

«НАУКА ПРОЕКТИРОВАНИЯ» - НОВЫЙ ЖУРНАЛ

Редколлегия журнала «Онтология проектирования» приветствует создание и создателей нового международного междисциплинарного научного журнала «*Наука проектирования*» (*Design Science Journal*), который был организован в июле 2015 года на базе *Cambridge Journals Online* (*Cambridge University Press*).

Для нас, разработчиков научного направления онтологии проектной деятельности, факт появления нового журнала с близкими по тематике целями – знак актуальности и востребованности проводимых и публикуемых исследований в нашем журнале.

В журнале «Наука проектирования» – *design* трактуется широко и как наука, и как искусство, и как некое *осмысленное созидание*. После того как приняты все решения, накоплен опыт, собраны данные и проведён научный анализ, претворение проекта в жизнь – акт веры (или риск). И новый журнал, как пишут его создатели, – не исключение. Это коллективный акт веры (или, опять-таки, риск) большого числа людей: авторов, читателей, редакторов, рецензентов и спонсоров. Почему мы верим в наш журнал? Каковы его задачи и цели? Как мы их достигнем? Эти вопросы были заданы редакторам журнала, а ответы на эти вопросы были опубликованы в первом номере в форме редакционной статьи (ниже мы публикуем оригинальные фрагменты). Здесь же мы приводим лишь краткий перевод идей создателей нового журнала.

ЗАЧЕМ или почему создан журнал

Проектирование относительно недавно оформилось как научная дисциплина. Оно одновременно является наукой и искусством. Научный подход к проектированию не должен отменять «искусственную» составляющую, баланс между этими двумя составляющими – вопрос личного выбора проектанта (или фокуса проектанта). Наука проектирования изучает создание артефактов и то как они встраиваются в наше физическое, психологическое, экономическое и виртуальное окружения.

Проектирование – сплав анализа и синтеза и опирается на множество научных дисциплин, каждая из которых имеет свой язык, культуру и семантику. Именно это разнообразие послужило причиной создания журнала. Цель журнала – сделать исследования в области проектирования доступными максимально широкой аудитории, создать междисциплинарную площадку для дискуссий.

ЧТО или о чём журнал

Взгляды редакторов на настоящее и будущее проектирования и на то, чему посвящен журнал, приводятся в редакционной статье. Гармонизировал этот результат Джон Геро. Часть результата его работы приведена ниже.

Проектирование имеет долгую историю и впервые упоминается в письменных источниках 4000-летней давности. Сегодня мы живем в мире, в котором всё большая часть объектов – это продукты проектирования, и всё меньше природных. Учитывая колоссальное влияние проектирования на нашу жизнь, удивительно как мало мы понимаем процесс проектирования по сравнению с физическими науками.

КАК мы будем достигать своих целей

Чем наш журнал отличается от других? Предполагается, что статьи будут включать больше описаний и обзоров и больше объяснений терминов в отличие от узкоспециализированных научных журналов.

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DESIGN SCIENCE: WHY, WHAT AND HOW

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The *Design Science* journal is a designed product, maybe also a designed product-service system. After all the insights, experiences, data collections and scientific analyses have played their role, bringing a design into existence remains an act of faith. This journal is no exception. It is a collective act of faith by a large number of people who have put themselves forth as authors, readers, editors, reviewers, producers and sponsors. Why do we believe in this journal? What are its scope and purpose? How will we achieve them? We share our thoughts on these questions below.

We start with a discussion of the ‘why’ as it emerged from my own interactions with the community. Next we address the ‘what’ question. We asked our Editorial Board to offer an individual statement on the ‘what’ of design science: what they see as current and future design science research. We include their verbatim responses followed by John Gero’s synthesis of the Board’s ideas. Finally, we discuss the practicalities of how the journal hopes to support the ‘what’ vision in the years to come.

The connecting thread throughout the discussion here is the collective desire to build avenues of communication and understanding for an open, inclusive, boundary-crossing design community.

WHY

Design as a recognized discipline is a relative newcomer in the research community. An established discipline involves both creation and dissemination of knowledge. In an academic setting, creation of knowledge is supported by research and dissemination of knowledge by education. Design research and education derive strong benefits from a more explicit use of the scientific method. Design is both art and science. Approaching design knowledge with the scientific method does not and should not negate art’s presence in design; it is simply a matter of focus.

Design science studies the creation of artifacts and their embedding in our physical, psychological, economic, social and virtual environments. Good design improves our lives through innovative, sustainable products and services, creates value, and reduces or eliminates the negative unintended consequences of technology deployment. Bad design ruins our lives. In design science, product and system design is addressed by combining analysis and synthesis, and drawing from many scientific disciplines.

While this combination has become a discipline in its own right, the need to bring many diverse disciplines to bear on design is a critical element of good design and of good design science research. Thus, design *happens* in a diversity of disciplines, each with its own language, culture and semantics. Exactly this diversity is the reason, the ‘why,’ the *Design Science* journal has been created: The journal aims to make all design research *accessible* to the widest possible audience; it aspires to be the meeting place for a design community that crosses the disciplinary boundaries and to offer entry points to those who wish to understand how other design researchers approach design questions in a rigorous manner. In doing so, it also aspires to strengthen all other design communities and to help them to thrive. This is one reason why several editors of other important design journals have agreed to serve on the *Design Science* Editorial Board and provide the requisite links.

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WHAT: JOHN GERO'S SYNTHESIS

Designing is one of the most profound of human intellectual activities. It is the way in which humans intentionally change the world around them. Designing has been written about for at least 4,000 years, starting with the *Epic of Gilgamesh* (approximately 2,100 BC), where instructions for a producing a boat are given, and the *Code of Hammurabi* (approximately 1,750 BC), where the social implications of poor design and construction are detailed. Vitruvius' *De architectura* (around 50 BC) covered both machine and building design, and outlined design knowledge in the form of both prescriptive and performance rules. He also described evidence-based approaches related to the selection of materials. In 1452, Leon Battista Alberti published *De re aedificatoria: Ten Books of Architecture*, which introduced the notion of design process as an intellectual activity. These and other works prior to modern times attest to designing being an identifiable act in both the military and civil domains.

Designs are recognized as one of the most significant means for a society to improve its economic and social well-being: designs add economic, safety and social value to what already exists. Today, we inhabit a world that is increasingly designed and where the natural component of our world continues to decrease. Even areas such as human organs that were considered the preserve of nature are being increasingly designed. Given designing's importance in our lives it is surprising that designs and designing are so little understood compared with the physical sciences

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The *Design Science* journal provides a platform for the publication, dissemination and archiving of research that is accessible across disciplines. Papers can be from a single discipline, multidisciplinary or interdisciplinary in the recognition that design is a discipline in its own right and that often commonalities cannot be seen because of the disciplinary focus of the publication location.

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What these contributions indicate is that designs and designing are rich in researchers' conception of them as well as being rich in what needs to be researched. This implies a lack of a complete understanding of both the depth and range of designing.

A thread that runs through these contributions is the notion that researchers and then practitioners can all benefit from a deeper understanding of designing and designs irrespective of the disciplinary source of the research that supports that understanding.

HOW

How then is *Design Science* different from other journals?

Making research results accessible across disciplines requires effort by both authors and readers. *Design Science* articles will likely have longer introductions and literature reviews and more explanation of terms than is typical for discipline-specific journals. Authors and reviewers in disciplinary journals usually discard such material as unnecessary 'padding.' Papers become more efficient at the expense of wider accessibility. For *Design Science*, I would expect the typical reader to follow at least 40% of any typical article and, having no expertise in the particular topic, to be drawn into further study of additional work from the references to fully comprehend what is put forth. Perhaps a fair aspiration for some *Design Science* articles is that they would be the first reads for researchers getting into a field or topic new to them.

Crossing disciplinary boundaries in an article does *not* mean that all articles must be interdisciplinary. Single-discipline papers are fine, they just need to be as *accessible* as possible to other disciplines.

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Welcome to the *Design Science* journal, and please join our community!



About the Journal

Design Science is an international open access journal publishing original quantitative and qualitative research in the creation of artifacts and systems, and their embedding in our physical, virtual, psychological, economic, and social environment. Peer reviewed by an international editorial board, Design Science aims to serve as the archival venue of science-based design knowledge across multiple disciplines. The Journal will facilitate communication across diverse fields and will serve as a bridge across several communities, publishing original research with a strong emphasis on accessibility by scholars from a diversity of disciplines.

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