

Elif Video & Canon

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It's a once in a lifetime commission – so Elif Video's Hamis Vantadas needed to be sure his 1,300-piece, 360-degree image would generate headlines.

“The entire print job was completed much more quickly than we had expected”

The ground breaking new Conquest Museum in Istanbul is home to what will surely become known as one of the most impressive items of print on display in the world – a 360-degree panoramic image covering 3,000 sq m of the inside of the museum. The awe-inspiring picture, which depicts the fall of Constantinople from the Byzantines to the Ottomans, consists of more than 1,300 individual pieces output over a six-month period on a Canon imagePROGRAF iPF9000 large format printer.

The mammoth project was steered by Elif Video in Beyoglu, which was awarded the 'Panorama 1453' contract in 2005 by the Istanbul Metropolitan Municipality located in the Topkapi region. Hasim Vantadas is coordinator for the project at Elif Video.

“We had a huge list of requirements to meet including the need to use inks that were resistant to light without fading for at least 100 years,” says Hasim. “The image also demanded excellent print quality colour and tonal depth, because the final result has to convey such realism that the visitors ‘live’ the moment in history when they are surrounded by the panoramic scene.”

That 'moment' is a scene in front of the Topkapi ramparts in 1453, at the point when the conquest of Istanbul was imminent. The museum has been constructed near the battle specifically to house the Panorama 1453 project.

“It was such a significant event in our history that its portrayal in print had to be on colossal proportions, and the Panorama 1453 project is one of the most important examples of historical reanimations in its class. The result is one of the largest prints of its type in the world and is probably unique in many ways,” says Hasim.

Eight artists, all experts in computer animation, spent two years hand-drawing an original version of the overall image, using as a guide hundreds of digital shots taken around the area of the actual battle. Elif Video developed a method of splitting this image into 1,304 different sections and the segmentation and stitching techniques were tested on this reduced picture before printing began on the full-size version. Due to the shape of the museum's dome, these had to be printed on the iPF9000 large format printer in varying sizes from 75x120 cm to 150x570cm.

Elif Sanat Yapimlari
Elif Video



 imagePROGRAF





imagePROGRAF iPF9000

The final inkjet picture covers every part of the museum's walls and ceiling and includes 2,000 individually drawn faces. Everything is reproduced life-size with extraordinary detail and resolution. It includes a 40-metre high tree, probably the largest printed tree in the world.

Visitors enter the building via a stairway that brings them into the centre of the dome. Elif Video calculated the average height of an adult and child and based the 'horizon' at eye level as it would be in real life, with all other elements of the picture positioned to this feature. Several areas within the panoramic scene incorporate 3D images, an effect that is straightforward to achieve with the imagePROGRAF iPF9000, which has extensive Photoshop plug-in facilities that enable easy adjustment to toning and intensity.

In materials and man hours, the scale of the task has been staggering. The project has so far consumed 42 litres of ink, 180 rolls of 60-inch water-resistant art canvas and 100 litres of varnish. A Canon imagePROGRAF iPF9000 was purchased for the sole task of handling the project, and installed at Elif Video's workshop in Topkapi.

The 12-colour pigment large format printer uses new LUCIA inks, which expand the range of colour reproduction by providing a wider gamut, while the inclusion of grey and photo grey helps to reduce graininess to create crisp, monotone output. The dual-print head system has a total of 30,720 nozzles, ensuring smooth gradations and maximum print quality and productivity. Resolution is up to 1,200x2,400 dpi.

"With such a prestigious project, first-class print quality was a given, while the size of it required ultra-high productivity," says Hasim. "We also needed absolute colour consistency across hundreds of prints output over several months, particularly as it was not possible to print the segments that were

to be stitched to each other at the same time. The built-in 40GB of processing power in the imagePROGRAF iPF9000 was one of many features that helped ensure high throughout levels so in the end the entire job was completed much more quickly than we had expected.

"Canon was able to faithfully match prints from the imagePROGRAF iPF9000 to the colour and texture of the original, which was hugely important to a successful end result. The print quality has been outstanding and the facility for nesting images with edge-to-edge printing, reduces media waste and operating costs.

"Overall, the imagePROGRAF iPF9000 has proved to be highly cost-effective and phenomenally reliable. We printed 3,000 sqm without any service issues or failures. The printer's non-stop printing feature has enabled printing to be carried out unattended during the night. Perhaps surprisingly, the printer has not been modified in any way and we have simply used it with the default factory settings and original driver" says Hasim.

Outputting prints and fixing them to the walls took place consecutively, with the canvas secured using an adhesive specially developed by Elif Video. The recently opened museum is designed to last at least 100 years and the Panorama 1453 is a permanent display. In order to improve the life span of the canvas, each segment was painted by brush with a varnish that will help counteract the high temperatures and humidity. "Each segment was left for 24 hours after printing before the varnish was applied and doing this by hand was an enormous task," says Hasim.

"The uniqueness of this project presented some unusual problems but Canon has been a true partner throughout and helped to ensure the result is something everyone in Istanbul can be proud of."

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