



WRAITH

*Interoperability and Performance Analysis
at the Tactical Edge*



The Warfighter Real-time Analysis and Interoperability with TruthH (WRAITH) software suite, developed by KBR, interfaces to various hardware and protocols to receive and process different segregated data links and correlate those sources with existing tactical and commercial radars in support of U.S. Army air and missile defense. The WRAITH system is a real-time data collection, test driver and data analysis tool that augments tactical systems to support multi-domain operations demonstrations and advanced concepts in an adapted system-of-systems environment. The WRAITH software suite is highly customizable and can operate in many different modes depending on its configuration. The primary modes of operation are as a test driver and a data collection and analysis tool. When operating as a test driver, WRAITH generates tactical data link messages from various input sources of track data, such as Distributed Interactive Simulation (DIS). When operating as a data collection and analysis tool, WRAITH passively listens to various tactical and instrumentation data links and displays the data in real-time.

AREAS OF EXPERTISE

Component Based: Each interface/algorithm in the WRAITH software suite is developed within its own component, which can be dynamically loaded into the WRAITH application at runtime. Data can be routed between components as defined in a configuration file. This allows the WRAITH application to be uniquely configured and customizable.

Analysis and Measurement: WRAITH is used to analyze data quality and measure performance of the various transmission mechanisms. It connects to instrumented test range sources of GPS truth providing real-time displays to support situational awareness and analysis of tactical system tracking accuracy and performance.

Testing: WRAITH has various analysis tools that display critical test information to the operator as the test is in progress. WRAITH is typically used in this mode to assist with mission go/no go calls and to help determine if test runs are operating nominally.

- Geodetic Registration
- Range Instrumentation Processing
- Joint Integrated Fire Control
- Advanced Engagement Concepts and Demonstrations
- Real-Time Data Collection and Tactical System Performance Monitoring
- Live Virtual Constructive Support for Joint Interoperability
- Multi-Domain Operations
- Data Injection and Tactical System Stimulation for Testing
- Link 16 Processing and Data Forwarding: Joint Range Extension (JRE)

Data can be routed between components as defined in a configuration file. This allows the WRAITH application to be uniquely configured for different applications.



PROVEN PERFORMANCE

KBR's team of software developers and test analysts has a trusted set of experience demonstrated for combat and materiel developers and decision makers:

- Participated in air and missile defense Hardware-in-the-Loop (HWIL), field test support, and technology demonstrations in various joint DoD operational test environments since 2000
- Supported joint testing, soldier training, and advanced concepts and demonstrations at the Integrated Air and Missile Defense (IAMD) Tactical Systems Integration Lab (TSIL) at Fort Bliss, Texas
- Provided backup Geodetic Registration for Integrated Fire Mission Command (IFMC) flight tests since 2015
- Supported Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) testing with the U.S. Air Force, including testing with the mobile Joint Air Defense Operations Center (JADOC), which is used in the National Capital Region
- Certified by the U.S. Army Test and Evaluation Command as a Patriot Integrated Fire Control Cooperative Shooter Emulator (when integrated with the Virtual Engagement Simulation and Test (VEST) high fidelity missile model)

WHY KBR?

KBR delivers mission critical, trusted services that help the U.S. maintain its unique and indispensable battlespace advantage. For more than 20 years, KBR has provided interoperability solutions for U.S. Army air and missile defense systems, by developing software applications to support advanced concepts of Joint Integrated Fire Control, and analysis tools to provide real-time results of tactical system performance with regards to kinematic tracking accuracy and target latency. These are critical factors to improve kill probability. KBR's team works at the tactical edge with supporting interfaces to tactical radios and direct interfaces to U.S. Army fire control networks. As threats continue to evolve, protecting our nation requires cutting-edge technologies and innovative methodologies, like WRAITH, to stay ahead of the curve. KBR is partnering with industry-leading technology developers and government partners on defense systems designed to counter or defeat missile, air and other threats on the battlefield.

NEXT STEPS

Let's talk about your interoperability and performance analysis goals and how KBR can help you achieve them. Contact us to learn more and schedule a consultation at kbr.com/en/contact-us.

ABOUT US

We deliver science, technology and engineering solutions to governments and companies around the world. KBR employs approximately 28,000 people performing diverse, complex and mission critical roles in 34 countries.

We are proud to work with customers across the globe to provide technology, value-added services, and long-term operations and maintenance services to ensure consistent delivery with predictable results. At KBR, We are the Team Behind the MissionSM.