

Using 3-D Virtual Reality to Promote Palestine



By Sam Hussein

Imagine for a second that you have the ability to immerse yourself in a 3-D virtual reality (VR) world

with an exact replica of a heritage site you want to visit. You look to your left and right and walk through the site as if you were there. You extend your hand to touch the walls, the floors, the columns as if they were right in front of you. You feel the presence of history come to life.

3-D VR is truly the best way to experience a heritage site digitally. An ideal experience involves wearing VR goggles. These goggles allow the curious navigator or tourist to look around in all directions and see the place as it really is.

Other layers could be added to the 3-D VR environment to make the experience even more pleasant through features such as combining it with text, music, and even a tour guide to explain the history of the place as the user walks around in this digital platform.

A short movie that shows a basic flythrough through the main archaeological site at Sebastiya is available at <https://youtu.be/H9s350ztEZI>.

The town of Sebastiya is located 12 kilometers north of Nablus. Today, you can see the ruins of ancient Sebastiya on a hill that overlooks the present village. The site invites you to feel the power of seven successive cultures, the earliest dating back as far as 10,000 years: Canaanite, Israelite, Hellenistic, Herodian, Roman, Byzantine, and Ottoman.

According to religious tradition, the body of Saint John the Baptist was found in Sebastiya.

This image (below) of the site was captured using a 3-D laser scanner that moved from one location to the next to capture the entire place. The scanner uses a laser beam (Laser Class 1 – nonharmful beam) to measure the most intricate details and to capture the exact geometry of every rock, stone, crack, and column it sees (1 million points per second are captured with up to 1 mm accuracy).



civilizations. By creating an online platform that shows these sites and adds narration, we bring these sites to life.

Our kids today need an interactive 3-D VR platform to experience history and learn from it. Their attention span is so short these days that unless we give them a new

■ The ruins of Sebastiya.



This is not futuristic technology; this technology exists today. Using a 3-D laser scanner is just one way to capture the beauty of a location. We can also use drones to achieve the same result but with less accuracy.

Palestine is beautiful and rich with cultural heritage sites from many

ways to learn, they will not have the chance to experience the fascinating wonders of our precious history.

Other benefits of 3-D laser scanning include presentation, as it enables us to present culture heritage sites in a 3-D VR manner for all to see, all around the world. Furthermore,



■ One of the best ways to capture with utmost detail the true environment of a heritage site is through a 3-D laser scanner, shown above.

it serves education, as it allows us to educate future and current generations in a new interactive way. Finally, it serves preservation, since by documenting the site today, we will be able to restore it in the future to exactly the way it once was, due to the 3-D measurements done by the 3D laser scanner.

Our shared goal is to attract tourists to our country and show them the beauty of this land. The road ahead has many challenges, but we know we will prevail. We have many outstanding partners working side by side with us to promote cultural heritage in the country. A short list of our partners includes the Ministry of Tourism and Antiquities, UNESCO, Riwaq, Taawon, and Custodia Terra Sancta.

For more information on LionHeart3D and the work being done in Palestine, visit www.LionHeart.ps.

With a master's degree in mechanical engineering, Sam N. Hussein is the CEO of LionHeart, a group of four companies, and a fellow at the Aspen Institute, Middle East Leadership Initiative. He has an exemplary record of leading business development globally for small through billion-dollar software- and hardware-development companies and is highly skilled at creatively motivating employees and empowering them to perform at their optimum levels of productivity.

