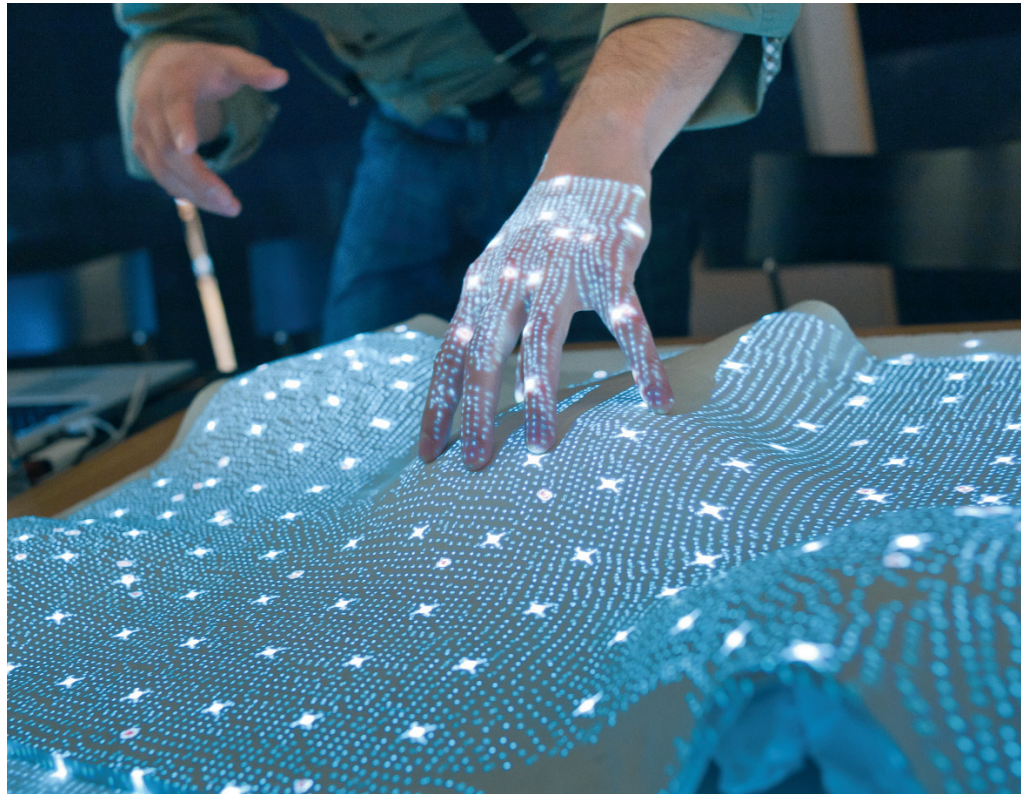


Forum

Research

Smart Geometry



The use and abuse of data in design provided the theme for the tenth Smart Geometry conference.

We are drowning in data. Huge quantities of the stuff, measuring everything from rainfall to street crime, are made available to architects and planners. But at what resolution is data meaningful? How is it refined into information that can be acted upon? Does its representation distort reality? Is there a danger of succumbing to ‘analytic pornography’ – impressive-looking graphics that tell us little? How much precision is really necessary in our use of data? How much information do we need? Do we already have enough?

These are some of the questions raised at the Smart Geometry conference in Copenhagen last month. Founded in 2001, Smart Geometry is a very particular sort of event.

It is not an academic symposium – though there are academic participants – nor the product of commercial conference planners. Rather it is organised by a community of architects who gather annually to explore developments in computational design. The fast-moving discussion takes place both in the auditorium and in a parallel charette (the Workshop) that develops speculative physical projects, and has something of the feel of an architecture school’s end-of-year show.

The difference is that those writing code or tinkering with sensors and actuators are drawn from practices such as Foster & Partners, KPF and Grimshaw that have spent the last decade bringing computational

design tools into the architectural mainstream. The conference has played an important role in that process – long-term sponsor Bentley Systems developed its Generative Components parametric software in collaboration with Smart Geometry. So it is a surprise to find that the general tone is more reflective about the merits of data-driven design than might be expected.

Likewise, the discussions reveal a general sense that having pushed to develop the tools, the question of how they should be used remains open. Speakers argued that it would be a mistake to associate parametric design with any particular architectural style, and that developing exotic new forms is not where the real potential of the technology lies. Rather, they point to the possibility of exploring options quickly in the critical early days of a project, responding rapidly to changing circumstances once it gets underway, and allowing architects to retain control of aspects of building design, from structure to project coordination, that are increasingly taken over by other consultants.

It is perhaps reflective of the participants’ interests that discussions about what to do with data revolved largely around the way buildings are

made, rather than used. But some – notably designer Usman Haque and theatre director Kjell Yngve Petersen – had a broader idea of ‘performance’ including human actors, and a more nuanced idea of how data might be something collectively created and made use of, rather than harvested.

Not everyone gets excited about data streams and computational power, and it is true that the social and cultural roles of buildings, their users and creators can be overlooked in such discussions. But as the information age develops, the built environment is emerging as the most important interface with the virtual world. The ubiquity and validity of data, and the ethics of its use, cannot help but be an issue for architecture. *CF*

Videos of all presentations at Smart Geometry 2011 can be viewed online at bentley.com

Left A hundred participants in ten ‘clusters’ made up the Workshop at the school of architecture, Royal Institute of Fine Arts, Copenhagen.

Above Prototype interactive design tool produced by one of the clusters: real-time weather data is applied to a physical urban model with a dynamic projected overlay. Changes to the physical model allow one to visualise effects of buildings on wind flow.

