Contact: Diana Gonzalez

PROPOSED NEW INSTITUTE AT IOWA STATE UNIVERSITY
CYBERINNOVATION INSTITUTE

Action Requested: Consider approval of the request by Iowa State University to establish a new CyberInnovation Institute under the direction of the Vice-President for Research and Economic Development.

Executive Summary: The purpose of the proposed Institute is to strengthen ISU's research in information sciences and information technologies (IST) and leverage it to grow the state's economy. The proposed Center addresses the University's Strategic Plan goals to create knowledge; share knowledge; and apply knowledge. It also supports the Board of Regents' strategic plan priorities to "discover new knowledge through research, scholarship, and creative activities (Priority 2.0) and provide needed service and promote economic growth (Priority 3.0)." This proposal was reviewed by the Board Office and the Council of Provosts and is recommended for approval.

Background:

◆   <u>Scope</u>. The proposed Institute will establish an infrastructure and organization for information science and technology research and commercialization.

◆   <u>Battelle Report</u>. Information science and technology (IT) is acknowledged as a powerful and pervasive engine of global economic growth. According to the Battelle Report, "Iowa's competitiveness in the increasingly IT-enabled global economy is critically dependent on the ability to take better economic advantage of the research strength in the universities."

◆   <u>Collaborations</u>. The proposed Institute will build on six independent IT research centers at ISU, providing a platform that will facilitate cross-cutting research necessary to solve today's complex challenges and better leverage institutional resources through shared infrastructure and services. The proposed Institute will also work closely with ISU's Pappajohn Center for Entrepreneurship.

◆   <u>Initial member centers.</u>
  - ☑ Center for Computational Intelligence, Learning, and Discovery (CCILD)
  - ☑ DARPA[1] Center for Interfacial Engineering of MEMS[2]
  - ☑ Information Assurance Center (IAC)
  - ☑ Information Infrastructure Institute (I³)
  - ☑ National Science Foundation (NSF) International Materials Institute (CoSMIC-IMI)
  - ☑ Virtual Reality Applications Center (VRAC) and its initiative in Human Computer Interaction

◆   <u>Objectives</u>. The proposed Institute has identified the following objectives:
  - ☑ An IT research infrastructure that will attract national and transnational corporations to bring their IT projects to ISU.
  - ☑ Enhanced effectiveness in securing large-scale federally-funded research projects that are beyond the reach of individual ISU centers.

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[1] Defense Advanced Research Projects Agency.
[2] Microelectromechanical Systems.

☑ Increased ISU competitiveness in securing IT-related grants from sponsors that require close partnerships between academia and industry.

☑ Expanded participation of emerging IT-related research activities at ISU and the other Regent universities.

☑ Support for industry through collaborative research projects that develop solutions for their specific IT-related challenges.

☑ Increased competitiveness of Iowa companies in securing large federal contracts for projects that require specialized IT infrastructure and capabilities.

☑ Enhanced ability to recruit and retain IT-focused faculty by providing world-class research infrastructure and unique opportunities to work with industry to increase the impact of their research in practice.

☑ Increased breadth and depth of IST research expertise at ISU, which, when leveraged with industry, can multiply seven-fold the impact of ISU research on the state's economy.

◈ Facilities. The proposed Institute will be located in the VRAC facilities in Howe Hall. Additional space in Howe Hall will be required to provide a central home for the other member centers. The proposed Institute will also seek approval to lease space in the former Engineering Animation facility adjacent to the ISU Research Park (Agenda Item 30). This space will provide the physical infrastructure that will enable researchers and industry collaborators to work together or independently as projects demand.

◈ ISU Strengths. ISU excels in a number of critical IT areas, including computational intelligence and data mining, computing and communications infrastructure, information security, software engineering, applied informatics, and emerging interface technologies. The proposed Institute will leverage ISU's excellence in interdisciplinary IT-related research and provide a unifying entity for all IT-related research and economic development at ISU.

◈ Goals. The proposed Institute will be reviewed periodically to ensure that it meets expectations, including the following goals:

☑ Directly facilitate at least six new IT-focused startup companies in Iowa.

☑ Establish three new major research collaborations with established companies.

☑ Increase IT research expenditures at ISU by 40% compared to FY07.

☑ Establish research and commercialization relationships with SUI and/or UNI.

☑ Secure a major (multi-year, multi-million dollar) federally-supported IT research initiative.

◈ Cost. The total cost of the proposed Institute will be approximately $8.9 million. The funding sources for the proposed Institute include the following:

☑ $1 million from the Battelle program.

☑ $103,743 ISU match for in-kind faculty and administrative time.

☑ $2,355,072 industry match, including Deere sponsorship, among others.

☑ $5,460,000 other match, including the National Science Foundation contribution to IAC's Industry/University Cooperative Research Center; U.S. Department of Justice support for IAC's ISEAGE[3] Internet simulator; and the U.S. Air Force support for VRAC's C6 upgrade.

◈ Duplication. The proposed Institute will be unique in the state.

Details about the proposed Institute are on file in the Board Office.

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[3] Internet-Simulation Event and Attack Generation Environment.