

The Fontaine de Tourny: a Full-Size Jewel

The creativeness and cooperativeness shown by some companies sometimes give rise to extraordinary realizations. As such, the work of two Levisian companies, Creaform and Artisans du passage, has brought together two diagonally opposite fields: 3D scanning and jewellery!

LA FONTAINE DE TOURNY

The Fontaine de Tourny is a gift from Mr. Peter Simons to the city of Québec as part of the city's 400th anniversary celebrations. This fountain once embellished the Allées de Tourny of the city of Bordeaux, in France. Now restored, it stands beautifully in the middle of the traffic circle that faces the Parliament of Québec (the province).

For its Handyscan 3D annual scanning contest, Creaform has challenged its employees to carry out a scan on the "4 Elements" theme. In teams of 3 or 4 people, the employees had to realize an original 3D scanning project with a laser scanner from the Handyscan 3D line-up: quite an imaginative and creative challenge for the employees! On the theme "The water", one of the team had the nice idea of scanning the Fontaine de Tourny, and undertook the scanning of this impressive work of art. Furthermore, this project also included an heritage preservation component, since the 3D files generated would be delivered to Peter Simons and would eventually be used for maintenance and historical archiving.

THE SCANNING PROJECT

This was a far-reaching project. Once they received all the authorizations required from the City of Quebec, Creaform's four members team took on the technical details. The fountain being located in a strategic point in the very heart of an important and busy traffic circle, it was decided that the operation would have to be conducted by night. It was also necessary to cut the water supply in order to dry the basins before the scanning. Finally, the team faced a



problem of logistics, because of the fountain's considerable size: because of its 12 ft maximal diameter and 21 ft height, it was imperative to find a way to reach the top statues and basins. The ladder not being a suitable option, the team decided on renting an hydraulic platform.

It only took the four members of the team two laser scanners and as little as one –cold!- fall night to scan the whole surface of the fountain, including the 8 statues, the water basins and the embellishments. The accuracy, detail and precision level of the final digital model is breathtaking: it is indeed a perfect virtual and scaled replica of the original.



The Handyscan 3D scanners have several interesting features, such as self-positioning, measurements high resolution and accuracy, portability and ease of use. However, four particular Handyscan 3D features sealed the deal for that project. First of all, these laser scanners are not fixed devices and allow for 360° scanning in tight spaces, which was crucial for the project to be carried out, as the 8 statues adorning the fountain have been carved on 360°. Second of all, the system does not require any other external tracking device, as the referencing is done from the very part to be scanned. Third of all, the scanning process is contactless (the scanner does not have to touch the work of art). Lastly, these three features added up to the possibility of scanning directly on site. Needless to say that without that fourth feature, the project would have been simply impossible to carry out.

THE FOUNTAIN GETS FASHIONABLE

A few months later, Mr. Charles-Olivier Roy, owner of the jewellery store Artisans du passage heard about the scanning project carried out by Creaform. He contacted the people at Creaform and exposed his idea: to use the digital files of the fountain to create jewellery pieces, within the frame of the 400th anniversary celebrations of the city of Québec.



Mr. Roy used the digital files generated and provided by Creaform to tool miniature replicas in precious metal of the Tourny fountain's statues, that embody the rivers. To do so and because



this task required highly specialized equipment, Mr. Roy partnered with a Toronto-based company to do the tooling.

Mr. Roy has created silver sleeve buttons as well as charm bracelets, which workmanship and detail show extreme finesse. These miniatures work of arts were given as a present to the spouses of the chiefs of state and leaders attending the 22nd Francophony Summit, held in Quebec City in October of 2008.

CONCLUSION

When the team first came up with this idea, little did they know that it would lead to such outcome! We have to admit that 3D scanning is a high technology process applicable to endless applications. Ipso facto, as innovative and advanced as they are, the Handyscan 3D self-positioning handheld laser scanners now emerge as powerful and reliable 3D scanning tools.

www.creaform3d.com
www.artisansdupassage.com
www.fontainedetourny.com