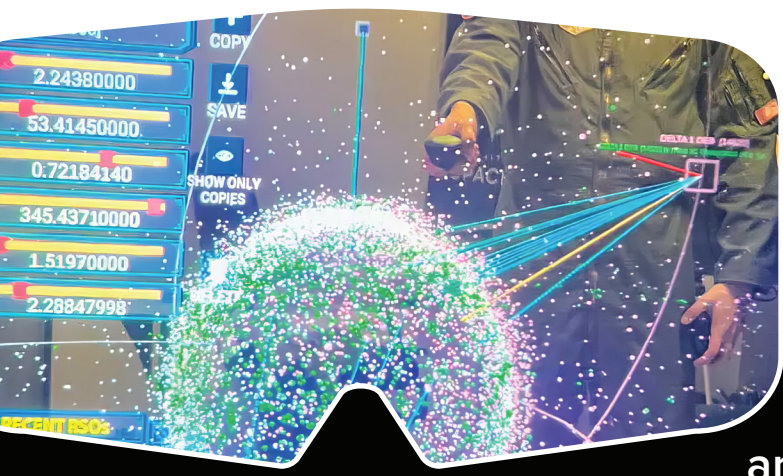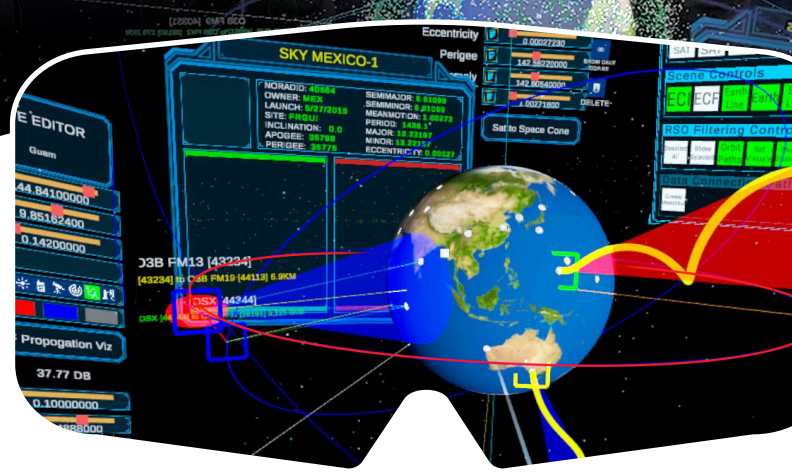# KWYN™ SOLAR

Immersive AR/VR for space domain education and battle management

Transforming operations, professional training, and space education

KWYN™ SOLAR is an advanced AR/VR platform revolutionizing how students, educators, space professionals, scientists, and policymakers understand the complex interactions of resident space objects. Users are immersed in the four-dimensional space domain, enabling direct interaction and visualization for a deep, intuitive understanding of space concepts, risks, opportunities, and dynamics.

Proven cognitive benefits and real-world deployments

Validated by cognitive evaluation teams, KWYN SOLAR reduces cognitive load, improving learning and retention. It is used by the US Air Force Academy, where it supports cadet training for Space Force careers, and is deployed to other units, including Space Delta 13's Operations Squadron.

Tailored, effective, and human-centered design

Customized AR/VR solution
Personalized experiences are tailored to individual needs with interactions informed by deep human factors expertise. Compatible with Magic Leap, Meta Quest, HTC VIVE, and other AR/VR headsets.

Contextual metadata overlays
Synchronized data provides context based on user access level, supporting both secure and intuitive understanding of dynamic satellite constellations.

Seamless collaboration
Interactive real-time networking features enable collaboration, data streaming, watchlist configuration, and rapid content sharing.

Advanced visualizations
3D visualizations, filtering, and annotation tools enhance spatiotemporal understanding of satellite field of view, satcom operations, and proximity-based conjunction assessments.

Empowering the future of space science

KWYN SOLAR accelerates space science by empowering students and researchers to explore new frontiers, publish and share findings, and lead space innovation as they explore complex math, astrodynamics, and new space architectures with technology demonstrated to enhance understanding and retention of this intricate content.

# Enhancing space domain awareness and decision-making

KWYN SOLAR integrates tens of thousands of satellite ephemerides into actionable intelligence with real-time 3D visualizations, spatiotemporal data analysis, and metadata overlays. Operators visualize and manipulate satellite tactics, techniques, and procedures (TTPs) delivering better course of action (COA) insights for rapid SDA and effective decision-making.

SCENARIO DEVELOPMENT

CLASSROOM-BASED NETWORKING

STUDENT INTERACTION
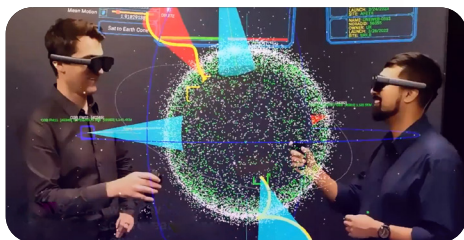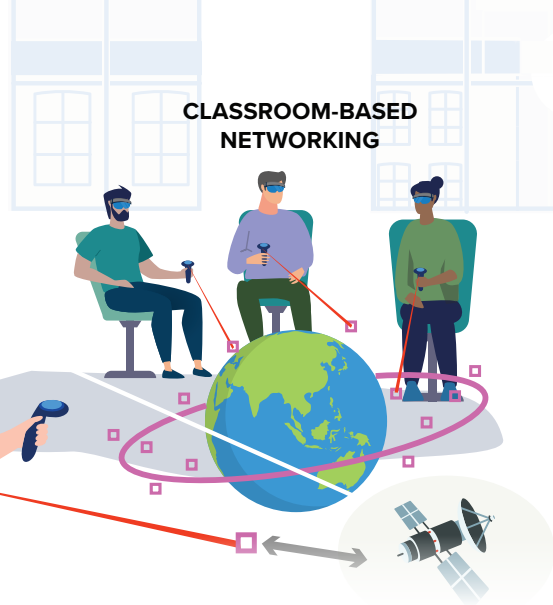
Core space education content, tools, and interactive systems support physics-based models and natural, intuitive interaction

Advanced 3D models of satellites and space assets enable interactive exploration of space operations
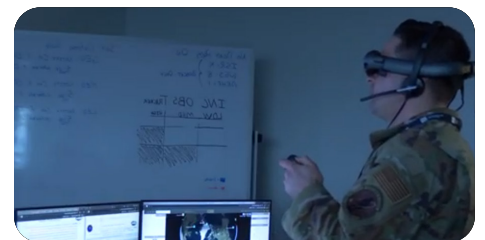
Cross-device, synchronous networking facilitates distributed, remote learning with real-time interaction and feedback

Contact us to start using KWYN SOLAR today!
Secure data handling, accredited hardware, TTP-integrated operational scenarios

cra.com/kwyn-solar

CONTACT OUR TEAM

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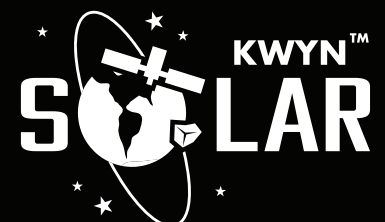Principal Scientist, Director of Program Transition

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KWYN™ SOLAR

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