

UC San Diego Artist Uses Computer 'Game' to Explore Algorithmic Nature of Urban Development

Sheldon Brown's 'Scalable City' Installation Anchors Grand Opening of gallery@calit2.

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Doug Ramsey

New-media artist Sheldon Brown has traveled as far as China and the Czech Republic to stage earlier versions of his work "Scalable City", his most ambitious project to date. However, he won't have to hop a plane this time, because the interactive art work will be on display at a new venue on the University of California, San Diego campus - barely 20 yards from Brown's office on the first floor of Atkinson Hall, the UCSD headquarters of the California Institute for Telecommunications and Information Technology (Calit2).

"Scalable City" by Sheldon Brown opens Oct. 23 in the gallery@calit2 on the same day as the venue's grand opening at a reception 6-8pm. Depicted above: an algorithm produces a road that carves itself into the landscape.

Watch the Scalable City trailer.

The exhibition will open to the public on Oct. 23 in the gallery@calit2, part of the UC San Diego division of the California Institute for Telecommunications and Information Technology (Calit2). The launch coincides with the grand opening of the gallery at a reception scheduled for 6-8 p.m. the same day. Scalable City will run through December 15, 2008.

"Sheldon Brown played a critical role in formulating how we integrated the arts into Calit2's multidisciplinary vision of our technological future," said Ramesh Rao, Director of the UC San Diego division of Calit2. "We are delighted that the official opening of the gallery@calit2 could be timed to coincide with the installation of an interactive work that has been evolving before our very eyes ever since CRCA and Calit2 moved into this building in late 2005."

Scalable City has appeared in multiple forms since its premiere as an interactive installation in 2006 at Ars Electronica in Linz, Austria. "It has appeared as a series of movies, as an installation, as prints, as objects, and soon as a downloadable online game," said Brown, Director of UCSD's Center for Research in Computing and the Arts (CRCA). "Within each of these there are variations - the interactive installation is configured differently for each venue - but at each venue and for each form, I am bringing forward particular qualities of the work."

The central piece of the installation on display in the gallery@calit2 is an interactive computer game involving users, data and algorithms as applied to urban development. "My work creates an urban, suburban and rural environment via a data visualization pipeline," said Brown, who also directs CRCA's Experimental Game Lab. "Each step in this pipeline builds upon the previous one, amplifying exaggerations, artifacts and the patterns of algorithmic process."

The raw data come from real-world, geo-spatial data that are subsequently transformed by computer extrapolations into built environments that are representative of reality, but at the same time seem hyper-real. The user shapes interactions of the city's major components: landscape, roads, building lots, architectural

components, and vehicles. Each user controls a vortex of automobiles that looks like a tornado of cars, continually spewing copies of themselves into the atmosphere. As this vortex moves through the landscape, it causes roads to "grow". Scattered throughout the landscape are architectural fragments that are flung into the air by the automotive tornados, and as the fragments fall back to earth, they re-form into houses - producing shanty-like facsimiles of their original form, which are scattered again into the landscape when another car vortex passes by.

"Scalable City places responsibility for the new landscape on each user, whose activities are simultaneously constructive and destructive," said Brown. "By applying computational processes to design decisions, it becomes easy to see how development can produce unintended effects after much iteration. Even the smallest design decision today to build a road can lead, at the extreme, to drastic changes in the built environment that were probably neither intended nor wanted."

Support for the development of Scalable City comes from IBM, Intel, Sun Microsystems, Vicon, High Moon Studios, the UC Discovery Grant program, UCSD's Center for Research in Computing and the Arts (CRCA), as well as the UCSD division of Calit2.

Students have played a critical role in the development of Scalable City. Graduate and undergraduate students who assisted Sheldon Brown on various phases of the work have included: Erik Hill, Daniel Tracy, Kristen Kho, Robert Twomey, Christopher Head, Prakhar Jain, Alex Dragulescu, Carl Burton, Mike Caloud, and Joey Hammer.

Sheldon Brown's "Scalable City" reflects the gallery@calit2's interest in the nexus of innovation implicit in Calit2's vision, and aims to advance our understanding and appreciation of the dynamic interplay among art, science and technology.

Calit2 is a partnership between UC San Diego and UC Irvine, and houses over 1,000 researchers organized around more than 50 projects on the future of telecommunications and information technology and how these technologies will transform a range of applications important to the economy and citizens' quality of life. The institute has integrated new-media arts into its cross-disciplinary agenda.

Artist Bio

Sheldon Brown is an artist who works in new forms of culture that arise out of the developments of computing technology. He is Director of the Center for Research in Computing and the Arts (CRCA) at the University of California, San Diego (UCSD), where he is a Professor of Visual Arts and Artist-in-Residence at Calit2.

The artist's work examines the relationships between mediated and physical experiences. This work often exists across a range of public realms. His work plays with overlapping and reconfiguring private and public spaces, with new forms of mediation, proliferating co-existing public realms with geographies and social organizations of increasing diversity. Brown's art explores the schismatic junctions of these zones - the edges of their coherency - providing glimpses into their formative structures with a view that suggests transformative modes of being and the extension of constrained boundaries.

In addition to Ars Electronica in Austria, Brown has shown various forms of Scalable City at such places as the Museum of Contemporary Art in Shanghai, The Exploratorium in San Francisco, FILE 2008 in Sao Paulo, Brazil, The Kitchen in New York City, Zacheta National Gallery in Warsaw, Poland, SIGGRAPH 2007 and Supercomputing 2007, and other venues. He has been commissioned for public artworks in Seattle, San Francisco, San Diego and Mexico City, and has received grants from AT&T New Experiments in Art and Technology, the NEA, the Rockefeller Foundation, IBM, Intel, Sun, Vicon and others.

Note to Editors: High-resolution still images from the installation "Scalable City" are available on request to Doug Ramsey at dramsey@ucsd.edu.

Location gallery@calit2 1st Floor, Atkinson Hall University of California, San Diego 9500 Gilman Drive La Jolla, CA 92093 Map & Directions: <http://atkinsonhall.calit2.net/directions/> <http://gallery.calit2.net> <http://calit2.net>

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