Computing smart geometry

SmartGeometry is an annual workshop with a reputation for being at the forefront of design technology. Started 11 years ago when parametric modeling was still in its infancy, the workshop initially focused on modeling geometry with parametric tools. As parametric modeling became more commonplace, SmartGeometry sought out other technology at the leading edge of the architecture industry. Fabrication has been a major theme for the past couple of years at SmartGeometry, but this too is slowly abating as robots and 3D printers become more commonplace.

This year’s SmartGeometry was held at the Chinese University of Hong Kong. Both HP and CASE were there. The theme of the event was “urban compaction.” During the workshop participants investigated how drones, gaming engines, location tracking systems, big data, and raw computational power could be applied to the issues associated with growing urban density.

In total, 70 participants came from all over the world, many with an HP laptop in tow. There were also a range of HP Z420 Workstations and HP ZBooks powered by Intel® Core™ i7 processors that were used to support activities at SmartGeometry, but this too is slowly abating as robots and 3D printers become more commonplace.

The presentations were run on an HP ZBook 14 Mobile Workstation. There was an Intel Core i7 processor, 16GB of RAM, and an SSD. This made a noticeable improvement in performance. And since all of these components are housed within a notebook which makes a noticeable improvement in performance.

The HP ZBook is perfect for the types of calculations the Resilient Networks group was doing. It has outstanding computational power for a mobile workstation, featuring the latest Intel® Core™ i7 processors. These processors are hyper-threaded so they work even better on parallel tasks like traversing a network. The 32GB of RAM was more than enough to accommodate the memory needs of even the most complicated network produced. These networks could be quickly saved onto the internal solid-state drive (SSD), which makes a noticeable improvement in performance. And since all of these components are housed within a notebook which has long battery life, the HP ZBook could easily pick up the workstation and take it with them to the 3D printer or into design reviews in other parts of the university.

The workshops at SmartGeometry were followed by a two-day conference. A number of international speakers were flown over to discuss big data, advances in digital technology, and the latest design trends emerging from Asia.

The presentations were run on an HP ZBook 14 Mobile Workstation. This is HP’s super thin and lightweight ‘Ultrabook’ mobile workstation. While the computer weighs just 3.57 pounds, it has all the performance of an HP workstation. There was an Intel Core i7 processor, 16GB of RAM, and an SSD. This was more than enough performance to run the presentation, video conferencing software, and interactive parts of the presentation—plus record everything that was going on—simultaneously.

Of course, the HP ZBook 14 can also be used to perform CAD modeling while traveling—eliminating the need to carry a bulky computer. Find out more about the full line of HP ZBook Mobile Workstations at www.hp.com/go/zbook.

ABOUT HP
HP helps you stay ahead of the curve with professional desktop and mobile workstations designed for large and complex datasets, dispersed teams, and tight deadlines. HP Z Workstations with Intel® Xeon® processors deliver the innovation, high performance, expandability, and extreme reliability you need to deliver your 3D CAD projects in less time. For more information, visit the HP Workstations and Autodesk page on the HP website (www.hp.com/go/autodeskmanufacturing).

ABOUT CASE
CASE exists where building and technology intersect. We combine our experience as architects, engineers, project managers, software developers, and educators with a passion for technology to improve the way buildings are designed, realized, and operated. CASE is a building information modeling (BIM) and integrated-practice consultancy. We provide strategic advising to building design professionals, contractors, and owners seeking to supplant traditional project delivery methods through technology-driven process innovation.