ANNEX H

Digitization Impact on CSS

Digitization of the battlefield is the insertion of digital technologies across all levels and within both combat and support organizations. It depends on the integration of numerous elements including computer processing, advanced software, displays, sensors, communications, and position/navigation components. The advantages of digitization include enhanced command and control (including C2 of CSS units) resulting from a common picture of the battlefield, improved situational awareness, better compatibility across battlefield operating systems, and shorter decision cycles.

IMPLICATIONS FOR SUPPORT

The CSS commander will have the command and control advantages of near real-time knowledge of location and status of friendly forces. Also, improved awareness of enemy elements will enhance his capability to ensure the survivability of CSS elements. However, beyond the C2 and security advantages, digitization leads to actual enhancements to the CSS process. Some benefits result from the increased speed and volume of data available as the system moves from analog to digital systems. However, CSS improvements from digitization can go beyond those obvious advantages. The most significant benefits accrue from the vertical and horizontal technological integration of digitized systems.

Vertical integration involves the passing of digital data through echelons. Digitized data will enter the system at the lowest level possible, down to the individual weapon system whenever feasible. Vertical integration of fully digitized systems will eliminate the requirement for manual processing and for re-entry of data at different levels as information moves from supported elements to CSS elements and through the various echelons of support. This process will provide CSS planners and operators more detailed, accurate, and up-to-date information on the status and requirements of supported forces. With this information they will be better able to anticipate and meet the needs of the force. Enhanced anticipation and control improves the capability of CSS personnel to push support to forces based on projected needs. This capability is especially critical in early stages of operations before the theater base is fully established.

Horizontal integration involves the use of various technologies to integrate digital data among combat, combat support, and combat service support elements. There are several interrelated aspects of such integration for CSS personnel. First, they will have the same picture of the battlefield as the combat and combat support leaders. This common picture, gained through such techniques as electronically transmitted orders and graphical overlays, will enable them to better and more quickly accomplish what they always strive for-the integration of operations and support plans, as discussed in Chapter 1. The tactical commander will

have better knowledge of the CSS situation and its implications for mission accomplishment.

Another aspect of horizontal technological integration for CSS personnel consists of integration of information among CSS personnel at a given level. Digitizing the CSS system cannot be confined to digitizing each of the functional analog processes of the current system and refining their uses. It must seek to develop new, fully integrated digital systems. As mentioned in Chapter 2, work is progressing on the development of a single integrated CSS Standard Army Management Information System (STAMIS). Current stand-alone functional systems will eventually

be blended into a single seamless automated system. The integrated functions will ultimately include not only supply, transportation, and maintenance, but also medical, personnel, and finance support. Integration of these functions will provide a near real-time comprehensive view of the CSS situation not only to CSS elements, but also, through the Army Battle Control System (ABCS), to all commanders. This integrated system along with the application of automatic identification technology (such as radio frequency identification) and communications both within the theater and between the theater and the sustaining base will enable the achievement of total asset and in-transit visibility as discussed in Chapter 2.

CSS TO DIGITIZED SYSTEMS

In addition to the enhanced capabilities that digitization provides to the CSS system, the digitized system itself will eventually require some changes in CSS. For example, manning may be affected in that skill requirements may be different. In fact, for certain functions (for example, development of resource requirements

and report preparation) automated capabilities may replace activities currently performed by soldiers. Also, the various hardware and software components of the digitized systems will require changes to maintenance requirements.

STAGES OF DIGITIZATION

Planners must take into account intermediate stages in the development and fielding of digitized systems. Not all elements of a force supported by a CSS unit may be at the same stage of digitization. This will be especially true if the supported force is joint, multinational, and/or interagency. Therefore, CSS planners must develop plans to receive status reports and requirements from fully digitized forces as well as from

elements with lesser capabilities. similarly, CSS activities at a given echelon and across the various levels may beat different stages of digitization. They will need to ensure plans to pass data address the various types of systems. Soldiers will need to maintain proficiency in operating and maintaining older systems as well as gaining expertise on digitized systems. This will require additional training.