



The Design Science Award of the INFORMS Information Systems Society (ISS)

Purpose and Coverage of the Award

The purpose of the INFORMS ISS Design Science award is to promote and recognize research efforts centered on the design and realization of innovative information technology (IT) artifacts.

IT artifacts are broadly defined as IT systems (instantiations), as well as the related constructs, models, and methods that enable their representation, analysis, understanding, and development. Constructs are vocabulary and conceptualizations that enable communication and description of problems (phenomena, possibly within a causal chain), solution components, constraints, and objectives for the designed artifact. Models use defined constructs to represent problem and solution spaces. Methods are algorithms or guidelines that are used to search problem and solution spaces and enable the construction of instantiations—computer-based systems implemented within an organization. Such systems demonstrate the feasibility and value of the utilized constructs, models and methods. Each may constitute a contribution to design science research knowledge.

The award recognizes research efforts that use an experimental research approach—building and evaluating working IT systems or creating IT artifacts, as a vehicle for generating design science methods, principals, practice guidelines, insights, and lessons learned.

The submission must be based on an IT artifact that is novel and innovative with respect to previous work in the field and that demonstrates utility in solving important problem in the development, management, and use of information technology within an organizational context. Preference will be given to work that develops and applies such IT artifacts to application areas that were not previously believed to be amenable to IT support.

The intent of the award is to encourage the creation and articulation of IT design science knowledge by university research communities that will be useful for both research and practice. Distinct from the current set of ISS awards which are focused principally on the quality of published papers in well known journals in the IS academic community, this ISS Design Science award is principally focused on the quality, novelty and significance

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of the IT artifact created and validated. In this sense, the award is not solely based on the publication.

Yet, the award acknowledges academic and research excellence in IS related Design Science research. Since research thinking and results are most effectively distilled and communicated through carefully written publications, submissions for this award must include related publications which describe the key ideas and substance of the work. The publication venue in which this IS related Design Science work appears is not the primary determinant for the award. Priority is given to the substance, quality, and innovative nature of the IT artifacts created and evaluated.

The award is open to university or graduate professional program faculty and students across any discipline, department or school within a university that is engaged in designing, building and evaluating IT artifacts for research and experimental purposes.

Submission Eligibility

Five principles as stated in the Appendix below provide the guidelines to the judging panel for assessing the eligibility and strength of submissions. Please read through these guidelines.

Award Nomination and Submission

Individuals may nominate one or more persons for this award. Each nomination should include the information described below. Self nominations are welcome.

Submissions should be sent to the following e-mail address:

IS-Design-Science@smu.edu.sg

The submission package should consist of

1. A cover statement for the submission summarizing
 - A. The name of the nominee and contact information.
 - B. Your name (or team name), affiliation, and contact information.
 - C. A title for the research effort, project, or program you are nominating.
 - D. A summary of the essential goals, accomplishments, and contributions of the research effort.
 - E. Discuss insights related to design principles or design science that have emerged from this specific line of work. Also summarize how and why the

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work has contributed more generally to Information Systems related Design Science in the past or present, or how the work will contribute in the future.

- F. Why the submitted work is to be considered as being within the realm of Information Systems related Design Science (based on Item #2 in the Appendix below).
- G. Verification that the project is principally led and driven by university based faculty, staff and students for R&D or educational purposes.
- H. A list of supporting documentation items submitted on the R&D effort submitted.

2. The supporting documentation

- A. All submissions must include one or more supporting peer-reviewed published paper which clearly explains the Design Science effort being nominated for the award. The paper may be either a journal, conference or workshop paper as long as it is rigorously peer reviewed.
- B. Optionally, submissions may include other types of supporting information as well. For example, a submission package may also include
 - Project web sites with URL's
 - Videos or other multi-media explanations of the work
 - Stand alone presentations which are designed to be understandable even if viewed without an accompanying verbal explanation.
- C. Optionally, submissions may include letters of recommendation, evaluation, or support.
 - Separate recommendation or evaluation letters are not required. However, the nominee submitting the application package may choose to also include such supporting letters. If one does include supporting letters, please make sure such letters provide substantive information and insight which can help the judging panel to understand the work and its significance to Design Science in the context of Information Systems.

Submission Deadline

15 November 2010

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Award Announcement, Presentation and Publicity

The award will be publicly presented in December at the Workshop on Information Technology & Systems (WITS), held in conjunction with the International Conference on Information Systems (ICIS).

A write up on the annual award winner will appear in the INFORMS ISS Newsletter and perhaps a brief mention in OR/MS Today Also, a list of annual award winners and a description of the award winning work will be maintained on the web site of the INFORMS Information Systems Society.

The Award amount is US\$500 per year.

INFORMS ISS Design Science Award is managed by



The Judging Panel

Judge	University Institution	Position
Steven Miller (Chair)	School of Information Systems, Singapore Management University	Dean and Professor of Information Systems Practice
Amit BASU	Cox School of Business Southern Methodist University	Carr P. Collins, Jr. Chair in Management Information Science
Alan Hevner	College of Business, University of South Florida	Professor of Information Systems & Decision Sciences, and Citigroup/Hidden River Chair
Sal March	Owen Graduate School of Management, Vanderbilt University	David K. Wilson Professor of Management
Sudha Ram	Eller College of Management, University of Arizona	McClelland Professor of Management Information Systems

Version History

Version No.	Date	Description	Authors
1	04 Nov 2009	First release of document, "The Design Science Award of the INFORMS Information Systems Society (ISS)"	Judging Panel + ISS President: Amit Basu, Al Hevner, Sal March, Steven Miller, Vijay Mookerjee, Sudha Ram
2	26 Jan 2010	Modify section on "Award Nomination and Submission." Modify submission package description by inserting a new item, E. "E. Discuss insights related to design principles or design science that have emerged from this specific line of work. Also	Steven Miller

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		<p>summarize how and why the work has contributed more generally to Information Systems related Design Science in the past or present, or how the work will contribute in the future.”</p> <p>Other existing items were not changed, though the numbering A-H was modified to reflect the addition of the new item E.</p>	
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Appendix

Principles for Assessing the Eligibility of Submissions for the INFORMS ISS Design Science Award

1. The Award Committee has a preference for work that has gone “End-to-End” from the beginning to the end of the design realization cycle for an IT artifact.

That design realization cycle typically includes the following steps, end-to-end:

- Identification and Statement of Need
- Iterative Design-Build-Validate-Evaluate Activities
- Evidence pertaining to the feasibility and value of the designed IT System or Artifact
- Articulation of design principles, insights, and lessons learned that provide guidance for subsequent efforts to design and create innovative IT Artifacts.

The more the work has gone end-to-end across this whole cycle, the stronger the case for the award.

We note that steps going beyond design realization, such as field deployment or commercialization are not listed above. See Principle #3 below.

2. The design and systems work must be in the realm of Information Systems.

While their might not be a single precise and uniformly agreed upon definition of the term Information Systems, we will use the following phrases and their associated concepts as working definitions:

Adapted from the Mission of ISR (from the INFORMS ISS website <http://infosys.society.informs.org/Publications/ISRResearch.shtml>)

Information Systems Research (ISR) is dedicated to furthering knowledge that aids in the productive application of information technology to human organizations and their management....

Adapted from the AIS Web site <http://home.aisnet.org/>

The mission of the Association for Information Systems is to advance knowledge in **the use of information technology to improve organizational performance and individual quality of work life.**

From the Information Systems overview article in Wikipedia
http://en.wikipedia.org/wiki/Information_system

The term **information system (BCIS, IS)** sometimes refers to a **system of persons, data records and activities that process the data and information in an organization**, and it includes the organization's manual and automated processes.

To the fullest extent possible, we will allow for a broad interpretation of the concept of an information system that actually supports work in an organizational context, or that has the potential to do so.

This award is specifically focused on Design Science research within the Information Systems discipline.

A great deal of design science research takes place outside of the context of what is generally regarded as the purview of Information Systems. For example, there are many types of ingenious power engineering related efforts that extend the battery life of mobile devices. Design Science and systems development achievements in this realm may impact organizations and people working in organizations in major ways through indirect channels or effects. Nonetheless, we would not consider this type or work, or any type of work principally focused on the design and realization of physical devices or components to be within the scope of what should be considered for this award.

3. While the submitted research should include effort to validate and evaluate the IT artifact, the work does not need to have been deployed outside of the university R&D setting.

The information artifact or system need not have been deployed in an organizational setting outside the university. Similarly, the information system need not have been commercially implemented.

If the submission is based on an information system that has been deployed in organizational settings outside of the university, or commercially implemented, and these implementation steps that take it beyond university R&D provide evidence of design science principals, practice and insight, then this evidence will be considered in the evaluation of the submission.

4. The award recognizes innovation and depth of new thinking and insight in design principles for Information Systems.

Immediate or near term business impact of the application, per say, is not the determining factor in the selection of the award winner, though it might be a relevant factor.

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Similarly, only the documentation of a business case for a design (without the actual design and its implementation) is not eligible for submission. This type of content is more suitable for submission to a business case competition.

5. This is an award to promote information systems related design science research and activity within the university-based academic communities throughout the world.

This award is to promote and recognize information systems related design science research and related experimental development by university researchers and educators, and the associated communities of students and research staff that work under the supervision of university faculty.

Commercial companies, government organizations, consulting firms, commercially oriented contract-based Research & Development Labs (even if they are university affiliated), and R&D labs of commercial companies, often develop new types of information technologies and information systems as part of their organizational mission. While such efforts often play a very important role in furthering information systems related design science principles and practice, efforts principally driven by such non-university based entities are not eligible for this award. The rationale for this limitation is that the award is intended to promote more of this type of work inside the university community.

University work done in collaboration with the types of external organizations noted above will be eligible for this award, assuming that the university team played the lead role in the design, in the realization of the design, and in the distillation and articulation of design related principles and insights.