# University Committee Faculty Working Group on Classified Research Final Report APPENDICES October 23, 2014

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Appendix A – Members of Working Group

Professor Vicki Bier (Industrial and Systems Engineering)

Michael Falk (WARF)

Greg R. Hyer (University Research Park)

Professor Eric Johnson (Bacteriology)

Professor Jeffrey Johnson (Pharmacy)

Mr. James Kupsch (Computer Sciences)

Professor Barton Miller (Computer Sciences)

Professor Gregory Moses, Chair (Engineering Physics)

Professor Dan Uhlrich (School of Medicine and Public Health and Graduate School)

Larry Westby (Research and Sponsored Programs)



March 24, 2014

TO: Michael Falk, General Counsel (WARF)

Greg R. Hyer, Interim Director (University Research Park)

Professor Jeffery Johnson (Pharmacy)

Professor Yoshihiro Kawaoka (Veterinary Medicine)

James Kupsch, Researcher (Computer Science)

Professor Barton Miller (Computer Science)

Professor Gregory Moses (Engineering), Chair

Professor Jon Pevehouse (Political Science)

Professor Daniel Ulrich (School of Medicine and Public Health)

Larry Westby, Pre-award Staff (Research and Sponsored Programs)

FROM: Michael Bernard-Donals, University Committee Chair

RE: Creation of an Ad Hoc Faculty Working Group on Classified Research

With this memo, I am formally inviting you to become members of the Ad Hoc Faculty Working Group on Classified Research.

There is a considerable body of research funded by various federal agencies that is considered *classified* because of the sensitive nature of the work in the context of national security. Such research is often critical to national security and can be essential to the nation. Performing or participating in such activities usually requires federal approval of individual researchers and their facilities in order to ensure protection from inadvertent disclosure of results. Moreover, the results of this work typically have restrictions on publication in the open literature. However, subcomponents of the work may often be directly published in the open literature, albeit with sponsor approval.

Our campus has had a long history of performing such research, adding considerably to the national security knowledge base. Often what starts as classified becomes de-classified with wide national application. An example would be advanced cryptography for military command and control communication that over time propagated into the banking and financial industries. Another striking example is the "star-wars" program development of the side-coupled electron linac deployed for satellite-to-satellite destruction and now used in all cancer radiation therapy equipment worldwide. Clear policies and processes are required to guide faculty, staff, and students who wish to participate in such work using campus facilities. Many other universities have such guidelines, but UW-Madison does not have detailed guidelines on classified research. Such guidelines are particularly important for

untenured faculty, Ph.D. students, postdoctoral fellows, and other trainees, given the critical importance to them of publishing in the open literature.

The charge to the **Working Group on Classified Research** is: to identify, clarify and recommend updates to the University of Wisconsin-Madison's policy on research activities for which its sponsors impose mandatory protections of confidentiality and/or restrictions on public availability. Recent changes in patent law and constraints associated with open records laws in the context of the research enterprise and faculty scholarship at this university require a contemporary policy. The Working Group is asked to:

- Describe the benefits and the challenges of participation in classified research projects;
- Review policies at peer institutions and determine best practices that are applicable to the research environment at UW-Madison;
- Examine previously articulated policies by the Graduate School, the UW-Madison administration, and/or the Board of Regents and consider whether revisions or clarifications to any of these existing policies should be recommended; and
- Formulate policy recommendations on issues including, but not limited to:
  - Articulation of when on-campus research activities and labs, institutes and departments, and off-campus facilities such as the Research Park are appropriate venues for classified research;
  - o Determination of guidelines for assuring classified work remains confidential.
  - Recommendation of mechanisms for assuring confidentiality during approval processes such as use of animal and human in research, safety approvals, etc.;
  - Recommendation of mechanisms for protecting intellectual property;
  - Determination of appropriate guidelines for the participation of Ph.D. students, postdocs, academic staff, student researchers, and younger faculty in classified research, including guidelines related to foreign nationals; and
  - Recommendation of options that the Vice Chancellor for Research (VCR) might utilize to help researchers determine how to best set up their classified research projects, making decisions about what belong on versus off campus and how to effectively involve younger researchers; these recommendations should also suggest how the VCR's office should monitor appropriate adherence to classified research guidelines on campus.

A draft report from the Working Group should be delivered the University Committee no later than August 15, 2014. It is anticipated that there will be broad consultation about this draft with key stakeholder groups that may result in changes to the draft prior to a final report being issued. The recommendations in this Working Group document will provide the framework which the VCR's office will use to write and implement an updated UW-Madison policy on classified research.

Thank you in advance for your service on this important committee.

c: Rebecca Blank, Chancellor
Martin Cadwallader, Vice Chancellor for Research
Heather McFadden, ASEC
Russell Kutz, CSEC
Heather Daniels, Secretary of the Academic Staff
John Lease, Interim Secretary of the Classified Staff
William A. Heiss, M.S.S.W., Interim Secretary of the Faculty

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2013 - 2014 Legislature

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LRB-4196/1 MDK:kjf:jm

#### **SENATE BILL 578**

on commercial, scientific, or technical subjects. The exemption applies whether or not the study or research is sponsored by the institution alone or in conjunction with a governmental body or private concern. The exemption expires when the information is publicly released, published, or patented.

## The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

**SECTION 1.** 19.36 (14) of the statutes is created to read:

19.36 (14) Higher education intellectual property records. An authority may withhold access to information, data, or records produced or collected by or for faculty or staff of public institutions of higher education in the conduct of or as a result of study or research on commercial, scientific, or technical subjects, whether sponsored by the institution alone or in conjunction with a governmental body or private concern, until such information, data, or records have been publicly released, published, or patented.

#### **SECTION 2.** 36.11 (55m) of the statutes is created to read:

- 36.11 (55m) Classified research. The board may accept research contracts involving government security classifications or other similar restrictions on participation in research or access to or dissemination of research results, if all of the following are satisfied:
  - (a) The research furthers national security interests.
- (b) The educational interests of all participating students are adequately protected.
- (c) Appropriate facilities, infrastructure, and administrative resources are available for the research, either on campus or at off-campus locations.
- (d) The sponsors of the research cover all additional costs associated with the security requirements of the research.

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2013 - 2014 Legislature

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LRB-4196/1 MDK:kjf:jm SECTION 2

#### **SENATE BILL 578**

1	(e) The conditions for accepting the contracts and conducting the research are
2	established pursuant to a process approved by the chancellor, in consultation with
3	the faculty, of the institution at which the research is to be conducted.
4	<b>Section 3.</b> 36.45 (4) of the statutes is created to read:
5	36.45 (4) The board shall report annually by September 1 to the joint committee
6	on finance the number of research contracts considered under processes established
7	under s. 36.11 (55m) (e) and the outcome of those contracts.
8	(END)

University affiliations with institutions that conduct classified research

University of California

Los Alamos National Laboratory (operated since 1940s)
Lawrence Livermore National Laboratory (operated since 1950s)

MIT

Lincoln Laboratory (operated since 1940s)

Johns Hopkins

Applied Physics Laboratory (operated since 1940s)

University of Michigan (now divested)

Willow Run Laboratory (no longer does classified research)

University of Rochester

Laboratory for Laser Energetics (operated since 1960s)

Georgia Tech

Georgia Tech Research Institute (operated since 1950s)

Penn State University

Applied Research Laboratory (operated since 1940s)

Academic Staff Document #551 March 9, 2015

#### **UW-Madison Policy on Open Research & Free Interchange of Information**

UW-Madison Policy on Open Research & Free Interchange of Information

#### **UW-Madison Policy on Open Research & Free Interchange of Information**

#### Introduction

The University of Wisconsin-Madison has a long and proud history of affirming academic freedom. The memorial of the Class of 1910, a bronze plaque on the front of Bascom Hall, eloquently reminds students, faculty, staff, and visitors of the University's commitment to this ideal:

"What may be the limitations which trammel inquiry elsewhere, we believe that the great State University of Wisconsin should ever encourage that continual and fearless sifting and winnowing by which alone the truth can be found."

From a report to the Board of Regents, September 18, 1894:

"To sustain and strengthen preeminence in research and higher education, the University must continue to foster and protect an environment of openness and academic freedom. Avenues of inquiry should be unlimited, participation in research and the academic community unrestricted, and dissemination of knowledge unfettered."

#### **Policy**

As policy, the University will not undertake research with restrictions on openness or academic freedom on its campus. Examples of unacceptable restrictions include classification, required external approval of research results before publication, or exclusion of members of the University's community from participation in research. In particular, foreign faculty, students, or scholars should not be singled out for restriction in access to University's educational and research activities. Most research can be conducted in accord with this policy and the ideals of freedom of inquiry and open exchange of knowledge.

#### **Exceptions**

The University recognizes that, in a very few instances, the best interests of society will mitigate against broad participation in research and open exchange of information. In such cases, the Vice Chancellor for Research may grant exceptions to this policy. Exceptions will be very rare and will require that the research is critically important to the University's mission and serve a demonstrable greater good. If these conditions are not met, the University will decline or discontinue the research or, if an acceptable off-campus site is available, consider moving it to such off-campus site.

#### **Application to Student Research**

Theses, whether undertaken by graduate or undergraduate students, are an integral part of the research program of the University and fall under this policy. No student may undertake a thesis project that, at its inception or at any point during its conduct, requires restrictions on openness or academic freedom, unless the Vice Chancellor for Research, who is also the Dean of the Graduate School, grants an exception to this policy.

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University of Wisconsin

Academic Staff Document #551 March 9, 2015

#### History

Madison

Approved by the Research Policy Advisory Council, December 15, 2005

Vice Chancellor for Research: Accepted RPAC recommendation

Keywords: Policy, Open Research, Free Interchange of

Information Suggest keywords

Doc ID: 34480

Owner: Alissa E.

Group: Graduate School Admin

Sites: Graduate School Admin

Feedback: Helpful 0 Unhelpful 0 Comment Suggest a new document

Research Policy and Compliance

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#### **Financial Administration**

### **EXTRAMURAL SUPPORT ADMINISTRATION (G2)**

Revised: April 19, 2004

#### Background

This paper sets forth systemwide policy related to extramural support. Extramural support includes gifts, grants, contracts and cooperative agreements. Each institution is expected to establish and efficiently maintain necessary procedures and administrative services to assist its faculty and staff in securing and using extramural funds. Sound administrative procedures and services are indispensable in assuring that a proper University atmosphere exists in support of extramural programs and in establishing and maintaining proper relationships with outside sponsors.

#### II. Constraints

In addition to the policies and procedures set forth in this paper, extramural funds are subject to the following rules and regulations:

- All applicable Federal Office of Management and Budget (OMB) Circulars.
- Rules and regulations of the granting agency.
- Guidelines established by the National Association of College and University Business Officers (NACUBO).
- State and UW System policies and procedures.
- State Statutes.
- Regent resolutions.

#### III. Definition of Terms

Extramural support as outlined in this paper is subject to the following definition of terms:

#### A. Gifts

To qualify as a gift to the institution, extramural support must meet all of the following criteria:

- 1. Funds provide general, unrestricted support for broadly defined activities in one or more program areas, such as research, public service, instruction, fellowships/traineeships, etc.;
- 2. Detailed reports are not required--neither periodic or final, nor fiscal or technical. (The principal investigator may provide the donor with a brief statement that the expenditures were in accord with the intent of the gift);
- 3. No provisions (delays, advance notice) are imposed by the donor concerning publication of data and information derived from the activity;

- 4. There is no specific time limit on the expenditure of funds;
- 5. Rights to any patent/copyright are not retained by the donor.

Any extramural support that does not meet all five criteria to be a gift will be classified as a grant or contract subject to the assessment of indirect costs.

#### B. Grants

A grant represents a mutual joining of interests on the part of the grantor and grantee institution in the pursuit of common objectives. In this relationship, the grantee institution assumes with the grantor the obligation to act in the public interest in achieving a common purpose. This is a relationship of trust which imposes upon the grantee institution the responsibility to assure that the grant funds are utilized for the purpose for which they were awarded, and to exercise the same probity and prudence in their expenditure that is extended to the use of the grantee institution's own funds.

A grant is distinguished from a contract in that a grant does not constitute the procurement of goods and services by the grantor. The grant is a unilateral act.

#### C. Contracts

A contract is a promise between two or more parties which usually involves the procurement of goods and services by one party or parties and the rendering of goods and services by the other party or parties. Contracts can be fixed price contracts or cost-reimbursement contracts.

#### D. Gifts-in kind

A gift-in kind is a contribution of personal or real property which requires annual reporting by the institution. (See <u>Section V.B.10.</u> regarding reporting, inventory and insurance valuation.)

#### E. Cooperative Agreement

An agreement is a concord of understanding and intention between two or more parties with respect to the effect upon their relative rights and duties. An agreement is used in lieu of a grant when the sponsor anticipates substantial programmatic involvement with the recipient during performance of the project.

#### IV. Authority to Sign Contracts Certifications, Applications, etc.

In accordance with Regent Resolution 8074, any of the following corporate or administrative officers of the University of Wisconsin System--Secretary, Assistant Secretary of the Board, the President, any Vice President and any administrative officer or administrative assistant designated by the President of the University of Wisconsin is authorized to sign:

0. Proposals, agreements, contracts and contract supplements for research work or any other purposes upon approval of the project by the President or any Vice President of the University of Wisconsin System or the appropriate chancellor or designee with the following extramural entities:

United States Government, any of its agencies or departments, any state or municipality or any agency or department thereof, or any nonprofit organization.

- Certifications, releases, inventory reports and other documents as required by the government in connection with the termination of the contracts with the federal government for research and educational services furnished by the University of Wisconsin System.
- 2. Applications, notices, bonds and other instruments required by the federal government in connection with matters relating to federal laws and regulations for the purchase and use of tax-free alcohol in the laboratories of the University of Wisconsin System.
- 3. Purchase orders and other instruments required by the federal government for the procurement of narcotics for use in laboratories of the University of Wisconsin and in University Hospitals.
- 4. Grants, contracts, leases and agreements with private-profit making organizations, with the understanding that those in excess of \$500,000 require formal acceptance by the Regents prior to execution.
- 5. Royalty agreements with the University of Wisconsin Press.
- 6. Transactions of the University of Wisconsin System's employe savings bond accounts.
- 7. Leases require formal acceptance by the Board of Regents prior to execution if: (1) a proposed leased space is not available in an existing building and would require the construction of a new building to satisfy the space need; or (2) negotiations for a new lease would involve leased space in excess of 10,000 assignable square feet; or (3) the proposed initial term of a lease would exceed 5 years (excluding renewal options).

#### V. Policy

Research administration should be carried out by institutional personnel. A limited amount of coordination should be exercised by System Administration to maintain systemwide policies. Systemwide coordination should assure that data are available and retrievable to meet System's management needs.

- System Administration responsibilities:
  - 1. Establishing system policies concerning such things as publications, patents, copyrights, fringe benefits and indirect costs.
  - 2. Assisting institutions in developing extramural support guidelines and complying with Federal regulations.
  - 3. Analyzing management reports to monitor and anticipate changes in extramural support programs.
  - 4. Developing fringe benefit cost rates to be used in grant proposals.
  - 5. Maintaining oversight responsibility for development and negotiation of indirect cost reimbursement rates.
- A. Institution responsibilities:
  - 1. Administration

Each institution shall have policies and procedures in place to administer extramural support funds.

2. Principal Investigators/Project directors

Each institution shall establish criteria for determining eligibility for its faculty and/or staff to act as principal investigators/project directors of extramural support programs.

#### 3. Cost Sharing

Each institution is responsible for mandatory cost sharing commitments.

#### 4. Fringe Benefits

Section 20.865, <u>Wisconsin Statutes</u>, requires that fringe benefits applicable to salaries paid from program revenue funds shall be charged to such program revenue funds. Fringe benefit contributions must be charged to the appropriation from which the salary is paid. Fringe benefits are a real cost to the institution, whether the financial support is from general or program revenue sources. Thus, all budgets submitted to extramural sponsors must contain an item for all associated fringe benefit costs of the institution. For ease of administration, System Administration annually provides fringe benefit rates by category of employe. When assessing fringe benefit costs to an extramural account, the rates in effect for the current fiscal year must be applied to the actual salary amount expended, regardless of the rates funded by the sponsor or the actual costs of fringe benefits for any specific employe.

#### 5. Indirect Costs (Overhead)

Each institution shall develop and negotiate an indirect cost reimbursement rate to be included on all grant and contract proposals. Indirect costs, although not readily identifiable with specific projects, are real costs charged to individual grants or contracts to provide reimbursement for certain institutional expenses that cannot be directly charged since they result from shared services, such as libraries, plant operation and maintenance, utility costs, departmental support, research administration expenses, and depreciation or use allowance for buildings and equipment.

All grant and contract applications to and awards from Federal agencies (except as provided otherwise by Federal regulations) must include indirect costs at the agreed upon rate set forth in the University/DHHS Negotiation agreement.

Indirect costs for non-Federal grants and contracts must be included at the Federally negotiated rates currently in effect. In some cases, a higher rate be may be used if approved by the sponsor. If the sponsoring agency has an indirect cost rate which is less than the Federal rate, the University will consider accepting that rate only after a review to determine if it is (1) a published rate, and (2) an agency-wide policy, and (3) consistently applied by that organization to all of its outside grants and contracts with educational institutions. In addition, it should be demonstrated to the Chancellor or delegated designee that the project is of sufficient importance to warrant subsidizing the indirect costs of the project from other university programs.

The inclusion or exclusion of indirect costs cannot be used as a bargaining point to gain a competitive advantage to secure extramural support. When joint projects are anticipated by several institutions of the UW System, indirect costs should be included and reimbursed at each institution's appropriate negotiated rate. When one institution receives extramural support and then subcontracts to or purchases services from a second, the first shall reimburse the second's indirect costs at the rate received by the first or the negotiated rate of the second whichever is less monetarily.

#### 6. Publication

No agreement shall be entered into with any extramural sponsor which prohibits the right of a University employe to publish the results of the project. The University and its employes have an obligation to assure that project results are made known to the general public.

#### 7. Patents

The University of Wisconsin does not contract with or otherwise require its employes to produce inventions and, thus, does not claim proprietary rights in employe inventions, except for the continuing right to use such inventions in its education and research mission. In the absence of contractual provisions obligating the transfer of all or some proprietary rights to the invention to a third party, employes who make inventions have complete ownership and control of any resulting patents. UW System policies and procedures governing patents are found in FAP - Patent Policy (G34).

#### 8. Copyrights

UW System policies and procedures governing copyrights are set forth in <u>FAP - Copyrightable Instruction Materials Ownership</u>, <u>Use and Control (G27)</u>. Subject to circumstances noted in FAP - Copyrightable Instruction Materials Ownership, Use and Control (G27), a copyright which a University employe obtains on his or her original work shall belong to the employe. Further, as provided in FAP - Copyrightable Instruction Materials Ownership, Use and Control (G27), when copyrights are the subject of agreements between the University and extramural sponsors, University employes must cooperate in honoring all such contractual commitments.

<u>FAP - Computer Software Ownership (G10)</u> deals with licensing agreements for computer software.

#### 9. Data

No agreement shall be entered into with any extramural sponsor which allows for the transfer of the ownership of data. (This is not meant to cover proprietary data originally belonging to the sponsor.)

#### 10. Gifts-in-Kind

Gifts-in-kind from all sources, including private donors, foundations, corporations, etc., require the recipient of each gift-in-kind to route the item through their institutional review process for approval (including a review for hazardous materials) as part of the Regent reporting process.

In accordance with s. 20.907, <u>Wis. Stats.</u>, each institution will provide a listing and a summary report of gifts-in-kind receiving institutional approval to the Vice President for Finance after the close of the fiscal year, by September 1. The Vice President will provide a summary report to the Regents at their subsequent October meeting and a combined listing to the Legislative Joint Finance Committee and the Department of Administration by December 1.

By Board policy, the University may not participate in establishing the monetary value of the gift, nor should any value be assigned when the institutions submit the annual gift-in-kind report.

An inventory value should be established based upon fair market value on the date of the gift for financial reporting purposes. If this value is \$5,000 or more and the useful life is one or more years, the donated item shall be included in the capital inventory. An insurance value should be determined in accordance with procedures established by the System Administration Risk Management office.

#### 11. Gifts of Real Estate (Land and Buildings)

Gifts of real estate must be evaluated for potential encumbrances of State assets prior to acceptance. Regent and State Building Commission policies require an environmental audit be performed on all land and buildings prior to acquisition.

Pursuant to s. 13.48(2)(b)1m., <u>Wis. Stats.</u>, the University of Wisconsin System may not accept any gift, grant or bequest of real property with a value in excess of \$30,000 or any gift, grant or bequest of a building or structure that is constructed for the benefit of the System or any institution thereof without the approval of the State Building Commission.

#### VI. Reports to the Vice President for Finance and the Board of Regents

Each institution shall provide a summary of new gifts, grants, contracts, leases and agreements, including royalty agreements with the University of Wisconsin Press, to System Administration, Financial Administration, by the 10th day of completion of each quarter. System Administration will determine the reporting format. The Vice President for Finance will provide a summary report to the Board of Regents on a quarterly basis.

Appendix F – Policies at peer institutions

John Hopkins

MIT

Carnegie Mellon

Georgia Tech

University of Michigan

University of California-Berkeley

University of Texas-Austin

University of North Carolina-Chapel Hill

University of Virginia

## POLICY ON CLASSIFIED AND OTHERWISE RESTRICTED RESEARCH JOHNS HOPKINS UNIVERSITY

October 23, 2005

#### **Executive Summary**

As part of the commitment to its public service mission, the Johns Hopkins University endorses faculty participation in research in the national interest. At the same time, however, the University's commitment to openness in documentation and dissemination of research results precludes the pursuit of classified research or the use of classified information within the academic enterprise. Thus no classified research will be carried out on any academic campus of Johns Hopkins nor will classified information be used to satisfy the criteria for any academic degree requirements, faculty appointments, or faculty promotions. Further, Johns Hopkins will not accept other restrictions on research or research information related to non-statutory classifications. An exception to this policy is the Applied Physics Laboratory, which is not an academic division, and has a distinct mission that makes it an appropriate venue for classified research.

#### POLICY ON CLASSIFIED AND OTHERWISE RESTRICTED RESEARCH

#### 1. Introduction

The mission of the Johns Hopkins University is "to educate its students and cultivate their capacity for life-long learning, to foster independent and original research, and to bring the benefits of discovery to the world." The University's endeavors in educating students and advancing knowledge are fundamental to the well-being of the nation, and to the security of our people. Johns Hopkins is dedicated to academic freedom and to the public documentation and dissemination of the knowledge that it creates. A free and open academic environment is an essential element in fulfilling the Johns Hopkins research and educational missions, and in achieving the University's ultimate objective of contributing to the benefit of the public. Conversely, policies or practices that inhibit the free exchange of ideas, by limiting scholarly interchange, can markedly restrain both the advancement of knowledge and its productive use.

In pursuing its public service mission the University and its faculty may find it important to engage in research in the national interest where restrictions may be imposed on access to and documentation and dissemination of information. In these cases, the specific research may be characterized as "classified" or "sensitive." Restrictions on these projects create potential conflicts with the academic values of this institution. A university policy on research under these conditions must be in accord with the basic academic principles of Johns Hopkins while, at the same time, providing the opportunity to engage in research in the national interest that the University, its faculty and staff deem important.

#### 2. Policy

This policy applies to all academic divisions of Johns Hopkins. The Applied Physics Laboratory (APL) is a non- academic division of the University largely conducting research for the government and is exempted from the restrictions of this policy. APL is a secure facility authorized by the Defense Security Service to conduct classified research projects on behalf of the University.

The following section outlines Johns Hopkins' policy relating to information or projects that potentially lead to restrictions on the free and open documentation and dissemination of research information, or that may limit access by certain faculty, staff or students to the research program. Classified research and sensitive information are defined in Section 3 of this document.

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#### A. Classified Research

Johns Hopkins is committed to its public service mission, and as part of that commitment we support faculty participation in research in the national interest that on occasion may involve classified information related to national security. However, the fundamental values of the University make it imperative that the University's academic campuses provide an environment where free inquiry and documentation and dissemination of information are rigorously maintained. Effective documentation and dissemination of research results is one of the most important contributions that Johns Hopkins can make to the nation.

Classified research will not be carried out on any academic campus of Johns Hopkins University. Research programs using classified materials cannot be used to satisfy the criteria for completion of academic degree requirements, faculty or scholarly appointments, or promotions.

Any member of the research community at Johns Hopkins who is planning to participate in a project conducted under the auspices of the University that may involve classified research must first obtain approval from her/his divisional research administration office on behalf of the University before submitting a proposal for the project. This approval must include a plan for a non-academic site where the expected research will be conducted.

#### **B.** Sensitive Information

Efforts have been made by some government agencies to impose restrictions on certain research projects by requiring a review of research results prior to publication to ensure there is not a disclosure of any "sensitive information." These restrictions are proposed despite the fact that there is no law or regulation defining or requiring restrictions on "sensitive information," and despite the fact that this information has not been classified using accepted procedures. Proposed restrictions have included the manner in which the results of the research project are compiled and disseminated, as well as prohibiting access by foreign nationals to this information.

The University will not accept any contracts or grants for research projects with restrictions imposed by sponsors that research should be reviewed for possible disclosure of "sensitive information." Information that is characterized as "sensitive" will not be accepted for use in research projects on academic campuses nor will "sensitive" information be held on those campuses. Research programs using "sensitive" information cannot be used to satisfy the criteria for completion of academic degree requirements, faculty or scholarly appointments, or promotions.

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#### C. Research Sponsored by Industry

Research sponsored by industry at Johns Hopkins frequently involves requests by the sponsoring organization to restrict the documentation and dissemination of the results of the research. Under certain circumstances, Johns Hopkins is willing to consider requests for restrictions proposed by industrial sponsors on open publication or presentation of research results, and may permit delays in documentation and dissemination of information in order to permit assessment of the potential of the intellectual property for patentability.

#### **D.** Other Restrictions

Some restrictions on documentation and publication of research emanate from foreign governments as part of their conditions for obtaining research visas or participating in collaborative research with their nationals. Non-governmental actors such as community leaders or non-governmental organizations may impose other restrictions. The University carefully examines proposals involving research projects that could possibly restrict documentation and dissemination of information or result in the indefinite delay of publication. In general, the University will not agree to such restrictions on the research except when ethical considerations could become an issue. The sponsor's right to review and reply may entail a reasonable delay in publication or dissemination.

#### E. Consulting

The restrictions outlined in this policy are not intended to prevent members of the Johns Hopkins faculty from acting in a private capacity as a consultant working with agencies or other institutions on matters of a classified or proprietary nature.

#### F. Special Exceptions

Only under special conditions shall the University accept a classified project when there are restrictions on the disclosure of its existence, its general nature, and its sponsor's identity. In such cases, a final determination for accepting such projects will be made by the President of the University.

#### G. Applied Physics Laboratory

The Applied Physics Laboratory is a non-academic division with a distinctively different mission that involves substantial work associated with national security and requires access to classified information. The Applied Physics Laboratory provides a venue that allows faculty from the academic divisions to participate in research with national

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security significance. The University, through the President and the Board of Trustees subcommittee on APL, provides management oversight of the direction and quality of the APL program, including classified research and development.

#### **H.** Standing Committee on Research Information Practices

The University shall establish a Committee on Research Information Practices whose purpose will be to review all matters concerning classified, "sensitive" and proprietary research. The committee will have cognizance over the policy for classified, "sensitive" and proprietary research areas. It will continue to review the federal policies and practices as well as program requirements from various other funding sources, and recommend an appropriate Johns Hopkins response to these issues. The Provost shall appoint the members of the Committee.

#### 3. Definitions and Terms

#### A. Classified Information

The government may classify information that is deemed to be important to the national security interests of the United States. Classification is the means by which information is restricted. The standard categories of classification include confidential, secret, and top secret. Successive levels of classification imply a greater level of importance to national security interests, and more stringent requirements for access or use of the information. Several more restrictive levels of information have been added to this set of classifications, but are only available under very special conditions. The categories successively impose greater restrictions on the documentation and dissemination and use of the information, as well as imposing more stringent requirements on persons who wish to be authorized access to information in the respective categories. The process by which individuals are granted access to the various categories of classified information is deemed to be security clearance, and is conducted by the Defense Security Service.

#### **B.** Classified Materials

Classified materials can be any resources, equipment, or supplies utilized in a project that contains classified research. These materials are most often (but not limited to) computer disks used to compile information about the project as well as hardcopy documents, forms, drawings, notebooks, cameras, tapes, chemicals, substances, or any other resources related to a classified research project. All classified materials are kept in containers that meet the specifications set forth in the National Industrial Security Program Operating Manual as they apply.

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#### C. Classified Research

Classified research is defined as research that has a security classification established by an authorized agency of the federal government. An entire sponsored research project or a specific section of a research project may be categorized as classified. Classification requirements typically emerge due to certain contractual conditions, but may, in some cases, arise after the research has been conducted as a result of the extreme importance of the research results to national security.

Classification is not normally applied to basic research projects. It is more typically used to limit use and dissemination of information about applied research or development efforts.

Johns Hopkins University carries out a significant amount of classified research and development at the Applied Physics Laboratory. As a result of their governance responsibilities with respect to the University's security program, a number of senior university officers and trustees are required to have security clearances.

Johns Hopkins also maintains a facility security office to meet its security obligations. A number of Johns Hopkins faculty and research staff hold security clearances in connection with research programs in which they are engaged or in connection with their roles as advisors in various government programs.

#### D. "Sensitive Information"

Most recently, government-contracting officials have identified certain research projects where a review and approval of research results is required prior to publication to ensure there is not a disclosure of any "sensitive information." Restrictions on publication of research results have included the manner in which the results of the research project are compiled and disseminated, as well as the limitations on specific research staff that have access to this information. Particular emphasis has been given to restrictions that limit the access to this information to research staff who are not foreign nationals. Inasmuch as there is no consistent understanding of or definitions for the term "sensitive" across various government agencies, the requirements for the institution, the principal investigator and the research team lack clarity.

#### E. Restrictions

Restrictions on research projects at Johns Hopkins are proposed on some occasions by government agencies or other external funding organizations. These restrictions may include the right to use the results of the research, the ownership of documents produced in the work, or distribution of the information involved in the project. In certain instances, the University may be requested to accept contracts prior to receiving

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the award that require specific controls over the dissemination of the results of the research. For example, funding agencies frequently attempt to restrict publication of research results by requiring agency approval rather than a simple review. In other cases, the external funding entity may place limits on who may participate in a sponsored project based on factors such as national origin. There are circumstances where funding institutions may attempt to impose restrictions that are in direct conflict with the University's federally approved rules.

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## MIT Policies & Procedures 14.0 Research Policies and Public and Private Support

14.2 Open Research and Free Interchange of Information

The encouragement of research and inquiry into intellectual areas of great promise is one of the most basic obligations MIT has to its faculty, to its students, and to society at large. The profound merits of a policy of open research and free interchange of information among scholars is essential to MIT's institutional responsibility and to the interests of the nation as a whole. Openness requires that as a general policy MIT not undertake, on the campus, classified research or research whose results may not be published without prior permission — for example, without permission of governmental or industrial research sponsors. Openness also requires that, once they are at MIT, foreign faculty, students, and scholars not be singled out for restriction in their access to MIT's educational and research activities.

The vast majority of on-campus research projects can be conducted in a manner fully consistent with the principles of freedom of inquiry and open exchange of knowledge. MIT, however, is an institution that plays a unique role in important areas of science and technology that are of great concern to the nation. It recognizes that in a very few cases the pursuit of knowledge may involve critically important but sensitive areas of technology where the immediate distribution of research results would not be in the best interests of society. In such cases, exceptions to these policies regarding publication, classification, and access by foreign students and scholars may be made, but only in those very rare instances where the area of work is crucially important to MIT's educational mission and the exception is demonstrably necessary for the national good. If these conditions are not met, MIT will decline or discontinue the activity and, if appropriate, propose it for consideration off-campus or elsewhere. Since the implementation of classified or otherwise restricted research on campus would drastically change the academic environment of the Institute, it is essential that each project be reviewed and acted upon in light of its impact on the Institute as a whole.

It is the policy of the Institute, therefore, that every research project within the academic structure of MIT (excluding Lincoln Laboratory) that requires a classification on the research process, classification as to the source of funds, classification of the research results, or imposition of other restrictions on publication or access must receive the prior approval of the Provost, who shall seek the advice of the Faculty Policy Committee and will inform the committee of all approvals. When unrestricted research at MIT is important to the national security, appropriate efforts will be made to ensure that relevant government agencies are informed of the results at the same time as are others in the scholarly community.

Theses, whether undertaken by graduate or undergraduate students, are an integral part of the research program of the Institute and fall within the statement of policy concerning classified or otherwise restricted research on campus as stated above. No thesis requiring that a student have a clearance or requiring a security review upon its completion may be embarked upon without the prior approval of the Provost. When graduate theses are involved, the Provost shall seek the advice of the Committee on Graduate School Policy in cases that involve modification of existing policy and will inform the committee of all approvals.

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#### **Editor's notes:**

POLICY TITLE: Carnegie Mellon University Policy on Restricted Research

DATE OF ISSUANCE: This policy was originally issued to campus on 9/14/88 as Organization Announcement #317, *Policy on Restricted Research*.

ACCOUNTABLE DEPARTMENT/UNIT: Office of the Provost. Questions on policy content should be directed to Susan Burkett, associate provost for research and academic administration, x88746.

ABSTRACT: Restricted research is inappropriate at Carnegie Mellon University except when confined to the semi-autonomous units, which are not associated with any academic departments.

### **Policy on Restricted Research**

Universities have two primary purposes: to create knowledge and to disseminate knowledge. Carnegie Mellon University recognizes the importance of open intellectual communication within a research group, within the university, and within the larger community outside. Ideally, all units of the university would disseminate the results of research as quickly and as widely as possible. Some members or units of the university, however, desire to do research that may be difficult or impossible without restrictions or without access to classified or proprietary materials.

There exists, therefore, a tension between the university's goal of disseminating knowledge freely and the desire on the part of some of its members to conduct restricted research on important problems. The university intends to guarantee the academic freedom of all faculty members to do research in their own manner on topics of their own choosing, provided that such research is consistent with the overall purposes of the university.

This policy seeks to resolve the tension between the desire to participate in restricted research and the desire to maintain the open atmosphere of the university by confining restricted research to semi-autonomous units, which are not associated with any academic departments. It thereby establishes the principle that restricted research is inappropriate at Carnegie Mellon University except in the semi-autonomous units.

This policy does not attempt to anticipate all possible concerns about restricted research. In some cases, decisions will need to be made about particular research projects to which the application of particular policy guidelines are not clear. In choosing to accept or decline such projects, the university will weigh the potential of a project for generating and disseminating new knowledge, for the benefit of society, against the project's potential for adversely affecting the climate for research conducted in a free and open environment. While this policy sets no explicit limits on the extent of classified research permitted in the semi-autonomous units, it is not the intent of the policy to encourage any unit of the university to engage in classified research as a primary ongoing activity. Indeed, it is expected that classified projects will never represent more than a small fraction of the total research effort in any unit.

#### **Definitions**

**research:** all projects and investigations involving the creation of new knowledge of a theoretical or practical nature. The term "research" as used here encompasses both "research" and "development" as they are commonly defined.

**classified research:** research, the free dissemination of the results of which is deemed to jeopardize national security. The federal government controls access to the environment in which such research is performed, restricts discussions about the work in progress to individuals with clearance and a "need to know," and limits publication of research, results or access to data needed to verify results, for a specified period of time.

**proprietary research:** research that results in intellectual property that is owned by entities other than Carnegie Mellon University. Such entities may wish to market products derived from inventions or ideas that are developed at the university. They might, therefore, desire to fund projects which restrict access to data and to discussions about work in progress to individuals with a "need to know," and to seek, for a specified period of time, a delay in publication of research results or data needed to verify results. Such entities may also provide access to proprietary material, which researchers must agree not to include in publications.

publication: oral or written dissemination.

**restricted research:** includes all classified research, and any proprietary or other research that requires more than a six month delay in publication of the research results.

**semi-autonomous units:** units of the university specifically so designated by the president, after consultation with the URC and the Faculty Senate, currently the Mellon Institute and the Software Engineering Institute.

non-autonomous units: all university entities other than semi-autonomous units.

#### **Restricted Research in Non-Autonomous Units**

It is the policy of Carnegie Mellon that restricted research is inappropriate and, therefore, not permitted within its non-autonomous units.

It is also the policy of Carnegie Mellon not to permit involvement of students in projects which carry restrictions that may impede their progress toward a degree. Therefore, students should not be involved in contracts that require the delay of a student's publication of research results when such results are intended for use in obtaining academic credit, except that a sponsor may require a delay of thirty days for review of publications for removal of proprietary information that was provided by the sponsor for the conduct of the research.

Proprietary research is allowed within non-autonomous units provided it is subject to limitations (excluding students' publications as noted above) no more stringent than the following:

- A sponsor may request a delay of up to six months in publication so that steps
  may be taken to secure intellectual property rights to inventions or ideas
  developed under the contract.
- A sponsor may require a delay of thirty days for review of publications for removal of proprietary information which was provided for the conduct of the research.

#### **Considerations for faculty/researchers:**

The university recognizes that problems arise in both restricted research and research that is not itself restricted but that involves access to classified or propriety information or materials (hereinafter, restricted materials). Researchers may also have access to restricted materials when serving as consultants. Access to restricted materials gives rise to concerns about limitations on researchers' freedom to communicate. In such instances, researchers must exercise considerable judgment to

conduct their research in an open environment while protecting the restricted materials to which they have access. Researchers must also be aware that the university will judge their performance as researchers through their publications or through other scholarly products that arise from their research. Research that is restricted in dissemination, or not available for public review, cannot be considered in promotion or reappointment decisions or in evaluations of academic performance of any kind.

#### **Considerations for students:**

There are important concerns about the involvement of students in restricted research. It is necessary for students to publish their work in order to obtain degrees, course credit and professional recognition. Students rely to a large degree on their faculty advisor's judgment for guidance and advice. Research that is restricted in dissemination, or not available for public review, cannot be used for academic credit. Thus, before working on such research, a student must be notified in writing that work on this research may not be used for academic credit.

#### **Restricted Research in Semi-Autonomous Units**

The semi-autonomous units associated with Carnegie Mellon may conduct restricted research.

Faculty members may conduct restricted research in or in cooperation with semiautonomous units only on a consulting basis or by means of a formal, internal leave of absence from their non-autonomous units.

Work that is restricted in any way may not be used for academic evaluations until it is released for publication, and then only with respect to future academic actions.

Students may occasionally be employed by the semi-autonomous units, provided that such employment does not interfere substantially with progress toward a degree. However, they must be made aware that work that is restricted cannot be used for academic credit. Work that was restricted and is later released for dissemination and review can be applied toward future academic credit. Students should be discouraged from working on restricted research in which dissemination may be delayed indefinitely.

#### **Guidelines for all Units**

Work by students on restricted research projects shall not be made a condition for admission or financial aid.

The principal investigator is responsible for informing all members of a project (faculty, staff and students) of any restrictions imposed on the dissemination of information related to the research. This must be done prior to the start of the project or prior to an individual joining an existing project.

Restrictions on access to university facilities due to the conduct of restricted research must be kept to a minimum. Access to and movement through the facilities in which restricted research is conducted must be consistent with standard university procedures.

The Provost's Office is responsible for obtaining signed documents from principal investigators on restricted research projects attesting that they are aware of all restrictions imposed on the research and that they have informed all participants of these restrictions.

<u>The Office of Sponsored Research</u> shall review all proposals and contracts prior to approval for conformity with these guidelines. Any that do not meet these guidelines will be referred to the University Research Council (URC) for review and recommendation of appropriate action to the provost.

To maintain a balance with the university's goals of broad dissemination of knowledge, the URC will conduct an annual review of all restricted research being conducted at the university. This review will be made based on a listing of all contracts that involve restricted research. This listing shall include the title and sponsor(s) of the research, name(s) of principal investigator(s), and the amount of funding of each contract.

The university community will be informed annually, through the URC's written report to the Faculty Senate and Student Senate, of the nature and overall impact of restricted research at Carnegie Mellon.

Existing sponsored research projects shall be allowed to continue under the terms of their present contract. However, renewal contracts must conform with this policy.

#### <u>Georgia Research Tech Institute</u> <u>Defense</u>

## Meeting mission-critical needs

Much of GTRI's work with the U.S. federal government supports defense and security. GTRI has been meeting mission-critical military needs since the 1950's. We are proud to serve our nation by developing effective, creative solutions that support national defense and homeland security.

From electronic defense technologies to vehicle survivability to high-tech networking, our defense technology expertise is recognized worldwide. GTRI gives defense agencies a strategic advantage by quickly implementing real-world solutions that allow our warfighters to:

- Be prepared
- Effectively defend themselves and others
- Maximize their effectiveness and efficiency

To read more about GTRI defense technology solutions, browse the solution areas below or our defense<u>case studies</u>. To learn about solutions for other federal agencies, visit our <u>Federal Government Solutions</u> page. You can also find detailed descriptions of GTRI's eight research laboratories by visiting our <u>research laboratory overview page</u>.

#### **Test and Evaluation**

We support programs ranging from product test and evaluation services to large-scale system operational tests to scientific research on future test needs. GTRI combines extensive in-house testing facilities with advanced processes and tools and a network of field offers to meet testing needs.

#### **Vehicle Survivability**

Our researchers combine proven vehicle technologies with advanced materials and engineering concepts—including ballistic and mine protection—to improve military combat vehicle survivability and mobility. For over 30 years, GTRI has been at the forefront of advanced aircraft defensive and countermeasure systems, from tactics, technologies and techniques through full defensive system integration.

#### **Integrated Air and Missile Defense**

GTRI's multidisciplinary systems and software research skills include analysis and modeling of complete air and missile defense systems, hardware-in-the-loop simulations and operational test support. GTRI is also designated as an official <u>University Affiliated Research Center (UARC)</u> with the U.S. Army Aviation and Missile Research, Development and Engineering Center (AMRDEC) as a primary sponsor.

#### **Integrated Sensing**

Signal detection. Signal analysis. Imaging. Fusion. Dissemination. Renowned experts in sensor technologies conduct research on the most advanced algorithms and data fusion techniques in the world.

#### **Systems Engineering**

Systems engineering education. First-of-a-kind systems. Complex systems research. To GTRI, systems engineering is not just a process, it's our culture. We focus on solid system design and analysis methods, modeling and simulation, and innovative test approaches.

#### **Electro-Optical / Infrared Systems**

GTRI conducts basic research in optical and infrared physics and phenomenology. We develop optical systems and techniques ranging from missile warning to night vision to unique sensors for chemical and biological agents.

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#### **Radar Systems**

Our researchers investigate and develop radio frequency sensor systems. They particularly focus on radar systems, electromagnetic environmental effects, radar system performance modeling and simulations, signal and array processing, electronic protection and antenna technology.

#### **Unmanned Vehicle**

We develop advanced systems concepts related to the design, construction and integration of advanced air, land and sea vehicles, especially unmanned vehicle systems.

#### **Command and Control**

GTRI focuses on systems engineering solutions in electronic defense and human systems integration, including command and control. We conduct multidisciplinary systems and software research related to battlefield command and control modeling.

#### **Technology Insertion**

We offer cost-effective, innovative and reliable engineering solutions to extend the lives of military electronic systems. Resourceful insertion of technology alleviates obsolescence, increases reliability, lowers costs and improves performance.

#### Logistics

Our experts help government agencies enhance performance of existing systems, while reducing total operating costs. We create solutions by applying multidisciplinary analysis, simulation and modeling technologies to existing systems.

#### **Human Systems Integration**

We conduct world-class research in cognitive science, user-centered design, and system development and testing. Using a combination of analyses, assessments and tests, we lead human engineering programs for a diverse set of customers.

#### Threat Simulation and Data Analysis

GTRI has a 30-year history of analysis and simulation of foreign threat systems, from integrated air defense systems to small, improvised explosive devices.

#### **Counter-IED**

Our experts take a multidisciplinary approach to developing new technologies aimed at keeping our nation's warfighters safe from improvised explosive devices.

#### **Modeling and Simulation**

GTRI researchers use advanced engineering models and simulations as the foundation of nearly all our research areas. We also continue to advance the science of modeling and simulation with investigations ranging from basic phenomenology to large distributed simulation systems.





## Implementation of Regents' Policy Concerning Research Grants, Contracts, and Agreements

303.01

On April 17, 1987, the Regents approved a new policy on research grants, contracts and agreements to replace their previous policy on classified research. The new policy applies to ALL research grants, contracts and agreements accepted by the University, not merely classified research agreements. It continues the University's commitment not to accept research agreements in secret.

This document describes the implementation of the Regents' Policy. It is organized into three parts and an attachment:

- Part I. Introduction to Key Features of the Regents' Policy,
- Part II. The text of the "Regents' Policy on Research Grants, Contracts and Agreements" (approved April 17, 1987),
- Part III. Definitions and Review Procedures for Compliance with the Regents' Policy, and

**Attachment:** Supplementary Proposal Approval Form PAF-R for review of "non-standard restrictions" and "classified research restrictions".

This set of implementing procedures has been constructed with great care, drawing on the Regents' policy and their discussions, on the comments from the community, and on the collective experience in the Office of the Vice President for Research (OVPR). We in OVPR welcome comments from you as we operate with these guidelines. Should we find significant difficulties with the procedures, we will make the necessary adjustments.

#### I. Introduction to Key Features of the Regents' Policy

The Regents assigned responsibility for compliance with the policy to the four levels in the regular channels for review and authorization of research grants, contracts and agreements -- the principal investigator, the department chairman, dean/director, and the Vice President for Research. At each level, this responsibility involves consideration of the sponsored research in the context of the mission of the institution, the principles of open scholarly exchange and academic freedom, and the University's tradition of conducting research aimed at enhancing human life and the human condition. The Regents recognized that some sponsored research might require a balancing of these contextual considerations. They did not specify criteria to be used in deriving the balance. Instead, they expressed confidence in the faculty and administrators in the regular review channel to make such judgments.

The Regents' new policy continues the University's general reluctance to accept sponsor-imposed restrictions on openness of research results, but it does not impose a single set of parameters for acceptability of such restrictions. The Regents expressed their general agreement with the standards being applied by the University in its negotiations with sponsors, but made clear their belief that the University must have the flexibility to depart from these standards in special situations. The policy also states explicitly that the University will accept classified research agreements under certain conditions.

Historically, the vast majority of sponsors of University research have imposed no restrictions on academic freedom or openness of research or its results. We expect no significant change in the incidence of sponsor-imposed restrictions.

Sponsor-imposed restrictions on openness, when they do arise, become known at various stages of the proposal/award cycle and they may or may not be negotiable. The implementing procedures for the Regents' policy must therefore accommodate these diverse circumstances.

The implementing procedures described in Part III below, impose no special justification and documentation requirements for sponsor-imposed restrictions falling within a defined set of "standard" restrictions based on existing University practices. The implementing procedures call for explicit review and documentation, using a Supplementary Proposal Approval Form (PAF-R), for the two other categories: "non-standard restrictions" and "classified research restrictions." (See Part III and Attachment, below.) The procedures call for prompt consultation between the principal

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investigator and the Division of Research and Development Administration (DRDA) Project Representative when either discovers a sponsor's intent to impose a restriction on openness of research results.

In their interaction with sponsors, principal investigators bear a responsibility to reflect the University's commitment to academic freedom and openness in research. DRDA will use its considerable experience to negotiate the most acceptable terms in sponsored research agreements.

To keep the University community informed, DRDA will continue to provide the monthly listing of awards in the Reporter and the Regents' Agenda Book. Classified research agreements will continue to bear an asterisk in the listing of awards.

As instructed by the new policy, the Vice President for Research will provide to the Regents, after consultation with the Senate Assembly Research Policies Committee, an annual report on the implementation of the policy.

Questions regarding implementation procedures for the policy should be directed to DRDA (764-5500). Other questions should be referred to the Research Policy Advisor in OVPR (763-1290).

#### II. Text of the Regents' Policy

## THE UNIVERSITY OF MICHIGAN REGENTS' POLICY CONCERNING RESEARCH GRANTS, CONTRACTS, AND AGREEMENTS

(Approved by Regents, 4/17/87)

The mission of the University is to generate and disseminate knowledge in the public interest. Essential to this mission are two fundamental principles: open scholarly exchange and academic freedom. Normally, these principles are mutually supportive. On those rare occasions when they conflict, they must be balanced, taking into account the University's mission and the public interest. The University also has had a longstanding tradition of conducting research aimed at enhancing human life and the human condition. Given these principles and continuing tradition, the following guidelines govern the acceptance of research grants, contracts, or agreements by the University:

- 1. The University will not enter into or renew any grant, contract, or agreement that would restrain its freedom to disclose the existence of the document, the identity of any sponsor of the proposed research, or the purpose and scope of the proposed research.
- 2. The University normally does not accept grants, contracts, or agreements for research that unreasonably restrict its faculty, staff, or students from publishing or otherwise disseminating the results of the research.
- 3. The University will accept a classified research grant, contract, or agreement if it can be accommodated without compromising the University's pursuit of its educational mission and if its purpose is clearly in the public interest.
- 4. Nothing in these provisions shall prohibit grants, contracts, or agreements that restrict publication or other public dissemination of classified or proprietary information supplied to the investigator by the sponsor, as distinguished from information generated in the course of research performed by members of the University community.
- 5. Where the sponsor supplies classified or proprietary information to the investigator, the grant, contract, or agreement may include reasonable provisions for submission of manuscripts arising from the sponsored research to the sponsor for review prior to publication or other public dissemination so that the sponsor may verify that no such classified or proprietary information is disclosed.
- 6. The responsibility for compliance with these policies rests with the principal investigators, the department chairs, the deans of the schools and colleges, and the directors of the institutes and centers, and the Vice President for Research, in the regular channels for review and authorization of such research grants, contracts, and agreements.
- 7. Periodic assessment and review of the impact of these policies are appropriate and necessary. The Vice President for Research shall provide to the Regents, after consultation with the Senate Assembly Committee, an annual report on the implementation of this policy.

## III. Definitions and Review Procedures for Compliance with Regents' Policy on Research Grants, Contract and Agreements

#### A. Definitions

To facilitate compliance with the Regents' Policy, sponsor - imposed restrictions on openness of research will be categorized as follows:

1. "Standard Restrictions"

The following restrictions are outer limits of what has been routinely accepted in research grants, contracts, and agreements by the University provided that the principal investigator agreed to them. Restrictions which exceed these limits have been accepted and may be accepted in the future, but they will require consideration in Category 2 or 3 below.

- a. Delay\* in publication or other dissemination of research results for a period of time deemed reasonable for the specific agreement but usually not to exceed 120 days, to permit sponsor review for:
  - 1. Comment (not for prior approval).
  - 2. Protection of confidential information provided by the sponsor.
  - 3. Possible participation in the protection of intellectual property.

Under unusual circumstances and with the concurrence of the principal investigator, a time delay of up to 180 days may be accepted in the negotiation of a sponsored agreement. Any publication delay of greater than 120 days shall be reported annually to the OVPR.

- b. Delay in publication or other dissemination of research results in order to provide reasonable time for research units participating in a multi-center or consortia project to conclude their studies. Such research may be conducted either concurrently or sequentially at a number of university or research centers. A reasonable and determinate time delay for publication will be agreed upon by all parties at the outset of the project.
- c. Beta test agreements and other forms of routine testing, where the results are not expected to be publishable as research findings, are not included under the Regents' Policy on Research Grants, Contracts, and Agreements. For the purpose of these guidelines, a "beta test" involves the authorized use -- for evaluation, assessment, and/or research -- of experimental or prototype equipment, models, devices, pre-release versions of software, or other copyrightable material -- which are not publicly available -- on the condition that the results will be shared with the provider/beta test sponsor.
- d. Agreement to refrain from disclosing the sponsor's confidential information for a determinate time period deemed reasonable for the specific agreement. Note if protection of information by Federal security classification is involved, the restriction will be treated under Category 3, "Classified Research." See below.
- e. Controlled access to University facilities that does not interfere with other University activities and does not interfere with access to non-classified, non-confidential information.

If the sponsor-imposed restrictions fall within the above parameters, no special documentation or consideration of their reasonableness is required. The signatures on regular Proposal Approval Form (PAF) will suffice.

All other sponsor-imposed restrictions on openness must be handled in Categories 2 or 3 below.

#### 2. "Non-Standard Restrictions"

Restrictions that do not fall within those described above as "Standard Restrictions" and which do not involve Federal security classification are called "Non-Standard Restrictions."

Categorization of a restriction as "non-standard" is not in itself a determination regarding its reasonableness or compliance with the Regents' policy. Such restrictions require explicit review and approvals, using a Supplemental Proposal Approval Form PAF-R. See Procedures below.

#### 3. "Classified Research Restrictions"

"Classified Research Restrictions" are those that involve Federal security classification and therefore impose a detailed set of external requirements on the University. A classified research contract or agreement can be accepted if it can be accommodated without compromising the University's pursuit of its educational mission and if its purpose is clearly in the public interest. "Classified Research Restriction" require explicit review and approvals using a Supplemental Proposal Approval Form PAF-R. See Procedures below.

#### B. Procedures

#### 1. Basic Procedures

The University's procedures for reviewing all proposals for externally sponsored research ask a series of individuals—the principal investigator, department chair, Dean/Director, and the Vice President for Research—to address certain matters, e.g., personnel, space, budget, involvement of human subjects, animals, etc. The DRDA Proposal Approval Form (PAF), attached to the proposal when it enters the approval chain, prompts decision-

makers to consider whether the proposed research conforms to institutional policies and has received all required approvals. The signatures on the PAF represent approval of the proposed activity, certification that the information on the PAF is correct, and assurance that the proposed activity is deemed consistent with institutional policies.

2. Procedures for Implementing the New Regents' Policy on Research Grants, Contracts and Agreements

The review process for compliance with the new Regents' policy is incorporated within the regular authorization system described above.

At each of the four levels of review the sponsored research is to be considered in the context of the mission of the institution, the principles of open scholarly exchange and academic freedom, and the University's tradition of conducting research aimed at enhancing human life and the human condition. Where balancing these contextual considerations is required, the individuals in this review channel have the responsibility to form the judgment required.

Approval of all levels is required for sponsored research to be accepted by the University.

Sponsor restrictions on openness of research may become known at the proposal stage, the award stage, or any time in between. Sponsor restrictions on openness may or may not be negotiable.

The procedures for handling proposals and awards will accommodate this broad range of circumstances to give as much flexibility as possible while still providing for careful judgments to be made regarding compliance with the Regents' policy. DRDA staff members will use their experience to negotiate the most acceptable provisions for each award.

Principal investigators and DRDA Project Representatives should confer with each other as soon as either learns that sponsor-imposed restrictions may be involved. When interaction between the principal investigator and the sponsor precede the proposal and/or the award, the principal investigator should take special care to reflect the University community's commitment to openness and academic freedom.

Sponsor-imposed restrictions in the "Standard" category require no special documentation of review and acceptance.

Sponsor-imposed restrictions in the "Non-Standard" and "Classified Research" categories require preparation of the Supplementary Proposal Approval Form (PAF-R) and its review and approval by the four signatories (principal investigator, department chair, Dean/Director, and Vice President for Research) designated by the Regents as responsible for judging the acceptability of such restrictions.

\* The University accepts with reluctance, and only with the principal investigator's concurrence, a sponsor's requirements to delay exercise of the investigator's prerogative to determine the appropriate timing for release of research results. A delay is considered to begin when an investigator would release the results if there were no sponsor constraint. The period of delay may or may not bear a relationship to the expiration of the funding period.

Attachment Size

SPG 303.1 attachment (pdf, 64kb)

64.66 KB

SPG number: Applies to:

303.01 All Research Grants, Contracts and Date issued: Agreements Accepted by the

February 17, 1993 University

Next review date: Owner:

May 12, 2012 Office of the Vice President for

Research

Primary Contact:

Office of the Vice President for

Research

Hard copies of this document are considered uncontrolled. If you have a printed version, please refer to the University SPG website (spg.umich.edu) for the official, most recent version.

Report:

5

#### Policy Guidelines Governing Openness and Freedom to Publish

University of California, Berkeley

Date: 05/06/91

To: DEANS, DIRECTORS, DEPARTMENT CHAIRS, AND ADMINISTRATIVE OFFICERS

From: Joseph Cerny, Provost for Research

Subject: Policy Guidelines Governing Openness and Freedom to Publish

The formal policy for the Berkeley campus on research openness and freedom to publish dates back nearly 25 years and was most recently updated in 1985. Although the fundamental core of Berkeley's policy in these areas has not changed since then, the current environment suggests the need to reiterate the policy and bring it up to date. Therefore, attached to this memo are the policy guidelines which supersede those of May 10, 1985, effective immediately.

The new guidelines, which have the concurrence of the Academic Senate, reflect current practices and are consistent with the 1989 "Guidelines on University-Industry Relations" issued by the Office of the President, which were distributed to the Berkeley campus on June 5, 1989.

Specifically, the new guidelines make the following changes:

- The policy of not accepting classified research projects is clarified as applicable to all classified contracts, not just those funded by the Department of Defense.
- The conditions under which a sponsor's proprietary data can be accepted are expanded to specify limitations on legal liability and the need for prior labeling of the sponsor's material.
- Acceptable restrictions on dissemination of tangible and intangible research results are rewritten to better
  explain the University's position that publication and non-commercial dissemination of research results must
  not be limited.

The problem of publication restrictions occurs both inside and outside formal contract and grant agreements. Although the policy guidelines can only address the former, I wish to reiterate that any fundamental limitation on the freedom to publish is unacceptable, whether or not it is part of a written agreement. Sponsors may attempt to convey such restrictions orally or via letters to principal investigators, even implying that future support depends on a willingness to comply. I urge the Berkeley faculty to be aware of such pressures and to avoid any pre-publication review or screening that would be unacceptable to the University if incorporated into a formal contract or grant agreement.

The Sponsored Projects Office staff is available for consultation and guidance on the policy guidelines and on issues relating to informal restrictions.

Joseph Cerny
Provost for Research

ATTACHMENT:

POLICY GUIDELINES GOVERNING OPENNESS AND FREEDOM TO PUBLISH

The University of California at Berkeley is committed to maintaining a teaching and research environment that is open for the free exchange of ideas among faculty and students in all forums—classrooms, laboratories, seminars, meetings, and elsewhere. Such an environment contributes to the progress of research in all disciplines. There can be no fundamental limitation on the freedom to publish as the result of accepting extramural research support

The freedom to publish is, of course, not an obligation to publish. Under the Faculty Code of Conduct, a faculty member "...accepts the obligation to exercise critical self-discipline and judgment in using, extending, and transmitting knowledge..." The exercise of this self-discipline and judgment, not external factors, should determine the content and timing of publication.

#### **Classified Research**

The Berkeley campus does not accept classified research projects from any sponsor, even if such classification is intended only to permit project personnel access to classified information and/or entry into classified research sites. The principal reasons that classified projects are unacceptable are (1) the resultant requirement for a campus facility clearance and (2) the inherent publication restrictions. In general, classified projects are not consistent with the teaching, research, and public service missions of the Berkeley campus.

#### **Use of Sponsor's Proprietary Data**

Sponsored projects allowing access to and/or use of the sponsor's proprietary data or materials Will be accepted only if regulations regarding access, use, and protection of such data or materials do not restrict the full dissemination of scholarly findings made under the grant or contract or put the University in a position of assuming financial liability. Proprietary data or materials must be labeled as such by the sponsor before release to University researchers. Sponsor requirements should not proscribe citation of the sponsor name in publications.

#### **Publishing and Disseminating Research Results**

The University of California cannot accept any fundamental limitation on the freedom to publish and therefore cannot accept publication restrictions which convey veto or censorship authority to extramural sponsors of University projects. Publication delays not exceeding sixty (60) days are acceptable so that a sponsor may review publications and (1) offer comments or suggestions and/or (2) determine that its proprietary data are not inadvertently disclosed. In either case, the final decision on content must rest with the author. Delays not exceeding ninety (90) days also are permitted so that the University and/or the sponsor may screen proposed publications for possibly patentable ideas. If both sixty- and ninety-day delays are applicable, the total period of delay should not exceed ninety (90) days.

#### **Tangible Research Results**

The Berkeley campus does not accept sponsored project agreements in which results and/or data generated by the University are owned by the sponsor and are not available for the University's scholarly purposes, including the sharing of information with other researchers. Restrictions on the University's right to commercially disseminate tangible research results and products (such as biological materials,

chemical compounds, computer software, mechanical specifications, drawings, and schematics) are acceptable only if (1) they apply to a tangible deliverable item specified in a grant or contract, and (2) there is no restriction on publication or noncommercial dissemination of the central research findings, including distribution of the results to other researchers for scholarly purposes.

May 1991			

#### GUIDELINES ON UNIVERSITY-INDUSTRY RELATIONS

University of California Office of the President May 1989

#### 2. Freedom to Publish

Freedom to publish and disseminate results is a major criterion of the appropriateness of any research project. University policy precludes assigning to extramural sources the right to keep or make final decisions about what may be published/2 A sponsor may seek a short delay, however, in order to comment upon and to review publications for disclosure of its proprietary data or for potentially patentable inventions. Such a delay in publication should normally be no more than 60 to 90 days. Chancellors, and Vice Presidents, in their areas of responsibility, may make exceptions to this policy under a few limited conditions. This is outlined in full in the Contract and Grant Manual./3 If any doubt remains concerning an exception, the Chancellor may resolve it by further referring the matter to the Office of the President.

The freedom to publish is not an obligation to publish. Under the Faculty Code of Conduct, a faculty member "...accepts the obligation to exercise critical self-discipline and judgment in using, extending, and transmitting knowledge..."3 The exercise of this self-discipline and Judgment, not external factors, should determine the content and timing of publication.

Guideline: Freedom to publish is fundamental to the University and is a major criterion of the appropriateness of a research project.

#### Handbook of Operating Procedures 7-1050

## Classified Research Policy

The University of Texas at Austin Executive Sponsor: Vice President for Research

August 1, 1984

University Policy Office

The University of Texas at Austin shall not accept any classified contract which restricts freedom to acknowledge the existence of the contract, to identify the sponsor, and to disclose the general purpose and scope of the proposed research in sufficient detail to permit informed discussion regarding its appropriateness within the University.

The University shall accept only those classified contracts under which there is a reasonable expectation that the investigation will yield significant new literature at an early date.

The Advisory Committee on Classified Research is appointed by the Vice President for Research. The committee is charged with (1) reviewing the classified research program for conformance with University policy and advising the President accordingly; (2) considering issues relative to the University's policy regarding classified research and recommending changes in policy as necessary; and (3) reviewing procedures relative to classified research programs and considering infrastructure needs and administrative issues. The committee meets at least annually and is required to submit a report to the President annually on its findings relative to University policies on classified research and any recommendations for changes in those policies.

Previously HOP 5.09

Report: Appendices page 40 of 56

## **POLICY ON CLASSIFIED RESEARCH**The University of North Carolina at Chapel Hill

In keeping with the traditions of a free university community, the University of North Carolina at Chapel Hill has long-standing commitments to academic freedom, the free flow of ideas, maximizing communication of new knowledge, and service to the citizens of North Carolina and the nation as a whole. These commitments generally work in harmony. However, in the very rare cases when they come into conflict, balanced solutions must be found that consider both the University's academic mission and the general public interest.

In general, the University should not accept or participate in any research grant or contract that will prevent or restrict investigators from publishing fully and freely the results of their investigations. Rare exceptions to this general policy with respect to classified research (i.e., research that falls under the provisions of Executive Order 12958) may be made only with the prior approval of the Chancellor or his designee. In such cases, the following additional considerations apply:

- All such exceptions must be reported in writing to the UNC President prior to execution of a contract or acceptance of a grant [pursuant to UNC Policy Manual, Section 500.1].
- Whenever possible, the University shall retain the right to disclose the existence of the proposed research and the identity of the sponsor.
- Students may participate in approved classified research, so long as this participation does not significantly
  impede their progress toward a degree. No thesis or dissertation submitted in fulfillment of degree requirements
  may be classified, in whole or in part.
- Consulting and other external activities involving classified research are not prohibited, so long as they are consistent with the University's Policy on External Professional Activities for Pay.
- In times of national emergency, rapid access to campus expertise or facilities may be required by government agencies for purposes other than long-term research. Permission for such short-term access may be granted by the Chancellor or his designee.

This Policy is effective as of December 1, 2003.

This Policy is maintained by the Office of the University Counsel





#### **Policy: Federal Classified Research**

Date: 06/23/04 Policy ID: RED-003 Status: Final

**Policy Type:** University

**Contact** Vice President for Research (Office of the)

Office:

**Oversight** President of the University

**Executive:** 

**Applies To:** Academic Division, the Medical Center, and the College at Wise.

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Table of Policy Statement

1. Responsibility

**Procedures** 

### Reason for Policy:

This policy describes the general guidelines for classified research. It is the policy of the University of Virginia to encourage the greatest possible freedom of communication of ideas and information in all areas of academic endeavor. However, in some instances, academic inquiry may produce results, the full and immediate disclosure of which would be detrimental to the national security of the United States of America. In such cases, it may be appropriate for the University to accept certain limitations on the communication of research results.

Each proposed classified research project will be considered on its own merits. The process by which the University shall decide whether to approve a particular classified research project proposed by a member of its faculty is included in this policy. Among the factors to be considered in determining whether a particular classified research project is acceptable to the University are the academic merit of the proposed research, the compatibility of the proposed research with the mission of the University, the nature of the restrictions placed on communication of research results, and the contribution of the proposed research to the benefit of humanity.

#### **Policy Summary:**

**Definition of Federal Classified Research:** Research whose procedures and results Terms in are legally knowable only by individuals with United States government Statement: security clearance.

#### Policy Statement:

The University will not approve classified research projects for which the identity of the sponsor and the general nature of the research cannot be revealed to the public. It is the responsibility of a scholar to reveal in publications and presentations of research results the identity of the sponsors of that research. The University places no restriction on the nature of the activities of its faculty as private consultants, except that such activities must conform to the University policy on Consulting by Faculty of the University of Virginia.

All projects involving classified research shall be reviewed through the procedure described below, including review by the appropriate chair, dean, representatives (2) of the Faculty Senate Research & Scholarship (R&S) Committee, and the VP for Research. A research project requiring that access to part of a University facility be restricted to persons with United States government security clearances shall not be conducted in buildings of the University that have a primary academic focus.

No part of a thesis or dissertation submitted for an advanced degree at the University may be classified. It is the policy of the University to advise graduate students that classified research shall not comprise a major portion of their graduate studies. Classified research may not be taken into account in decisions about promotion and tenure of faculty until the research has been declassified.

The University discourages any restriction on its faculty in communicating unclassified information to any individuals, including foreign nationals and institutions, engaged in research at the University or in the international community of scholars. **BACK TO TOP** 

#### 1. Responsibility:

The Vice President for Research shall annually inform the University President of any and all classified research projects conducted by the University. The information provided shall include the general nature of the research being conducted, the sponsor, and the funding level.

#### **BACK TO TOP**

#### **Procedures:**

A faculty member desiring to engage in classified research will notify the appropriate department chair and dean of this intention, providing each of them with an unclassified description of the project and a plan for preserving academic freedom for all faculty and students involved. The plan will specifically include appropriate counseling regarding the impact of the project on related dissertations, promotion and tenure, and student mentoring.

The chair and dean will be responsible for making sure that all involved faculty and students have received the appropriate counseling for preserving academic freedom. The dean will then provide the designated representatives (2) of the Faculty Senate R&S Committee with the unclassified description of the project and a letter enumerating what safeguards are in place to preserve academic freedom for all faculty and students involved. The R&S Committee designated representatives (2) will recommend additional steps if necessary to the dean to assure that all appropriate counseling has occurred. The R&S Committee will not be reviewing the academic merit of the research.

After acting on the recommendations on the preservation of academic freedom from the R&S Committee designated representatives (2) the dean will forward the unclassified proposal to the Office of Sponsored Programs for initial review of contract terms and requirements. The faculty member is required to submit a written description and justification of the project, its academic merit, and the restrictions on the dissemination of its results. This classified proposal will be submitted to the Vice President for Research for review and approval. The primary review criterion will be that the proposal be consistent with the University's pursuit of its mission and not compromise basic human dignity or freedom. If the project is approved by the Vice President for Research it will be processed through the normal sponsored program process. The Office of Sponsored Programs will receive only an unclassified version of the proposal.

The faculty member shall annually inform, in writing, the dean and Vice President for Research of any changes in faculty and students working on the project so the dean can ensure that appropriate counseling for preserving academic freedom has occurred. ВАСК ТО ТОР

Information:

**Related** Consulting by Faculty of the University of Virginia

**Policy Background:** 

Category:

Major Research Administration

Category **Cross** Reference:

**Process:** 

**Next** 06/23/14

**Scheduled Review:** 

By, Date:

**Approved** Policy Review Committee, 06/23/04

**Revision** Udpated 8/5/11. **History:** 

Supersedes Classified Research, XV.E.3 (previous policy):





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Phone: (920) 527-1950

#### November 7, 2013

The Wisconsin Security Research Consortium has established the Wisconsin Information Security Center. The focus of this center will be to solve problems of National Importance. WSRC is teamed with researchers at the University of Wisconsin – Madison, to support your needs. UW Madison, one of the Nation's top 10 research institutions, is dedicated to providing solutions for national security priorities. You will find a brief overview of campus research centers, labs and projects in this report. The computer science department has approximately 200 graduate level students pursuing their degree; over half of these students are United States Citizens.

The WISC center is located five miles southwest of the UW Madison campus.

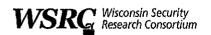
For more information about specific topics of research please feel free to contact me.

Regards

аск неитет:

Director

Wisconsin Security Research Consortium





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#### **Computer Science Centers at UW Madison**

#### Center for High Throughput Computing: (http://chtc.cs.wisc.edu/)

The Center for High Throughput Computing (CHTC) offers computing resources for use by researchers. These resources are provided to all UW Madison researchers – free of charge. Even external collaborators with an on-campus sponsor may be given access to resources. (http://chtc.cs.wisc.edu/)

#### Internet Scout: https://scout.wisc.edu/

The Internet Scout Research Group provides services, tools, and technologies for finding, filtering, and delivering information and metadata to connect users to high quality online content. One of the research projects within this group is our Collection Workflow Integration System (CWIS – pronounced see-wis) <a href="https://scout.wisc.edu/cwis">https://scout.wisc.edu/cwis</a>. This free, open source software is designed to assemble, organize, and share collections of data about resources. The Group's publications can be found by following the link: <a href="https://scout.wisc.edu/publications">https://scout.wisc.edu/publications</a>

#### Labs at UW Madison:

#### Wisconsin Advanced Internet Laboratory (WAIL): http://wail.cs.wisc.edu/

WAIL, part of the Computer Science Department on Campus is led by Paul Barford. Professor Barford worked in industry for 8 years prior to his academic career. He has been a consultant to companies and frequently gives talks and seminars on Internet measurement and security issues. He was the founder and CEO of Nemean Networks, LLC., a Madison-based company focused on developing next generation Internet security technology. Nemean was acquired by Qualys, Inc. where he served as chief scientist. More information about his research can be found at: (http://pages.cs.wisc.edu/~pb/).

#### Wisconsin Wirless and NetworkinG (WiNGS) laboratory.

Suman Barerjee (<a href="http://pages.cs.wisc.edu/~suman/">http://pages.cs.wisc.edu/~suman/</a>) leads the WiNGS Lab. This lab was established in the summer of 2005. Research in this lab is conducted in the areas of networking and distributed systems with a primary focus on wireless and mobile networking.

The Advanced Systems Laboratory (ADSL) (<a href="https://research.cs.wisc.edu/adsl/Overview/">https://research.cs.wisc.edu/adsl/Overview/</a>)
This lab is led by <a href="https://energia.com/Andrea Arpaci-Dusseau">Arpaci-Dusseau</a>. Their group is interested in developing new technology in file and storage systems – they also branch out into more general systems work in operating systems, virtual machines, and other related topics. Their current work is examining how datacenters should be constructed.

Publications can be found at: (http://research.cs.wisc.edu/adsl/Publications/)





Academic Staff Document #551

March 9 2015

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#### **Projects**

HT Condor - High Throughput Computing <a href="http://research.cs.wisc.edu/htcondor/">http://research.cs.wisc.edu/htcondor/</a>
The goal of this effort is to develop, implement, deploy, and evaluate mechanisms and policies that support <a href="https://research.cs.wisc.edu/htcondor/">High Throughput Computing (HTC)</a> on large collections of distributively owned computing resources. Guided by both the technological and sociological challenges of such a computing environment, the <a href="https://ceearch.cs.wisc.edu/htcondor/">Cemputing Throughput Computing of distributively owned computing environment, the Center for High Throughput Computing at UW-Madison has been building the open source <a href="https://example.computing.edu/HTCOndor distributed computing software">HTCOndor distributed computing software</a> and related technologies to enable scientists and engineers to increase their computing throughput.

MIST (Middleware Security and Testing) <a href="http://research.cs.wisc.edu/mist/">http://research.cs.wisc.edu/mist/</a> This project, led by Bart Miller (<a href="http://pages.cs.wisc.edu/~bart/">http://pages.cs.wisc.edu/~bart/</a>), has the following goals:

- Develop techniques, tools and procedures for vulnerability assessment focusing on grid middleware
- Apply these techniques to production software
- Improve the security of this software
- Educate developers about best practices in secure coding
- Research new techniques in vulnerability assessment
- Increase awareness about the need of this activity
- Train and build a community of security specialists

This research is funded by Department of Homeland Security grant FA8750-10-2-0030 (funded through AFRL). Past funding has been provided by NATO, National Science Foundation as well as the National Science Foundation under contract with San Diego Supercomputing Center.

Bart is also the Chief Scientist of the DHS-funded (\$25 Million R&D program) Software Assurance Marketplace (SWAMP) research center. This center located at the Morgridge Institute (public/private partnership on the UW Madison Campus) invites top software analysis tool providers from around the world to run their latest assessment tools at the Morgridge Institute for Research on the UW-Madison campus in a months-long series of tests to improve the quality and security of software assurance tools and open-source software.

The project will be led by the National Institute of Standards and Technology in collaboration with the Software Assurance Marketplace and U.S. Department of Homeland Security's Science and Technology Directorate.

#### Paradyn (http://pages.cs.wisc.edu/~paradyn/

The Paradyn project develops technology that aids tool and application developers in their pursuit of high-performance, scalable, parallel and distributed software. The primary project, **Paradyn**, leverages a technique called dynamic instrumentation to efficiently obtain performance profiles of unmodified executables. This dynamic binary instrumentation technology is independently available to researchers via the **Dyninst API**.

Publications can be found at: <a href="http://www.paradyn.org/html/publications-by-year.html">http://www.paradyn.org/html/publications-by-year.html</a>

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#### Quickstep (http://research.cs.wisc.edu/quickstep/)

Quickstep is a next-generation relational data processing kernel that is being developed at the <u>Database Systems Group</u> of the <u>University of Wisconsin</u>. Quickstep aims to deliver high database performance on modern and future hardware by using a hardware-software co-design philosophy. For the hardware available today, this means exploiting large main memories, fast on-die CPU caches, highly parallel multi-core CPUs, and NVRAM storage technologies.

Publications can be found at: <a href="http://research.cs.wisc.edu/quickstep/">http://research.cs.wisc.edu/quickstep/</a>

#### Scalable Wide-area On-demand Reliable Digital Streaming (SWORD)

(http://pages.cs.wisc.edu/~vernon/sword.html)

This project is developing next-generation transport level and application level data delivery protocols for the Internet and other on-demand data delivery systems that will contain large, popular, widely-shared streaming media files.

Publications can be found at: http://pages.cs.wisc.edu/~vernon/sword.publications.html

#### Wisconsin Multi-scalar (http://pages.cs.wisc.edu/~mscalar/index.html)

Multi-scalar processors use a new implementation paradigm for extracting large quantities of instruction level parallelism (ILP) from ordinary high-level language programs. Both control and data dependences are aggressively dealt with by executing instructions speculatively based on predictions made at run time by hardware. Unlike other known ILP processing paradigms (such as superscalar and VLIW), the "frontend" of a multiscalar processor speculatively distributes large chunks of conventional program code (or "tasks") to a number of parallel processing elements without stopping to look at individual instructions contained within a task (including any number of conditional branches and procedure calls). Then each of the parallel processing elements operates on its task using its own program counter and physical copy of the single logical register file. Data dependences are resolved by a combination of hardware and software, with hardware being given more responsibility than is the case with currently used ILP paradigms.

Publications can be found at: http://pages.cs.wisc.edu/~mscalar/publications.html

#### Wisconsin Mulitfacet

The Wisconsin Multifacet Project seeks to improve the multiprocessor servers that form the computational infrastructure for Internet web servers, databases, and other demanding applications. Work focuses on using the transistor bounty provided by Moore's Law to improve multiprocessor performance, cost, and fault tolerance, while also making these systems easier to design and program. Publications can be found at: (<a href="http://research.cs.wisc.edu/multifacet/papers/">http://research.cs.wisc.edu/multifacet/papers/</a>)

# WISC

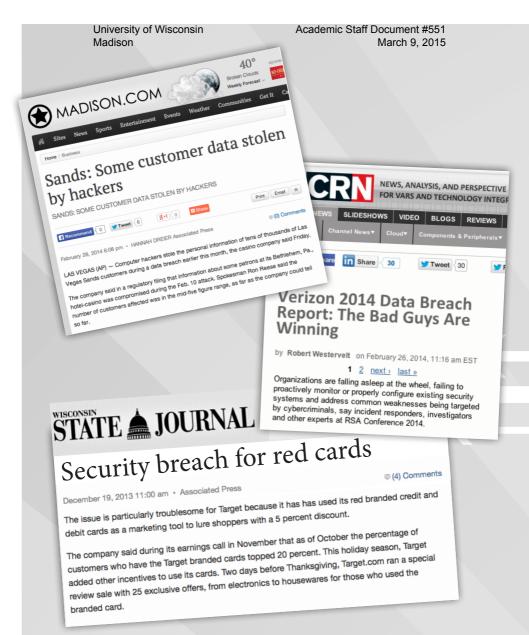
**WISCONSIN INFORMATION SECURITY RESEARCH CENTER** 

## A Cybersecurity Center of Excellence

The Wisconsin Information Security Center will accelerate the growth of a high-tech/knowledge-based workforce with capabilities to provide solutions to problems of national security importance. It will build upon the region's economic diversity by promoting cybersecurity research, education and technology innovation. WSRC will foster collaborative and strategic alliances between government agencies, private industry and academic institutions.







# **Cybersecurity: A Lonely Bright Spot among Government Spending**

06 August 2013

Despite an ongoing US government sequester, spending on IT security continues as a robust market according to a panel of industry experts at the SINET Innovation Summit in New York.

Read more at infosecurity-magazine.com

# Federal Cybersecurity Spending To Hit \$13.3B By 2015

Increased threats and lack of qualified security professionals will drive a 9.1% annual growth rate over the next five years, finds Input report.

Read more at informationweek.com

Report:

#### **SERVICES**

**WISC** - A WSRC initiative is a skunkworks-type environment that provides a unique combination of world-class talent, facilities and expertise.

- Provides cohesive network of facilities, talent and service providers
- Access to an environment that encourages and focuses on innovative cyber solution development and commercialization
- Promotion of activities and opportunities to defense contractors
- Access to a strong base of information technology and cyber security talent
- Marketing of cyber technologies and ideas through public / private partnerships
- A world-class, high value operational center

#### **LOCATION**

**WSRC**, centrally located in University Research Park, Madison, WI, in the heart of the *I-94 IQ Corridor*, works in partnership with the UW System, including UW-Madison, UW-Milwaukee and other strategic academic institutions.

#### **Measures of Excellence**

- Strong leadership in database research and computer architecture, where UW-Madison is frequently cited as the best in the world
- Ranked 10th best doctoral program and 9th best computer science program in the nation
- More than 3,500 CPUs fuel the UW-Madison HTCondor project, a 20-year initiative that is a world leader in highthroughput computing and has attracted hundreds of sites and thousands of users in academia and industry
- Home of a five-year \$25 million software assurance research project funded through the Department of Homeland Security









# **DESIGNED TO ICD 705 REQUIREMENTS**

- ICS 705-1 standard compliant
- ICS 705-1 storage capable
- NSTISSAM Advisory Memo
- 2-95A compliant
- Supports Voice/Data Services

Suite meets STC 45

Sound Rating

Report:



#### STRATEGIC PLAN

- Stimulate innovation-based economic growth through strategic partnerships
- Develop a critical mass of workers with skills needed to make the region a cyber security solutions destination
- Foster collaborations in-state and out-of-state
- Serve as a conduit for government agencies, private industries and academic institutions to share ideas and advance research
- Continue to mature critical infrastructure needed to attract federal programs in the area of big data, cybersecurity, visualization and natural program languages

#### **PARTNERSHIPS**



Provides matching funds for the project.



A consortium of research institutions in Wisconsin is dedicated to delivering world-class science and technology solutions in response to our nation's homeland security requirements.



Supports the mission and efforts of WSRC to create the infrastructure needed to support the growth of cybersecurity R&D in Wisconsin.



The leading catalyst for tech-based development in Wisconsin.



The Milwaukee Institute provides secure, high performance technical computing systems and services that support research, engineering and development programs in and among commercial, academic and government organizations.

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#### **GET INVOLVED!**

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Report:

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