

Case Study

360Cities

» The Fujitsu CELSIUS workstation has made a dramatic difference to our production process, allowing us to create and manipulate massive images quickly and edit an entire 300 gigapixel photograph without breaking it up «

Jeff Martin, Senior Photographer, 360Cities



The customer

360Cities is the web's largest collection of stunning, geo-referenced panoramic photos, created by a network of thousands of expert panorama photographers from around the world. Its growing community is proudly and lovingly documenting our planet as only people can. The company was founded in late 2007 and consists of a closely knit team of six, living and working in Prague, Czech Republic and committed to bringing panoramic photography to the mainstream.

The challenge

Rendering images that are measured in gigapixels on traditional workstations can be a real struggle. Until 2010, 360Cities had been using a regular dual core machine with 8 gigabytes of RAM. However, this made the process of editing its massive photographs time-consuming.

"It was taking us weeks to make just simple edits on projects such as the then record-breaking panorama of Prague which consisted of 18 gigapixels," explains Jeff Martin, Senior Photographer at 360Cities. "And if the computer crashed during that time, we were back to square one. We are always aiming for bigger images so we wanted to find a machine that could cope with the processing involved without taking a lifetime."

360Cities was introduced to Fujitsu who explained that it might have the perfect solution for creating images consisting of billions of pixels.

The solution

Fujitsu lent the company a CELSIUS R670 workstation with 192GB of RAM and 24 CPU cores, running Giga panorama stitching software from Kolor. Fujitsu's highest performing workstation, the CELSIUS delivers first-class benchmark results and is designed to surpass all expectations. This reliable, high-end multi-processor workstation is individually configurable for the most power hungry, 24/7 operating environments and, as such, was perfect for 360Cities needs.

THE CUSTOMER

Country: Czech Republic
Industry: Photography
Founded: 2007
Number of employees: 6
Website: www.360cities.net



CHALLENGE

360Cities was finding traditional workstations too slow to process the massive panoramic images it produces. It needed to find a new, more powerful platform that could render the images in hours rather than weeks.

APPROACH

The company turned to Fujitsu who lent a high-end CELSIUS workstation capable of processing images consisting of hundreds of gigapixels within short periods of time.

THE BENEFIT

- The Fujitsu CELSIUS workstation can handle images consisting of as much as 320 gigapixels – equivalent to a photo measuring 98 meters by 24 meters
- Images can be processed and made available much more quickly using the workstation
- The Fujitsu CELSIUS workstation is optimized for use with Adobe Creative Suite, making it ideal for editing photography
- Finely tuned storage and architecture guarantees optimal stability and reliability

"We were scheduled to begin work on a panoramic view of London but we wanted the image to be available within days rather than weeks so Fujitsu's CELSIUS workstation was a godsend," adds Martin. "The image of London consisted of 80 gigapixels and rendering it on any other platform would have taken weeks. Using the Fujitsu CELSIUS workstation, it took a matter of hours."

The CELSIUS workstation is also optimized for Adobe – meaning it is specifically designed to handle Photoshop and other critical creative applications in the Adobe Creative Suite portfolio. For each CS6 software suite, Fujitsu can provide a perfectly configured workstation. With high-end Intel® processing technology and cutting edge NVIDIA® graphics, the Fujitsu CELSIUS workstation provides 360Cities with the power and versatility needed to complete the most complex creative tasks.

The benefit

Since the company has begun using Fujitsu CELSIUS workstations, it has completed a number of complex projects including several cityscapes and 15 sporting events including the Wembley FA Cup Final in 2011. In some cases, the images have been available within 24 hours, allowing 360Cities to capitalize on publicity.

For example, 360Cities wanted to make the Wembley Cup Final image available by the next day while the event was still newsworthy. This involved loading 1,147 raw images onto the workstation, converting them to JPEG and stitching them together. After only two hours, the final image, an 80 GB Photoshop file, was written to the SSD Raid.

"It has made a dramatic difference to our production process, allowing us to create and manipulate massive images quickly and edit an entire photograph without breaking it up," says Martin. "The storage and overall architecture are finely tuned so the system is incredibly stable and reliable – that is one less thing for us to worry about."

PRODUCTS AND SERVICES

- CELSIUS R670 workstation
- CELSIUS R920 workstation

It was Fujitsu's involvement with 360Cities that led another leading photographer to seek it out for advice. Henry Stuart of Spherical Images was tasked with taking a panoramic photo of the Men's 100m Final at the London 2012 Olympics. He also needed it to be available to view by the following day. Fujitsu equipped him with an even more advanced workstation – the CELSIUS R920 – so he could process 250 individual photos, each comprising a total of 36 megapixels.

"The value of these images is at its highest immediately after the event so being able to get the finished photo online within hours was a real benefit," comments Stuart. "The workstation was a dream to work on and perfectly configured for my needs. I couldn't have asked for more from Fujitsu."

Conclusion

360Cities has already working on a number of record-breaking projects using the Fujitsu CELSIUS workstations. The most recent was launched in February 2013 and consisted of a 320 gigapixel image comprising 48,640 individual frames which have been collated into a single panorama by a CELSIUS R920 workstation. It shows an incredibly detailed panorama of London taken from the top of the BT tower. If printed at normal photographic resolution, the BT Tower panorama would be 98 meters across and 24 meters tall, almost as big as Buckingham Palace.

"Fujitsu's powerful and reliable CELSIUS workstations are at the heart of our production process, enabling us to produce massive images quickly. We're looking forward to continuing to partner with Fujitsu as we advance on our mission to bring panoramic photography to the mainstream."

About Fujitsu

Fujitsu is the leading Japanese information and communication technology (ICT) company offering a full range of technology products, solutions and services. Over 170,000 Fujitsu people support customers in more than 100 countries. We use our experience and the power of ICT to shape the future of society with our customers. For more information, please see <http://www.fujitsu.com>.

In collaboration with



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