of new drug substances from such natural resources as exotic marine sponges are among the research foci.

High-speed test and measurement equipment purchased with a BoRSF Enhancement Grant enabled the **University of Louisiana-Lafayette** Electrical and Computer Engineering Department to establish an undergraduate/graduate education and research telecommunication laboratory that is unique in the State. The goal is a world-class telecommunications infrastructure that includes well-trained personnel to support Louisiana's economic development and diversification. Toward that end, new courses have been developed and others revised, and equipment is available for conducting testing, staging, research and innovation that local Louisiana businesses cannot perform using their own facilities.

Unique new equipment purchased by a BoRSF Enhancement Grant for a new **Louisiana Tech** Trenchless Technology Education and Research Laboratory is offering a more comprehensive educational experience for undergraduate and graduate students. A workshop attracted practicing engineers from Ruston and the Oak Ridge, Tennessee nuclear complex.

The National Science Foundation considers the **University of New Orleans** program to recruit local minority students into the Geosciences as the most successful in the nation. A thermal imaging camera purchased with BoRSF Enhancement funds for use in developing a long-term archeological geophysics project at UNO is supporting 7th-12th grade teachers and their students to search for unmarked graves of slaves.

A facility that an Enhancement Grant to the **LSU Health Sciences Center in New Orleans** helped establish will improve the ability of researchers to compete for grants in key areas of vaccine and bio-defense research, aid in the recruitment of new faculty members, and contribute to the development of new biotechnology in the State.

Two four-year doctoral-level fellowships were awarded to **Southern University's** Environmental Toxicology program, one of only 59 such Ph.D. programs in the nation. Because Louisiana is annually listed as one of the top 10 most polluted states and the Baton Rouge-New Orleans corridor as one of the top five most polluted in the nation, Southern's Environmental Toxicology program is uniquely positioned to make a significant contribution to the state's work force of environmental scientists, teachers and engineers working to reduce the level of pollution in Louisiana.

RESEARCH & DEVELOPMENT

A year-long sabbatical funded in part by a Board of Regents ATLAS Grant, freed a former humanities research professor and **Centenary College** dean to finish writing what is the first English language commentary on the Greek translation of the biblical book of Genesis. Titled *LXX Genesis: A Commentary*, the manuscript is scheduled for publication this year.

An ATLAS Grant funded six Louisiana-focused programs for the National Public Radio series, *American Routes*, all of which have been aired. The support was critical in keeping the program up and running after Katrina flooding forced the producers from their **University of New Orleans** offices. A six-part series inspired by hurricane-related tragedies, *After the Storm*, was also created within the grant period.

Electrical activation of neural tissue has been used for several decades as a treatment method for such neural disorders as Parkinson's disease, spinal cord injury and pain management. A team of **Louisiana Tech University** investigators awarded a BoRSF Research grant has successfully demonstrated a concept that could eliminate a major problem in the design of neural stimulators. Their goal: floating light-activated electrical stimulators for remote activation of neural tissue to eliminate the problem of wires between the implant and outside world causing tissue damage. The researchers have been awarded a $287,000 National Institutes of Health grant to continue their work.

The Center for BioModular Multi-Scale Systems (CBM^2) is the centerpiece of a 2004 $9 million National Science Foundation EPSCoR grant matched by $3 million from the Board of Regents Support Fund and $1.5 million from the participating institutions. Participants include researchers with expertise in microsystems, engineering, materials, chemistry and biological systems from **LSU, LSU's Center for Advanced Microstructures and Devices (CAMD), the LSU Health Sciences Center in New Orleans, Tulane Health Sciences Center, and Xavier University in New Orleans.**

A CBM^2 researcher was on the 2006 *Scientific American* 50 list – the magazine's prestigious annual list recognizing outstanding acts of leadership in science and technology. **LSU** chemistry professor Robert Hammer was included for his work in furthering the understanding of the basic science of Alzheimer's disease.

The work of another CBM^2 researcher was featured on the cover of the *Proceedings of the National Academy of Science*. The article by **LSU** professor of biological sciences Mark Batzer described a new mechanism through which genes and gene families are created with the genome.

The possible mass production of a game developed under the auspices of the CBM^2 education and outreach program is also under discussion. *Widget Works,* a board game designed to teach science basics to elementary-age students, is a mix of "Mouse Trap," 'Trivial Pursuit" and "Monopoly." Tested at a local elementary science class and CBM^2 summer programs, *Widget Works* made its formal debut in October 2006 at the 5th Annual American Society of Engineering Educators Global Colloquium in Rio de Janeiro. Based on its reception at those arenas, the decision was made to pursue possible commercialization of the game.

Louisiana Tech University researchers awarded a three-year BoRSF Research Grant in biotechnology have been awarded two patents. The first was for a method of polymer nano-assembly for drug and protein microparticles; the second for a method of sustained drug release for nano-organized microcapsules. The latter resulted in a $900,000 NSF grant. The PI, who headed a national symposium in New York titled "Smart Nanoassemblies" that was attended by 200 leading nanotechnology researchers, was also invited to give two international presentations on his research.

In addition, he trained five Louisiana Tech professors in the technique of nanofabrication by self-assembly who have in turn developed national leadership in nano-assembly and been awarded four major grants. Over 40 students also underwent training, one of whom is currently working on a micro fluidic nano-scale device at the Max Planck Institute in Germany.

A team of **LSU Health Sciences** investigators in **New Orleans** is developing HIV infection therapies that are based on targeting host genes rather than viral genes. They have demonstrated that inhibiting the furin cellular enzyme with a particular synthetic drug (D9R) is highly active against the AIDS virus. The recipients of a BoRSF Research Grant, the investigators are also developing computer approaches to analyze a major determinant of the biology of both normal and malignant cells. Their work has established their laboratory as a leader in testing potential new anti-HIV drugs for companies and academic scientists.

An academic and industrial collaboration that also involves Children's Hospital, **UNO** and Norion Diagnostic Innovations, an R&D company focusing on developing diagnostic assays for measuring HIV drug resistance, the project has been awarded approximately $400,000 from the National Institute of Allergy and Infectious Diseases.

In 2002, a BoRSF Research Grant was awarded to the **University of Louisiana-Lafayette** Center for Business and Information Technology to address the fact that current electronic business management solutions were too expensive and complex for many of Louisiana's small and medium businesses to implement. The Center's goal was to develop a robust and secure information architecture that those businesses could profitably implement to support collaborative electronic-business management methodologies with their supply chain partners.

The BoRSF grant has paid off in a big way. Based on a survey in which the capabilities of Louisiana businesses were measured, the Center designed a framework and developed a suite of collaborative and business management software solutions, one of which resulted in a feasibility study and two funded research protects with the Defense Logistics Agency of the U.S. Department of Defense. Guidelines for the commercialization of the software are being established.

There are 223 lift boats — self-propelled crane vessels that jack-up on site for offshore operations — operating worldwide. Of that total, 207 — or 93% — operate in the Gulf of Mexico. In 2003, the **University of New Orleans** was awarded a BoRSF Research grant to investigate the problems encountered when lift boats operate at higher speeds of 7 to 9 knots. After UNO tests demonstrated that setting a bow plate ahead of a lift boat bow resulted in a 10 to 15% reduction in its overall resistance, a patent was issued.

While the damage to UNO's industrial collaborators by hurricanes Katrina and Rita temporarily postponed a full scale trial of the investigation's results, it also facilitated a number of other accomplishments. They include: 2) An energy saving device that can be fitted to existing lift boats to increase their current speed and operation range; 2) The continuation of UNO's industrial ties to a Louisiana shipyard as well as a group of Louisiana lift boat operating companies; and 3) The hiring of UNO students for intern and full-time positions.

A unique non-invasive cardiac diagnosis and monitoring system developed by **Louisiana Tech University researchers** awarded a BoRSF Research Grant has resulted in four full patent submissions and four international conference presentations. Participation in the 2005 "World's Best Technologies Showcase" generated favorable interest from various angel and seed investors, and the university has licensed the technology to a start-up company.

This project will contribute to the medical technology industry, which is traditionally under-represented in Louisiana, through cutting edge research, linkages with established medical manufacturers and facilities, and the transfer of research results to a commercially available product.

Results of a study funded by the BoRSF at the **LSU Agricultural Center** will provide the Louisiana soybean industry with a cheaper, more efficient method for timing insecticide applications for defoliating insects. Based on remote sensing, the new method will also lead to greater profitability for farmers and less environmental damage. Currently, Louisiana's soybean fields are under-sprayed because of the high cost of conventional methods. The more efficient, less expensive remote sensing method will allow farmers to know when insecticide application is warranted.

Because Louisiana is the nation's third largest chemical producing state, annually shipping approximately $11 billion in chemicals in intermodal* tanks, Louisiana **State University and A&M College** researchers developing a new generation of composite frame and tank systems for intermodal transportation concentrated on that industry.

Steel frames and tanks represent over 60 percent of the gross weight during transportation. Highway load limits significantly reduce the load carrying capacity of tanks. Using advanced composite materials, the LSU researchers developed innovative frame structures and intermodal tanks that achieve the same structural functionality as their steel counterparts but with significant weight savings. They also reduce truck fuel consumption by about 20 per cent.

The BoRSF Research Grant project also resulted in a patent and over $7.5 million in external funding.

**Transportation system connecting or including different modes of transportation.*

ATTACHMENT III

TAXONOMY OF DISCIPLINES

TAXONOMY OF DISCIPLINES
USED IN THE
BOARD OF REGENTS SUPPORT FUND PROGRAMS

NATURAL SCIENCES - BIOLOGICAL

Agriculture
- 0101 Agricultural Economics
- 0102 Agricultural Production
- 0103 Agricultural Sciences
- 0104 Agronomy
- 0105 Animal Sciences
- 0106 Fishery Sciences
- 0107 Food Sciences
- 0108 Forestry and Related Sciences
- 0109 Horticulture
- 0110 Resource Management
- 0111 Parks and Recreation Management
- 0112 Plant Sciences (Except Agronomy, see 0104)
- 0113 Renewable Natural Resources
- 0114 Soil Sciences
- 0115 Wildlife Management
- 0199 Agriculture - Other

Biological Sciences
- 0201 Anatomy
- 0202 Biochemistry/Biophysics
- 0203 Biology
- 0204 Biometry
- 0205 Botany
- 0206 Cell and Molecular Biology
- 0207 Ecology
- 0208 Embryology
- 0209 Entomology and Parasitology
- 0210 Genetics
- 0211 Marine Biology
- 0212 Microbiology
- 0213 Neurosciences
- 0214 Nutrition
- 0215 Pathology
- 0216 Pharmacology
- 0217 Physiology
- 0218 Radiobiology
- 0219 Toxicology
- 0220 Zoology
- 0299 Biological Sciences - Other

NATURAL SCIENCES -BIOLOGICAL (CONTINUED)

Health and Medical Sciences
- 0601 Allied Health
- 0602 Audiology and Speech Pathology
- 0603 Chiropractic
- 0604 Dental Sciences
- 0605 Environmental Health
- 0606 Epidemiology
- 0607 Health Science Administration
- 0608 Immunology
- 0609 Medical Sciences
- 0610 Nursing
- 0611 Optometry
- 0612 Osteopathic Medicine
- 0613 Pharmaceutical Sciences
- 0614 Podiatry
- 0615 Pre-Medicine
- 0616 Public Health
- 0617 Veterinary Science
- 0699 Health and Medical Sciences - Other

NATURAL SCIENCES - PHYSICAL

Chemistry
- 0301 Chemistry, General
- 0302 Analytical Chemistry
- 0303 Inorganic Chemistry
- 0304 Organic Chemistry
- 0305 Pharmaceutical Chemistry
- 0306 Physical Chemistry
- 0399 Chemistry - Other

Physics and Astronomy
- 0801 Astronomy
- 0802 Astrophysics
- 0803 Atomic/Molecular Physics
- 0804 Nuclear Physics
- 0805 Optics
- 0806 Planetary Science
- 0807 Solid State Physics
- 0899 Physics and Astronomy - Other

NATURAL SCIENCES - COMPUTATIONAL

Computer and Information Sciences
0401 Computer Programming
0402 Computer Sciences
0403 Data Processing
0404 Information Sciences
0405 Microcomputer Applications
0406 Systems Analysis
0499 Computer Sciences - Other

Mathematical Sciences
0701 Actuarial Sciences
0702 Applied Mathematics
0703 Mathematics
0704 Probability and Statistics
0799 Mathematical Sciences - Other

NATURAL SCIENCES - EARTH/ENVIRONMENTAL

Earth, Atmospheric, and Marine Sciences
0501 Atmospheric Sciences
0502 Environmental Sciences
0503 Geochemistry
0504 Geology
0505 Geophysics and Seismology
0506 Paleontology
0507 Meteorology
0508 Oceanography
0599 Earth, Atmospheric, and Marine Sciences - Other
4403 Environmental Design
4405 Landscape Architecture

ENGINEERING - A

Engineering - Chemical
1001 Chemical Engineering
1002 Pulp and Paper Production
1003 Wood Science
1099 Chemical Engineering - Other

Engineering - Civil
1101 Architectural Engineering
1102 Civil Engineering
1103 Environmental/Sanitary Engr.
1199 Civil Engineering - Other

ENGINEERING - A (CONTINUED)

Engineering - Electrical and Electronics
1201 Computer Engineering
1202 Communications Engineering
1203 Electrical Engineering
1204 Electronics Engineering
1299 Electrical and Electronics Engineering - Other

ENGINEERING - B

Engineering - Industrial
1301 Industrial Engineering
1302 Operations Research
1399 Industrial Engineering - Other

Engineering - Materials
1401 Ceramic Engineering
1402 Materials Engineering
1403 Materials Science
1404 Metallurgical Engineering
1499 Materials Engineering - Other

Engineering - Mechanical
1501 Engineering Mechanics
1502 Mechanical Engineering
1599 Mechanical Engineering - Other

Engineering - Other
1601 Aerospace Engineering
1602 Agricultural Engineering
1603 Biomedical Engineering
1604 Engineering Physics
1605 Engineering Science
1606 Geological Engineering
1607 Mining Engineering
1608 Naval Architecture and Marine Engineering
1609 Nuclear Engineering
1610 Ocean Engineering
1611 Petroleum Engineering
1612 Systems Engineering
1613 Textile Engineering
1699 Engineering - Other

SOCIAL SCIENCES

Anthropology and Archaeology
- 1701 Anthropology
- 1702 Archaeology

Economics
- 1801 Economics
- 1802 Econometrics

Law (5102)

Political Science
- 1901 International Relations
- 1902 Political Science and Government
- 1903 Public Policy Studies
- 1999 Political Science - Other

Psychology
- 2001 Clinical Psychology
- 2002 Cognitive Psychology
- 2003 Community Psychology
- 2004 Comparative Psychology
- 2005 Counseling Psychology
- 2006 Developmental Psychology
- 2007 Experimental Psychology
- 2008 Industrial and Organizational Psychology
- 2009 Personality Psychology
- 2010 Physiological Psychology
- 2011 Psycholinguistics
- 2012 Psychometrics
- 2013 Psychopharmacology
- 2014 Quantitative Psychology
- 2015 Social Psychology
- 2099 Psychology - Other

Sociology and Social Work
- 2101 Demography
- 2102 Sociology
- 5001 Social Work

Social Sciences - Other
- 2201 Area Studies
- 2202 Criminal Justice/Criminology
- 2203 Geography
- 2204 Public Affairs and 4801 Public Administration
- 2205 Urban Studies and 4406 Urban Design
- 2299 Social Sciences - Other
- 4401 Architecture
- 4402 City and Regional Planning
- 4404 Interior Design
- 5101 Interdisciplinary Programs

SOCIAL SCIENCES (CONTINUED)

Communications
- 4501 Advertising
- 4502 Communications Research
- 4503 Journalism and Mass Communication
- 4504 Public Relations
- 4505 Radio, TV and Film
- 4506 Speech Communication
- 4599 Communications - Other

Home Economics
- 4601 Consumer Economics
- 4602 Family Relations
- 4699 Home Economics - Other

Library and Archival Sciences
- 4701 Library Science
- 4702 Archival Science

ARTS

Arts - History, Theory, and Criticism
- 2301 Art History and Criticism
- 2302 Music History, Musicology, and Theory
- 2399 Arts - History, Theory, and Criticism - Other

Arts - Performance and Studio
- 2401 Art
- 2402 Dance
- 2403 Drama/Theater Arts
- 2404 Music
- 2405 Design
- 2406 Fine Arts
- 2499 Arts - Performance and Studio - Other

Arts - Other
- 2999A Arts - Other
- 5101A Interdisciplinary Programs

HUMANITIES

English Language and Literature
- 2501 English Language and Literature
- 2502 American Language and Literature
- 2503 Creative Writing
- 2599 English Language and Literature - Other

HUMANITIES (CONTINUED)

Foreign Language and Literature
- 2601 Asiatic Languages
- 2602 Foreign Literature
- 2603 French
- 2604 Germanic Languages
- 2605 Italian
- 2606 Russian
- 2607 Semitic Languages
- 2608 Spanish
- 2699 Foreign Languages - Other

History
- 2701 American History
- 2702 European History
- 2703 History of Science
- 2799 History - Other

Philosophy
- 2801 All Philosophy Fields

Humanities - Other
- 2901 Classics
- 2902 Comparative Language and Literature
- 2903 Linguistics
- 2904 Religious Studies; 4901 Religion; and 4902 Theology
- 2999H Humanities - Other
- 5101H Interdisciplinary Programs

EDUCATION

Education - Administration
- 3001 Educational Administration
- 3002 Educational Supervision

Education - Curriculum and Instruction
- 3101 Curriculum and Instruction

Education - Early Childhood
- 3201 Early Childhood Education

Education - Elementary
- 3301 Elementary Education
- 3302 Elementary-level Teaching Fields

EDUCATION (CONTINUED)

Education - Evaluation and Research
- 3401 Educational Statistics and Research
- 3402 Educational Testing Evaluation and Measurement
- 3403 Educational Psychology
- 3404 Elementary and Secondary Research
- 3405 Higher Education Research

Education - Higher
- 3501 Educational Policy
- 3502 Higher Education

Education - Secondary
- 3601 Secondary Education
- 3602 Secondary Level Teaching Fields

Education - Special
- 3701 Education of the Gifted
- 3702 Education of the Handicapped
- 3703 Education of Special Learning Disabilities
- 3704 Remedial Education
- 3799 Other Special Education Fields

Education - Student Counseling and Personnel Services
- 3801 Personnel Services
- 3802 Student Counseling

Education - Other
- 3901 Adult and Continuing Education
- 3902 Bilingual/Crosscultural Education
- 3903 Educational Media
- 3904 Junior High/Middle School Education
- 3905 Pre-Elementary Education
- 3906 Social Foundations
- 3907 Teaching English as a Second Language/Foreign Language
- 3999 Other Education Fields

BUSINESS

Accounting
- 4001 Accounting
- 4002 Taxation

Banking and Finance
- 4101 Commercial Banking
- 4102 Finance
- 4103 Investments and Securities

Business, Administration and Management
- 4201 Business Administration and Management
- 4202 Human Resource Development
- 4203 Institutional Management
- 4204 Labor/Industrial Relations
- 4205 Management Science
- 4206 Organizational Behavior
- 4207 Personnel Management
- 4299 Business Management - Other

Business - Other
- 4301 Business Economics
- 4302 International Business Management
- 4303 Management Information Systems
- 4304 Marketing and Distribution
- 4305 Marketing Management and Research
- 4399 Business Fields - Other

(2006)