Headquarters,
Department of the Army

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(FM 24-40)

# Visual Information Operations

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# Visual Information Operations

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# Preface

This manual is a reference guide for understanding and using visual information (VI) assets, systems, and forces to support task force operations from the operational through the tactical levels of war. It encompasses the concepts of battlefield visualization outlined in TRADOC PAM 525-5 and TRADOC PAM 525-69 and provides the doctrinal foundation for VI support to the warfighter at all echelons. It reflects the certainty that technological advances and force redesign will result in VI activities playing an increasingly important role in operational success. This manual describes the capabilities and components of VI assets and defines the organizational structure and responsibilities of VI activities at each level. When applicable, the reader is referred to supporting publications for more detailed information.

The proponent for this publication is the United States Army Signal Center. Send comments and recommendations on DA Form 2028 directly to Commander, United States Army Signal Center and Fort Gordon, ATTN: ATZH-CDF (Doctrine Branch). Fort Gordon, Georgia 30905-5075 or via E-mail to doctrine@gordon.army.mil. Key comments and recommendations to pages and lines of text to which they apply. Provide reasons for your comments to ensure complete understanding and proper evaluation.

**Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.**

## Chapter 1

# Army XXI

Joint and enemy forces with capabilities that have increased since the Cold War, or even the Persian Gulf War, will man the battlefield of the future. This chapter discusses the operational environment, technological advances, battlefield visualization, visual information (VI) support, and the operational impact.

## OPERATIONAL ENVIRONMENT

1-1. Within the next few years, the Army may find itself involved in operations in a variety of sophisticated environments. Soldiers will conduct activities ranging from battles against major regional powers to stability operations within failed states dominated by competing paramilitary factions. Conflict, wherever it may occur, will share several characteristics: expanded areas of operations, urban and other complex terrain, and multidimensional operations.

1-2. The Army may also face threats from urban-based paramilitary groups, state-sponsored terrorists, weapons of mass destruction (WMD), offensive information operations (IO), and diplomatic actions before open hostilities begin. Through doctrine development, experimentation, simulation exercises, and experience, the operational concepts of Army XXI have evolved. These concepts are designed to meet these threats and achieve full spectrum dominance on the battlefield of the future.

### BATTLEFIELD CHARACTERISTICS

1-3. The battlefield of the future will be increasingly complex. The nature of future operations and the battlefield they will be waged on are best described as—

- **Multidimensional.** Existing throughout the height, width, and depth of the area of operations and electromagnetic spectrum.
- **Precise.** Taking full advantage of the capabilities inherent in digitized information systems; strategic, operational, and tactical sensors; and simulations to execute operations with pinpoint accuracy.
- **Noncontiguous.** Encompassing a fluid concept of decisive, shaping and sustainment operations, which change as the factors of mission, enemy, terrain and weather, time, troops available, and civilian considerations (METT-TC) change.

- **Distributed.** Executing operations where or when required and achieving masterful effects at decisive points because of mission command, which empowers subordinates to operate independently within the commander's intent.
- **Simultaneous.** Conducting concurrent decentralized operations across the complete battlefield spectrum to achieve the mission objectives.
- **Integrated.** Army operations fully integrated with joint, interagency, multinational, and nongovernmental partners.

1-4. A constantly changing battlespace will require the ability to command and control (C2) on the move as enclaves move and operate in dynamic environments.

## THREAT

1-5. The global environment during the early twenty-first century will be one of instability. The information technology (IT) revolution, the evolution to a global marketplace, and the population explosion in the developing world have already, in some countries, caused the collapse of governmental control and an increase of nongovernmental military or paramilitary forces.

1-6. Although no single power has the means to threaten the United States, some regional or local powers may be able to employ advanced military technologies relatively inexpensively. Our adversaries will use technology to wage asymmetric warfare if they cannot compete in a more conventional sense. Thus, the character of future military operations can no longer be anticipated merely by analyzing an adversary's relative geographic size or stage of economic development.

## OPERATING CONCEPT

1-7. Army XXI will be more resource-efficient, with capabilities enhanced through Information Age technologies. It will be more responsive, deployable, agile, versatile, lethal, survivable, and sustainable than the current force. It will have a smaller deployed support footprint and fewer lift requirements. This streamlining will allow for rapid, effective, and efficient power projection to any area of the world. The resulting force will be able to place a combat-capable brigade anywhere in the world in 96 hours, a division on the ground in 120 hours, and five divisions into a theater within 30 days.

1-8. Rapidly advancing IT will provide new systems to efficiently execute this mission as resources, both materiel and people, are reduced. Information systems, in particular, will be revolutionized, with emphasis on the near real-time exchange of information between users throughout the battlespace. The result will be in more readily available and up-to-date information. This will improve split-based operations and give leaders and soldiers access to information needed to adapt tactics, techniques, and procedures (TTP) in varied scenarios, on both tactical and strategic levels. Effective battle command will be crucial on future conventional battlefields and depends largely on the information available to and the actions of quality soldiers and competent leaders.

## TECHNOLOGICAL ADVANCES

1-9. To realize the objective of Army XXI, technological solutions will more efficiently equip the smaller, more mobile, modular force. The Army will reorganize and equip the force with current commercial off-the-shelf (COTS) technology, while at the same time develop the technologies needed to create a family of systems that are lethal, mobile, and survivable. The new weapons systems will offer survivability through low observable platforms, ballistic protection, long-range acquisition, deep targeting, early attack, and first round kills at smaller caliber. Logistical and communications systems will be smaller, more mobile, and extremely versatile to support this newly equipped force.

1-10. The military information environment (MIE) has become increasingly complex as a result of digitization. Integrated command, control, communications, computers, information, surveillance, and reconnaissance (C4ISR) systems will provide a common operating picture (COP). This information is critical to the commander on the ground for C2 and situational awareness (SA). More emphasis will be placed on sophisticated communications and intelligence reach-back systems to enhance the COP, increase agility and flexibility, and facilitate rapid transition from one point on the battle spectrum to another. The information and resulting SA these tools contribute are critical to the battle visualization process.

## BATTLEFIELD VISUALIZATION

1-11. Battlefield visualization is a three-step command process. First, the commander develops a clear understanding of the current situation with relation to the enemy and environment. Next, he envisions a desired end state. Finally, he visualizes the sequence of activity that will move his force from its current situation to the desired end state.

1-12. Battlefield visualization goes beyond understanding the basic factors of the physical location, environment, equipment, and supply readiness of friendly and enemy forces. It also includes understanding human factors, such as fatigue and morale, and the decision-making processes and information requirements of each respective force.

1-13. IO and the products of the various information systems will be crucial tools for the commander to use in the battlefield visualization process. Human intelligence (HUMINT), coupled with technology-supplied information, will provide the commander with a comprehensive view of the battlefield. This will reduce uncertainty, minimize risk, promote clear and rapid transmission of intent and orders, and facilitate the decisive employment of combat power. Doctrinal, training, organizational, leadership, materiel, and soldier efforts will be integrated to provide the commander the frame of reference to clearly see and understand the battlefield in this manner.

## VI SUPPORT

1-14. The commander is surrounded by common-user systems that provide information. In order to capitalize on the benefits this new technology offers, the commander must fully grasp the applications, advantages, effects, and limitations of these systems and their products. The same is true in regard to the organic and attached VI assets at the commander's disposal. Commanders at all levels must understand the capabilities and potential uses of VI assets and the far-reaching effects of VI products. As the result of a shrinking MIE, imagery plays an important role in shaping events; and VI products and imagery have the potential to profoundly affect and influence operational success.

## OPERATIONAL IMPACT

1-15. The transformation to Army XXI will result in a modular, more agile force, equipped with state-of-the-art weaponry and armed with information provided by new technologies. The force will be able to reach trouble spots quickly and arrive fully prepared for de-escalation and a return to stability or to prosecute war intensely, whichever is called for. The force will be able to operate in a joint, multinational, or coalition environment. The force will also be able to take on a variety of missions, from humanitarian assistance to peacekeeping to major theater wars, including conflicts involving the potential use of WMD. Information will be the key to victory in upcoming conflicts, and VI forces and products will play a critical role in providing it.

## Chapter 2

# Visual Information

VI is a resource that can significantly impact operational success. This chapter defines and discusses VI. It also discusses its mission, activities, exclusions, and threat.

## INTRODUCTION

2-1. VI is that aspect of IT pertaining to the acquisition, creation, storage, transmission, distribution, and disposition of still and motion imagery and multimedia, with or without sound, linear, or nonlinear, for conveying information. VI includes the exchange of ideas, data, and information, regardless of formats and technologies used.

2-2. VI documentation (VIDOC) is the process of using motion media, still photography, and audio equipment to acquire audio and visual records of events. VI soldiers, specifically trained to acquire, process, and transmit imagery and products, collect VIDOC. Resulting VI products include photographs, motion pictures, video recordings, graphic art, visual aids, models, and displays.

2-3. VI products assist commanders at all levels, from field commanders to the Secretary of Defense, in tactical C2 decision making, strategic planning, and management, through presentations and reports. Doctrinal, combat, materiel, and training developers use VI records for analysis and in reports and briefings to support their programs. In addition, VI products can be used for training, education, engineer (EN), logistical, personnel, medical, and legal purposes.

2-4. Department of Defense (DOD) Directive 5040.2 directs that VI resources are maintained by DOD agencies and the military services to provide the following:

- Rapid deployment combat camera (COMCAM) teams to support military operations and emergencies, including documentation of force deployments and activities before, during, and after military engagements.
- General purpose VI support that meets DOD requirements for VI documentation, production, distribution, records centers, and installation-level support.
- Dedicated VI support of such activities as medical; intelligence; and research, development, test, and evaluation (RDTE).

## MISSION

2-5. The mission of VI activities and soldiers is to acquire and provide commanders and staffs, at all levels, with record documentation and VI products and services to satisfy official requirements. Security classification, operations security (OPSEC), nor subject sensitivity should prevent VI documentation, as VI products can be classified to any level required.

2-6. VI soldiers can provide military police (MP), military intelligence (MI), psychological operations (PSYOP), public affairs (PA), and civil affairs (CA) organizations with useful VI capabilities. However, because these units have specific missions that require special training, augmentation is limited to processing support a commander request and for which the VI soldier is equipped and trained. VI soldiers can also provide valuable sources of collateral combat medical operations and intelligence documentation despite the fact they are not considered specialists in either functional area.

2-7. VI support is limited to official events or activities. The use of VI products, equipment, or facilities for other than official purposes, such as loaning equipment to local and state governments or nonprofit organizations meeting on government property, is at the discretion of the local commander.

## VI ACTIVITIES

2-8. Common support VI activities service commanders and staffs at installations, organizations, and activities in an assigned support area (usually geographic).

2-9. Dedicated VI activities provide products and services only to a specified organization or function. This includes activities within deployable elements of operating forces.

2-10. The specific services a VI activity offers are outlined in the local standing operating procedures (SOPs); however, some common basic services offered by visual information support centers (VISCs) at troop installations are described below:

- **Still photography**. Producing, processing, and reproducing still picture film, prints, and slide transparencies. This includes electronic still video camera systems.
- **Motion picture**. Exposing, processing, and duplicating motion picture film. This includes briefings, news clips, operational documentation, filmed reports, and stand-alone segments, with or without sound.
- **Television**. Producing and reproducing video recordings. This includes briefings, news clips, operational documentation, video reports, and stand-alone video segments, with or without sound.
- **Graphic art**. Designing, creating, and preparing two- and three-dimensional visual products. This includes charts, graphs, posters, and visual materials for brochures, covers, television, motion pictures, printed publications, displays, presentations, and exhibits that are prepared manually, by machine, or by computer.

- **Audio**. Recording, producing, reproducing, and distributing sound in support of an activity. This includes recording of briefings, news clips, ambient sound, sound effects, reports, documentation, aural amplification, and other studio products.
- **Library**. Loaning and maintaining VI media and equipment. This authorization allows purchase, lease or rental, and accountability of COTS VI productions for local use.
- **Ready access file**. Providing a consolidated electronic source of imagery that is accessible to official customers.
- **Presentation**. Scheduling and maintaining classrooms and conference rooms and their supporting equipment. This may include providing public address systems, equipment loan, and projection services.
- **Customer self-help**. Providing self-help support to customers for the production of simple overhead transparencies, briefing charts, sign-out boards, flyers, or flip charts.
- **Consultation**. Providing customer consultation services in support of official requirements for the customer and for professionally developed VI products and services.
- **Maintenance**. Repairing and servicing organic VI equipment.

2-11. Table 2-1 describes the different types of VI activities. The operation of VI activities is discussed in AR 25-1 and DA PAM 25-91.

**Table 2-1. Types of VI Activities**

| Type | Primary Function | Description of Capabilities | Level of Approval |
|---|---|---|---|
| A | VISC | Provides VI support services to all organizations on an installation or within a defined area. (Motion picture, linear and/or digital video, audio recording, graphic art, VI media, and/or equipment loan, maintenance, presentation support, still or digital photography, and processing.) | MACOM (FOAs are authorized by Office of the Director of Information Systems, Command, Control, Communications, and Computers [ODISC4]) |
| B | VI Production (Local) | Includes production, reproduction, and distribution of local multimedia/VI productions to support an individual organization, installation, or defined geographic area. | MACOM |
| C | VI Production (Non-local) | Includes all functions of Type B activities for use outside of the local installation or defined geographic area. | ODISC4 |

**Table 2-1. Types of VI Activities (Continued)**

| Type | Primary Function | Description of Capabilities | Level of Approval |
|---|---|---|---|
| D | VI Production (Contracting) | Provides commercial contracting, purchase, or rental of VI productions. | ODISC4 |
| E | VI Records Center | Central control and storage facility for VI products. | Office of the Secretary of Defense (Public Affairs) (OASD[PA]) |
| F | Component Accessioning Point | Central point for screening VI imagery and for forwarding imagery to the VI records center. | ODISC4 |
| H | VIDOC | Recording of technical and nontechnical events. | ODISC4 |
| I | Product Distribution | Central VI product distribution activity. | OASD(PA) |
| J | VI Management | J1 through J4 includes staff functions, management, and administration of VI activities. | |
| J1 | Headquarters | | OASD(PA) |
| J2 | Major Army Command (MACOM)/field operating agency (FOA) | | ODISC4 |
| J3 | Common Support | | MACOM |
| J4 | Dedicated | | MACOM |
| K | VISC (Dedicated) | Provides VI support to a specific organization or organizational element only. (Offers services similar to Type A facilities.) | ODISC4 or MACOM |
| Q | Broadcasting | Includes closed-circuit television (CCTV) support to a defined area (CCTV, master/community antenna, and command channel[s]). | MACOM |
| R | Regional VI Activities | Provides VI support to a specifically designated region. (Offers services similar to Type A facilities.) | ODISC4 |
| S | PA | Includes photojournalism, HQDA journalism, electronic photojournalism, and other VI media to support PA for TOE/MTOE PA units only. | ODISC4 |

## EXCLUSIONS

2-12. Activities and functions that are not the responsibility of VI forces and excluded from the provisions of this document are discussed in Figure 2-1.

- All video teleconferencing (VTC) capabilities and/or facilities. (See AR 25-1 for VTC policy.)
- Photocopies, maps, digital medical imagery, X-ray, microfilm, and microfiche products.
- C2 information displayed in conjunction with weapon systems.
- VI products collected exclusively for surveillance, reconnaissance, or intelligence, and equipment integrated in a reconnaissance-collecting vehicle.
- VI productions on the technical, procedural, and management aspects of cryptological operations.
- Facilities, services, and products operated or maintained by the American Forces Radio and Television Service (AFRTS). Products and productions acquired and distributed for AFRTS overseas use.
- VI commercial entertainment production and equipment acquired and distributed by the Army and Air Force Exchange Service (AAFES) and the Navy Motion Picture Service (NMPS).
- VI systems embedded in training devices, simulators, instrumentation systems, and weapon or medical systems, if the primary purpose of the equipment is not VI and it does not perform a VI function.
- VI equipment and products acquired with nonappropriated funds.
- Organizations using still camera equipment for the purpose of generating identification or security badges.
- At the choice of the MACOM commander, individual VI activities and their equipment, products, and services that are 100 percent funded by RDTE and used solely to support programmed and funded RDTE missions, and not common support VI requirements. (RDTE activities are not excluded from the Army VI Documentation Program [AVIDP].)
- Non-VI activities using COTS office business graphic software (such as PowerPoint) in an office environment.

**Figure 2-1. Excluded VI Activities**

- Nurse call/paging systems, binoculars, fixed outdoor public address systems, bugle call systems, silk screen equipment, outdoor sign makers, security surveillance systems, copiers not dedicated to VI activities, language labs, engraving equipment, and radio paging systems.
- United States Army Communications-Electronics Command (USACECOM) products and services that are funded by civil appropriations and used solely to support funded civil works and non-DOD agency missions.
- Multimedia products developed within the printing and publications policy and procedures guidelines.
- VI library materials and equipment acquired for use in Army libraries.
- Equipment not controlled by VI systems.
- Self-processing cameras.

**Figure 2-1. Excluded VI Activities (Continued)**

2-13. If VI products excluded in Figure 2-1 are used to develop a subsequent VI production, the resulting production is considered VIDOC and subject to the provisions of this manual and DA PAM 25-91.

2-14. VI forces rely on automated information systems that provide a target for adversary IO activities. While using DOD or commercially leased circuits to provide imagery, they share the common risks associated with using these systems. Also, due to the lack of a procedural mechanism to determine the extent of foreign ownership, control, or influence (FOCI) of software or other IT to support VI operations, there is the potential for covert insertion of malicious code during the developmental process. This could have serious security implications.

2-15. VI forces collecting VIDOC in a tactical environment face the additional risk of adversary intervention. Adversaries may attempt to determine what the VI customer is seeing, or not seeing, or to manipulate the data stream in order to present a distorted or false picture.

2-16. VI assets face the same physical threats as their host organization when operating as a component of a deployed ground force. The conventional threats include artillery systems, missile systems, rocket-propelled grenades, land mines, close-combat aircraft, and small arms fire.

## Chapter 3

# Visual Information Documentation

VIDOC provides a visual record of significant Army events and activities and encompasses both tactical and nontactical documentation. This chapter defines and discusses VIDOC to include COMCAM documentation, operational documentation (OPDOC), and technical documentation (TECDOC). It also discusses supplemental roles, the AVIDP, and training support.

## INTRODUCTION

3-1. VIDOC is the use of motion media, still photography, and audio to acquire audio and visual records of events. It includes tactical and nontactical documentation and is divided into three categories of information: COMCAM documentation, OPDOC, and TECDOC. The purpose of the final product dictates the documentation category and provides justification for the initial imagery collection. Once the original collection mission is accomplished, the documentation can be used for other purposes.

3-2. VIDOC imagery preserves permanent visual records for historical purposes, such as after-action reports, lessons learned, briefings, books, magazine articles, movies, and television programming. This imagery also assists in building unit morale and identity by visually enhancing a unit's history.

## COMCAM DOCUMENTATION

3-3. COMCAM is tactical documentation covering air, sea, and ground actions of armed forces in combat and combat support operations, catastrophes, natural disasters, and training activities (such as exercises, war games, operations, and peacetime engagements). It allows command, control, and management authorities, who may not be on the scene, to visualize the essence of ongoing activities. It is primarily used as an operational decision-making tool and does not include imagery specifically acquired by intelligence activities.

3-4. Tactical COMCAM documentation is an essential battlefield information resource that supports strategic, operational, and tactical mission objectives. It is shared, as required, to simultaneously support the operational and planning requirements of commanders and decision-makers from the combatant through National Command Authority (NCA) levels. It is a fundamental tool of commanders and decision-makers that, when utilized properly, is an effective combat multiplier.

## PREOPERATIONAL PLANNING

3-5. Preoperational planning is the recording of selected or proposed routes into and within an operational area. It allows combat personnel to learn landmarks, building locations, and other visual references to get an accurate visual site image. Motion media can capture these references, as well as noise level, light level, and area traffic in urban areas. This imagery can also analyze an area before an operation or critique employment tactics if access to the site is available after exercises. Figure 3-1 shows an example of preoperational planning.

US Army photo, abandoned Serbian position

**Figure 3-1. Preoperational Planning**

## BATTLEFIELD DAMAGE ASSESSMENT (BDA)

3-6. BDA imagery is a detailed record of battlefield damage to friendly equipment that gives tacticians immediate information to develop countermeasures to an enemy's weapons and allows logisticians to begin requisitioning appropriate supplies. Still photos or videos provide the necessary information to assess the current situation. Figure 3-2 shows an example of BDA imagery.

## GAUGING EFFECTIVENESS

3-7. Gauging effectiveness imagery documents the effectiveness of friendly weapons. Documentation includes the amount of collateral damage, the enemy's strengths and weaknesses, and the nature and effectiveness of his countermeasures. This visual imagery can quickly and accurately communicate information for analysis beyond the capability of words. Figure 3-3 is an example of gauging effectiveness imagery.

US Navy photo, USS Cole

**Figure 3-2. BDA**


DOD photo, Iraq

**Figure 3-3. Gauging Effectiveness**

## IMPROVING SA

3-8. Improving SA imagery documents near real-time visual reports. Examples are actual combat conditions and progress in military operations and engagements for the component, theater, NCA, Joint Chiefs of Staff (JCS), and military services staffs for decision-making purposes. Figure 3-4 shows an example of improving SA imagery.

US Army photo by TASC photographer

**Figure 3-4. Improving SA**

## REVIEW

3-9. Review imagery documents initial battle engagements of new weapons and support systems, both friendly and enemy. It can be used to revise friendly tactics or validate doctrine. High technology, precision weapons, and enemy WMD (chemicals and biological warfare agents) that may be used in future conflicts can significantly affect the battlefield situation. Commanders can use review imagery to visually comprehend the threat, thereby speeding innovation and the timely development of counter-tactics and revised doctrine. Figure 3-5 shows an example of review imagery.

US Army photo by TASC photographer

**Figure 3-5. Review**

## OPERATIONAL DOCUMENTATION

3-10. OPDOC imagery documents tactical and nontactical activities. Its purpose is to archive and submit images of people, places, and things. OPDOC is generally performed in peacetime, and it is the most familiar type of nontechnical VI support.

3-11. OPDOC imagery supports PA and command information programs, construction and renovation projects, safety office and fire safety reports, personnel and community affairs projects, and numerous other programs. Much OPDOC material has only transitory, temporary value, but much also has lasting historical importance and must be preserved.

3-12. VI activities at troop installations usually perform OPDOC as a major part of their mission. The following paragraphs discuss OPDOC imagery.

### READINESS POSTURE

3-13. Readiness posture imagery displays a unit's readiness. Still photos or videos provide the necessary information to assess the situation in ways a written report might not do justice. Figure 3-6 shows an example of readiness posture imagery.

## SIGNIFICANT OPERATIONS

3-14. Significant operations imagery documents situations and supports public or community affairs programs. Examples are images of operations, campaigns, exercises, or maneuvers captured for historical or PA purposes. Figure 3-7 shows an example of significant operations imagery.

US Army photo by TASC photographer

**Figure 3-6. Readiness Posture**

US Army photo by TASC photographer

**Figure 3-7. Significant Operations**

## SIGNIFICANT PROGRAMS AND PROJECTS

3-15. Significant programs and projects imagery documents programs and projects that impact national or Army policy. These images can be used to track progress, provide status, or document the accomplishment of significant milestones. Figure 3-8 shows the change in Army headgear and documents a significant milestone in Army transformation.

US Army photo, Black Berets

**Figure 3-8. Significant Programs and Projects**

## CIVIL INVOLVEMENT

3-16. Civil involvement imagery shows operating conditions, chronicling Army efforts and participation in disaster relief, civil disturbances, and environmental protection. This imagery can be used as part of the PA or community relations program to keep the public abreast of developments. Figure 3-9 shows an example of civil involvement imagery.

## CONSTRUCTION

3-17. This imagery shows construction of systems, facilities, and installations. It demonstrates project progress and provides information for future operations, after-action reviews (AARs), and lessons learned. Figure 3-10 shows an example of construction imagery.

US Army photo, Mogadishu

**Figure 3-9. Civil Involvement**

US Army photo by TASC photographer

**Figure 3-10. Construction**

### SIGNIFICANT MILITARY EVENTS

3-18. Significant military events imagery provides a visual historical record. Examples of these are base closures/realignments; activation/deactivation, deployment, or change of command of a division or larger unit; and general officer promotions. Figure 3-11 shows an example of a significant military event.

US Army photo, change of command

**Figure 3-11. Significant Military Event**

### MILITARY LIFE

3-19. Military life imagery documents today's Army life. Examples are soldiers at work, physical training, new equipment usage, and enjoyment of life as a military family. Figure 3-12 shows an example of military life imagery.

## TECHNICAL DOCUMENTATION

3-20. TECDOC is nontactical documentation of an actual event taken in order to evaluate it. It contributes to the study of human or mechanical factors; procedures, and processes in the fields of medicine, science, logistics, RDTE, intelligence, investigations, and armament delivery. It is important permanent record material. Figure 3-13 shows a T-62 tank after a mine was detonated for demonstration purposes.

US Army photo, AT-4

**Figure 3-12. Military Life**

US Army photo, T-62

**Figure 3-13. Evaluation**

3-21. VI activities at proving grounds, missile ranges, hospitals, research centers, and similar installations are primarily engaged in TECDOC, but may also perform some OPDOC. Timely identification and preservation of record material is important for all VI activities, especially those concerned with TECDOC.

## SUPPLEMENTAL ROLES

3-22. In addition to preserving permanent visual records for historical purposes, VIDOC imagery provides other supplemental, supporting roles.

### LEGAL

3-23. Legal imagery provides hard visual evidence that can be used in the prosecution or defense of Law of Armed Conflict (LOAC) issues or to complete investigators' accident or incident investigations. It also provides photographic proof of damage supporting US governmental property damage claims against foreign governments. Figure 3-14 shows an example of legal documentation imagery.

US Army photo, Khobar Towers

**Figure 3-14. Legal Documentation**

### PSYOP

3-24. Imagery supports PSYOP programs by providing visual images to effectively support a successful PSYOP. By visually demonstrating US forces' capabilities, strength, or resolve, they help PSYOP forces to counter disinformation programs and influence military operations. Figure 3-15 shows an example of PSYOP imagery.


Photo courtesy of US Special Operations

**Figure 3-15. PSYOP**

## SIMULATIONS

3-25. Simulations are images of recreated events developed using technology. Imagery of actual combat operations can assist in imparting the highest degree of realism to simulation technologies by including actual battle scenes and assisting in the detailed recreation of events.

3-26. High-speed computers and advanced software packages allow commanders to recreate entire battle engagements, second-by-second and shot-by-shot, that can be shown on large projection screens. Importing this imagery into computer programs enhances simulation technology. This includes making simulations interactive and possibly raising the technology from a training tool to an intelligence and C2 system. Figure 3-16 shows an example of simulation imagery.

US Army photo by TASC photographer

**Figure 3-16. Simulation**

## ARMY VISUAL INFORMATION DOCUMENTATION PROGRAM

3-27. AVIDP provisions govern the disposition of any VIDOC product gathered by designated VI assets. The AVIDP directs that VIDOC material with lasting value or historical significance be collected and archived for historical purposes. It specifically regulates VIDOC products produced by VI forces, although VI collected through other means can also be submitted, if appropriate. This program ensures the nation has a visual record of significant Army events and activities.

3-28. Because of technological advances and the decreasing cost of purchasing audiovisual (AV) equipment, more units are purchasing COTS VI devices to help them accomplish their missions. While the provisions of DA PAM 25-91 and AVIDP do not cover products at all levels, leaders must ensure VI products are handled responsibly and are included in the visual record of military history when appropriate.

## TRAINING SUPPORT

3-29. VIDOC imagery can provide the full range of VI products to meet a commander's training needs. The following paragraphs discuss types of training programs that can be developed using documentary capabilities.

### VISUAL TRAINING PROGRAMS

3-30. Visual training programs can be distributed throughout a theater of operations. Training aides can cover such topics as changes in tactics or operational and maintenance procedures and can be rapidly and accurately distributed. During peacetime, training at every level is enhanced through such products as interactive videodisk, videotapes, and slide-tape programs.

### INTERNAL PA PROGRAMS

3-31. Internal PA programs convey crucial information to large groups of soldiers quickly and efficiently. Examples of this type of information are soldiers' expectations and mission support.

## Chapter 4

# Documentation Methods and Products

Unprocessed information can be transformed into a useful product. This chapter discusses documentation methods, products, and product handling and distribution.

## METHODS

4-1. The documentation method depends on the purpose of the documentation, the environment in which the documentation takes place, and the support available to the soldiers documenting the event. The following paragraphs discuss the different documentation methods.

### MOTION MEDIA

4-2. Motion media is VIDOC of activities or operations as they occur. It is complemented by audio documentation. Motion media technology can be used in daytime, nighttime, and limited visibility operations. The following paragraphs discuss examples of motion media.

#### Motion Picture Photography

4-3. Film-based documentation taken with a motion picture camera results in a series of images, which when viewed in rapid succession give the illusion of motion. The film, which captures positive and negative images, must be processed and developed. Film can be processed in either color or black and white. Figure 4-1 shows an example of film-based documentation.

#### Video Camera Recorder (VCR)

4-4. Video cameras capture and record images electronically. Videotape formats are generally classified by the width of the magnetic tape used. The videotape formats are described below:

- **1 inch**. Used for professional or broadcast quality video recording and editing. The tape comes in large, open reels. This format is used on a limited basis industry wide and never in the tactical environment.
- **¾ inch**. Used for industrial video. The tape is stored in ¾ inch-thick cassettes. This format is used on a limited basis industry wide and never in the tactical environment.
- **½ inch**. Used by most consumers for home videotape. Both Video Home System (VHS) (the most popular home videotape format) and Beta are ½ inch, as are their higher-quality counterparts (Super-VHS and Super Beta, respectively). The tape is cassette-based.

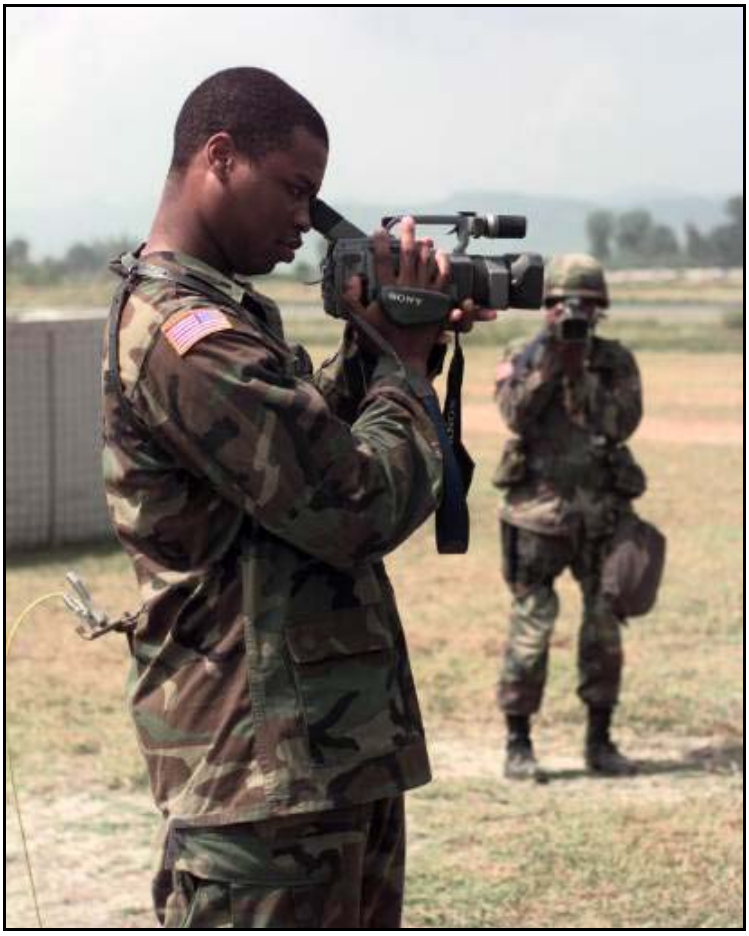
- **8mm and HI-8**. New consumer format for use in handheld camera recorders (camcorders). The tape is cassette-based.
- **Digital Video**. Images are recorded and played back on the camera's disc drive, memory chip, or other digital storage device.

US Army photo by SPC Francis

**Figure 4-1. Film-Based Documentation**

4-5. Small format (½ inch or 8mm) videotape is particularly useful in combat documentation as there are several light, highly portable systems that produce acceptable quality products. Larger format (¾ inch or 1 inch) videotape, often referred to as production format, is necessary for materials that may be included in sophisticated video reports or that are unique documentation which needs to be transferred to a standard format for archival, reproduction, or distribution. This format also permits broadcast

use to support PA and PSYOP. Figure 4-2 shows an example of motion media using video camera photography.



US Army photo by SPC Horne

**Figure 4-2. Video Camera Photography**

## STILL PHOTOGRAPHY

4-6. Still photography involves producing, processing, and reproducing still picture films, prints, and transparencies. These images can be captured using film or digital camera photography or can be taken from motion picture or video photography. The following paragraphs discuss examples of still photography.

### Digital Still Video Photography

4-7. Digital still video cameras capture images electronically. The images are stored on a floppy disk or card reader and can be viewed on a personal computer and printed immediately. The images can be printed in black and white or in color, depending on the capabilities of the printer. They can be printed on photo or copy-quality paper, depending on their intended use.

Some cameras also have night vision devices that permit them to be used during darkness or other limited light conditions.

4-8. Because digital technology is relatively inexpensive and simple to use, it is available to forces at all levels. Digital still video cameras can capture images such as terrain features, tactical deployments, intelligence information, and tactical operations taken directly from the battlefield. These images can be used from the local level through the NCA level to enhance critical and timely operational decisions.

### Film-Based Still Photography

4-9. Film-based still documentation is taken using still film cameras, which results in top-quality photographic images. The film, which captures positive and negative images, must be processed and printed. Film can be processed in either color or black and white. Processor capabilities range from compact, low-quantity processors to high-quality and volume printing processors. Photos can be scanned to allow for transfer of products and captions into analog or digital format for transmission. Film-based still photography has the same capability for capturing images as digital still video photography; however, its processing speed is slower. Figure 4-3 shows an example of still documentation.

US Army photo by TASC photographer

**Figure 4-3. Still Documentation**

## AUDIO

4-10. Audio documentation is done by using portable microphones and audio recorders or by using audio recording systems that are integrated with video tape recorders. Audio documentation uses high-fidelity sound technology and standard size magnetic cassette recording tape.

### CAPTIONS

4-11. All VI units must document captions at the time visual images and sounds are recorded. Original captions are an integral and permanent record of the documentation. Still and motion media documentation will include captions in accordance with (IAW) DOD Directive 5040.2, DOD 5040.4, AR 25-1, and DA PAM 25-91.

4-12. The VI soldier acquiring the documentation will verify the accuracy and security classification of caption information with the command he supports. The captions will be factual and objective. Figure 4-4 shows an example of recording notes for captions.

US Army photo by TASC photographer

**Figure 4-4. Recording Notes for Captions**

## PRODUCTS

4-13. The following paragraphs discuss products acquired through various means.

### PHOTOGRAPHS

4-14. Photographs, either digital or film-based, can capture critical images such as terrain features, tactical deployments, intelligence information, and tactical operations. These images can be used from the local level through the NCA level to enhance critical and timely operational decisions.

## MULTIMEDIA PRESENTATIONS

4-15. Multimedia describes the ability to combine audio, video, and other information with graphics, control, storage, and other features of computer-based systems in the communication of information. The combination of several media often provides a richer, more effective flow of information or ideas than a single media, such as traditional text-based communication. Typically, multimedia presentations are recorded continuously onto a motion medium, such as film or videotape, for replication and/or time delayed playback, but they may also be presented in real time.

4-16. Multimedia products can be used for a variety of purposes, from meeting training requirements to serving as a means to transmit public information. They allow commanders to review the operations and training of their forces, and introduce new and improved operational techniques and developments to subordinates.

4-17. There is a range of quality in multimedia products, which is a direct result of the time available for editing. Many times, the intended audience determines the amount of time a particular product is given.

- Rough edit video report productions are normally products used by commanders and staff at a local level to support their operational needs and are not viewed at higher levels.
- Fully edited video productions are normally products used by the theater command, joint headquarters, DOD, JCS, or NCA to support operational needs.

4-18. VI productions are generally defined as the results of sequencing, according to a plan or script, original and/or existing still and/or motion images into a self-contained, complete, linear presentation for conveying information to or communicating with an audience. The inclusion of a scripted audio aspect defines a VI production specifically as an AV production. Figure 4-5 shows an example of a linear presentation.

## AUDIOCASSETTES OR SOUNDTRACKS

4-19. Audio documentation can accompany video documentation, complement still slide shows, or stand alone, depending on the purpose of the presentation.

## GRAPHICS

4-20. Graphics are the product of designing, creating, and preparing two- and three-dimensional visual products manually or with computer-assisted imaging equipment. This capability can produce accurate and informative operational decision graphics or enhance maps, aerial photographs, and satellite imagery. Graphics help create overlays with terrain and friendly, enemy, and targeting positions. They incorporate visual imagery into maneuver control systems to enhance accurate representation of the battlefield. Graphics are also used to prepare charts, posters, and visual materials for brochures, publication covers, briefings, displays, and models, as well as rough sketches and paintings for operational and historical purposes.

US Air Force photo by TSGT Varhegyi

**Figure 4-5. Linear Presentation**

## PRODUCT HANDLING AND DISTRIBUTION

4-21. The exploitation and handling of all VI products follow a basic four-step procedure: processing, reproducing, transmitting, and distributing. This procedure encompasses the following functions:

- Acquiring/receiving raw material.
- Evaluating and screening contents for functionality, operational relevance, and quality.
- Processing still negative and color slide film with conventional wet chemistry, when required. (Conventional film is used for backup only.)
- Converting conventional still negatives and transparencies into electronic images.
- Making color prints or transparencies from electronic images.
- Reviewing motion and still imagery for quick and refined video reports.
- Creating an appropriate product.
- Duplicating motion and still imagery, as required.
- Transmitting imagery and products over available communications systems, via official correspondence channels or courier.
- Distributing products, as required.

4-22. Commanders and leaders at all levels must apply OPSEC to the handling, releasing, and distribution of acquired VIDOC.

## Chapter 5

# Combat Camera Assets and Activities

COMCAM documentation is an essential battlefield information resource that contributes to decision-making at strategic, operational, and tactical levels. This chapter discusses the theater COMCAM Company, theater COMCAM VI officer, joint COMCAM operations, and the Joint COMCAM Center.

## THEATER COMCAM COMPANY

5-1. The mission of the theater COMCAM Company, IAW Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3205.01 and DOD Directive 5040.4, is to provide imagery to the NCA, JCS, military departments (MILDEPS), and the unified combatant commanders to support their operational and planning requirements during world crises, contingencies, exercises, and wartime operations. Those requirements include SA, PA, information warfare, mission assessment, and legal documentation. The company accomplishes its mission by providing COMCAM support to joint, unified, and US Army operations and exercises.

5-2. The company can provide land, airborne, and airmobile operations. When deployed as a whole, it supports the warfighter at all echelons in a fully manned theater of war. When necessary, its modular design facilitates tailoring support packages for lesser regional conflicts (LRCs), small-scale contingencies (SSCs), and other operations in the spectrum, such as peacekeeping (PK) and humanitarian relief operations. The company can deploy on short notice to support any level of combat force projection down to the maneuver brigade. It can also operate in a joint operational environment as part of, or in support of, a joint COMCAM organization.

5-3. The theater operational commander determines collection requirements based on local mission objectives and is the release authority for all COMCAM imagery. Once the in-theater operational requirements are satisfied, cleared products are immediately forwarded to the Joint COMCAM Management Team (JCMT) for use by the unified commands and released to the Joint COMCAM Center. The complete cycle from acquisition to receipt by the Joint COMCAM Center must occur within 24 hours for the collected imagery to remain a viable decision-making tool for the leaders at the NCA, JCS, and MILDEPS.

5-4. The COMCAM Company provides digital and conventional still or video photography, conventional film processing, digital image transmission, video editing, limited airborne and air assault capabilities, and limited night vision imagery acquisition. When deployed, all COMCAM forces are under the operational control of the supported unified commander; however, command of these companies is kept within Army channels, with joint operational control exercised through the appropriate component commander.

5-5. The COMCAM Company has limited capability to process weapons system video (WSV). WSV shows the impact of ordnance on targets and captures immediate secondary effects that may not be ascertainable by subsequent reconnaissance overflights of the same target. WSV becomes a valuable source of material for timely and accurate BDA and intelligence at the theater level, PSYOP within the international arena, and PA at the national level. COMCAM units usually do not handle reconnaissance and unmanned aerial vehicle (UAV) imagery. UAV requirements and missions to gather reconnaissance imagery are assigned to other forces.

5-6. The mission performed by the COMCAM Company is not meant to replace user-owned and -operated VI systems, such as those used specifically for intelligence, medical, prisoner documentation, and PSYOP. The company will augment functioning VI systems only when the systems cannot provide the required support.

## CAPABILITIES

5-7. The COMCAM Company provides the following to the theater:

- Staff planning, control, and supervision of the operations of the company, to include any augmenting personnel or materiel assets.
- COMCAM equipment maintenance by on-site repair, replacement, or evacuation to civilian contractors.
- Liaison to supported units, JCMT, and other service COMCAM elements.
- Capability of landing by parachute when organized to support airborne operations.
- Establishment, operation, and maintenance of COMCAM facilities supporting the theater and subordinate tactical command post headquarters. This includes—
  - COMCAM editing for the electronic processing of digital still and motion imagery acquired by organic documentation teams, WSV, or other COMCAM field units located in the theater area of operations (AO).
  - Operating support facilities to provide tailored still and motion media products, graphics products, narration support, and video reports on short suspense.
  - Presentation and exploitation of visual imagery in support of operational requirements.
  - COMCAM platoons to support operational requirements and provide continuous COMCAM documentation for historical purposes, to include ground and aerial documentation/acquisition of visual imagery. Transmission is accomplished via the most reliable transmission means available; that is combat net radios (CNRs), single-channel tactical satellite (TACSAT) radios, local area networks (LANs), or Defense Switch Network (DSN) and commercial telephone lines.

## OPERATIONS

5-8. The COMCAM Company is low-density, high profile, and rapidly deployable. Its response capacity is equal to the forces it deploys with, and it trains with those units when possible. Elements of the company supporting airborne operations are jump qualified. Elements supporting forced entry and rapid deployment missions can embark on short notice with limited aircraft space. When fully deployed, elements are dispersed over the entire theater of operations and are capable of 24-hour operations. Figure 5-1 shows an example of a rapid deployment mission.

US Air Force photo by TSGT Varhegyi

**Figure 5-1. Rapid Deployment Mission**

5-9. The company is trained and equipped to operate in all climates, adverse weather, chemical warfare environments, and under severe operating conditions. It can provide field operations with all mission forces within the military service and employ equipment with compatible technical formats and film types to ensure interoperability when deployed. In special operations or small task force situations, soldiers may operate in forward areas in direct combat with opposing forces. All personnel remain qualified on both pistol and rifle, and the company maintains mobility stocks of these weapons to deploy with soldiers.

5-10. Upon receipt of the tasking order, the company is attached to the Theater Signal Command (TSC), and subordinate elements are detached to deploy with their supported unit. COMCAM elements work for, and at the direction of, the J3, G3, or S3, as appropriate. Company leaders and planners integrate operations with the component battle staffs at all levels. They are required to have a TOP SECRET clearance to ensure the necessary access for this crucial staff coordination. All other company personnel are required to have a SECRET security clearance due to the sensitive nature of materials.

5-11. Upon acquisition, COMCAM imagery is moved to editing/processing facilities and then to the requesting command by the fastest means available. Within the theater/tactical environment and between the theater/tactical environment and the Joint COMCAM Center and/or sustaining base environment, this can include electronic movement via battlefield/theater communications systems (TACSAT, CNR, the Area Common User System [ACUS], or the Defense Information Systems Network [DISN]). The company also uses nonelectronic means, such as messengers, official mail, and military air to move and distribute COMCAM products.

5-12. The operational commander is the release authority for all collected COMCAM images. This authority can be delegated to the appropriate J3 or G3 or further delegated to the J2 or G2. The local command must release the images before they can be transmitted out of the theater. Images must be transmitted back to the Joint COMCAM Center within 24 hours to meet the mission requirements of the NCA, JCS, and MILDEPS.

## SUPPORT REQUIREMENTS

5-13. At the theater level, the COMCAM Company is attached to the TSC and is collocated with the Army Service Component Command (ASCC) G3. The theater Army (TA) element provides food service, health, legal, religious, finance, personnel and administrative services, supply, supplemental air transportation, and support for transmission of VI on data-capable communications lines across the theater and back to the sustaining base. The TSC provides communications-electronics (CE) maintenance support.

5-14. At the corps and division levels, the COMCAM element is attached to the headquarters. The platoon headquarters is collocated with the appropriate corps/division G3. COMCAM teams are under the operational control (OPCON) of the brigade and battalion headquarters and are collocated with the appropriate unit S3. The associated Army element provides food service, health, legal, religious, finance, personnel and administrative services, supply, supplemental air transportation, and support for transmission of VI on data-capable communications lines across the corps/division and to the next higher headquarters. The corresponding signal command provides CE maintenance support.

## STRUCTURE

5-15. The modular design of the COMCAM Company facilitates support package tailoring. The six modules are the company headquarters, the platoon headquarters, the theater operations section, the editing squad, the documentation squad, and the documentation team. Figure 5-2 shows the structure of the theater COMCAM Company.

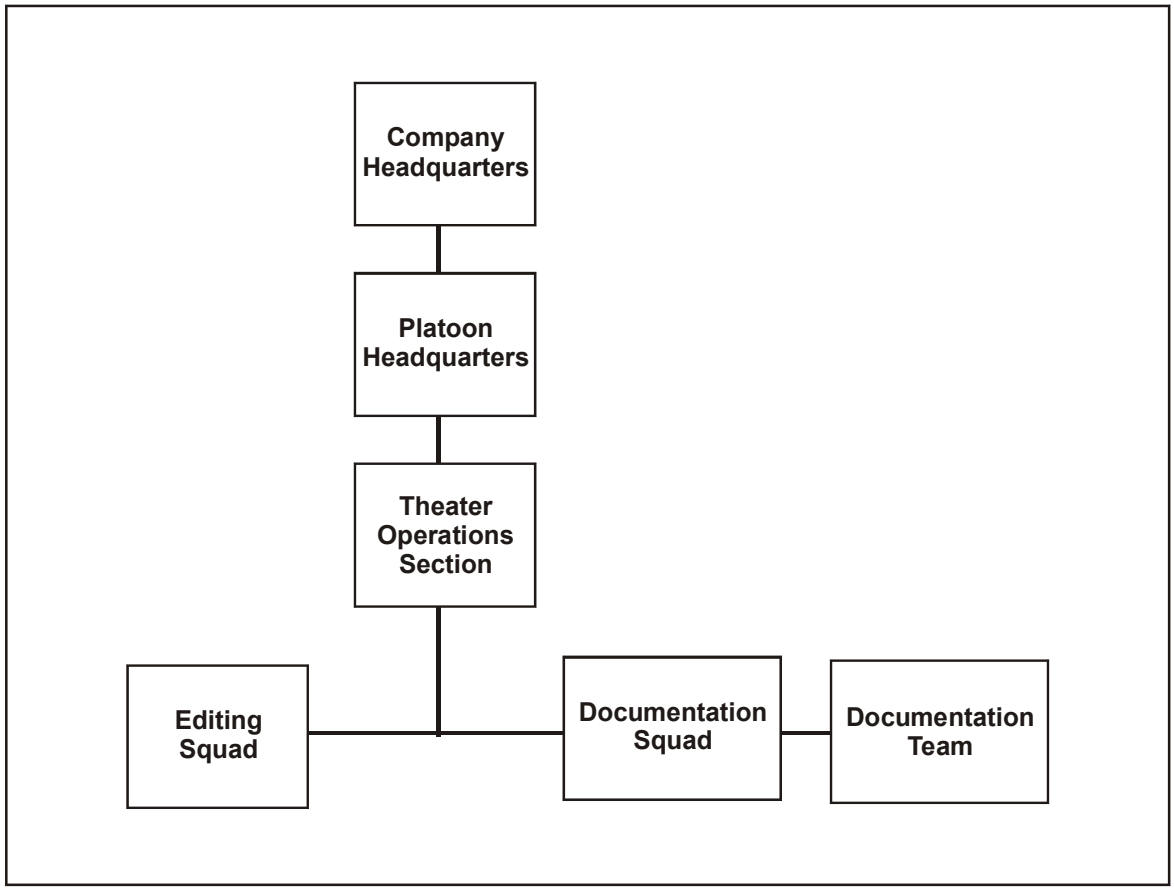



**Figure 5-2. Theater COMCAM Company**

### Company Headquarters

5-16. The company headquarters provides command, control, and supervision of the operations and activities of assigned platoons and ensures they execute their joint, unified, and Army VIDOC missions. The company headquarters also provides control and coordination of COMCAM VIDOC missions in the theater/joint AO to include COMCAM VI staff planning. The company headquarters provides limited administrative and logistical support for all assigned personnel, to include procuring the operational, logistical, and battlefield information services required to accomplish the mission. COMCAM administrative and logistical support includes the following activities:

- Coordinating the unit's supply activities, to include requesting, receiving, storing, issuing, accounting for, and preserving individual, organizational, installation and expendable supplies, and equipment.
- Issuing, receiving, maintaining, securing, and controlling the unit's weapons and ammunition.
- Training, advising, and supervising the unit on the operation and maintenance of chemical equipment.
- Executing the unit's personnel and administrative functions.
- Maintaining the unit's maintenance management system and prescribed load list (PLL).
- Maintaining the company's environmental control unit, vehicles, and generators.

**Platoon Headquarters**

5-17. The platoon headquarters provides command, control, and supervision over COMCAM missions and elements within the corps and division area. The platoon leader serves as the corps/division COMCAM VI staff officer.

**Theater Operations Section**

5-18. The theater operations section plans, coordinates, and supervises the operations of all theater, corps, and division-level COMCAM documentation. It supports missions while distributing associated products to support the mission requirements of the ASCC G3. It develops and distributes annexes to operations orders (OPORDs) and operations plans (OPLANs) and ensures the execution of COMCAM VIDOC by assigned platoons. The theater operations section is responsible for coordination/liaison among theater J3, ASCC G3, corps, and division COMCAM support elements. It exercises direct control over the documentation and editing squads assigned to the section.

**Editing Squad**

5-19. The editing squad provides still and video editing for finished products at the division, corps, and theater levels. It tailors still and motion media products, graphic products, narration support, and video reports. It also edits and archives video and photographic productions, processes 35mm conventional slides/prints, and arranges for presentation of visual imagery to support the operational headquarters.

5-20. The editing squad operates the Still Photography Editing and Processing System (SPEPS) and the Motion Video Editing System (MVES).

**Documentation Squad**

5-21. The documentation squad provides on-site day and night COMCAM still and video imagery and rough video editing in support of the theater, corps, division, and below. The documentation squad supervises and directs the three documentation teams in the squad.

### Documentation Team

5-22. The documentation team provides day and night COMCAM still and video imagery. The imagery supports the units throughout the theater and down to the maneuver battalion level.

### COMMUNICATIONS

5-23. The theater COMCAM Company passes classified and unclassified orders and command and operational information at the theater, corps, and division levels over CNR networks. At each of these levels, COMCAM elements operate an internal frequency modulation (FM) net for C2 and operate within the supported unit's IO net. The company has organic radios to support this requirement.

5-24. The company passes classified and unclassified orders, command and operational information, imagery, and data throughout the theater over the ACUS network. It uses telephones for basic staff coordination and to pass products and imagery around the battlefield. Due to geographic separation, each company module has its own organic user-owned voice and automation equipment; however, it relies on the supported unit for transmission support. Figure 5-3 shows a network diagram.

## THEATER COMCAM VI OFFICER

5-25. The COMCAM Company commander is dual-hatted as the theater COMCAM VI officer on the Theater Signal Command-Army (TSCA) G6 staff at the ASCC. As the theater COMCAM VI officer, his responsibilities include—

- Advising and providing information to the commander and the G3 on COMCAM capabilities and operations.
- Making recommendations on the capabilities, limitations, and employment of COMCAM assets to support the mission objectives.
- Planning and recommending COMCAM missions, and monitoring execution of decisions.
- Preparing, updating, and maintaining COMCAM annexes to plans and orders.
- Processing, analyzing, and disseminating COMCAM information, to include submitting COMCAM products and information to the appropriate staff element.
- Identifying and analyzing problems that might affect or be affected by COMCAM.
- Conducting staff coordination with the command, other staff officers, and sections at the higher, lower, adjacent, and supporting echelons of command and corresponding joint staff elements.

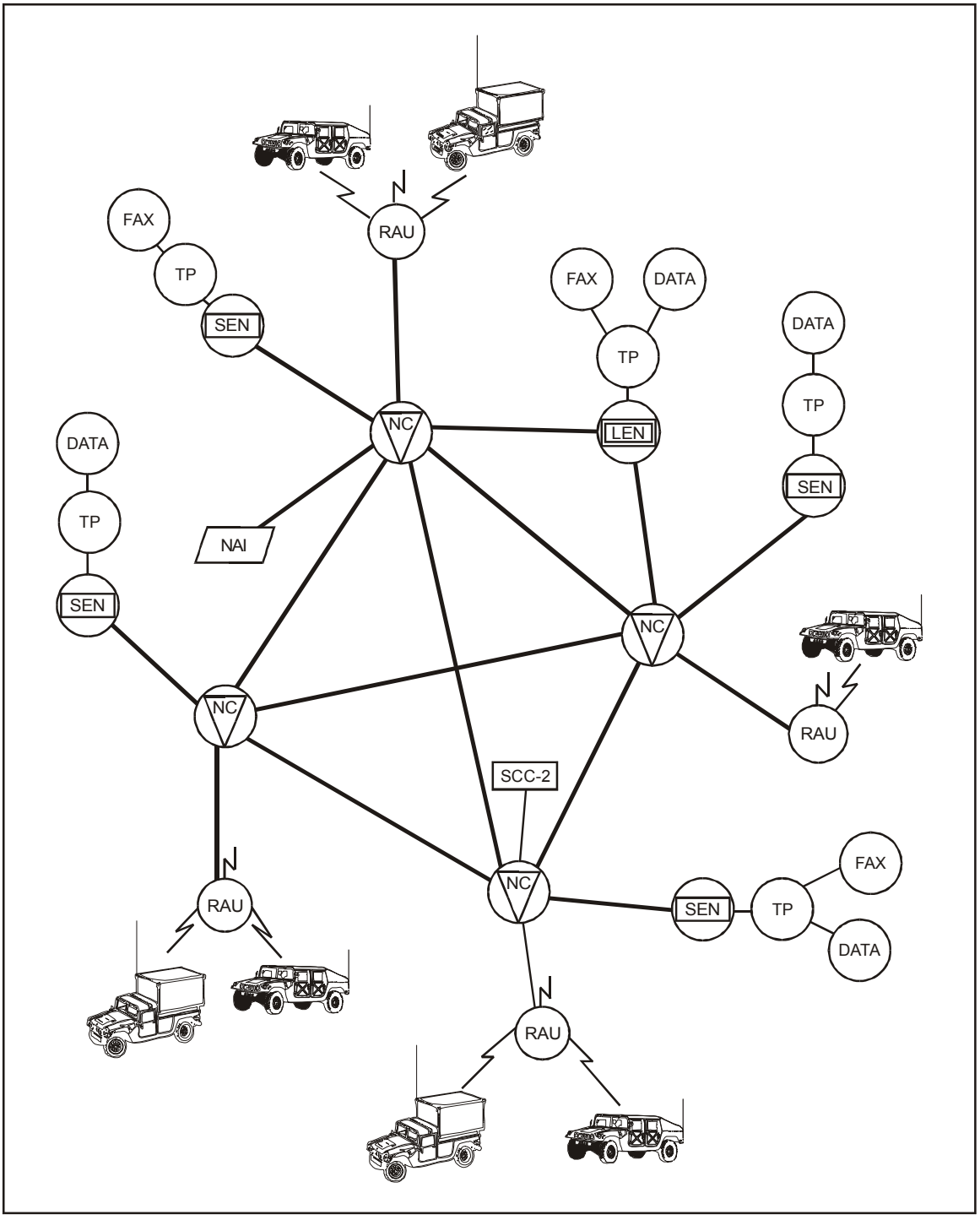



**Figure 5-3. Network Diagram**

## JOINT COMCAM OPERATIONS

5-26. Each military service has COMCAM forces that are trained and equipped to support forces in a combat environment. They can provide still photo and motion media support. COMCAM forces can be tailored to fit any requirement. All COMCAM force members possess at least a SECRET security clearance.

5-27. The Chairman of the JCS, the Joint Staff, or any specified or unified commander may task COMCAM support. Tasking is normally component-specific (Army COMCAM is tasked to document Army activities); however in a joint environment, joint COMCAM forces can be formed to document all aspects of an operation.

5-28. COMCAM products cleared by the operational commander can be forwarded directly from the theater of operations to the Joint COMCAM Center in the Pentagon for further distribution to the JCS, DOD, NCA, other sustaining base activities, and agencies and for the archive.

## JOINT COMCAM CENTER

5-29. The Joint COMCAM Center is the Pentagon's central reception and distribution point for still or motion imagery of current US military operations. The center distributes COMCAM imagery to the NCA, JCS, MILDEPS, unified combatant commands, defense agencies, and other DOD components simultaneously. The Defense Visual Information Directorate operates the center.

## Chapter 6

# Operational Responsibility

VI assets are a valuable source of information. This chapter discusses the responsibilities of the commander, operations and plans staff officer, signal staff officer, VI staff officer or noncommissioned officer (NCO), and functional user.

## COMMANDER

6-1. The operational commander is responsible for identifying the requirement for VI support, ensuring there is adequate support for VI assets, and determining collection requirements based on local mission objectives. This includes VI operations in all subordinate, assigned, or attached commands. Staff officers assist commanders in the discharge of these duties.

6-2. The commander is the release authority for all imagery acquired in the theater of operations. The complete cycle from acquisition to receipt by the Joint COMCAM Center must occur within 24 hours for the collected imagery to remain a viable decision-making tool for the leaders at the NCA, JCS, and MILDEPS.

## OPERATIONS AND PLANS STAFF OFFICER

6-3. The operations and plans staff officer at each level (theater, corps, division, and brigade) is responsible for identifying and integrating VI requirements into the command battlefield information efforts. This integration is critical as it significantly enhances operational decision-making.

## SIGNAL STAFF OFFICER

6-4. The signal staff officer at each level of command is responsible for directing VI in support of the assigned mission and advising both the commander and the operations and plans staff officer. He identifies and evaluates VI requirements and directs the preparation of planned operations, crisis, and exercise plans to ensure accomplishment of VI missions. The signal staff officer briefs commanders and staffs on the capabilities and limitations of VI units and procedures for requesting VI support. He is responsible for defining and integrating the role of VI in support of battlefield information systems (BISs) at his command level. The signal officer at each level will have a VI staff officer or NCO to advise them on VI operations.

## VI STAFF OFFICER OR NCO

6-5. The VI staff officer or NCO at each command level integrates operationally with the component battle staff and is responsible for assisting the signal staff officer in the planning and execution of VI in support of the assigned mission. He identifies and integrates VI applications to support operational decision-making to prosecute operations at all echelons of command. He defines the capabilities and limitations of VI units and establishes procedures for requesting, validating, and prioritizing VI support. On the ASCC staff, the theater COMCAM VI staff officer in the G6 assumes these duties and responsibilities. At echelons corps and below (ECB), the signal staff officer assumes these duties and is advised and assisted by the VI staff officer or NCO.

## FUNCTIONAL USER

6-6. The functional user at each level is responsible for identifying, defining, coordinating, and integrating VI support into the operational decision-making process. Users must familiarize themselves with VI capabilities, limitations, and procedures prior to requesting support. VI capabilities, limitations, and procedures are outlined in local VI SOPs.

## Chapter 7

# Logistics Management

As with other Army supplies, exact determinations of requirements for VI supplies and equipment and careful requisitioning are essential. This chapter discusses equipment and systems, equipment planning, combat developers (CBTDEVs), materiel developers (MATDEVs), supplies and repair parts, and maintenance.

## EQUIPMENT AND SYSTEMS

7-1. VI activities are authorized equipment and systems to produce products and provide services at their approved capability levels.

7-2. VI equipment and systems are nonexpendable or durable items that are capable of continued or repetitive use. These items can record, produce, reproduce, process, broadcast, edit, distribute, exhibit, and store VI products.

7-3. A VI system exists when a number of components can interconnect to operate together. Both VI and non-VI equipment are an integral part of a system (whether existing or under development) and are managed as part of the VI system.

7-4. The Department of the Army (DA) controls VI COTS investment items, with a cost threshold established by Congress. The requesting MACOM/FOA VI manager validates VI systems and equipment requirements costing in excess of the other procurement, Army (OPA) threshold. The Office of the Director of Information Systems, Command, Control, Communications, and Computers (ODISC4) approves and funds the requirements.

## EQUIPMENT PLANNING

7-5. Commands with authorized VI activities will establish and maintain a five-year VI requirements plan for equipment to meet their current and projected acquisition needs. This plan will establish an annual, realistic basis for programming both new and replacement equipment requirements. DA PAM 25-91 contains sample plans.

7-6. When a VI activity is assigned new mission requirements, these new requirements can be used to justify planning for and acquiring new VI equipment. However, the Army Visual Information Management Office (AVIMO) must approve the expanded capability.

7-7. Replacement equipment requirements are planned and programmed based on the life expectancy of equipment currently installed or in use. This provides a basis for establishing annual funding increments for replacing equipment. Table 7-1 is a guide to assist in determining the life expectancy of VI equipment.

**Table 7-1. A Guide to Life Expectancy of VI Equipment**

| Type of Equipment | Installation | Life Expectancy Years |
|---|---|---|
| **Photographic Systems** | | |
| All still and motion picture cameras (except self-processing cameras) | Transportable | 6 |
| | Portable | 5 |
| Self-processing cameras | Transportable | 5 |
| | Portable | 5 |
| Optical printers, processors, washers, dryers, and all other photo finishing equipment | Fixed | 7 |
| | Transportable | 5 |
| | Portable | 5 |
| Ancillary motion picture equipment: film editing, splicing, sound readers, synchronizers, and similar equipment | Fixed | 10 |
| Presentation equipment: all types of projectors, screens, and accessory equipment | Transportable | 10 |
| **Audio Systems** | | |
| Audio amplification equipment: audio tape recorders and players, disc players, public address systems, and accessory equipment | Fixed | 7 |
| | Transportable | 5 |
| | Portable | 5 |
| Audio microphone, mixing and control equipment, distribution equipment, speakers, and recorders | Fixed | 7 |
| | Transportable | 5 |
| | Portable | 5 |
| **Video Systems** | | |
| Video camera systems; synchronization generation, switching, and effects equipment; distribution systems, monitoring and control equipment, recording systems, and television systems | Fixed | 6 |
| | Transportable | 5 |
| | Portable | 5 |
| Video editing systems and character generators | Fixed | 5 |
| | Transportable | 5 |
| | Portable | 5 |
| Studio equipment: lighting, dollies, pedestals, tripods, booms, prompting equipment, and associated gear | Fixed | 10 |
| | Transportable | 5 |
| Still video and still store frame systems | Fixed | 5 |
| | Transportable | 5 |

**Table 7-1. A Guide to Life Expectancy of VI Equipment (Continued)**

| Type of Equipment | Installation | Life Expectancy Years |
|---|---|---|
| **Video Systems (continued)** | | |
| Ancillary technical plant equipment | Fixed | 10 |
| Film chains | Fixed | 6 |
| Closed circuit television systems | Fixed | 10 |
| **Video Teleconferencing Systems** | | |
| All systems | Fixed/Portable/ Modular | 10 |
| **Graphic Arts Equipment** | | |
| Computer graphics equipment | Fixed | 5 |
| Composing machines, typesetters, and title making machines | Fixed | 5 |
| Vapor process printers, art projector viewers, fluorescent tracing boxes, drafting tables, dry mount presses | Fixed | 10 |

7-8. AV is developed or commercially acquired. The procuring activity provides the logistic supportability of COTS materiel. The Army Signal Command (ASC) will centrally manage commercially available tactical VI equipment and systems included in the table(s) of organization and equipment (TOE)/modified table(s) of organization and equipment (MTOE) as specified in AR 710-1 and AR 708-1. The local ASC supporting activity will coordinate local procurement to consolidate maintenance service contracts.

7-9. Equipment standardization and interoperability is a goal of tactical VI resource management. Tactical VI equipment must meet military and federal standards and specifications (defense-approved industrial standards) IAW DOD Directive 4120.24-M. Supply Bulletin 700-20 provides currently tactical VI equipment and may be used as a guide for selecting equipment.

## COMBAT DEVELOPERS

7-10. CBTDEVs provide the doctrine, materiel requirements, organizations, and management information systems for new concepts. They—

- Determine the maintenance impact of new materiel or concepts.
- Assist in planning for logistics demonstrations and maintenance tests and analyze the results.
- Resolve issues relating to reliability, availability, maintainability, and supportability.
- Determine requirements and develop the documentation for training devices.

- Develop techniques and determine skill requirements for battle damage assessment and repair (BDAR).
- Coordinate with MATDEVs to ensure materiel maintenance considerations are included in the requirements documents.

7-11. The US Army Signal Center and Fort Gordon (USASC&FG), US Army Training and Doctrine Command (TRADOC), is the CBTDEV of tactical VI systems. The USASC&FG develops plans and concepts for tactical VI organizations and VI equipment and systems and prepares the TOE within the force structure.

7-12. To ensure compliance with DOD Directive 5040.2, units must submit requirements for tactical VI equipment and systems to HQDA, ATTN: SAIS-PPD-V, the Pentagon, Room 1C710, Washington, DC 20310-4800, to validate the authorization prior to documentation into a TOE or MTOE. As specified in AR 710-2, user/owners are responsible for property book accountability of authorized VI equipment.

7-13. The appropriate authorization document TOE/MTOE will include the approved requirements. Tactical VI organizations with an approved unit identification code will maintain a centralized listing of tactical VI equipment and systems.

7-14. Tactical VI organizations with an approved TOE/MTOE authorization will use type-classified (TC) standard (STD) equipment, when possible. STD equipment, when authorized, is requisitioned through the Army Wholesale Supply System (WSS). When equipment in the WSS does not meet the operational requirements, the MATDEV will initiate product improvements IAW AR 750-10 or add new requirements to the system IAW AR 71-9.

## MATERIEL DEVELOPERS

7-15. MATDEVs—

- Ensure the fielding plan meets the requirements of the Army maintenance systems, and that reliability, availability, and maintainability are included in design parameters and demonstrated during operational testing.
- Participate in the planning and conduct logistics demonstration and operational maintenance testing.
- Ensure trained personnel, test measurement and diagnostic equipment (TMDE), facilities, support equipment, repair parts, and publications are available when the system is delivered to the user.
- Establish and monitor modification work order (MWO) programs.
- Develop BDAR techniques, procedures, and related tool and materiel requirements.
- Develop factors for determining operational readiness float (ORF) requirements, which will be submitted to HQDA for approval.

- Emphasize prognostics and diagnostics in the design, development, and improvement of equipment.
- Collect data from all maintenance levels to analyze and use for prognostic purposes.

7-16. The USACECOM, a subordinate command of the US Army Materiel Command (AMC), serves as the MATDEV for tactical VI equipment and systems. They provide centralized procurement, maintenance, and logistical support for TC VI equipment and systems. The AMC plans, programs, and manages the RDTE of VI technology.

7-17. The MATDEVs at AMC will establish annual review procedures to ensure tactical VI equipment and repair part allowances and inventories are valid. Obsolete or underused equipment and parts will be redistributed for disposal.

## SUPPLIES AND REPAIR PARTS

7-18. The Army WSS supports repair parts for approved VI equipment and systems. Repair parts for COTS equipment that is not TC STD are locally procured.

## MAINTENANCE

7-19. Maintenance of tactical VI is performed and managed IAW AR 750-1. Preventative maintenance includes all actions to retain an item in an operational condition by providing systemic inspection, detection, and prevention of failures. Corrective maintenance includes all maintenance actions needed because of equipment failure.

7-20. The maintenance categories and their responsibilities are—

- **Organizational maintenance.** Units perform scheduled and unscheduled preventive maintenance tasks, including tightening, adjusting, cleaning, lubricating, and testing. Units replace minor items such as knobs, lamps, fuses, and interconnecting cables and makes operational checks to verify equipment readiness.
- **Direct support (DS) maintenance.** Designated maintenance activities perform this maintenance in DS of using organizations. DS maintenance is limited to the repair of end items, components, and assemblies on a return-to-user basis. VI units perform DS maintenance at corps level. Broad-level controlled substitution is authorized at the DS level.
- **General support (GS) maintenance.** Designated activities perform this maintenance in support of Army area supply requirements. Personnel perform repairs or overhauls necessary to restore materiel to a ready-for-issue condition, based upon published Army maintenance standards for the particular item of equipment. TSC VI units perform GS maintenance at theater level. The Television-Audiovisual Support Activity (T-ASA) provides disposition instructions for warranty items. Component and part-controlled substitution is authorized at the GS level.

- **Depot maintenance.** An industrial-type facility performs this highest category of materiel maintenance. Depot maintenance includes necessary disassembling, overhauling, rebuilding, testing, and inspecting of operating components; servicing required to obtain the desired performance; and returning the item to the Army supply system when it meets maintenance standards established for the equipment.
  - TSC VI units will determine requirements to evacuate equipment to a T-ASA for depot maintenance.
  - Selected equipment or components that cannot be repaired in the theater is returned directly to the depot facility for overhaul, return to contractor, or disposal.

7-21. Maintenance of COTS nondevelopmental items (NDI) equipment is accomplished by on-site repair, replacement, or evacuation to civilian contractors.

## Chapter 8

# Personnel Training

VI training prepares soldiers to provide VI support to commanders and their staffs. This chapter discusses VI military occupational specialties (MOSs) and VI training.

## VI MOSs

8-1. The following paragraphs discuss the four MOSs in the Career Management Field (CMF 25) responsible for accomplishing the VI mission.

### MULTIMEDIA ILLUSTRATOR (MOS 25M)

8-2. The multimedia illustrator—

- Supervises, plans, and operates manual, mechanical, and electric multimedia imaging equipment to integrate armament delivery recordings and various VI products portraying combat and noncombat Army, joint, and combined operations.
- Creates illustrations, layouts, map overlays, posters, graphs, and charts in support of battlefield operations, PSYOP, MI, medical, PA, and training functions.
- Installs, operates, and performs unit level maintenance on assigned equipment.
- Performs preventive maintenance checks and services (PMCS) on assigned vehicles.

8-3. The multimedia illustrator operates the following equipment:

- Diazo.
- Graphics computers.
- Headliners.
- Opaque and overhead projectors.
- Photo composers.
- Copy cameras.
- Desktop publishing equipment.
- Digital camera systems (still).
- Digital information handlers.
- Still photography editing and processing systems.

## VI EQUIPMENT OPERATOR-MAINTAINER (MOS 25R)

8-4. The VI equipment operator-maintainer—

- Installs, operates, maintains, and performs unit and higher levels of maintenance on VI equipment and systems, to include VTC equipment, in support of Army, joint, and combined operations.
- Operates vehicles and maintains forms, records, repair parts, special tools, and test equipment.
- Installs, operates, and performs unit and DS maintenance on assigned equipment and performs PMCS on assigned vehicles and generators.

8-5. The VI equipment operator-maintainer operates the following equipment:

- Army inventory and commercial television/radio broadcasting systems and associated equipment.
- Desktop publishing equipment.
- Electronic still photography systems.
- Still photography editing and processing systems.
- Motion video acquisition systems.
- Motion video editing systems.
- VI satellite support equipment.

## COMBAT DOCUMENTATION/PRODUCTION SPECIALIST (MOS 25V)

8-6. The combat documentation/production specialist—

- Supervises, plans, and operates electronic and film-based still video and audio acquisition equipment to document combat and noncombat Army, joint, and combined operations.
- Operates broadcast, collection, television production, and distribution equipment.
- Produces VI products in support of combat documentation, PSYOP, MI, medical, PA, training, and other functional missions.
- Installs, operates, and performs unit level maintenance on assigned equipment and performs PMCS on assigned vehicles and generators.

8-7. The combat documentation/production specialist operates the following equipment:

- Commercial still and video camera systems.
- Other Army inventory and commercial processing and finishing equipment.
- NDI digital acquisition equipment.
- Electronic still photography systems.
- Still photography editing and processing systems.

- Motion video acquisition systems.
- Motion video editing systems.
- VI satellite support equipment.

### VI OPERATIONS CHIEF (MOS 25Z)

8-8. The VI operations chief—

- Plans, programs, and supervises personnel performing VI support for Army, joint, and combined operations.
- Manages VI documentation/production schedules, multimedia illustration, television productions, and VI equipment repair operations.
- Operates facilities supporting combat documentation, PSYOP, MI, PA, training, and special mission functions.
- Establishes equipment maintenance and production schedules.
- Supervises installation, operation, and maintenance of assigned equipment and supervises PMCS on assigned vehicles and generators.

8-9. The VI operations chief can operate all major equipment used by the multimedia illustrator, VI equipment operator-maintainer, and combat documentation/production specialist.

## VI TRAINING

8-10. The Commanding General, USASC&FG, directs and supervises all service school training for VI MOSs (CMF 25). Officers receive basic VI instruction at the Regimental Officer Academy (ROA), Fort Gordon, Georgia. However, a majority of the resident training in support of the VI mission occurs at the Defense Information School (DINFOS), Fort George G. Meade, Maryland.

8-11. The senior enlisted advisor for CMF 25 series MOS works in the Office of the Chief of Signal (OCOS), USASC&FG, and can be contacted at (COMM) (706) 791-2287 or (DSN) 780-2287.

### DINFOS

8-12. The DINFOS provides resident, entry-level, and advanced training in PA, journalism, photojournalism, broadcasting, graphics, electronic imaging, broadcast systems maintenance, video production, and VI management. Instruction is provided to officers, enlisted personnel, and civilian employees of all branches of the armed forces to prepare them for worldwide assignment within the DOD.

8-13. The DINFOS's VI specific course work covers such topics as—

- Electronic imaging.
- Imagery systems maintenance.
- Broadcast television systems maintenance.
- Graphics.

- Still photography.
- Television equipment maintenance.
- Electronic fundamentals.
- Photographic maintenance.
- Photographic processing maintenance.
- Quality control.
- VI management.

8-14. Training at the DINFOS includes—

- Advanced individual training (AIT) for MOS 25M and MOS 25R.
- The Basic Noncommissioned Officer Course (BNCOC) and the Advanced Noncommissioned Officer Course (ANCOC) for CMF 25 series NCOs. These courses are a part of, and offered through, the Signal Center's Regimental Noncommissioned Officer Academy (NCOA).
- A VI management course for senior NCOs and company grade officers (first lieutenant through major).

8-15. The DINFOS is a part of the American Forces Information Service, a field activity of the Assistant Secretary of Defense (PA). The DINFOS can be contacted at the following address: Defense Information School, 6500 Mapes Road, Fort George G. Meade, Maryland 20755-5620, or using the world wide web address http://www.dinfos.osd.mil. The Directorate for Training for VI can be contacted at (COMM) (301) 677-5029 or (DSN) 923-5029.

8-16. All Army students arriving at the DINFOS must report directly to the US Army Signal School Detachment for in processing. The signal detachment office is located in Building 8611, 6th Armored Cavalry Road, Fort George G. Meade, Maryland 20755. The telephone numbers are (COMM) (301) 677-2386 or (DSN) 923-2386.

**ROA**

8-17. ROA provides resident VI training to all company grade signal officers (first lieutenant through captain) during the Signal Captains Career Course (SCCC).

8-18. The scope of the SCCC covers—

- Army operations doctrine.
- Communications systems planning, management, and control.
- Digital and analog engineering operations.
- Communications interfaces.
- Electronic warfare.
- Nuclear, biological, chemical (NBC) defense.
- Leadership.
- Personnel administration.
- Property accounting.

- Training management.
- Force integration.
- Military justice.
- Signal system tactics and doctrine.

8-19. ROA's purpose is to prepare signal corps company grade officers for company level command and for assignments to staff positions at battalions and brigades, both signal and nonsignal, with primary emphasis on signal operations.

8-20. ROA is part of the School of Leadership and Professional Development (SLPD) at USASC&FG and can be contacted at (COMM) (706) 791-2685 or (DSN) 780-2685.

8-21. Personnel interested in attending a Regimental Officer or NCO Academy course should contact their branch/functional area representative, local post/installation training coordinator for Army Training Resources and Requirements System (ATRRS) enrollment or the Training Support Division.

## CONSOLIDATED ARMY CORRESPONDENCE COURSE PROGRAM (ACCP)

8-22. The consolidated ACCP offers nonresident VI training. USASC&FG determines VI correspondence course offerings and specific eligibility. However, the Army Institute for Professional Development (AIPD), US Army Training Support Center, Fort Eustis, Virginia, administers the program.

8-23. ACCP offers both individual and group study enrollment options. With individual study, the student decides on course work to pursue and the timetable for completing it. With group study, a group leader administers the course to a group of students. Group study can be an effective way to conduct additional unit training, especially in low-density MOS situations.

8-24. DA PAM 350-59 explains policies and procedures for enrolling in Army correspondence courses. It also lists all correspondence courses developed and administered by the Army and certain other government agencies.

8-25. Address questions concerning enrollment eligibility waivers for current course configurations or problems with specific VI subcourses to the US Army Signal School Detachment.

## SPECIALIZED TRAINING

8-26. Required specialized training (airborne) to fulfill a specific unit's mission is identified and programmed by the unit commander. The requirement for the training must be documented on the unit's TOE or tables of distribution and allowances (TDA).

## ON-THE-JOB TRAINING (OJT)

8-27. Formal school training is supplemented by OJT to improve individual proficiency and to develop teamwork. OJT and cross-training of VI soldiers is a command responsibility. Cross-training provides for continuity throughout the organization.

## UNIT TRAINING

8-28. Leaders in VI units are responsible for planning training that guarantees a high standard of wartime proficiency. For example, the hands-on approach is intellectually and physically challenging to both soldiers and leaders. Training should focus on image acquisition, processing, reproducing, and distribution in a tactical operations environment; the effective use of available time and resources; and the maintenance of all assigned equipment.

# Glossary

**8mm** A compact videocassette record/playback tape format that uses eight-millimeter wide magnetic tape, a world-wide standard established in 1983 allowing high-quality video and audio recording. Flexibility, lightweight cameras, and reduced tape storage requirements are among the format's advantages.

**AAR** after-action review

**AC** active component

**ACCP** Army Correspondence Course Program

**ACUS** Area Common User System

**AAFES** Army and Air Force Exchange Service

**AFRTS** Forces Radio and Television Services

**AIPD** Army Institute for Professional Development

**AIT** advanced individual training

**AMC** Army Materiel Command

**analog** A method of representing data using continuously varying electrical voltages. Analog video whether transmitted over cables, read from videotapes, or broadcast is subject to degradation due to noise, distortion, and other electronic phenomena. Normal signal levels should be within 0.7 to 1 volt.

**ANCOC** Advanced Noncommissioned Officer Course

**AO** area of operations

**AR** Army regulation

**ASC** Army Signal Command

**ASCC** Army Service Component Command

**ATRRS** Army Training Resources and Requirements System

**audio** The "other half" of any video production consisting of frequencies corresponding to a normally audible sound wave (20 Hz to 20,000 Hz). The "soundtrack" of a videotape.

**AV** audiovisual

**AVIDP** Army Visual Information Documentation Program

**AVIMO** Army Visual Information Management Office

**BDA** battlefield damage assessment

**BDAR** battle damage assessment and repair

| | |
|---|---|
| **Betacam** | Portable, professional camera/recorder format developed by Sony. Betacam uses a component video system. |
| **Betacam SP** | A superior performance version of Betacam. SP uses metal particle tape and a wider bandwidth recording system. |
| **Betamax** | Consumer videocassette record/playback tape format using 1/2 inch wide magnetic tape. Developed by Sony, Betamax was the first home VCR format. |
| **BIS** | battlefield information system |
| **BNCOC** | Basic Noncommissioned Officer Course |
| **C2** | command and control |
| **C4ISR** | command, control, communications, computers, information, surveillance, and reconnaissance |
| **CA** | civil affairs |
| **Camcorder** | Combination of camera and videotape recorder in one device. Camcorders permit easy and rapid photography and recording simultaneously. Camcorders are available in most home video formats: 8mm, HI-8, VHS, VHS-C, S-VHS, etc. |
| **CBTDEV** | combat developer |
| **CCTV** | closed circuit television |
| **CE** | communications-electronics |
| **CJCSI** | Chairman of the Joint Chiefs of Staff Instruction |
| **CMF** | Career Management Field |
| **CNR** | combat net radio |
| **COMCAM** | combat camera |
| **component video** | Most home video signals consist of combined (composite) video signals, composed of luminance (brightness) information, chrominance (color) information, and sync information. To get maximum video quality, professional equipment and some consumer equipment keep the video components separate. |
| **compression** | The process of electronically processing a file to make it use less storage, or to allow more data to be sent down a transmission channel. |
| **COP** | common operating picture |
| **COTS** | commercial-off-the-shelf |
| **DA** | Department of the Army |
| **definition** | The aggregate of fine details available on-screen. The higher the image definition, the greater the number of details that can be discerned. |
| **digital** | A method of representing data using binary numbers. |

**DINFOS** Defense Information School

**DISN** Defense Information Systems Network

**distortion** In video, distortion usually refers to changes in the brightness color portions of a signal. It may contort the picture and produce improper contrast, faulty brightness levels, twisted images, erroneous colors, and snow. In audio, distortion refers to any undesired changes in the waveform of a signal caused by the introduction of spurious elements. The most common audio distortions are harmonic distortion, intermodulation distortion, crossover distortion, transient distortion, and phase distortion.

**DOD** Department of Defense

**DS** direct support

**DSN** Defense Switch Network

**ECB** echelons corps and below

**EN** engineer

**FM** frequency modulation. This is a process used for radio and television audio transmission and videotape recording. A low frequency signal modulates the frequency of a high frequency, radio frequency carrier signal. The original signal is demodulated at the receiver.

**FOA** field operating agency

**FOCI** foreign ownership, control, or influence

**G2** Assistant Chief of Staff, G2 (Intelligence)

**G3** Assistant Chief of Staff, G3 (Operations and Plans)

**G6** Assistant Chief of Staff for C4 Operations, G6

**GIE** global information environment. Includes all individuals, organizations, or systems, most of which are outside the control of the military or NCA, that collect, process, and disseminate information to national and international audiences.

**GS** general support

**HI-8** An improved version of the 8mm-tape format, capable of recording better picture resolution.

**HQDA** Headquarters, Department of the Army

**HUMINT** human intelligence

**Hz** hertz

**IAW** in accordance with

**IO** information operations. Activities that gain information and knowledge and improve friendly execution of operations while denying an adversary similar capabilities by whatever possible means.

| | |
|---|---|
| **IT** | information technology |
| **J2** | Joint Staff Intelligence |
| **J3** | Joint Staff Operations |
| **JCMT** | Joint COMCAM Management Team |
| **JCS** | Joint Chiefs of Staff |
| **JPEG** | joint photographic experts group. A digital compression standard for still video images that allows the image to occupy less memory or disk space. It includes options for trading off between storage space and image quality. |
| **JTF** | joint task force |
| **LAN** | local area network |
| **LOAC** | Law of Armed Conflict |
| **LRC** | lesser regional conflict |
| **MACOM** | major Army command |
| **MATDEV** | materiel developers |
| **METT-TC** | mission, enemy, terrain and weather, time, troops available, and civilian considerations |
| **MI** | military intelligence |
| **MIE** | military information environment |
| **MILDEPS** | military departments |
| **monitor** | A display that gets its signal directly from a camera or VCR, as opposed to a television. |
| **MOS** | military occupational specialty |
| **MP** | military police |
| **MPEG** | motion/joint photographic experts group. A digital compression standard for moving video images that allows the images to occupy less memory or disk space. It includes options for trading off between storage space and image quality. |
| **MTOE** | modified table(s) of organization and equipment |
| **multimedia** | A somewhat ambiguous term that describes the ability to combine audio, video, and other information with graphics, control, storage, and other features of computer-based systems. Applications include presentation, editing, interactive learning, games, and conferencing. |
| **MVES** | Motion Video Editing System |
| **MWO** | modification work order |
| **NBC** | nuclear, biological, chemical |
| **NCA** | National Command Authority |

| | |
|---|---|
| **NCO** | noncommissioned officer |
| **NCOA** | Noncommissioned Officer Academy |
| **NDI** | nondevelopmental item |
| **NMPS** | Navy Motion Picture Service |
| **OASD(PA)** | Office of the Secretary of Defense (Public Affairs) |
| **OCOS** | Office of the Chief of Signal |
| **ODISC4** | Office of the Director of Information Systems, Command, Control, Communications, and Computers |
| **OJT** | on-the-job training |
| **OPA** | other procurement, Army |
| **OPCON** | operational control |
| **OPDOC** | operational documentation |
| **OPLAN** | operation plan |
| **OPORD** | operation order |
| **OPSEC** | operations security |
| **ORF** | operational readiness float |
| **OVERLAY** | Keyed insertion of one image into another. Overlay is used, for example, to superimpose computer-generated text on a video image for titling purposes. |
| **PA** | public affairs |
| **PAM** | pamphlet |
| **PE** | peace enforcement |
| **PK** | peacekeeping |
| **PLL** | prescribed load list |
| **PMCS** | preventive maintenance checks and services |
| **post-production** | All production work done after the raw video footage and audio elements have been captured. Editing, titling, special effects insertion, image enhancement, audio mixing, and other production work is done during post-production. |
| **protocol** | A specific software-based guide or language for linking several devices together. Communication protocols are used between computers and VCRs or edit controllers to allow bi-directional "conversation" between the units. |
| **PSYOP** | psychological operations |
| **RC** | reserve component |
| **RDTE** | research, development, test, and evaluation |

| | |
|---|---|
| **resolution** | A measure of the ability to reproduce detail. Generally referred to as horizontal resolution and evaluated by establishing the number of horizontal lines which are clearly discernible on a test pattern. |
| **ROA** | Regimental Officer Academy |
| **SA** | situational awareness |
| **SCCC** | Signal Captains Career Course |
| **SLPD** | School of Leadership and Professional Development |
| **SOP** | standing operating procedure |
| **SPEPS** | Still Photography Editing and Processing System |
| **split screen** | An electronic process that allows the viewing of two video images, side by side or above and below, on-screen simultaneously. |
| **SSC** | small-scale contingency |
| **STD** | standard |
| **S-VHS** | Super Video Home System. An improved version of the VHS tape format capable of recording better picture resolution. A higher-density tape is required which provides a wider brightness bandwidth, resulting in sharper picture quality and improved signal-to-noise ratio. |
| **TA** | theater Army |
| **TACSAT** | tactical satellite |
| **T-ASA** | Television-Audiovisual Support Activity |
| **TC** | type-classified |
| **TDA** | tables of distribution and allowances |
| **TECDOC** | technical documentation |
| **TMDE** | test measurement and diagnostic equipment |
| **TOE** | table(s) of organization and equipment |
| **TRADOC** | United States Army Training and Doctrine Command |
| **TSC** | Theater Signal Command |
| **TTP** | tactics, techniques, and procedures |
| **US** | United States |
| **UAV** | unmanned aerial vehicle |
| **USACECOM** | United States Army Communications-Electronics Command |
| **USASC&FG** | United States Army Signal Center and Fort Gordon |
| **VCR** | video camera recorder |

**VHS** Video Home System. Consumer videocassette record/playback tape format using half-inch wide magnetic tape. The most common home VCR format in the United States.

**VI** visual information

**video camera** A camera with an electronic image sensor rather than photographic film. This electronic circuitry generates color and sync pulses. Equipped with a full complement of audio circuitry.

**video editing** A procedure for combining selected portions of video footage in order to create a new, combined version. During video editing, special effects can be added. Audio editing is often carried out simultaneously with video editing.

**VIDOC** visual information documentation

**VISC** visual information support center

**VTC** video teleconferencing

**WMD** weapons of mass destruction

**WSS** Wholesale Supply System

**WSV** weapons system video

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**FM 6-02.40** (FM 24.40)
**24 JANUARY 2002**

By Order of the Secretary of the Army:

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General, United States Army
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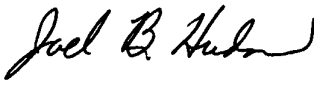

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