



PRESENCE

Cultural Heritage

Step into history — and feel every moment.

Real-World Challenge

Museums and historical sites strive to bring the past to life - but physical limitations, aging artifacts, and the passive nature of traditional tours often create barriers to engagement. Many stories are difficult to convey with words or static displays, especially for younger or digitally native audiences. And for those who can't visit in person, the emotional and educational experience of history remains out of reach.

Immersive Solution

PRESENCE reimagines how we experience history through XR. In this use case, visitors explore "Tunnel 57," one of the most daring Cold War escape stories, recreated in full spatial detail. Equipped with an XR headset, haptic gloves, and a haptic vest, the user is transported into a reconstructed Berlin cellar - the original starting point of the escape tunnel.



A holoported "time witness" shares a gripping first-hand account of the escape attempt. An intelligent virtual guide offers historical context, explains cultural details, and answers questions. Visitors crawl through the tunnel, touch its walls, and interact with artifacts - feeling vibrations, texture, and resistance through haptics as if they were there. It's not just a lesson - it's a lived experience.



Key Technologies in Action

- **Holoportation:** A time witness recounts the escape with authentic emotion and presence.
- **Haptics:** Users feel textures, tools, and resistance - turning passive viewing into active exploration.
- **IVA Tour Guide:** Offers voice-guided narration and answers to user questions in real time.



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Immersive Scenario

The visitor enters a damp cellar recreated in 1960s Berlin. Dust motes float in the air. A flickering lightbulb hangs above a pile of earth. A man, projected through holoportation, appears near the tunnel entrance and begins to speak: "This is where we began - digging every night for weeks, terrified we'd be heard."



The tunnel stretches ahead. The visitor drops to their hands and knees and begins to crawl. Their haptic vest rumbles faintly as they move through confined space. Brushing against the rough wall gives a sharp vibration, as though their shoulder has struck a wooden support beam.

The virtual assistant explains how the tunnel was reinforced and how its escape route led to freedom in the West.

At the end of the tunnel, the visitor sees personal belongings, photos, bags, a child's shoe. These items tell a human story, now felt in full emotional and sensory detail.

Why it Matters

PRESENCE gives cultural institutions a new way to preserve and share history through participation, not just observation. Visitors can connect with stories in visceral, memorable ways, while the platform ensures accessibility, multilingual narration, and repeatable experiences for global audiences. For heritage, it's not only about remembering, it's about reliving.

Applications & Domains

-  Museums & Exhibits
-  Education & EdTech
-  Cultural Tourism
-  Remembrance & Reconciliation

"You don't just learn history — you live it."

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on Anything
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