USE CASE · TACTERRA DIGITAL TERRAIN SIMULATION

Mission rehearsal on digital terrain

A map and a sand model show the ground, but nobody can walk on them. A digital twin built from GIS data lets a commander plan on the real terrain and lets the team walk the route in VR before the mission, on a network that never touches the internet.

IN SHORT

- TACTERRA is a tactical terrain intelligence and mission rehearsal platform developed in India by Star INXS.
- It turns raw GIS data into a walkable digital twin of a 50 x 50 km sector in under 4 hours.
- 60-70 users can train together in AR and VR on a 30 Hz authoritative server.
- It runs 100% air-gapped on a segmented network, including the offline AI tactical assistant.



THE FIGURES THAT MATTER

FIGURE	WHY IT MATTERS	TACTERRA
GIS to walkable twin	The model must be ready before the mission	Under 4 h for a 50 x 50 km sector
Pipeline	Where the time goes	Ingest 20-40 min, reconstruct 90-150 min, package 30-60 min
Fidelity modes	Detail against speed	Low-poly operational, high-detail tactical, hybrid
Concurrent users	Size of the group that rehearses together	60-70 AR / VR
Server tick	Everyone sees the same thing at the same time	30 Hz authoritative
Domains	Arms that can train together	Infantry, armoured, artillery, air defence, special forces, JTAC
AI	Planning advice and debrief	Offline LLM tactical assistant; mission, terrain and AAR agents

HOW A REHEARSAL RUNS

1. **Ingest the GIS data.** Raw GIS data for the sector is loaded, which takes 20-40 minutes.
2. **Reconstruct the terrain.** The platform builds the terrain model in 90-150 minutes.
3. **Package the twin.** The walkable twin is packaged in 30-60 minutes, in low-poly, high-detail or hybrid fidelity.
4. **Plan on the sand table.** Commanders plan on a holographic sand table of the real terrain.
5. **Rehearse in VR.** Teams step into the digital twin and walk the route before the mission.

COMMON QUESTIONS

Who makes TACTERRA?
Star INXS Solutions Pvt Ltd. TACTERRA is designed and built in India, and the company is certified to five ISO management-system standards.

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