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DIGITAL TWIN OF BATTLEFIELD

REVOLUTIONIZING MISSION PLANNING AND EXECUTION WITH REAL-TIME 3D SIMULATIONS

Problem

Technological Limitations

Small groups of soldiers are highly skilled, but rely on **outdated tools**: **radio** and **paper**

Lack of software support **increases dangers** faced and **dicreases mission success**.

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Problem

As soldiers lack the ability to anticipate crucial variables, probability of mission success decreases and soldiers are more vulnerable to ambushes, surprise attacks, explosions, and other unforeseen dangers.

Digital Twins can radically transform every aspect of mission planning and execution!

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OUR GOAL

Develop a decision support system that enhances the ability of small soldier groups to plan and execute missions effectively.

HOW

3D real-time replica of the battlefield

Buildings, terrain, vehicles, and people

Soldiers can view the area from various perspectives, gaining a comprehensive understanding of the environment.

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HOW

3D real-time replica of the battlefield

Blast simulation scenarios

Allows commanders to run **multiple blast simulation scenarios**, helps identification of most effective strategies, reducing risks and improving decision-making.

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HOW

3D real-time replica of the battlefield

Blast simulation scenarios

Continuous monitoring & update

Ensures soldiers have the **most current information** allowing them to adapt quickly, adjusting tactics based on **real-time updates** of evolving battlefield conditions.

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HOW

3D real-time replica of the battlefield

Blast simulation scenarios

Continuous monitoring & update

On-Site Portable Server Solution

Entire system operates on a **small, portable server** that provides **local connectivity** for soldiers and drones, ensuring functionality in areas with limited or no internet access.

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HOW IT WORKS

Real-time 3D Modeling

TECHNOLOGY

DRONES

SATELLITE

PHOTOGRAMMETRY

POINT CLOUDS

MACHINE LEARNING TO CONVERT INTO 3D MODELS.

3D MODEL

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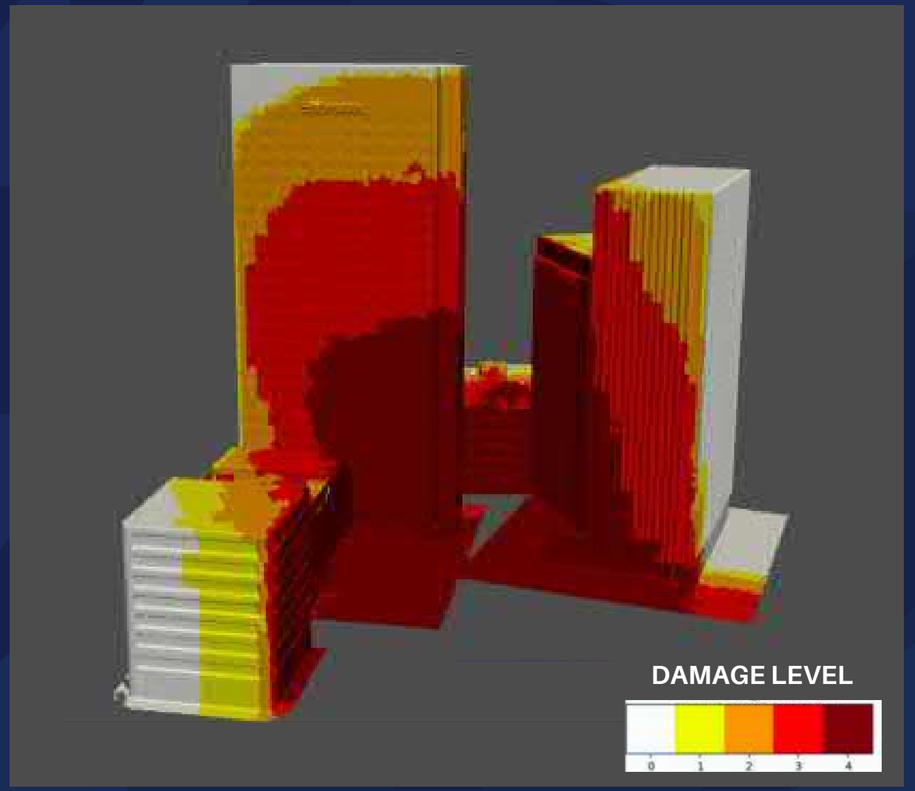
HOW IT WORKS

AI & GPU: Accelerated Simulations

Advanced AI and GPU technology enable near-real-time blast simulations, ensuring timely and accurate results for tactical planning.



BOMB BLAST DAMAGE SIMULATION ON BUILDING

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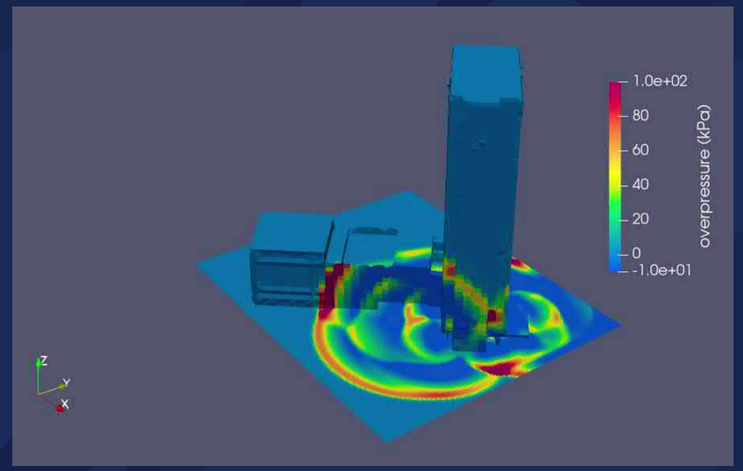
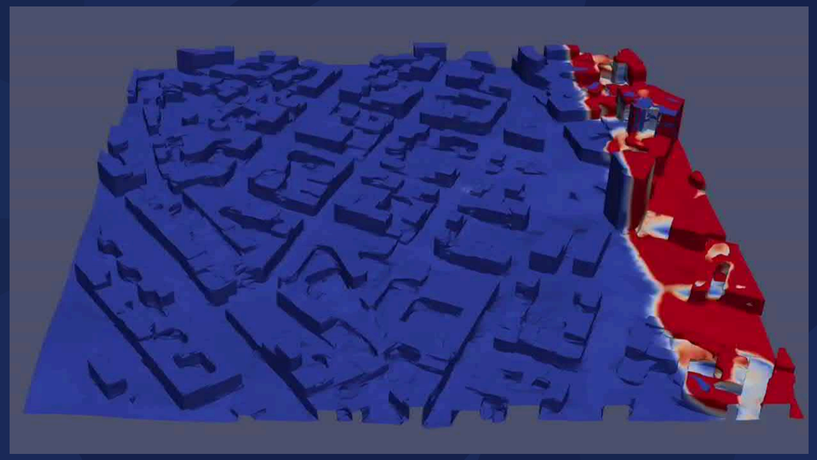
HOW IT WORKS

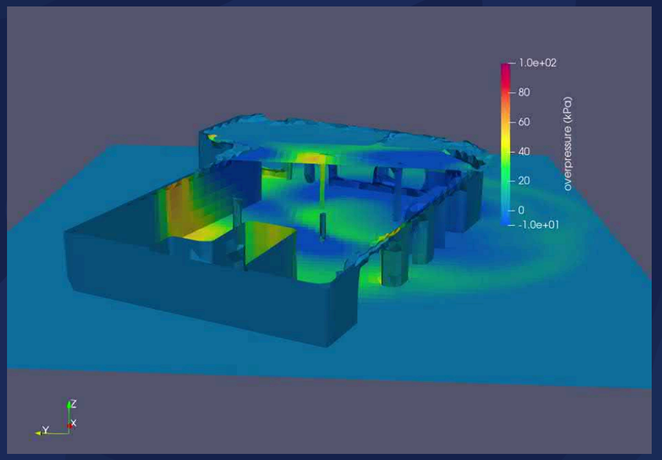
AI & GPU: Accelerated Simulations



BUILDING BLAST SPREAD SIMULATION



GAS DISPERSION SIMULATION ON CITY BLOCK



BLAST SPREAD SIMULATION - GROUNDFLOOR VIEW

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HOW IT WORKS

3D View of Area of Interest

Provides a comprehensive view of the area, allowing soldiers to familiarize with the battlefield in advance, for improved mission readiness and situational awareness.

3D MAP OF LISBON CITY

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FUTURE

Looking beyond the battlefield

This technology serves as the foundation for future command and control software, digitizing operations from small to large military units in real-time 3D. It enables the system to run thousands of scenarios to maximize mission success while ensuring seamless coordination between soldiers and autonomous systems through access to high-quality, real-time data. It can be further extended from the battlefield to virtual combat training within the metaverse.

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WHY US?

We have proven track record of blending real-world and virtual environments through digital twin technology.

Our ability to incorporate AI, machine learning, and autonomous systems, ensuring access to high-quality, real-time data.

We are commited to pushing the boundaries of technology, positioning us as the ideal partner for future command and control software development!

LET'S PREPARE FOR THE CHALLENGES OF TOMORROW'S BATTLEFIELD!

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