Chapter 7
Information Operations

"Information is the currency of victory on the battle field."

GEN Gordon Sullivan, CSA, (1993)

LSE COMMUNICATIONS

The LSE's standing mission is to deploy rapidly to operational areas worldwide to provide strategic-level logistics to ASCC during combat and across the full range of military operations. USAMC designed the communications and automation for the LSE to support this mission profile. Characteristics of information operations equipment are:

- Portability and capability for rapid set up.
- Modularity (to include capability for split-based operation).
- Real-time service and secure mode for voice and data.
- Excellent capabilities for voice, data, E-mail, facsimile, and video.
- Worldwide access via satellite links to both commercial and DOD circuits.
- Networks with other LSE elements.
- Connectivity to theater and tactical systems.
- Minimum number of personnel required to operate.
- Commercial off-the-shelf and standard Army equipment packaged to meet the needs of the LSE.

Upon notification from the HQ USAMC Operations Center and LSE-Rear, and with clearance from the theater, an LSE Jump TOC deploys with sufficient long-haul and internal communications to sustain the LSE until the main body arrives. Once in the operational area, the LSE provides updates on the logistics situation to LSE-Rear, the Foundation LSE, and HQ USAMC using organic assured real-time communications. These real-time updates and the ability to communicate directly with the logistics staff of the ASCC, TSC, or JTF allow LSE commanders to rapidly tailor the follow-on LSE modules to best support the force. During early phases of LSE deployments, the LSE Jump TOC uses sophisticated equipment to provide strategic-level logistics support.

The backbone of the system that enables this level of reliable communications consists of dedicated access to Defense Communication Service (DCS) or other leased circuits. USAMC CECOM specifies one or more leased circuits in deployment plans for supporting the LSE. If available and of sufficient capacity, it incorporates the commercial telephone system of the HN (and CONUS) for voice, E-mail, and data. The communications element of the LSE TOC coordinates use of HN systems with TSC communications planners.

US ARMY COMMUNICATIONS AND ELECTRONIC CENTER COMMAND ROLE

CECOM supports the LSE through:

- Designing and fielding LSE communications capability.
- Procuring deployable communications and automation equipment to include ground transportation.
- Providing communications personnel to deploy with the LSE.
- Storing and maintaining the equipment.
- Coordinating with: US Army Information Systems Command (USAISC), the appropriate CINC, and the theater signal command (Army) on LSE communication and automation (i.e., identifying DCS entry points, area signal nodes, and overall operational-level signal support to be available in the theater).
- Obtaining access to commercial satellite circuits, when they are required.
- Assembling the full range of equipment and software for deployment with the LSE. This equipment includes: notebook and desktop personal computers, local area networks (LAN), desktop mobile and cellular telephones, handheld radios, facsimile machines, modems, printers, communications security devices, a small switch system to route voice and data, satellite ground stations, and antennae.

USAMC designed the LSE communications package to provide these capabilities:

- Point-to-point and conference voice via desktop, mobile, and cellular telephones.
- Data transmission and reception for queries into all USAMC and LOGSA databases plus all of the customer data services from LOGSA.
- Access to DAAS for defense data network (DDN).
- LAN and wide area network (WAN) data networks.
- Facsimile, including wireless.
- Voice mail.
- Call waiting/forwarding.
- Modem.
- Secure data and voice via the secure telephone unit (STU) devices.
- Internet to include secure Internet.
- Connectivity to ASCC/JTF via nodal interfaces, mobile or cellular phones.
- E-mail.
- Video conference and digital imaging.
- Speech and data encryption equipment.

ASCC COMMUNICATIONS SYSTEMS

Operational-level signal elements from the USAISC under OPCON of the ASCC provide area common-user system (ACUS) communications support. The ACUS is a series of nodal switching centers in a grid-like network connected primarily by ground line-of-sight multichannel radio systems, but with uplinks to satellites. The ACUS provides: high volume C2, operations/intelligence, administrative and logistics data, and voice

communications. The ACUS and dedicated ASCC support may provide the LSE with:

- Voice and data tactical information services to and within the operational level via multichannel tactical satellite.
- STAMIS connectivity for CSS automation via the CSS automated information system interface (CAISI).
- Out-of-theater access and connectivity to other joint and multinational elements.
- Communications to support ITV/TAV.
- Communications for split-based operations.
- Capability to reroute LSE traffic to CONUS via gateways and the network to communicate with ASCC HQ.

See Figure 7-1 for a diagram of the LSE interface with tactical and strategic communications systems.

The Power Projection for Army C3 (POWER PAC3) company and the Contingency Communications Package/Light Contingency Communications Package are employed for communications during entry operations of force projection. The LSE should establish an interface with POWER PAC3. This unit could also provide area support to the LSE (see Figure 7-2).

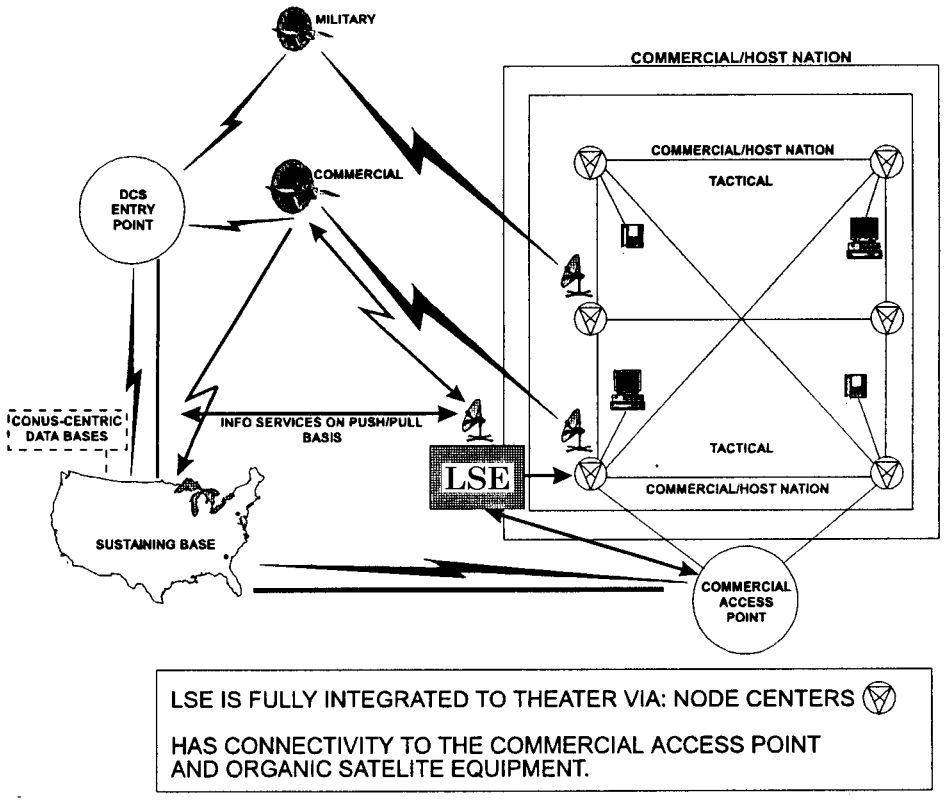

Figure 7-1
LSE Interface with Tactical and Strategic Communications Systems

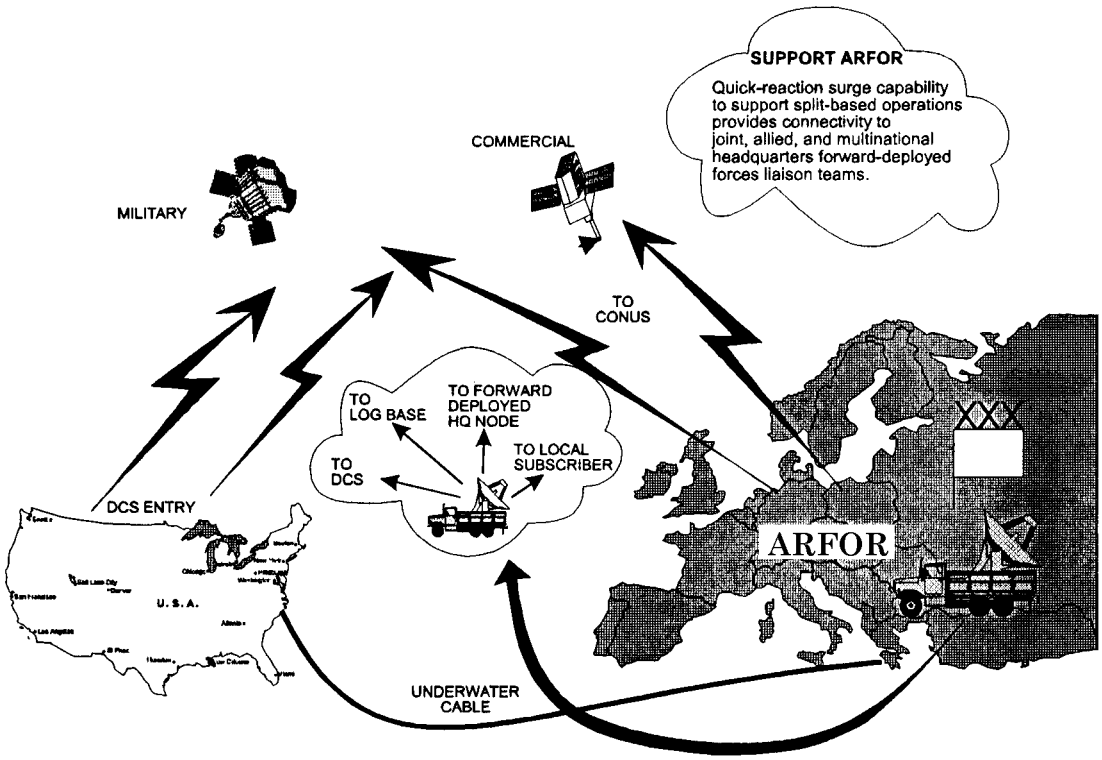

Figure 7-2
POWER PAC3, Entry Signal Support

OCONUS Operations

The LSE must rapidly establish communications with LSE-Rear and USAMC. Communications, more than any other equipment resource, most affects the responsiveness and effectiveness of USAMC strategic-level logistics in support of deployed Army forces. The LSE-Rear and CECOM (in coordination with the Foundation LSE) plan communications based on the infrastructure in the deployment area, potential access to ASCC communications support, the size of the LSE commitment, the mission of the LSE, and the need for rapid deployment. Three packages of equipment are available to meet the mission while enhancing deployability and mobility.

Flyaway Team A is part of the Jump TOC. If necessary, the communications equipment is man transportable. Team A consists of at least two communications planners/operators. This team carries sufficient equipment to allow fully independent point-to-point voice, E-mail, facsimile, and data communications over a satellite link for the team and the advance party of the LSE. USAMC plans to deploy this package within 24-72 hours after alert notification. It will deploy with organic ground transportation if airlift permits.

Flyaway Team B builds on the "A" package. It is the main capability of the LSE. Components include: an International Maritime Satellite (INMARSAT) terminal with

approved circuits; highly portable voice, data, E-mail, and video communications instruments (telephones, notebook and desktop computers, facsimile machines); switches; cabling; base station and satellite antennae; vehicles; and self-contained life support. The number of personnel and level of equipment associated with this package depends on the robustness of HN telecommunications, the LSE mission, task organization, and geographic area covered by the LSE. Package "B" is vehicle-mounted and deployable via C-130 aircraft.

Flyaway Team C is the additional capability of CECOM to reinforce Flyaway Team B from resources at Fort Monmouth, New Jersey. These resources include: CECOM fixed DDN interface nodes and switches, satellite ground stations, commercial and back-up communications personnel and equipment.

CONUS Operations

LSE CONUS (in coordination with LSE-Rear and FORSCOM) plans communications for deployments to domestic support missions. The four principal CONUS LSE missions are: deploy equipment contact teams, provide technical advice, expedite supply, and give customer assistance. The LSE requires assured and timely communications to:

- The supporting task force commander.
- DLA and other federal agencies on the mission.
- LSE CONUS and LSE-Rear.
- HQ, USAMC.
- MSCs and SRAs in USAMC (as required).
- FORSCOM.

For these missions, the LSE-Rear and LSE CONUS will coordinate with CECOM to tailor the LSE communications package based on:

- An area assessment from the on-scene LSE commander.
- Existing electrical power and communications infrastructure.
- Mission and size of the LSE contingent.
- The distance from the support base area to the LSE operational
- Connectivity required to other units on the scene.

LSE COMMUNICATIONS FUNCTIONS

Primary duties of the LSE communications specialists are to store, secure, deploy, install, maintain, and operate communication/ADP equipment and software for LSE communications. Other functions include:

- Coordinating with the ASCC or JTF signal support organization for area coverage to connect with theater networks for voice, data, E-mail, STAMIS, text, and joint message service. This includes LSE interface with mobile subscriber equipment (MSE).
- Controlling all communications security devices, systems, codes, and documents. Implementing Army information security program in communications security, computer security, and electronic security.
- Publishing and updating the LSE signal operating instructions (SOI) and the voice and data address directory.

The LSE interfaces with tactical and strategic systems through node centers, commercial and HN telecommunications systems, and satellite communications as shown at Figure 7-3.

SUPPORT TO THE LAP FORWARD

LAP members of the LSE receive enough equipment (to the extent equipment is available) to be self-sufficient in communications. Prior to deployment, the LSE Foundation and LSE-Rear coordinate for the size and composition of the LAP contingent to accompany Army forces. Critical information includes: task organization, proposed geographic locations of LAP teams, the equipment profile and its density in the Army task organization, and sequencing of forces into the operational area.

Depending on the mission and availability of equipment, the LSE will normally outfit LAP representatives with cellular phones and notebook computers for voice, facsimile, data, and E-mail (with a mail box) connectivity to USAMC MSCs and to the deployed LSE. The LSE will also consider using host nation commercial telephone system. The supported Army units in the corps will normally provide their LAP personnel use of MSE on an area basis. The LSE communications specialist assures that the cellular phones net with MSE nodal switching centers.

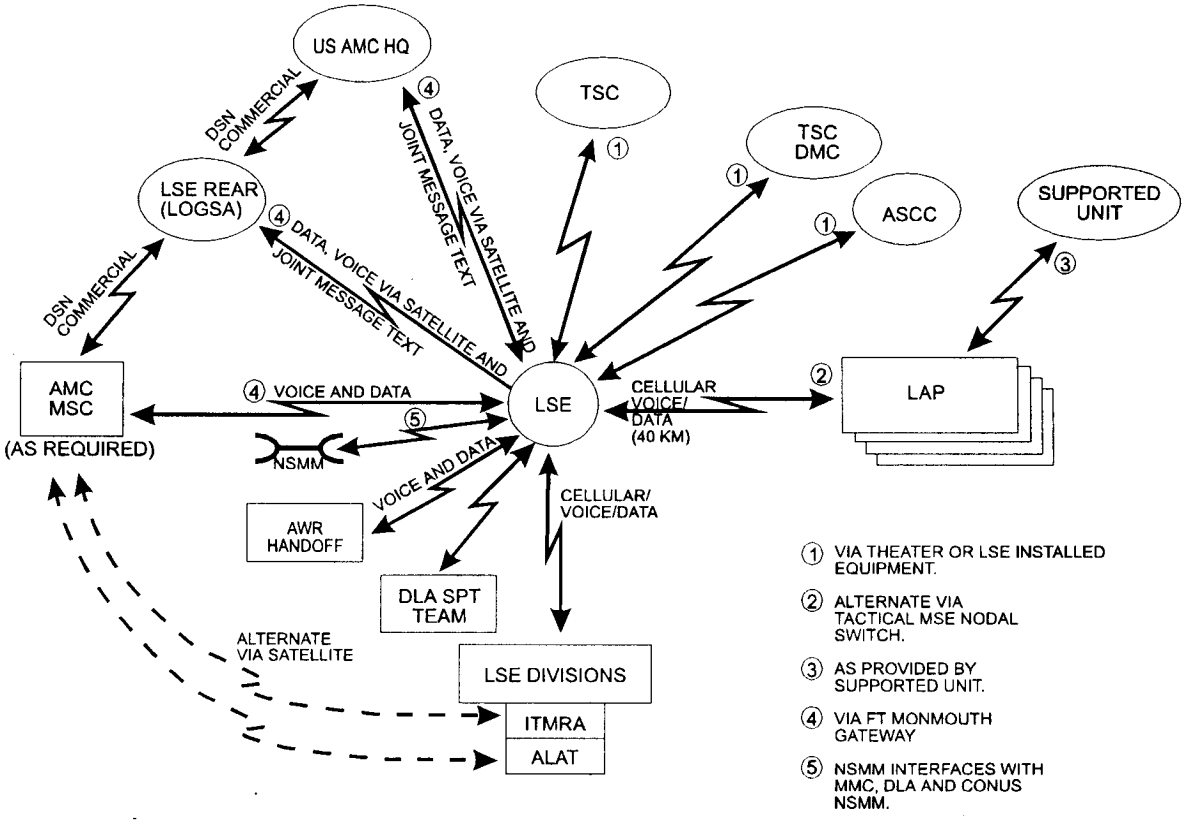

Figure 7-3
LSE Communications Networks

Security

Information activities are vulnerable to interception, penetration, and exploitation. LSEs must implement security measures to deny unauthorized personnel access to information. LSE communications and automation operations will comply fully with information security measures in AR 380-19 and with those issued by the ASCC. When using communications and automation equipment, LSE personnel must follow these standard security practices:

- Prevent unauthorized access to classified information through secure transmission of data and voice.
- Use only encryption codes specified for the operation.
- Implement physical security measures to safeguard all high-value items from access and observation by unauthorized personnel. This is particularly important concerning classified equipment, material, and documents.
- Require authentication, especially if the source of a voice message is in doubt.
- Employ operational security (OPSEC) procedures as described in AR 530-
- Keep voice transmissions short.
- Present information security briefings and require attendance.
- Follow special accountability procedures for communications security (COMSEC) devices and material.

Continuity of Operations

Continuity of Operations (COOP) permits the LSE to continue operations if automated systems become inoperative due to battle loss or if technical problems occur. Regularly backing up critical logistics databases and files is a COOP measure. Storage of backed up media at an alternate site is fundamental to continuity. Plan to have float equipment and alternate processing sites for critical automated processes. Split-based operations, where the deployed LSE can access and manipulate CONUS logistical data, is a form of COOP.

AUTOMATION

The LSE establishes an ADP interface to the CONUS strategic level and one or more STAMIS CAISI with the ASCC or JTF. These interfaces for data transmission permit the earliest response for problem resolution and for logistical services such as asset visibility and use of LOGSA data services. Other LSE missions requiring automation via STAMIS include:

- Management of selected high-dollar, low-tech density items. For these missions, the TSC DMC will transmit materiel release orders to the LSE.
- AWR operations for hand-off, maintenance, property accountability, and reconstitution.
- Management of the specialized in-theater aviation and ground maintenance programs operated by the LSE. Parts requisitioning, status, production planning and control, accountability, and management information are the principal automated processes in the Special and Forward Repair Activities in the Maintenance Division.
- Access by the LSE Ammunition Division to the standard Army ammunition system (SAAS) for supply management information and to perform LSE functions in stock identification, storage, limited accountability, safety, serviceability, surveillance, limited renovation, and retrograde of theater ammunition.

- Access by divisions in the LSE for TAV/ITV and for strategic-level logistics support to the ASCC, the materiel management center (MMC), LAP personnel, and to major logistical headquarters in the theater.

- Fielding of the combat service support control system (CSSCS) to operational-level logistical units for providing a portal to the Army global command and control system (AGCCS). CSSCS provides summary and detailed data from logistics, medical, financial, and personnel STAMIS. The LSE may receive this capability.

REPORTS

The principal report concerning LSE operations is the standard USAMC SITREP. A sample SITREP is at Appendix G. This is the LSE commander's report for summarizing all important actions and for referencing other reports for full information. The SITREP does not request specific actions, but can identify personnel requirements. The LSE selectively addresses request for specific actions to:

- ASCC DCSLOG, JTF J4, or theater support command (senior logistics headquarters).

- LSE-Rear.

- HQ USAMC.

The LOGSA emergency operating center (EOC) forwards the SITREP to staff sections and USAMC MSCs. Unless otherwise stipulated, frequency of the SITREP is daily. The Plans and Operations Division (with input from other LSE staff sections), assembles reports, obtains command approval, and then transmits them via secure means.

Other Recurring Reports

The DCSLOG or other senior logistics element of the ASCC will also require a daily SITREP. The LSE Plans and Operations Division is responsible for compiling and submitting this report.

The LSE uses the standard personnel message to inform LSE-Rear and HQ USAMC of personnel requirements. Information in these messages can assist in preparing deployable civilians and military members for assignment to the LSE by outlining: refresher training needed, specialized clothing and equipment, policy on weapons for civilians, funding, deployment location, civilian personnel administration information (time and attendance and hours for tours of duty), expected length of deployment, highlights of life support, and transportation arrangements.

The LSE will submit to LSE-Rear time and attendance reports for deployed USAMC civilians. LSE-Rear will forward them to applicable USAMC MSCs using electronic mail or other expeditious transmission means.

Special Reports

Based on the commander's guidance, the LSE keeps the LSE-Rear, Foundation LSE, and HQ USAMC informed of fast breaking and unusual events in the operational area. The LSE transmits the information by submitting special reports. As warranted, the LSE also informs the ASCC of these type events in special reports or includes them in SITREPs. Examples of situations requiring special reports include:

- Pending major change of mission.

- Mass or individual casualties.

- Changes in LSE capability through arrival, departure, or attachment of logistical capability.

- Major repositioning of LSE activities.

- LOGCAP status.

- Funding shortfalls.

- Hand-off and reconstitution of the AWR.

- Major materiel issues such as fleet readiness changes or system failures.

- Major successes.

Reports - LSE-Rear Actions

The LSE-Rear receives and acts on reports from deployed and Foundation LSEs. LSE-Rear receives reports via joint message text, telephone, facsimile, and E-mail. Based on contact with the Foundation LSE and guidance from HQ USAMC, LSE-Rear organizes and deploys USAMC assets to crises. Initial support consists of the Jump TOC and Team A of the flyaway communications. Communications systems operated by the branch are vital for the call forward of LSE personnel. When necessary, the LSE-Rear coordinates for additional resources for the LSE from USAMC, other sources in-theater, and LOGCAP. The LSE-Rear provides data retrieval and research to the LSE and especially to LAP representatives for access to all LOGSA databases.

LSE-Rear supports data inquiry services by using LOGSA's extensive automation capability. The Logistics Anchor Desk is a decision support tool consisting of a network of logistics databases. The LOG Anchor Desk allows the operator to design specialized data retrieval, perform simulations of supply problems, and forecast materiel readiness. The LSE sends requests for LOG Anchor Desk output to LSE-Rear, Logistics Operations Branch. LSE-Rear transmits replies to the LSE via secure data transmission.

LOGISTICS AUTOMATION ASSISTANCE

The Software Support Team of the LSE provides CSS STAMIS support to LSE staff sections, operating activities, and units requiring assistance. Prior to requesting support from CON US, the Team should request assistance from the TSC AMO or supporting ASG CSSAMO. For software problems in CSS STAMIS beyond the capability of the Software Support Team and the TSC, the LSE reports them to LSE-Rear, which contacts CASCOM and the USAMC MSC responsible for the system for assistance. Support to retail-level logistical STAMIS automation maintenance is delivered by the CSSAMO at the senior operational-level CSS organization and the CSSAMO in the supported units. See FMs 63-3, 54-30, and 54-40.

AUTOMATION SECURITY

Automated systems are vulnerable to destruction, sabotage, and compromise. Security includes not only physical security of hardware devices, but also security of programs and procedures. All members of the LSE using personal computers and Army STAMIS equipment must follow these security practices:

- Place the Army STAMIS and personal computer used for classified information in an enclosure that provides controlled access.

- Secure all electrical facilities that support the system.

- Position magnetic media storage containers at least 20 inches from an exterior wall. (This helps with protection against effects of magnetic fields or radiation.)

- Restrict physical access to diskettes and hard drives.

- Require that authorized operators have at least an interim confidential security clearance.

- Rotate unique operator passwords frequently.

- Control all log-ons and file access by using unique operator passwords.

- Monitor device usage.

- Restrict the access of visitors.

- Monitor report distribution plans.

- Reduce the number of copies of each report.

- Destroy printouts of reports and lists as new ones are produced.

DIGITIZATION

Digitization of the battlefield is the insertion of digital technologies across all levels and within both combat and support organizations, It depends on the integration of numerous elements including computer processing, advanced software, displays, sensors, communications, and position navigation components.

TAV using automated identification technology (AIT) and the Logistics Anchor Desk are examples of digitization in LSE support operations. TAV is more developed, By bringing together databases concerning asset balances, procurement actions, and requisitions, TAV allows users to track locations, conditions, and consignees of supplies from producers in the industrial base to ultimate Army users. The ITV component of this program uses radio frequency tags, fixed and handheld detection devices, and a computer system linked with satellites to track movement of materiel through the transportation system.

Using inquiry devices in the communications flyaway package, the LSE divisions and operating activities access TAV/ITV. LOGSA provides one system expert to deploy with the LSE to assist in accomplishing TAV/ITV.