

# ARCHIVED REPORT

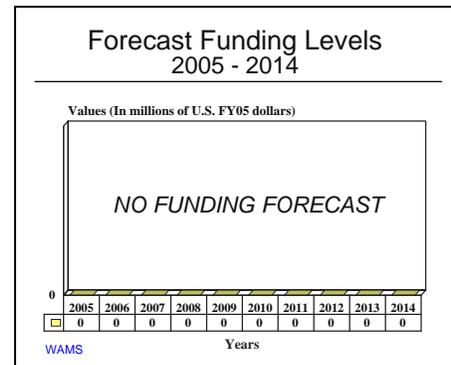
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## Wide-band Anti-jam Modem System (WAMS) - Archived 3/2006

### Outlook

- The United States Army last funded the Wide-band Anti-jam Modem System (WAMS) in fiscal year 2003
- No production is foreseen at this time
- Unless WAMS developments occur, this report will be archived in March 2006



### Orientation

**Description.** The Wide-band Anti-jam Modem System (WAMS) would enable the United States Army warfighter to communicate via the DSCS III, NATO, and SKYNET 4 satellite systems. The WAMS would be able to provide communications connectivity that will survive disturbed atmospheric conditions caused by jamming and nuclear events.

#### Sponsor

U.S. Army  
Army Communications-Electronics Command  
Fort Monmouth, New Jersey (NJ)

**Status.** According to the fiscal year 2005 United States Army Procurement Back-up Book, the U.S. Army eliminated funding for the WAMS in fiscal year 2004.

**Total Produced.** Not applicable at this time.

**Application.** Communications

**Price Range.** According to the FY 2004 U.S. Army Procurement Back-up Book, the cost of WAMS hardware was supposed to be \$152,000 per unit.

### Contractors

Unidentified at this time, Prime

### Technical Data

**Design Features.** The primary component of the WAMS architecture will be the Wide-band Anti-jam Modem (WAM). The WAM will be comprised of the following functional parts: the Communications Unit (CU), Operator Interface Unit (OIU), Modem Control Unit (MCU), TRANSEC/COMSEC Unit (TCU), and Transmit Combiner/Receive Divider (TCRD). A single WAM unit will contain multiple CUs, providing up to 12 transmit and 12 receive functions.

The minimum WAM user communication requirements include a Medium Data Rate (MDR) Anti-Jam (AJ) service between 16K and 2.048 Mbps, and an Anti-Scintillation (AS) service between 16 and 128 Kbps. The WAM will have an intermediate frequency bandwidth of at least 135 Mhz. This represents the maximum bandwidth that a user may select for operation. The WAM will have eight bandwidth occupancy plans. Bandwidth occupancy plans define

the actual range of frequencies that the anti-jam waveform may occupy at any instant in time.

The WAM will be able to perform as a Network Terminal (NT), or as a Network Control Terminal (NCT). The NCT will furnish all the functionality needed to provide positive control over network

resources, including the responsibility to add or delete circuits from the active database.

The Wide-band Anti-jam Modem will be 56 inches high, 19 inches wide, and 20 inches deep, and will weigh approximately 300 pounds.

## Variants/Upgrades

A WAM variant for use in the U.S. Army Tactical Tri-band Terminal Heavy, the T3(H) will be solicited as a separate "priced option." This version of the WAM will be called the Ruggedized NT (R-NT), and will satisfy the requirements of the T3(H) to furnish an anti-jam

communication capability. In addition to the MDR data rates, the R-NT will be able to support frequency division multiple-access communication up to 20 Msps. The R-NT will provide up to four transmit and eight receive functions.

## Program Review

**Background.** In 1996, after six years of research, the full-scale engineering development version of the Universal Modem was built. The prototype Universal Modem, together with the prototype Interim System Planning Computer, demonstrated the feasibility of building a wide-band frequency-hopping anti-jam communication system, capable of using a system bandwidth of up to 500 Mhz.

In February 1997, a contract was awarded to Rockwell Collins to manufacture a production version of the Universal Modem System (UMS). Three years later

(March 2000), the UMS production contract was terminated due to "contractual" issues. A new product acquisition program was initiated under the name Wide-band Anti-jam Modem System (WAMS). If produced, the WAMS will provide the U.S. Army warfighter with satellite communications capability during sub-optimal atmospheric conditions.

Latest Information. According to the fiscal year 2005 United States Army Procurement Back-up Book, the U.S. Army last funded the Wide-band Anti-jam Modem System (WAMS) in fiscal year 2003.

## Funding

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According to the fiscal year 2005 United States Army Procurement Back-up Book, the U.S. Army eliminated funding for the WAMS in fiscal year 2004.

## Recent Contracts

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No recent contracts have been identified.

## Timetable

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<u>Year</u>	<u>Major Development</u>
1990	Universal Modem research and development begins
1996	Full-scale engineering development version of the Universal Modem is constructed
1997	Rockwell Collins awarded a contract to manufacture a production version of the Universal Modem System
2000	Universal Modem System production contract terminated
2000	Wide-band Anti-jam Modem System (WAMS) acquisition program initiated
2004	The U.S. Army eliminates funding for the WAMS

## Worldwide Distribution

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The Wide-band Anti-jam Modem System is a **United States Army** program.

## Forecast Rationale

If ever produced, the Wide-band Anti-jam Modem System, or WAMS, will enable the United States Army warfighter to communicate via the DSCS III, NATO, and SKYNET 4 satellite systems. According to a fiscal year 2005 United States Army procurement document, the U.S. Army last funded the WAMS in fiscal year 2003. Consequently, no production of the Wide-band Anti-jam Modem System is foreseen at this time. Unless WAMS developments occur, Forecast International will archive this report in March 2006.

## Ten-Year Outlook

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The United States Army last funded the Wide-band Anti-jam Modem System (WAMS) in fiscal year 2003. No production of the WAMS is foreseen at this time; consequently, Forecast International has omitted the Ten-Year Outlook chart.

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