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## Improved Emergency Message Automated Transmission System (IEMATS) Defense IEMATS Replacement Command and Control Terminal (DIRECT)

The United States Air Force, Electronic Systems Center (ESC), Strategic and Nuclear Deterrence Command and Control (SND C2) systems program office is in the process of improving the end-to-end communications capability of the ICBM forces, by adding the Modified Miniature Receive Terminal (MMRT) system to MINUTEMAN LCCs improving the timeliness and robustness of communications; and installing the Defense Improved Emergency Message Automated Transmission System (IEMATS) Replacement Command and Control Terminal (DIRECT) system into Strategic Command Centers providing faster and more accurate injection of force direction messages.

DIRECT was developed, produced, installed, and is currently maintained by General Dynamics Communication Systems, Needham, MA. Seven systems are installed in current Nuclear Commander in Chiefs (CINCs) command centers at NMCC, NMCC Site R, USJFCOM, USSTRATCOM, USSPACECOM, USPACOM, and USEUCOM. An additional system resides at General Dynamics as a development/test and sustainment system. DIRECT consists of both commercial-off-the-shelf (COTS) equipment and newly designed/developed equipment.

The Defense IEMATS Replacement Command and Control Terminal, DIRECT, is a strategic C2 system directly supporting the Chairman of the Joint Chiefs of Staff (CJCS). DIRECT allows the CJCS and warfighters to remain responsive to the NCA by providing an automatic capability to prepare, process, transmit, receive, acknowledge, and re-address Emergency Action Messages (EAM) on all available communication channels with an expansion capability for future communication systems. DIRECT enables its operators to generate, release, and retransmit Emergency Action Messages (EAMs), Emergency Action Support Message (EASMs), and Non-Emergency Action Messages (non-EAMs). It also provides its operators with the capability to receive, correct, acknowledge, and relay messages received at the command center. DIRECT provides the means for two or more person review of all messages and enforces two person release of all messages.

DIRECT interfaces with communications systems located at each command center. The communications systems provide for the transmission and reception of EAMs, EASMs, non-EAMs, acknowledgements, and voice preambles between command centers and nuclear forces. DIRECT relies on the command center facilities for power, environmental conditioning, protection against conventional weapons, chemical/biological contamination events, and reduction of the level of exposure to the threat posed by High-Altitude Electromagnetic Pulse (HEMP), Electronic Warfare (EW), Information Warfare (IW), and physical access.

DIRECT utilizes a two-level maintenance concept--organizational and depot. Organizational level hardware maintenance will be performed by contractor on-site technicians in TOP SECRET/SIOP-

ESI facilities and will consist of system restoration by fault verification/isolation, removal/replacement of the faulty Line Replaceable Unit (LRU), and functional checkout using existing technical manuals and other technical data. Software maintenance will consist of periodic updates (estimated two per year) to implement changes to SIOP plans and values as well as to correct other problems and incorporate enhancements.

## **Sources and Resources**

• Defense IEMATS Replacement Command and Control Terminal

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http://www.fas.org/nuke/guide/usa/c3i/direct.htm

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