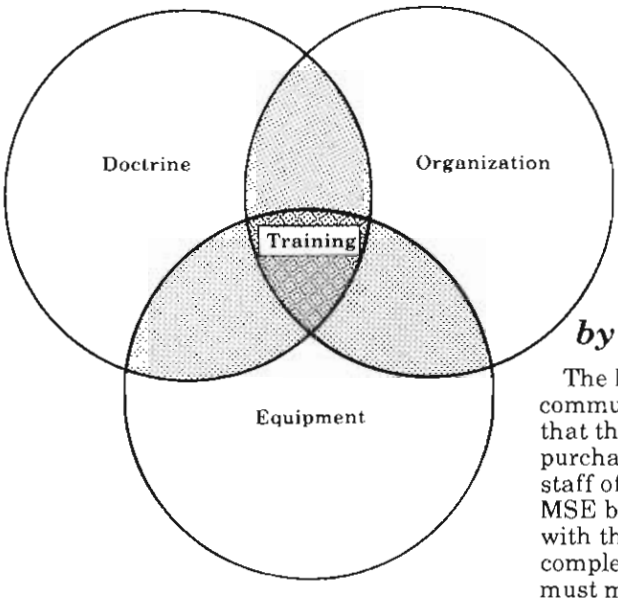
MSE training: the driving force



...a streamlined training strategy has been adopted that will meet the directives given by the Army staff and, at the same time, minimize any temporary loss of unit readiness...

by Jerry Arnett

The MSE system is the largest communications-electronics system that the Army has ever attempted to purchase at one time. The vice chief of staff of the Army has directed that MSE be fielded one corps at a time, with the fielding for each corps completed within one year. Trainers must meet this challenge by having personnel trained in time to keep pace with the MSE fielding schedule. To accomplish this, a streamlined training strategy has been adopted that will meet the directives given by the Army staff and, at the same time, minimize any temporary loss of unit readiness caused by the transition to MSE.

What we bought

GTE will develop the training materials required for the enlisted courses directly affected by MSE; they will also develop instructional materials for the four professional development courses. GTE will provide the following training courses and instructional materials:

- Staff Planners Course (each MACOM, DA staff, and Signal Center).
- Instructor key personnel training for 31V/31G during fielding at Fort Sill, Okla.
- Systems Management and Planning—January and March 1987 at Fort Gordon, Ga.
- Transition courses for operators and unit level maintainers, taught both in the receiving units and at the Signal Center.
- Functional courses for management and maintainers, also taught both in the receiving units and at the Signal Center.
- AIT courses for operators, unit level maintainers, and intermediate/forward maintainers.
- Exportable training materials for user devices.
- Reserve component, user, and sustainment training packages.
- Professional development courses (4 each) for specific MSE requirements.

What the Army provides

We must provide the required professional development training and doctrinal manuals necessary for MSE to interface with the current Army communications-electronics structure. Additionally, we will give all personnel attending resident training at Fort Gordon a one-week field training exercise (FTX).

New equipment training

Traditionally, CECOM had deployed NET teams to introduce new communications-electronics equipment. However, for MSE, the contractor will perform these missions as part of the total fielding effort. The contractor will deploy a NET team to each site to help that unit convert from its current structure to a new MSE unit. The training time-lines developed to support MSE fielding are shown in Figures 1 and 2.

In order to minimize the impact on force readiness, the contractor was directed to complete training within six weeks for corps and four weeks for divisions. As you can see, most of the units' training (less staff training) will be conducted within the allotted time. The rationale for conducting staff training first was to allow the planners time to develop the operations plans that would support MSE development after unit conversion. This training for the most part will be conducted in the contractor's own facilities. Additionally, the contractor will conduct a four-hour training course for all non-Signal subscriber personnel during this same period.

Unit transition training time-lines
Corps Signal bn

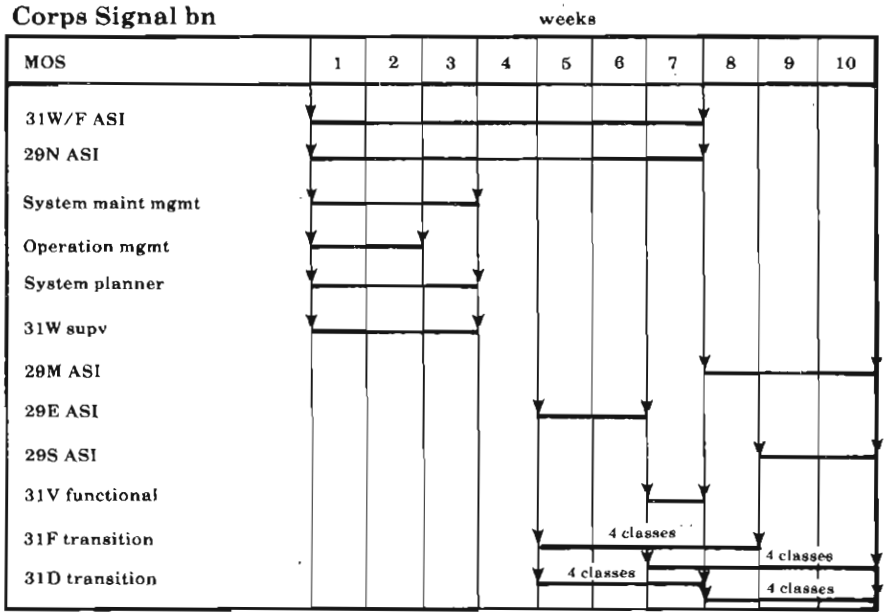


Figure 1.

Unit transition training time-lines
Division Signal bn

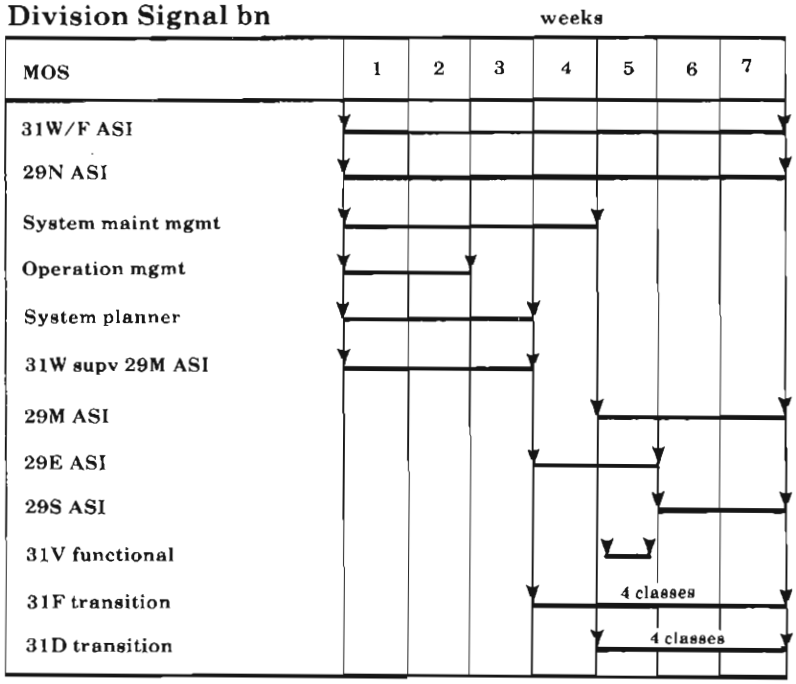


Figure 2.

Personnel from TRADOC and CECOM will oversee the on-site training conducted by GTE. All of the training programs provided by the contractor will have been approved by TRADOC. At the conclusion of training, the personnel will be qualified as MSE operators, maintainers, supervisors, or managers, and their MOSs will be adjusted to reflect this training certification.

After a unit finishes its NET, it will conduct an FTX so the unit commander will be able to evaluate his unit's performance with the new MSE. The Army Training and Evaluation Program (ARTEP) and the Army Materiel Training Plan (AMTP) will provide the evaluation standards, thus giving the commander concrete information on the readiness of his unit to support a deployment mission using MSE. Each commander must conduct such an evaluation prior to approving the MSE system. This approach has been adopted by DA and will be included in the update to the materiel fielding plans for MSE. We at Fort Gordon will provide personnel to help the commander conduct the AMTP and to evaluate the results. Not only will we thus assist the commander, but we will gain valuable feedback to help us update our FTX and provide quality instruction at the Signal School.

Doctrine and tactics

The Signal Center will deploy doctrine and tactics training teams to each active unit location and to the annual training site for reserve component units. This team will teach MSE doctrinal deployment concepts to both Signal and non-Signal personnel.

We are currently developing four new doctrinal manuals to support the deployment of MSE:

- *MSE Corps/Div Sig Ops, FC 11-12.*
- *MSE/MSGS Architecture Manual, FC 11-36.*
- *MSE Leadership Primer, FC 11-37.*
- *MSE/MSGS Management and Control, FC 11-38.*

In addition to the above field manuals, we are developing an MSE/TRI-TAC interface manual and updating *FM-50, Division Communications*, and *FM-92,Corps Communications*, to reflect the changes caused by the deployment of

Fort Gordon	Length
31D10 AIT, MSE Transmission System Operator	
31D10 Transition, MSE Transmission System Operator	3 Wks
31F10 AIT, MSE Network Switching System Operator	10 Wks
31F10 Transition, MSE Network Switching System Operator	4 Wks
29M10 Functional, Satellite/Microwave System Repair	3 Wks
29N10 Functional, Electronic Switching System Repair	7 Wks
31W/31F ASI	7 Wks
29S Functional, COMSEC Repair	2 Wks
29E Functional, MSE Field Radio Repair	2 Wks
Fort Sill	
31V/31G Unit Level Communications Maintainer	2 Wks

NOTE: The contractor will conduct all AIT, functional, and ASI courses for MSE at Fort Gordon.

Figure 3. MOS courses

Contractor Taught	Length
31W Transition, MSE System Supervisory	3 Wks
MSE System Planner	3 Wks
MSE System Maintenance Management	4 Wks
MSE System Operations Management	2 Wks
Integrated into ongoing courses and taught by government	
Signal Officer Basic Course AC/RC	108 Hrs
Signal Officer Advanced Course AC/RC	92 Hrs
Branch Officer Advanced (USAR)	20 Hrs
C-E Doctrine & MSE	36 Hrs
Corps/Div Operations	180 Hrs
EAC Operations	40 Hrs
EAC Plt Leader	40 Hrs
Co Grade Pre-Command	27 Hrs
WO Technical Basic 286A, 287A, 290A	80 Hrs
WO Advanced, 286A, 287A, 290A	160 Hrs
Bn/Bde Pre-Command Course	36 Hrs

Figure 4. Professional development courses

MSE. All of these manuals will be completed prior to the start of MSE fielding and will be included in the resident training at Fort Gordon and other TRADOC schools. (For a more detailed look at this subject, see "MSE doctrinal publications," in this issue.)

Resident training

There will be two primary resident training locations for MSE—Fort Gordon, Ga. and Fort Sill, Okla.—though there will be some training in other TRADOC schools for integration purposes.

GTE will develop the instructional materials for AIT, transitional, functional, and professional development courses directly related to MSE. The contractor will also teach these courses at Fort Gordon only. The Signal Center and Fort Sill will develop the instructional materials and teach all of the integration courses and MOS 31G/31V courses. Lists of MSE-related courses are shown in Figures 3 and 4.

Fort Gordon will conduct an FTX for each MSE class as it graduates. The program manager will provide a division set of MSE equipment (minus a company set) to support these FTX requirements. This training will begin at Fort Gordon in August 1989. Fort Sill will be provided a set of equipment to establish the same 31G/31V and professional development training. Fort Sill is scheduled for equipment fielding in November 1988, and for the start of training in February 1989.

GTE is developing 18 interactive video disc (IVD) programs for the various MOSs. These will be available to all units at the beginning of fielding. In addition to the IVDs, video tapes and extension training materials (ETMs) will be developed to support the user community and assist in sustainment training. Fort Gordon will also develop additional IVDs to support MSE fielding.

Reserve training

The initial training of personnel in reserve component units will be conducted differently from that for active units. The following strategy has been developed and approved, and will be implemented starting in FY 87:

- First year - The Active Guard/Reserve (AGR) and full-time manning (FTM) personnel for either a division Signal battalion (8 people each) or a corps Signal battalion (14 people each) will come to Fort Gordon and receive leveler training. Leveler training is a series of courses which will teach the basic fundamentals of digital communications, digital circuit analysis, electricity, electronics, computers, radio communications, telephony, common test equipment, single channel systems, multi-channel systems, computerized switching systems, and tactical automatic switching systems. Instructional packages will be developed for the following specific MSE equipment: node center switch, large extension switch, small extension switch, line of sight, radio access, HMMWV generator, and COMSEC.
- Second year - The personnel that attended training at Fort Gordon will return to their units and begin teaching the new information. This will continue until the unit gets MSE. At the fielding site, GTE will conduct 16 days of training and will then assist in the unit FTX.
- Third year - The unit will receive 98 training packages to assist them in maintaining their training status after completing the FTX. Additionally, GTE will visit the unit every month, for at least three days per visit, if the unit needs additional reinforcement training.

Summary

As you can tell from this overview of the MSE training strategy, the mission of training, both in the unit and at the TRADOC schools, will be a major undertaking by the Signal Corps. We will meet the challenge and support the resident and unit training. The fielding and training of MSE will provide a model for future nondevelopmental item (NDI) acquisitions within the Army.

Mr. Arnett is the deputy TRADOC systems manager for MSE at Fort Gordon, Ga. He previously served as a branch manager supervising training specialists, and as a team leader/project manager for TRI-TAC in the Directorate of Training Development at Fort Gordon. He has considerable experience teaching at the Signal School, both as a soldier and as a civilian. The author of several articles on new weapons systems and a veteran of over 80 oral presentations on the management, planning, and control of training products for new weapons systems, Mr. Arnett, in June of 1982, received the Commander's Award for superior service as a DA civilian.