

Operation Charlie

Maptek™ I-Site™ is helping virtual tourism become a reality at Operation Charlie, breathing new life into Charleville's historic airfield.

In 1942, after the Japanese invasion of the Pacific during WWII, Charleville aerodrome in south west Queensland became the terminal for heavy bomber aircraft flown from the USA. Today, many wartime remains are still visible including an aircraft hangar, Hangar 104, the radio tower and a concrete shed housing the top secret bombsights fitted to the US aircraft.

Maptek has been working closely with Griffith Institute for Tourism at Griffith University and Murweh Shire Council to unearth Charleville's WWII and aviation heritage through 3D laser scanning.

The 3D data is processed and visualised in Maptek I-Site Studio software. A pilot study will focus on significant areas of interest such as the Bomb Vault, Bitumen Baths, Aircraft Hangar and Mess Hall.

This information now enables the community to communicate and present these WWII sites in new ways, enabling accurate 3D printing and production of educational tools and online viewing platforms.



3D laser scan of Hangar 104 displayed in I-Site Studio software

Griffith University Technical Officer and PhD candidate Chris Little says the university, with support from Maptek, now wants to further its research into the use of non-invasive methods for 3D data capture of historical landmarks.

Converting these physical real world sites and objects into digital interactive virtual experiences is described as turning cold sites into warm, living sites.

The overall aim of the project is to develop new workflows for heritage preservation, bringing sites back to 'virtual life' by converting them into immersive experiences and enabling visitors a new, engaging way to interact with Australia's rich history.

*Charleville QANTAS aircraft hangar 1930
(Source: Murweh Shire Council)*





2,000 feet above Charleville airbase during WWII (Source: Murweh Shire Council)



3D scan of Charleville Bomb Vault for virtual reality



Charleville WWII visitor experience (Source: Murweh Shire Council)

Maptek involvement with this project enables diversification into new areas of 3D laser scanning, post-processing and 3D user interfaces such as augmented and virtual reality human-computer interactions.

Griffith Institute for Tourism Senior Research Assistant Dr Alexandra Bec says developing these new workflows enables researchers to open a window into the past, exposing greater knowledge around the sites themselves and sharing their hidden stories.

Bringing these historic locations into this form means they can be preserved for future generations of visitors and locals to enjoy and experience.

Investing in this project offers the Charleville community and Murweh Shire Council enhanced commercial benefits for the region. Virtual tourism has been shown as a powerful tool to enhance visitor numbers. Given the 'hidden' nature of the sites to be developed, the potential for augmented and virtual reality systems to lead to increased real world visitor numbers has potential for Charleville to become a major tourist attraction.

Until now, visitors to Charleville have only been able to travel through the WWII airbase remains as part of a convoy tour and listen to accounts of soldier life from local volunteers. Griffith Institute for Tourism Senior Research Fellow Dr Brent D. Moyle notes combining cutting-edge methods with traditional interpretative mediums has immense potential.

Capturing these stories and presenting them as immersive augmented and virtual reality experiences will provide visitors with an interactive and immersive experience that better explains the stories, photos and memorabilia.

Already supported by Griffith Institute for Tourism and Queensland Tourism, this new technology will put Charleville and regional Queensland on the map as a 'must visit' location.

Thanks to:

- Murweh Shire Council
- Chris Little, Technical Officer and PhD candidate with Griffith University
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