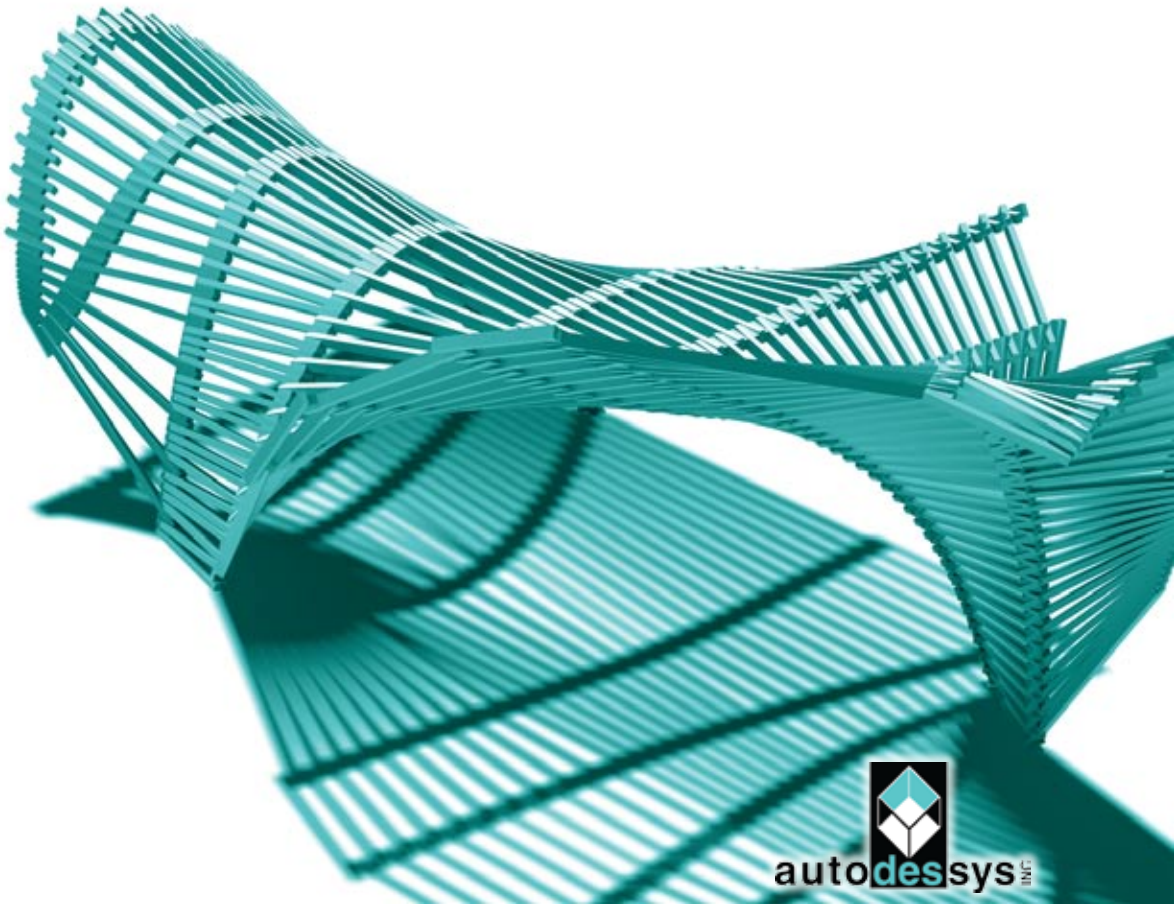
Partnerships in Learning 16
2007-08 **form•Z** Joint Study Journal

Digital Media and the Creative Process



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Partnerships in Learning 16

2007-08 form•Z Joint Study Journal

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Preface

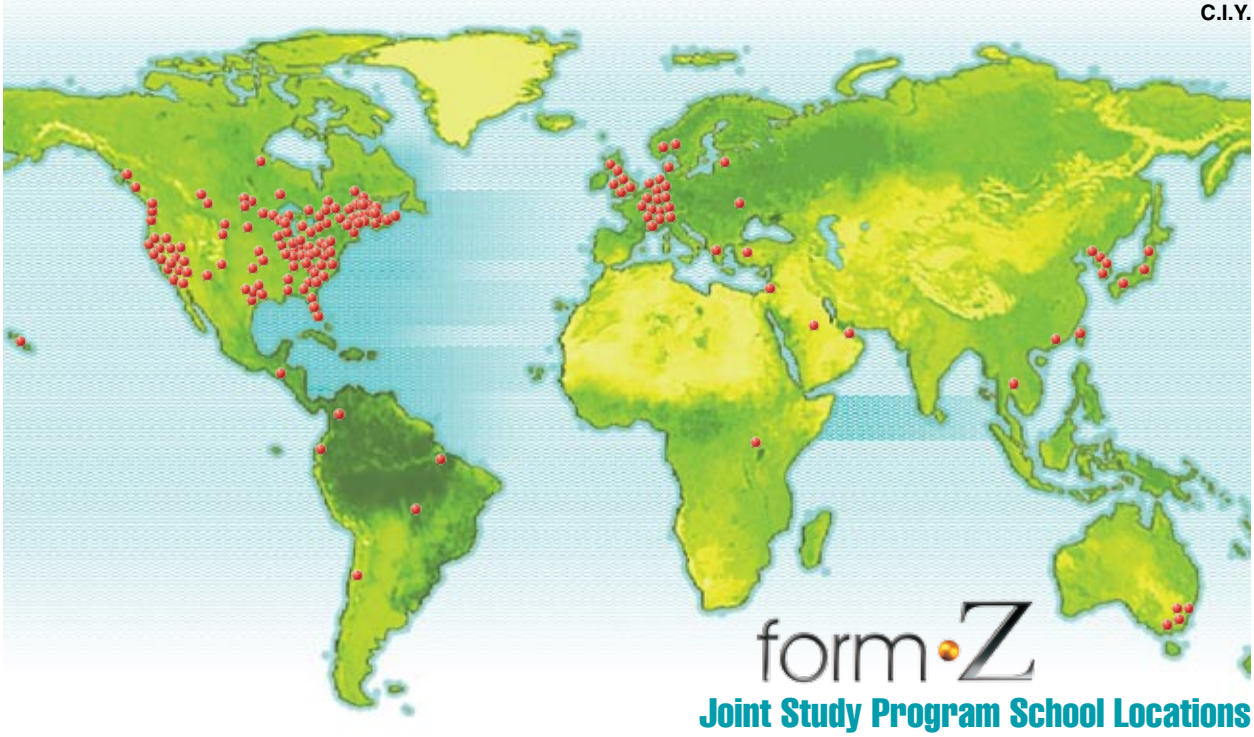
It is with great pleasure that AutoDesSys presents the 2007-08 Joint Study Journal with apologies for its delayed publication due to unforeseen circumstances.

Without boring you with too many details, the initial guest editor, Robert Brainard, had to withdraw due to personal reasons. However, at the time, which was already the end of 2008, the theme had already been selected and we were able to pick up where he left. At the time, the completion of the publication appeared questionable, but I decided to pick up the editorial responsibility myself and after we managed to assemble additional material, we were able to complete the publication.

The result is in your hands! Yes, I believe we were able to complete a high quality publication, albeit at a much later time than it is usually produced. It turned out to be a most enjoyable and even invigorating experience, a task that taught us much to be hopefully used in future undertakings of the Joint Study Journal.

Needless to say that none of this would have been possible if it were not for the great cooperation of the authors, especially those that joined late, which is about half of them. We thank them from the bottom of our heart as we do Robert Brainard for what he was able to accomplish during his rather short tenure. I am confident that this publication will once again become a valuable aid to those that explore and teach the digital tools.

C.I.Y.



Joint Study Program School Locations

The **form•Z** Joint Study is a program by which AutoDesSys Inc. supports and subsidizes the learning of the new digital tools, primarily 3D modeling, by students at Universities and High Schools worldwide. When schools agree to incorporate 3D modeling in their curriculum, AutoDesSys provides them with **form•Z** licenses, one year at a time, at the cost of material and processing. In return the schools agree to report about their experiences, offer recommendations, and share the projects produced by their students or researchers.

form•Z Joint Study Journal

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About . . .

Digital Media and the Creative Process, as the title suggests, provided a topic to discuss the challenges and the possibilities that designers encounter as they integrate digital tools in their daily workflow. It attracted a number of high quality submissions of articles that insightfully address the subject. We wish to thank Robert Brainard for the selection of the theme, which AutoDesSys chose to maintain even after his withdrawal from his editorial duties due to personal reasons. The articles are summarized and introduced below, in the order they appear.

This Joint Study Journal is again enriched by the display of this year's Awards of Distinction and Honorable Mentions granted to deserving students after a blind review by a jury of experts. As has become a tradition, the awards were handed out last October at a special dinner.

Animate Topologies by Carl Lostritto and Michael Ambrose discusses the exploration of a process oriented design research methodology, as it occurred in a design studio and a complementary digital media seminar at the University of Maryland. They place particular emphasis at investigating animation methods to enliven architecture. As animation techniques begin to permeate the core of software, they are becoming a valuable digital tool in the production of form.

In his ***Deformable and Performative Space***, George Katodrytis of the American University of Sharjah in the United Arab Emirates, discusses and demonstrates how emergent practices of digitally based genetic algorithms and parametric processes are now leading to mimetic and behavioral techniques, as well as performative models of design. The architectural creative process has now become evolutionary, intuitive, and performative, he concludes.

Outside the Blocks, by Keith Labutta and Drew Weinheimer of the Pennsylvania State University, seems to endeavor into a dual semantic: thinking outside the conventional block and redesigning a glass block, a prototype of which was also fabricated. The paper is about redesigning a glass block for a real customer, the Pittsburgh Corning Glass Block Corporation. They seem to have surprised their customer and themselves with an outcome that appears to have gone quite beyond the conventional concept of a glass block.

In ***Typologies***, Thomas Rusher of the University of Texas at Arlington raises the question: "How can digital media be used in both an inventive and generative fashion without complete loss of authorship and humanity to the computer?" This is the same question he explores with his students in his studios. He points out the value of animation "as a means of understanding 'real time' processes," and digital fabrication that "opens the design field up to new potentials."

In ***Rapid Visualization***, Murali Paranandi of Miami University in Ohio, points out how students frequently are unable to capitalize on the advantages offered by the digital tools and use them mostly for presentation purposes, rather than for exploring design solutions. He looks into ways of addressing these shortcomings and presents paradigms of some of his better students and some projects done in his studios.

In Bennett Nieman's ***Four Poetic Statements***, projects of a media workshop at the Texas Tech University are presented as "poetic statements." The workshop promotes the act of making as a discourse and the computer is introduced as an interpretive playground for design experimentation.

Modular Constructs by Asterios Agkathidis of the Technical University of Darmstadt in Germany starts with a historical overview of "modularity" and then proceeds with an exploration of how modularity has evolved and has been affected by contemporary digital tools and their parametrics. Sameness tends to be replaced by "mathematically coherent, but differentiated objects."

In ***Giving Our Ideas a Playground, not a Contained Shoebox***, Andrzej Zarzycki, after he points out that the term "design process" may be an oxymoron, he discusses and illustrates mostly generative thinking and design as it is reinforced by today's digital tool. "The digital environment is a rich, prolific, generative medium to pursue unintended consequences and to achieve unexpected goals," he concludes.

In ***Thinking and Making***, Mark Ramirez and Carl Lostritto of the University of Maryland, report on a Digital Media course that applies seminar methodology. They conclude that "digital media is not a tool, but rather a means to explore architectural issues." They present student projects that prove this thesis.

In ***Razor Design***, Robert Brainard reports on his Industrial Design studios at the University of Bridgeport. His goal was the "integration of all the design skills into the design process," which he illustrates with a typical razor design project.

AutoPLAN, by Kostas Terzidis of the Harvard Graduate School of Design, presents scripting as a valuable technique for both exploring design and addressing functional requirements. His project is in the latter area. The article is also a useful reminder of an era that a few decades back had given many promises but has been shockingly neglected.

Chen-Cheng Chen's article, ***Designing and Fabricating***, presents the work of a design studio at Tamkang University in Taiwan. Two of the projects are intriguing fabrication examples. The other two that came later in the class are general design projects with an urban design flavor. They are all excellent examples of the impact of digital tools.

In his short diatribe ***Conjectural Intersections***, Ganapathy Mahalingam of the University of North Dakota starts by pointing out that virtual design produced with digital tools seems to imitate what can already be done with real materials. He then introduces "conjectural intersection" as something that can only be produced with digital tools.

Carmina Sanchez-del-Valle and Sean Creque, in ***Learning and Teaching***, discuss a course at Hampton University they offered together, with an emphasis on the preparatory stages. Each of a different generation and level of experience, they discuss their points of agreement as well as disagreement and the aspects they found most challenging.

In ***Digital Iteration***, James Eckler of the University of Cincinnati presents a design exercise where digital design achieves a synthesis with the conventional ways of making. This is in contrast to the common practice where 3D modeling is relegated to a presentation tool. As designers we think through making and, when the digital tools become part of the making process, they also become reinforcers of our thinking process.

In ***Hylomorphic Surface***, John Cirka of Ryerson University in Canada, presents a diatribe on how form is (or may be) generated in today's world of digital media. Force is a major factor and he quotes a number of notables to defend his position. He also displays examples, but recognizes that "In spite of the increased complexity possible in today's designed components, they do not approach the levels of complexity in the cellular matrix of organisms."

Lastly, in ***Journals of a Digital Design Studio***, Sarah Jester (the student) and Thomas Fowler (the teacher) of the California Polytechnic State University, present a weekly journal of a studio. The student writes her thoughts and impressions of the week. The instructor lays out and describes the tasks of the week. Then both express their reflections. All together an interesting record of nine weeks of studio that concludes with final reflective essays on the entire quarter by both the student and the instructor.

This Journal begins with a display of ***Invisible Cities*** by Derek Ham's students at the Florida A&M University, on the inside front cover, and concludes with a mini article, ***Computing the 'Holy Wisdom'*** by Oliver Hauck of the Technical University of Darmstadt. While these are not part of the overall theme, they present some intriguing usage of digital tools, form•Z in particular. They were selected from among a good number of reports we received this year.

We wish to wholeheartedly thank all the contributors and authors for the valuable information and experiences they provided to this year's Joint Study Journal. We hope that its readers will share our excitement in producing a beneficial and instrumental educational aid.

C.I.Y.