

**Engineering Research Center**  
*Computer-Integrated Surgical Systems and Technology (CISST)*

## **Intellectual Property Policy**

The CISST ERC *Intellectual Property Policy* (the “IP Policy”) has been established for the purpose of managing intellectual property matters for the Computer-Integrated Surgical Systems and Technology Engineering Research Center. In support of the ERC’s mission to advance the field of computer-integrated surgical systems, the IP Policy defines a ‘Core’ of technology on which several ‘Applications’ can be developed and commercialized in collaboration with Industrial Sponsors. The IP Policy sets out (i) to preserve intellectual property rights associated with “Core Technology” (hereinafter defined) such that Core Technology can be made widely available as a platform for Applications Technology, and (ii) to facilitate commercialization of “Application Technology” by Industrial Sponsors. The Policy is intended to serve as a guideline for intellectual property terms in interinstitutional agreements between Participating Institutions and for Industrial Sponsored Project Agreements between Participating Institutions and Industrial Sponsors.

### **I. Definitions**

A. “**Intellectual Property**” or “**IP**” shall mean intellectual property which is protectable under Patent or Copyright Law. IP shall exclude copyrights associated with literary or scholarly works (e.g., textbooks, reference works, journal articles, etc.) produced by ERC investigators as part of their usual teaching, service, and research activities which are not a specified deliverable of Program (hereinafter defined) research.

B. “**ERC**” shall mean the Engineering Research Center for Computer-Integrated Surgical Systems and Technology established through a National Science Foundation (NSF) grant issued to The Johns Hopkins University (“JHU”), Carnegie-Mellon University (“CMU”), and The Massachusetts Institute of Technology (“MIT”).

C. “**IPSC**” shall mean the Intellectual Property Steering Committee for the ERC, which shall be responsible for oversight of intellectual property policies for the ERC and such other tasks as set forth in Section II below.

D. “**Participating Institution(s)**” shall mean, individually and collectively, JHU, CMU, MIT, Harvard University, Brigham and Women’s Hospital, and UPMC Shadyside Hospital and such other institutions who participate in the ERC and who have signed an agreement to perform research as part of the ERC.

E. “**Industrial Sponsor(s)**” shall mean a corporation who enters into an agreement with a Participating Institution to contribute sponsored research funding or other valuable resources to the ERC as part of a collaboration to develop Core Technology and/or Applications Technology (each hereinafter defined).

F. “**Industrial Sponsored Project Agreement**” shall mean an agreement between an Industrial Sponsor and a Participating Institution to perform research in the ERC.

G. “**Program**” shall mean research performed as part of the ERC. This includes, (i) research funded directly by the NSF, (ii) research funded by Industrial Sponsors through direct research support or through employees working in collaboration with the ERC, and (iii) research funded through other sources which are designated for ERC projects.

H. “**Core Technology**” shall mean (i) all IP developed using NSF funding under the Program, (ii) IP defined as ‘Core Technology’ in Industrial Sponsored Projects Agreements, (iii) IP provided by Participating Institutions and Industrial Sponsors and designated as ‘Core Technology’, and (iv) IP developed under funding from other sources when such funding has been designated for ERC projects and when such IP is identified as ‘Core Technology’.

I. “**Applications Technology**” shall mean IP developed under an Industrial Sponsored Research Project Agreement which is not Core Technology and which is specifically defined as Applications Technology in said Industrial Sponsored Project Agreements.

J. “**Background Technology**” shall mean IP made prior to, or outside of, the Program which is utilized in the Program.

## **II. Intellectual Property Steering Committee (IPSC)**

### **A. Members**

The IPSC will perform certain functions for the ERC and will be comprised of one technology transfer and one scientific representative from each Participating Institution who shall represent their institution and ERC investigator(s). In addition, the ERC principal investigator, or his designee, shall serve as Chairman for the IPSC. Appendix A hereto lists the names and contact information for each Participating Institution representative.

### **B. Tasks**

The IPSC will be responsible for the following:

1. Acting as an appeal board for disputes related to the definition “Core Technology” in individual Industrial Sponsored Project Agreements arising from decisions made by the ERC principal investigator (See Paragraph IV.A.2.);
2. Acting a mechanism for arbitrating disputes between Participating Institutions related to the sharing of licensing revenues (See Paragraphs III.B.4&5.);
3. Reviewing and approving petitions for exclusive licensing of Core Technologies (See Paragraph III.B.7.); and
4. Revising IP policies for the ERC as necessary.

### C. Operation of IPSC

1. The IPSC shall meet in person, by video conference, or by conference call on an *ad hoc* basis.
2. Decisions shall be made by a simple majority. The participation of four (4) members of the IPSC shall establish a quorum.
3. In the event that a simple majority can not be reached on an issue, a decision will be made by the IPSC Chairman. In cases where said issue is the appeal of a decision made by the ERC principal investigator who is the IPSC Chairman, (i) the Chairman shall recuse himself/herself from consideration of said issue, and (ii) a simple majority shall be required to overturn the appealed ERC principal investigator/Chairman's decision.

## III. ERC Intellectual Property

### A. Background Intellectual Property

1. Background Technology may be made available to the ERC for Program research. Participating Institutions wanting to contribute Background Technology to the ERC may do so by providing written notification to the ERC principal investigator. **Any Background Technology contributed to the ERC must be free of encumbrances such that it can be non-exclusively licensed to industrial partners.** Background Technology may be provided to the ERC on a restricted basis, i.e., for a specific project, to a specific investigator or institution, etc.; however, any such Background Technology must be available for non-exclusive licensing in accordance with the previous sentence and Paragraph 3 below.
2. Background Technology which has not been reported to a Participating Institution's technology transfer office must be reported to the Participating Institution's technology transfer office before it is used by the ERC so an appropriate determination can be made as to its availability for non-exclusive licensing.
3. To the extent necessary, the institution providing Background Technology hereby grants the other Participating Institutions a non-exclusive royalty-free right to use Background Technology for ERC Program research and a right to non-exclusively sublicense Background Technology (i) when such Background Technology is being licensed with other Core Technology or Applications Technology owned by the Participating Institution granting such license, and (ii) when such Background Technology 'blocks' (under a patent right or copyright) such other Core Technology or Applications Technology. Participating Institutions that sublicense Background Technology developed by an other institution agree to negotiate in good faith a reasonable sharing of revenue for such license. In the event that the parties cannot agree on a distribution of royalty revenue, the issue will be resolved by the IPSC upon the written request of one of the institutions.

4. Except as set forth in Paragraph 3 above, Background Technology will be licensed solely by the providing institution at which such Background Technology was developed.
5. Background Technology may be contributed to the ERC as Core Technology. Participating Institutions wanting to contribute Background Technology to the ERC as Core Technology may do so by providing written notification to the ERC principal investigator. Any such Background Technology shall thereafter be treated as Core Technology.

B. Core Technology

1. When Core Technology is developed, inventors or authors thereof will report such Core Technology to their institution's technology transfer office in accordance with their institution's policies and indicate that such Core Technology was developed under the Program. The Participating Institution(s) at which the Core Technology was developed ("Inventing Institution(s)") may file patents on Core Technology at its option and expense.
2. Each Participating Institution will report new Core Technology to the ERC principal investigator within sixty (60) days of receipt of a full disclosure report thereof. Inventing Institutions must also report to the ERC principal investigator when patents are filed on the reported Core Technology and which funding was used for each Core Technology developed.
3. The ERC principal investigator will notify all Participating Institutions of the availability of reported Core Technology.
4. To the extent necessary, any Inventing Institution hereby grants the other Participating Institutions a non-exclusive royalty-free right to use Core Technology for research purposes associated with the Program. Furthermore, the Inventing Institution hereby grants Participating Institutions the right to sublicense Core Technology (i) when such Core Technology is being licensed with other Core Technology or Applications Technology owned by the Participating Institution granting such license, and (ii) when such Core Technology 'blocks' (under a patent right or copyright) such other Core Technology or Applications Technology. Participating Institutions that sublicense Core Technology developed by another Inventing Institution agree to negotiate in good faith a reasonable sharing of revenue from such license. In the event that the parties can not agree on a distribution of royalty revenue, the issue will be resolved by the IPSC upon the written request of one of the Participating Institutions.
5. In the event that a Participating Institution, other than the Inventing Institution, is interested in licensing Core Technology, which is not 'blocking', to a third party packaged with other IP owned by such Participating Institution, said Participating Institution shall not be free to sublicense the Core Technology without including the Inventing Institution as a party to the sublicense agreement. The Participating Institution and the Inventing Institution shall negotiate in good faith an appropriate sharing of licensing revenue. In the event that the parties can

not agree on a distribution of royalty revenue, the issue will be resolved by the IPSC upon the request of one of the Participating Institutions.

6. Except as set forth in Paragraph 7 below, Core Technology will be licensed to commercial entities solely on a non-exclusive basis.
7. An Inventing Institution may petition the IPSC to allow certain Core Technology to be licensed on an exclusive basis. Any such petition shall be sent to the ERC principal investigator/Chairman of the IPSC in writing for consideration. Any such exclusive licensing of Core Technology approved by the IPSC will be subject to rights retained by the Participating Institutions to use the Core Technology for their research purposes and subject to rights retained by the U.S. Government. The IPSC will base its decision on the likelihood that such Core Technology will 'block' other ERC IP, and the commercial benefit associated with exclusively licensing the Core Technology versus non-exclusive licensing.

C. Applications Technology

1. When Applications Technology is made, inventors or authors thereof will report such Applications Technology to their institution's technology transfer office and assign such Applications Technology to their institution in accordance with their institution's policies. Authors or Inventors of Applications Technology shall indicate that such Applications Technology was made under the Program as part of their invention disclosure report. The Participating Institution(s) at which the Applications Technology was made ("Inventing Institution(s)") may file patents on Applications Technology at its option and expense or as set forth in an Industrial Sponsored Research Agreement.
2. Each Participating Institution will report new Applications Technology to the ERC principal investigator within sixty (60) days of receipt of a full disclosure report thereof. Inventing Institutions must also report to the ERC principal investigator when patents are filed on the reported Applications Technology. Inventing Institutions will also report funding used for each Applications Technology developed.
3. Applications Technology may be licensed to commercial entities on an exclusive, royalty-bearing basis.

D. Joint Inventions between Participating Institutions

1. Inventorship and authorship for Core Technology and Applications Technology shall be determined in accordance with U. S. Patent and Copyright Laws.
2. In the event that investigators from more than one Participating Institution are named as an inventor or author on patented or copyrighted Core Technology or Applications Technology, the Inventing Institutions shall negotiate in good faith an inter-institutional agreement to address which of the Inventing Institutions shall be responsible for taking the lead with respect to patent filing, prosecution, and maintenance; licensing; and how patenting costs and licensing revenues will be shared.

## **IV. Policies for Industrial Collaboration and Participation**

### **A. Industrial Sponsored Project Agreements**

1. An Industrial Sponsor may provide funding for development of Core Technology and/or Applications Technology under an Industrial Sponsored Project Agreement. Each Industrial Sponsored Project Agreement shall have a detailed research plan describing the work to be performed under the agreement.
2. All Industrial Sponsored Project Agreements shall have a definition of Core Technology and Applications Technology that may be developed thereunder. The definitions of these terms shall be consistent with this IP Policy and shall be clearly indicated in the Industrial Sponsored Project Agreement's research plan. All definitions of Applications Technology in Industrial Sponsored Project Agreements shall be subject to the review and approval of the ERC principal investigator or his/her designee. Any objections to these definitions by the ERC principal investigator must be made within thirty (30) days of his/her receipt of the research plan. Research plans for which objections are not made during said thirty (30) day period shall be deemed approved by the ERC principal investigator. Any decision made by the ERC principal investigator may be appealed and overturned by the IPSC.
3. As set forth in Paragraph III.C.3, above, Applications Technology resulting from Industrial Sponsored Research Agreements may be licensed to the Industrial Sponsor on an exclusive royalty-bearing basis.
4. Core Technology resulting directly from an Industrial Sponsored Project Agreement may be non-exclusively licensed to the Industrial Sponsor on a royalty-bearing or royalty-free basis.

### **B. Industrial Employees working at Participating Institutions**

1. 1. Employees of an Industrial Sponsor ("Industrial Employees") who wish to work at Participating Institutions as part of the Program shall sign, and have signed by their employer, an industrial employee work agreement which shall contain terms consistent with this IP Policy as if said employee work agreement was an Industrial Sponsored Project Agreement. Ownership of Intellectual Property developed solely by Industrial Employees working at Participating Institutions or jointly by the Industrial Employee and an employee of the Participating Institution will be determined by the policies of said Participating Institution or as otherwise negotiated by said Participating Institution and the Industrial Sponsor. The employee work agreement shall include, at a minimum, a grant of an automatic, non-exclusive, royalty-free, sublicensable license to all of the Industrial Sponsor's interest in Core Technology, if any, made solely by the Industrial Employee, or jointly by the Industrial Employee and an employee of the Participating Institution, under the Industrial Sponsored Project Agreement as set forth in the research plan thereof.
2. The Industrial Employee will be required to maintain as confidential, and not disclose to his/her employer or any other party, proprietary and confidential

- information obtained while working at the Participating Institution. However, the Industrial Employee shall be encouraged to use skills and know-how developed while working at a Participating Institution.
3. Applications Technology developed by the Industrial Employee while working at a Participating Institution may be licensed to the Industrial Sponsor on an exclusive, royalty-bearing basis.

## **V. Reporting**

1. The Participating Institutions will report all Core Technology developed (as set forth in Paragraph III.B.2, above), Applications Technology Developed (as set forth in Paragraph III.C.2, above) licensing activity, royalty income and patent activity to the ERC principal investigator. JHU will report such information to the NSF, as the grant requires.
2. The ERC will establish a database for invention reporting and tracking purposes. The database will generate reports for the NSF as required under the funding agreement and reports for notifying Participating Institutions of the current portfolio of Core Inventions available for research use and/or for sublicensing.

**APPENDIX A**  
**Members of the IPSC**  
**January 2004**

- I. Johns Hopkins University:**
  - Russell Taylor (Chairman)
  - Nicole Leonard
- II. Carnegie Mellon University:**
  - Cam Riviere
  - Bob Wooldridge
- III. Massachusetts Institute of Technology:**
  - Eric Grimson
  - Jack Turner
- IV. Brigham and Women's Hospital**
  - Ron Kikinis
  - Brian Hicks