

RANGE INSTRUMENTATION WAVEFORM (RIW)

Cubic's Range Instrument Waveform (RIW) is a cost effective upgrade to the existing P5 combat training systems (CTS). RIW upgrades the training network of CTS allowing for an increase in the amount of aircraft allowed to participate in training exercises, and also provides a common waveform between 4th and 5th generation aircraft. RIW allows the Air Force, Navy, and Marine Corps to operate their full spectrum of aircraft on the same network, facilitating multiservice joint exercises.

RIW is easily integrated into existing P5 systems, and is adaptable into a communication secure operating environment with added encryption capabilities. In addition RIW runs a range-less network and can support live monitor training simulations on the ground and aboard aircraft carriers. RIW provides enhancements to pilot training scenarios by incorporating messaging that provides advanced features such as weapons simulation, counter measures, and kill notification all in real time. This waveform was specifically designed to be interoperable between various types of aircraft enabling large multiservice exercises.

Key Features

- Utilizes existing P5 CTS
- Increased node capacity
- 4 Channel node hopping mode
- Dual mode interface
- Dynamics processing collects in flight data

Benefits

- Cost effective solution, integrates new generation platforms into existing system
- Upwards of 100 platforms can operate on network
- Allows rangeless training environment
- Tactical video simultaneously with ACMI
- Perform real time weapon simulations



Performance Characteristics

Network Overview

- Capacity for 100 total nodes
- Receiver dynamic processing
- Dual mode allows for tactical video capability and ACMI simultaneously

RF Transmit and Receive

- 500 nautical miles total network range
- L Band support (1.750-1.850 GHz)
- S Band (2.3-2.5GHz)
- Single antenna (JSF)

GPS Denied

- Time of arrival
- Direction finding
- Differential time of arrival

Encryption

- 10 Mbps per crypto channel
- Transmit on Demand, Frequency Hopping, and Time Jitter