

FOSTERS + PARTNERS

TOP ARCHITECTURE AND DESIGN FIRM HARNESSES THE POWER OF LENOVO THINKSTATIONS FOR 3D DESIGN APPLICATIONS.



CUSTOMER PROFILE

Foster + Partners, one of the most innovative architectural practices in the world today led by Founder and Chairman Norman Foster, is based in London with project offices worldwide. Over the past four decades the practice has pioneered a sustainable approach to architecture and ecology through a strikingly wide range of work, from urban masterplans, public infrastructure, airports, civic and cultural buildings, offices and workplaces to private houses and product design.

BUSINESS SITUATION

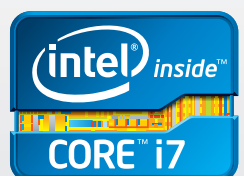
As an architecture and design business, Foster + Partners needed a robust workstation solution with powerful graphics capabilities to effectively run the highly graphics intensive 3D design applications that the firm uses. Eighty percent of Foster + Partners staff being architects, standards dictate that the firm have one machine build that goes to all several hundred of those employees, and that variations to that build be taken into account for the remaining 20 percent who complete design work associated with the firm's ongoing projects. The ultimate goal, then, is for Foster + Partners to achieve a much higher level of standard than prior to the partnership with Lenovo.

BUILT FOR BUSINESS THINKSTATIONS SUPPORT DIGITAL DESIGN FIRM'S INNOVATIVE VISUALIZATIONS.

"There are no reliability issues, the performance and service of the equipment is excellent, and our close working relationship means we can share our ideas with Lenovo for the ultimate benefit of our business."

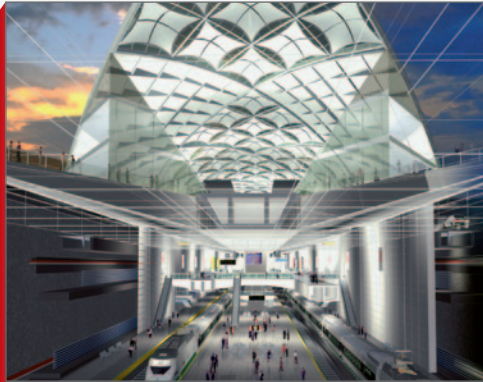
- **Mr. Graham Young**
 Head of Information
 & Design Systems

Foster + Partners



" User feedback was positive from day one. I have yet to hear an architect or designer say they are disappointed with their Lenovo hardware. "

- Mr. Graham Young
Head of Information
& Design Systems



Rendering of Florence Station, on ThinkStation workstation.
Credit: Foster + Partners



INTRODUCTION

The studio has established an international reputation with buildings such as the world's largest airport terminal at Beijing, Swiss Re's London Headquarters, Hearst Headquarters in New York, Millau Viaduct in France, the German Parliament in the Reichstag, Berlin, The Great Court at London's British Museum, Headquarters' for HSBC in Hong Kong and London, and Commerzbank Headquarters in Frankfurt. There is also a strong interest in city planning and infrastructure. The practice has received over 550 awards for excellence and won 92 national and international competitions since its inception in 1967.

CHALLENGES

Foster + Partners' main challenge lies in managing the vast volumes of data that a modern, global architectural firm like itself generates, and making that data available globally to its architects and designers. Foster + Partners transfers large CAD files and 500MB Adobe® Photoshop files in near real time to temporary on-site offices around the world. How the company stores that data and manages de-duplication is a true challenge, in addition to satisfying the distinctly different computing needs of its two user types: the highly demanding technical set, which encompasses the firm's designers who generate the majority of Foster + Partners' data volume, and the support set, which includes the firm's facilities team, accounts team, and HR team.

SOFTWARE USED

- CAD Applications: Bentley® MicroStation & Architecture, Rhinoceros® Rhino
- Graphics: Adobe® Creative Suite
- 3D Software: Autodesk® 3DS Max with V-Ray & Maxwell Render

SYSTEM REQUIREMENTS

- Processor: Intel® Quad-Core Xeon™ 3.16 GHz
- Graphics Processor: NVIDIA® Quadro FX5600 1.5GB
- Storage Configuration: Solid State SAT drives
- Memory: 16GB DDR3 RAM

WHY LENOVO?

- Lenovo was already known by Foster + Partners as the standard for workstations and business laptops
- Lenovo's direct relationship was more appealing to Foster + Partners than a typical reseller relationship
- Lenovo's open disclosure of product roadmaps was admirable
- Local service and support proved responsive, quick, and knowledgeable

BUSINESS BENEFITS

- Improved end user satisfaction
- Increased productivity
- Reduced support costs

ThinkStation: The Office Champion:

Typically, the architects at Foster + Partners hook up their ThinkStations to two highly color manageable Eizo screens, sometimes as large as 30-inches for 3D visualizations, so that multiple software applications – like Bentley® MicroStation & Architecture and Adobe® Creative Suite – can span across both viewing panes and run simultaneously. "The ThinkStation really does have brute force," Young said. "Its workstation-class processing power, outstanding graphics processing capabilities, and certification for many of the CAD applications we use every day means that we can create animations at 30 frames a second for multiple minutes with ease."

The quality of the content the firm produces gets richer all the time, while the expectations of its clients rise in conjunction. Young said "It's very important that we get the right image that will sell our idea or concept to our client," This is where the ThinkStation has been the firm's saving grace. Dozens of ideas get into a digital format before one or two of them are taken forward. "Our ThinkStation workstations have helped us do that because we can leave them running overnight for image or movie-file rendering. The hardware goes through a fairly tough time and doesn't get much respite to cool down, meaning the ThinkStation is up to the challenge. Because it can take on such a high computing workload, we haven't needed to commit our file structure to a central datacenter – and that positively affects our bottom line."

"Wherever you turn, a Lenovo ThinkStation S10 or D10 is sitting underneath a desk," Young said of Foster + Partner's main office. "We slightly over provide equipment to our architects by giving each business area a few 'hotdesk' machines that are loaded with a fairly expensive software portfolio. On the standard desktops, however, we load the software that they use 95% of the time."

Lenovo I.T Builds a Global Bridge

"Our clients come in all shapes and sizes," said Graham Young, Senior Partner and Head of Information & Design Systems at Foster + Partners. "We work directly with governments, cultural organizations, construction companies and building developers, and we have up to 200 projects on the go at any one time."

" The ThinkStation really does have brute force. "

- Mr. Graham Young
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Rendering of Millenium Tower, on ThinkStation workstation.
Credit: Foster + Partners



Sharing critical build information with a widespread project team on the ground meant that Foster + Partners had to move out of the desktop computer arena and search for alternatives. With its equipment portfolio, Lenovo was an obvious place to look.

Foster + Partners relies on a Lenovo hardware portfolio to respond to the needs of 150 clients worldwide and a number of regional offices in China, Hong Kong, Spain, the United Arab Emirates and New York. Strategic construction sites place a small number of architects at the center of the action. This requires wide-area file systems and data sharing technologies such as Riverbed that enable architects in London, intermediaries in New York and on-site builders in Colorado – all working on the same project – to trade information with each other in a timely fashion.

"What makes Lenovo such a valuable partner to Foster + Partners from a technology perspective is that these challenges are becoming easier to face," Young said. "We can't change the fact that we are a part of the design and build process from inception to completion. But what we can account for is the quality of the technology that will reliably take us from A to Z 100% of the time. With Lenovo, we haven't had to worry otherwise."

FIRM LOOKS TO THE FUTURE

Foster + Partners is currently debating the role of laptops in its business, as well as desktop virtualization. "Our business is all about getting messy with physical models and drawing sketches on walls in conference rooms," Young said. "You can replicate that process digitally, but it doesn't have the same immediacy.

The real question now, among our architects, is 'What do I need at home?' The answer: A state-of-the-art laptop that's equal in performance to the workstations we have at the office." As the firm grows its infrastructure and data center, Young says he sees evidence of virtualization and nettop device implementation. "I hope that it's coming," Young said. "Our firm could greatly benefit from these small form factor, lower cost devices, to aid the mobility of our architects and the increasing levels of remote access technology that they demand."

As more and more professionals across all fields move work from their office to their home, Young said workstation-class laptops with remote log-in access will be desired. "With this implementation, our architects could use a screen and keyboard at home to connect to the CPU and GPU of their workstation at the office," Young said. "I'd like to see this realm of remote technology continue to improve, as well as broadband speeds increase. If you can use the same software setup at home as you would in the office, this could be a viable means of flexible working."

ABOUT LENOVO

Lenovo (HKSE: 992) (ADR: LNVGY) is dedicated to building exceptionally engineered personal computers. Lenovo's business model is built on innovation, operational efficiency and customer satisfaction as well as a focus on investment in emerging markets. Formed by Lenovo Group's acquisition of the former IBM Personal Computing Division, the company develops, manufactures and markets reliable, high-quality, secure and easy-to-use technology products and services worldwide. Lenovo has major research centers in Yamato, Japan; Beijing, Shanghai and Shenzhen, China; and Raleigh, North Carolina.

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For more information on Lenovo, visit www.lenovo.com

<http://www.youtube.com/user/LenovoVision>

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