



LMST --Replacement for STAR-T

Purpose. The purpose of this paper is to provide information on the SHF Triband Advanced Range Extension Terminal (STAR-T) replacement terminal, the Lightweight Multiband Satellite Terminal (LMST).

- SHF wideband connectivity is primary long haul communications pipe for MEF to MSC connectivity, MEF to JTF connectivity and MEF to DISN connectivity
- Connectivity currently provided by five AN/TSC-85B and twenty AN/TSC-93B Ground Mobile Forces (GMF) vans in military X-band frequency
- GMF vans are 15 years old and have been subject to continuous and rigorous deployment schedule
- **GMF vans require constant maintenance.**
- **Burgeoning bandwidth requirements not sufficiently supported by GMF vans**

Replacement SHF Satcom Terminal

- Forty STAR-Ts were to replace all GMF vans
- STAR-T was to provide significantly increased bandwidth and frequency band flexibility in X, C and Ku bands
- Marine Corps portion of the STAR-T program worth approximately \$45 million under Army PM MILSATCOM contract
- Original acquisition timeline had Marine Corps fielding starting in Oct 98
- The STAR-T program is approximately 3 years behind schedule due to reliability problems, overheating problems and individual component problems
- STAR-T program slips forced USMC to fund "C" modification of GMF vans
- Marine Corps has Program Budget Decision (PBD) 172 from Congress authorizing STAR-T POM 00 dollars to be carried to FY01
- "C" modification has provided some risk mitigation for next several years: **This**

modification addresses primarily maintenance issues not bandwidth issues

- U. S. Army is looking at the following STAR-T timeline:
 - Mar 02—Complete OT&E
 - June 02—MSII Decision
 - Spring 03—Earliest Marine Corps Fielding
 - **Current contract has lapsed and must be renegotiated with Raytheon**

Budget Considerations

- Current timeline will not allow POM 00 dollars to be obligated until 02
- Marine Corps will not be able to obtain PBD to carry POM 00 dollars to FY02
- ***This places USMC \$45m, FY-00, PMC in grave jeopardy.***

Alternatives

- ❖ Jan 01-MCSC Commander directs "develop alternative material solution."
- ❖ Jan-Feb 01—HQMC, MCCDC, MCSC working groups discuss USMC requirements and evaluate alternatives
- ❖ Working groups consult July 2000 Booz, Allen Hamilton contracted study that indicated several potential alternatives.
- ❖ **AN/USC-59 Lightweight Multiband Satellite Terminal (LMST) determined to be best alternative—built by Harris Corporation; they also built GMF vans**
 - LMST meets over 90% of original STAR-T requirements
 - All significant requirements met
 - Capable of military X-band, commercial C and Ku band operation and upgradeable to Ka band
 - Provides expeditionary capability
 - Transit case version would be bought and fielded initially and would be mounted on a HMMWV in the near future to increase mobility



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- GOTS solution requiring no R&D and rapid procurement-LMST currently a PM MILSATCOM program of record
- Block IV LMST Terminals currently employed by USAF
- Block V contract to be signed in April 01
- PM MILSATCOM and Harris indicate eagerness to support Marine Corps' procurement of Block V systems
- Marine Corps could obligate original STAR-T POM 00 dollars relatively quick
- Initial Marine Corps buy of 25 terminals (designated USMC Block I terminals) would ***significantly*** increase Marine Corps satcom capability and provide FMF with increased bandwidth and frequency flexibility
- Future Marine Corps buy of 25 additional terminals (designated USMC Block II terminals) would fulfill nearly all Marine Corps SHF satcom requirements

MCCDC Actions

- MCCDC, working with MCSC, has developed Statement of Need as requirements documentation
- Statement of Need reflects initial Marine Corps Block I buy of approximately 25 systems to provide initial deployment capability
- Statement of Need also reflects a future Marine Corps Block II buy of approximately 25 systems as part of a spiral development approach and evolutionary acquisition

HQMC Position

- Director, C4 fully supports Statement of Need and procurement of STAR-T alternative to avoid losing \$45 million POM00 dollars
- Director C4 has signed letter endorsing Statement of Need
- C4 Board was briefed on 28 Feb 01 and approved STAR-T alternative