

Center for e-Design Bylaws Draft

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ARTICLE I – INTRODUCTION

- 1.1 **Bylaws Purpose** - Whereas Center for e-Design personnel will develop research products (research, publications, websites, prototypes, and software tools) of relevance to industry members, it is deemed necessary to have bylaws that manage the development of and access to these products by coalition members.
- 1.2 **Center for e-Design Research Objectives:**
 - **To research, develop, and test new collaborative systems and design paradigms** that support interoperability and trust-support infrastructures.
 - **To provide a testbed** to benchmark, verify, and validate the performance of both prototype software developed within the e-Design coalition and vendor software intended to function within an e-Design environment.
 - **To nurture and cultivate** a new breed of engineers, scientists, technologists and business leaders in e-Design products and systems through university/industry collaboration.
- 1.3 **Bylaws as Clarification** - These bylaws do not supersede the Center for e-Design Membership Agreement (MA), but are designed to provide further clarification. Thus, these materials form an addendum to the Membership Agreement (MA). In the event any terms in the bylaws conflict with terms in the Membership Agreement (MA), the Membership Agreement (MA) terms will take precedence.
- 1.4 **Bylaws Terminology** – The number of universities that belong to the the Center for e-Design coalition may change over the duration of the Center for e-Design. These universities having an IUCRC may be referred to as **sites, site universities, or Center sites**. The director of each site is referred to as a *Site Director*, whereas the Director of the Center for e-Design is simply referred to as **Director**. The use of the term **Center** refers to the NSF sponsored IUCRC Center for e-Design. A Site Director is automatically a Co-Director of the Center for e-Design, under the leadership of the Director of the Center for e-Design. The Center for e-Design Director, site Directors (Center for e-Design Co-Directors), and the Center IAB Chairperson form a governing council.
- 1.5 **Bylaws Industrial Member Definition** - For simplification of speech, an *industrial member* is to be treated as a synonym for any industry, company, university, or organization that is approved for membership, submits a completed Membership Agreement, and pays the annual membership fee to at least one site university.

ARTICLE II – PURPOSE

Vision Statement

- 2.1 The Center for e-Design coalition will create new design paradigms and electronic design tools that will assist industry in generating high quality products and systems at reduced costs, while also reducing the time associated with designing complex engineered products and systems. The Center for e-Design research supports the basic vision that collaborative integration of information and production processes is critical to an efficient enterprise.

Mission Statement

The mission of the Center for e-Design is to:

- 2.2 Serve as a nucleus of excellence for the creation and dissemination of a systematic body of knowledge in intelligent e-design and product realization.

Research Focus

Research conducted within the Center for e-Design coalition focuses on five thrust areas:

- 2.3 **Enabling Information Infrastructure** to support the development of an e-design platform that will seamlessly, dynamically and securely integrate distributed design objects and engineering tools over the Internet.
- 2.4 **Design Optimization Activities** address the research challenges associated with customer constraints and preparedness, automatic accommodation of scalability, flexibility, efficient collaboration (concurrency), and multidisciplinary product design evolution.
- 2.5 **New Design Paradigms and Processes** focus on advancing new design paradigms to support functionality-based design and reasoning in the conceptual design phase of product development, and to develop new multi-user computer-aided applications. It also supports research to capture and model the designer's intent at product conceptualization and to consider product specification processes for collaborative product teams.
- 2.6 **Visualizing and Virtual Prototyping** support cost-effective product design. Advanced tools for viewing design at the system level are needed so that interrelated effects of behavior on the complete product are known. Considering the current computer aided design (CAD) software methods, virtual prototyping allows engineers, earlier in the development cycle, to visualize their full-system design ideas on the computer with realistic 3D models, and related models that behave dynamically, just as they would in the real world, under any operating condition. Users can navigate through and interact with designs in real time to assess assembly, operation, and maintenance issues early in the design process. Virtual simulation and prototyping tools will enable engineers to check for potential design problems.
- 2.7 **Design Education** is focused on the preparation of students capable of taking on current

and future challenges of engineering design. Research in this area is focused on methods and tools that improve design pedagogy and tools to support students' skills and knowledge in design methods locally as well as in distant and distributed design educational environments.

ARTICLE III – MEMBERSHIP

- 3.1 Membership fees are \$30,000 per year and will be used to support Center research. Membership in the Center is expected to last five years contingent upon available funds of industry members.
- 3.2 A company or organization may support a Center Site with multiple memberships. A company or organization may support other center sites with additional memberships.
- 3.3 A Center Site that receives and uses membership fees will provide a cost share in connection with the sponsor's cash fees to support Center research in accordance with the requirements of the National Science Foundation IUCRC Program Solicitation. The site university is free to cost burden/overhead the funds received from NSF to support center operations. Proprietary research projects contracted between a Center Site and a member company will be cost burdened (overhead applied to contract costs). Such contracted funds are in addition to the membership fees.
- 3.4 All industry members will use the same Membership Agreement form. Any requested deviations from the standard form should be reviewed and approved by the governing council of the Center for e-Design.
- 3.5 The use of the word "license" in the Center for e-Design Membership Agreement should be interpreted for "internal use only" when a member company exercises their right to license a patent or copyrighted material such as software, herein referred to as Center intellectual property (IP). Rights to re-market or commercialize Center intellectual property for the purpose of external sales or distribution can be negotiated with those Center universities that developed the intellectual property.
- 3.6 *From MA, paragraph H: "During the term of this agreement, UNIVERSITY asserts that the COMPANY shall have a non-exclusive, royalty-free license to use the CENTER tools for internal use when they are available."* Industry members will have access to all research products that are initiated and completed within their membership period, but not those that culminate after their membership period. This includes all research products and materials conducted within any of the Center sites, thusly defined as research products of the Center for e-Design, and subject to the access constraints defined in the Membership Agreement. Industry members may negotiate access to any Center research product that has not been exclusively licensed. These negotiations will normally involve the university technology transfer offices of those sites that developed the research product.

ARTICLE IV- ORGANIZATION

- 4.1 *From MA, Paragraph F: "The IAB will be composed of one representative from each member."* That representative must be a unique individual for each membership. Each industry member will be entitled to have one voting representative on the Center IAB for every paid up membership fee.
- 4.2 Other than memberships funded entirely in cash, all other forms of membership will be proposed to and decided upon by the IAB on a case-by-case basis, thereby ensuring that the objectives of the Center are sufficiently satisfied. In each case, at least one of the site directors will formally propose to the IAB a special membership, and that proposal will be approved or rejected by IAB vote.
- 4.3 A site industry member is identified as that industry or government organization providing fees to a Center Site. All site industry members will participate in the strategic planning for a site research agenda. In addition, site industry members will assist in identifying appropriate industrial internship opportunities for undergraduate students, graduate students and postdoctoral students; assist the site in identifying new industry members; review the site and Center for e-Design activities and products; and recommend needed changes.
- 4.4 Site directors will be responsible for activities at their university and will report directly to their respective appropriate university administrators and to the Center for e-Design Director. The site directors will provide liaison between the Center for e-Design and the appropriate academic departments of the site universities.
- 4.5 Project Principal Investigators will manage specific research projects funded by the site universities and will report directly to the appropriate Site Director, the appropriate university administrators, and indirectly to the industry member(s) supporting the project. Project Principal Investigators will be identified in specific project proposals.
- 4.6 *University Policy Committee:* Each site university should form a university administrative oversight and policy committee to resolve any and all site administrative issues, including review of academic standards, recruitment strategies, retention issues, funding issues, space requirements, and equipment requirements related to the site. The committee may consist of a Vice President or Provost of Research (or his/her designee), and should include Dean(s) or Associate/Assistant Dean(s), one or more department chairpersons, and the Site Director.
- 4.7 *Administrative Support Staff:* Each site university will provide a reasonable level of clerical and accounting support for the site operations. Each site university will maintain a well maintained and secured website accessible to IAB members by password.

ARTICLE V- ADMINISTRATION

- 5.1 The Site Director will authorize the use of membership fees by the project principal investigators in support of annual research conducted at the site university.

- 5.2 The Site Director will work with the appropriate departments on recruiting graduate students for the Center for e-Design universities and will set standards for student participation; monitor student progress towards a degree; set diversity goals for recruiting students; promote the collaborative aspects of the research program; and, help students to organize industrial internships. The Site Director will develop a strategy to integrate the new e-Design technologies into the academic curriculum as possible.
- 5.3 Each (under)graduate student conducting e-Design research will have a faculty mentor. The faculty mentor is responsible for advising the student on university, departmental, and Center site center policies and for mentoring the student's research efforts.

ARTICLE VI- REPORTS

- 6.1 The Center for e-Design Director shall provide at least an annual report to the site members and to the National Science Foundation. Site directors will provide at least an annual report of their site activities to their site industrial members and to the Center for e-Design Director. This report will be available in electronic form and can be downloaded over the Web through a secured login interface. Industrial members will be given password authority with passwords changed regularly.
- 6.2 The site directors and principal investigators shall provide interim reports to the Center for e-Design Director and to industrial members as necessary at the completion of major research tasks. These interim reports will be distributed electronically via the Center and site websites. Members will be notified by email when reports are posted.
- 6.3 Administrative issues, and concerns or conflicts regarding research activities, shall be directed to the Center for e-Design Director or to the Site Director when it involves local concerns at a site. Site directors will direct any site concerns not easily resolved to the Center for e-Design Director.

ARTICLE VII- MEETINGS

- 7.1 The Center for e-Design Director, site directors and the Center for e-Design IAB Chairperson will establish the schedule of activities and meetings for the Center and sites as well as the agenda for the research review meeting(s). Any necessary site meetings will be coordinated with the Center for e-Design Director to avoid scheduling conflicts.
- 7.2 Site universities and IAB members will meet semiannually, physically and/or virtually, to review research results, propose projects, review budgets, and discuss strategic plans for the Center and site universities. Additional virtual meetings may be conducted as needed. An industry member may send more than one representative to the IAB meeting(s), but will only have one voting representative per paid membership.
- 7.3 Both site and Center for e-Design meetings are closed to the public, because of proprietary information that will be discussed. Attendance is limited to faculty, staff, and

students affiliated with the Center; representatives of Center industry members; and the NSF appointed Center Evaluator and other NSF personnel.

ARTICLE VIII- RESEARCH PROJECT SELECTION PROCEDURE

- 8.1 A method for recommending and selecting projects will be developed and adopted by the members of the Center for e-Design governing council.
- 8.2 A project with a single industrial member sponsor can only be carried out at a single site. Multi-site research projects require the sponsorship of two or more industrial members. Membership fees from several industry members may be used to support individual projects of common interest to the members. The research projects will be conducted by students (undergraduate, graduate, and/or postdoctoral) and faculty at one or more of the participating universities. The quantity and depth of deliverables for research projects must be consistent with the level of funding committed to the project. These deliverables must be determined at the outset of any project based upon information from the industry member and site sponsors.
- 8.3 All industry members may participate in the selection and evaluation of research projects. Individual organizations may acquire multiple Center memberships, and therefore will have a corresponding number of voting representatives on the IAB.
- 8.4 Typically, individual industry members will propose general industry-oriented research topics of interest to their organization. A portfolio of relevant research topics will be compiled based on the interest of the industry members. These research topics will be posted on the Center website (restricted) and will form the basis for cooperative discussions among the faculty and the industrial members. Each participating university will develop a set of pre-proposals – using an agreed upon template – consistent with the goals of their group, the interest of the industry members, and the mission of the Center. The pre-proposals will be posted on the Center website prior to the annual IAB planning meeting. At the research review meeting, faculty/student teams will discuss their proposals with IAB members.

ARTICLE IX- PUBLICITY

- 9.1 An industry member shall not use the name of any Site University in any publicity, advertising or news release without the prior written approval of an authorized representative of the referenced Site University. Likewise, no Site University or other representative of the Center for e-Design coalition may use the name of an industry member in any publicity without the prior written approval of the industry member. Press releases will be coordinated between the Site Director and participating university press office. Notwithstanding the forgoing, the parties may satisfy any reporting requirements of their respective organizations.
- 9.2 Subject to the recommendations of the Center for e-Design IAB, the Site Director shall

post the descriptions of all research projects on the Center for e-Design website. The descriptions shall not contain confidential or proprietary information and may be published freely.

ARTICLE X- PUBLICATIONS

- 10.1 Researchers shall be permitted to disclose the methods and results of their research after a review by the industry members for proprietary materials as outlined in the Membership Agreement.
- 10.2 At any time a Site Director or an industry member employee may request permission to publish Center information presented in summaries, semiannual reports, annual reports, or final reports; or arising out of or resulting from research projects; in the form of abstracts, presentations, or manuscripts. To receive permission, the requestor shall submit a "Request for Permission to Publish" containing the information to be published and the form of the publication. The request will be sent by email to the primary contact for each industry member with read receipt requested and posted to the Center website. It shall be incumbent upon the requestor to obtain documented evidence that the primary contact for each industry member has received the request. The information may be published in a substantial form if within thirty days (30) after obtaining evidence that all industry members have received the request, no industry member has objected in writing to the publication of such information. An industry member may object if the publication contains patentable subject matter that requires protection and/or the publication contains an industry member's confidential information. In such cases, publication will be delayed up to ninety (90) days to allow for patent applications to be filed or confidential information to be removed.
- 10.3 At least 30 days prior to the defense of a thesis or dissertation supported in whole or in part by the Center, the Site Director shall submit the Abstract of the thesis or dissertation to the members of the IAB. The Abstract will be posted on the site website with read receipt requested forwarded to each industry member. It shall be incumbent upon the Site Director to obtain documented evidence that the primary contact for each sponsor company has received the Abstract notification email. Upon request, a draft of the thesis or dissertation will be viewable on the website by an individual industry member. The thesis or dissertation may be published according to normal practices, if within thirty (30) days after obtaining evidence that all industry members have received the Abstract notification email, no industry member has objected in writing to the publication of the thesis or dissertation. An industry member may object if the publication contains patentable subject matter that requires protection and/or the publication contains an industry member's confidential information. If the objection is due to the inclusion of an industry member's confidential information, the confidential information shall be removed. If the objection is due to patentable subject matter, the thesis or dissertation shall be submitted to the University under terms that will prevent its public release for up to one year in order to protect patent rights. This policy has been established to avoid

unreasonable delay in the normal academic progress of a graduate student of participating University with respect to preparation and submission of a graduate thesis or dissertation.

- 10.4 Any confidential information provided by industry members to a Project Principal Investigator or other members of the Center shall be provided under the protection of an independent confidentiality agreement between the industry member and the appropriate university.
- 10.5 Center data that have been approved for publication may be used in additional publications or forums without additional permission.

ARTICLE XI- BENEFITS

- 11.1 *From MA, paragraph H: "During the term of this agreement, UNIVERSITY asserts that the COMPANY shall have a non-exclusive, royalty-free license to use the CENTER tools for internal use when they are available."* All industry members will have non-exclusive rights to the entire Center for e-Design research portfolio under the conditions outlined in the Membership Agreement and subject to the restrictions in Sections 3.5 and 3.6 of these bylaws.
- 11.2 All industry members will have an opportunity to directly contribute to Center for e-Design research and educational activities by serving as industrial mentors and/or thesis committee members as appropriate and consistent with the policies and procedures of the participating universities.
- 11.3 All industry members will have an opportunity to propose case study problems, specific research problems, and focus areas for research. The case study problems will be used to train students on the use of current Center for e-Design technologies.
- 11.4 All industry members will have an opportunity to host postdoctoral research associates and/or graduate students as industrial interns.
- 11.5 Technology transfer between the faculty/student research teams and industry members will be promoted by: 1) pre-doctoral and post-doctoral industrial internships; 2) direct involvement of the industrial advisor on the research team; 3) web-based submission of reports; and 4) research retreats.
- 11.6 Each industry member will vote on the selection of research projects supported by membership fees. They will also be eligible to vote on all other Center matters and participate in the evaluation and discussion of research projects.

ARTICLE XII- NEW UNIVERSITY AFFILIATES AND INDUSTRIAL SPONSORS

- 12.1 From time to time, new universities may request membership into the Center for e-Design as an affiliated site. Each new university requesting membership shall initially obtain concurrence from the Center Director, Site Directors, and the IUCRC Program Manager at

the National Science Foundation prior to submitting a “Letter of Intent” to join to the Center for e-Design. Universities requesting membership as an affiliated site must demonstrate their ability to perform synergistic research within the focused research areas of the Center and their willingness to work within the structure, policies and procedures of the Center for e-Design. Upon concurrence by the Center, the new university requesting membership as an affiliated site may continue application per the applicable procedures of the current National Science Foundation IUCRC program solicitation.

- 12.2 A new university requesting membership into the Center for e-Design shall review their research objectives and program plans, and, obtain and submit within their Planning Grant Proposal a “Letter of Support” from the Site Director at each of the current Center university members.
- 12.3 From time to time, new Companies, Corporations, or Organizations may request, or be requested, to join a university affiliated site of the Center for e-Design as an industry member. These new Companies, Corporations, or Organizations may join the Center for e-Design upon signature of the existing coalition Membership Agreement, acceptance of the current Bylaws, and payment of the non-prorated annual membership fee. Application of these new membership fees shall be made to existing research programs at the affiliated site unless a new “interim” research program is otherwise approved by the Center Director, Site Directors, and the Chairman of the IAB. Continued funding of the “interim” research program is subject to IAB approval at the next annual IAB meeting under the terms of these Bylaws.