



“Colonel, You’re Fired!”

By Richard Chaney

Maps have always been paramount during military operations. Wise planning includes a mechanism for timely map production and dissemination, but even the best-planned operations may meet with disaster. An example of this occurred during World War II when unexpected problems caused map shortages that threatened the success of the European invasion. Although today’s military has committed to the digital mapping environment, the technology creates new hazards as well as solutions. We must carefully consider both logistic and production factors.

The words in the title of this article were directed at Lieutenant Colonel Daniel Kennedy during the Battle of the Bulge in World War II. As chief of the Army Topographic Section of the 652d Engineer Topographic Battalion under Lieutenant General George S. Patton’s Third Army, Kennedy was doing his best to improvise and make up for map shortages and rapidly changing battle plans.

Kennedy’s reprimand came from Major General John S. Wood, commander of the 4th Armored Division, XII Corps, Third Army. At about the same time, Patton ordered General Wood to spearhead

the attack into Alsace-Lorraine. Wood and his troops were exhausted from earlier battles and Wood replied, “Dammit George, we’re not robots. We need a rest.” Many officers and historians believe that Patton “fired” Wood at this point¹. At about the same time, Wood sent a letter to the XII Corps commander concerning “the rotten map situation.”² He “fired” Kennedy soon after.

Although General Wood reprimanded Kennedy more than 50 years ago, Kennedy still vividly recalls the sting. The words were a bitter reminder of the frustrating events that plagued battlefield engineer units during that



LTG Patton and MG Van Fleet examine a map layout of the Danube River area.

historic but trying period. Today, Kennedy's experience may serve as a "heads-up" for future engagements.

World War II

Much of the planning for the European invasion of World War II began in 1943. The General Staff estimated that the four U.S. Armies involved would need approximately 7 million maps each month. Since this was more than the base and field topographic units and local civilian facilities could provide, additional British and American facilities located in England were tasked for support. This wise planning was overshadowed by the disruptive events that followed.

During World War II, and particularly in the European Theater, most battles were characterized by rapid advancement over new and difficult terrain. "Go where you can, as fast as you can" was Patton's buzz phrase during his campaigns in France, and General Wood echoed this philosophy in his actions. However, when troops began their rapid advances, they were plagued by map shortages.

Map Shortages

Two major factors led to map shortages during the Battle of the Bulge. The first was directly related to enemy action, which impacted the situation early in the invasion; the second was logistical problems, which compounded most of the later shortages. Changes in distribution demands and weather conditions also took a heavy toll on early supply and logistics efforts.

Enemy Action. According to LTC Kennedy, most of the advance maps were aboard transport ships that sunk in Cherbourg harbor during the first days of the invasion. Many ships were sunk as they crossed the English Channel, while others were destroyed as they approached or entered French harbors. The few strategically located harbors (most notably, Cherbourg) were either heavily mined or too damaged to allow adequate discharge of ship cargoes.³

Logistical Problems. Subsequent to direct enemy action, most of the research indicates that logistics (specifically, distribution) was one of the biggest problems and bottlenecks to the mapping equation. Once inside the harbors, no one knew which ships to unload first. Although well-defined priorities were established, depending on the cargo type, strict adherence to these priorities meant time-consuming investigations of each load, followed by unloading only specific, partial cargoes. Meanwhile, other vessels and cargoes sat idle, creating additional congestion. The staff finally agreed to discharge each ship as quickly as possible regardless of cargo and then sort the supplies once they were ashore. This method greatly reduced harbor congestion, but it created confusion at several depots. During the unloading of Project Overlord, one frustrated staff officer jokingly summed up the entire harbor logistics problem: "The general principle is that the number of divisions required to capture the number of ports required to maintain those divisions is always greater than the number of divisions those ports can maintain."⁴

Distribution Demands. Although combat actions and congested harbors set the stage for many map shortages, additional problems compounded the situation. Topographic battalions were well-equipped and well-organized, but they were not adequately prepared to handle unexpected changes in demands. According to some experts, "The transportation [of map stocks] between depots and from depots to troops was to cause more trouble than any other aspect of map distribution on the continent."⁵

In some instances, maps were of no value because troop locations did not match the map coverage. However, this was not necessarily due to improper delivery of the maps. During the invasion of Utah Beach, the combination of naval artillery bombardment and Army Air Force bombs created so much dust and smoke that terrain features could not be seen. Radar could not distinguish between the different beaches, and

strong tidal streams pulled about 20 of the first-wave landing craft completely off course. Although they met little enemy resistance and there was little surf to contend with, the troops soon realized that none of the local features matched their maps. Later Brigadier General Theodore Roosevelt Jr. discovered the problem. Having studied the terrain maps earlier, he realized that the troops had "slipped" about 2,000 yards south of the designated point.⁶

Weather. Record-breaking storms between 19 and 22 June 1944 caused heavy losses to supplies and equipment. According to the commander of assault force O, 90 ferrying craft and an undetermined number of larger craft were lost on Omaha Beach alone. The British estimate that they lost 250 ferrying craft, and about 800 additional craft were stranded on U.S. and British beaches. On 22 June, one eyewitness on Omaha Beach counted 335 LCMs (landing craft, mechanical), 11 LCTs (landing craft, tanks), 3 LCIs (landing craft, infantry), 9 rhino ferries, and more than 20 other craft piled up.⁷

Changes in Tactics

The demand for accurate maps on short notice has always been a high priority that requires constant reorganization and logical thinking to contend with changing circumstances. In France, map shortages due to enemy action, logistics, distribution, and weather were exacerbated by changing tactics, particularly those of Patton's rapidly advancing forces. Patton's attack plans changed so often that there was insufficient time to make new maps to support the latest strategy. Kennedy remembers an all-too-familiar scene: "Each morning at 0900, Patton held a general's meeting and determined where each unit was going. Then he would leave to check the front lines. By 1900, he would have another meeting, and all the earlier decisions would change. We had to pitch the first maps and start on the new ones. This went on

throughout most of the campaign."⁸

Because Patton demanded such quick map-support response, the Army Survey Center was cannibalized into a topographic section to better meet his needs. A photogrammetric camera and printing press capabilities were added to make it self-contained and capable of providing quick response. LTC Kennedy recalls many instances where the topographic section received *carte blanche* status to commandeer whatever supplies and facilities it needed.

The demand for maps exceeded all expectations, and a paper shortage became a major engineer supply problem. Local supplies of French paper stock were inadequate, so U.S. Army engineers printed about 10 million maps on the reverse side of captured German maps.⁹ In areas such as the upper Rhone valley, small-scale maps were particularly scarce, and French units relied on Michelin road maps supplemented by information from local residents.¹⁰

Today's Army

Today's Army is committed to pursue digital technology and to provide cartographic products as they are needed. According to current map doctrine and AR 115-11, *Army Topography*, the U.S. Army Corps of Engineers remains the proponent for topography. Engineer topographic battalions are responsible for the production of special maps and terrain-related products and services. They also retain the ability to produce limited quantities of standard maps in the field.

Present and future technology allows us to use huge, global databases in many useful ways, but managing that information requires comparable levels of administration. System administrators must monitor and provide quick access to a wide spectrum of data through a more controlled intranet versus Internet environment. Simultaneously, organizations such as the National Imagery and Mapping Agency need access to deposit traditional or specialized cartographic products. Data managers must control both

input and access to digital data from all sources, civilian and military. Additionally, many scenarios may require specific physical locations and levels of control, although physical location is less critical than it was during World War II.

The transfer medium poses another dichotomy. Many technological advances have geometrically increased the data storage capacity on either magnetic- or laser-imprinted materials. But these advances come with a price in survivability. One frequently asked question is: "Which would you rather have, a CD-ROM with a bullet hole or a paper map with a bullet hole?" Although a high-tech, "shoot-and-scoot" Army may reduce the possibility of receiving bullet holes, CDs are also more susceptible to damage from dust and moisture.

Learning From the Past

History reminds us that we should not place too much faith in technology. "Look what happened with the fratricide during Desert Storm," LTC Kennedy explains. "Technology is fine in controlled situations, but combat is usually unpredictable and far from controlled...[In combat situations] you have to be able to do anything. You have to adapt to situation requirements. There are basic things every engineer should know, but they need a broad range of knowledge to better prepare them for a wide set of circumstances. Then they must use common sense and make do with what they have."

After we survived the problems during the Battle of the Bulge, historians placed a "mark on the wall." It was a strong reminder that we need to possess and be able to disseminate critical terrain information on demand. When a general requests maps from an engineer, the engineer must produce them. To accomplish this, he must have appropriate equipment and supplies and be able to disseminate the finished products.

Could a similar mapping problem occur today? In this age of advanced digital imaging, can we still lose maps on a sinking ship? Many experts

believe a similar scenario is possible. The logistics of transfer medium, data management, training, and support are elements that we must scrutinize from every angle. If we fail to learn from the past, we may find ourselves in a situation similar to LTC Kennedy's. We cannot afford to be lulled into technological complacency or to produce critical information only to let it "sink in Cherbourg Harbor." If that happens, the next outcry we hear may be more tragic than "Colonel, you're fired!"



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Endnotes:

¹ Nat Frenkel and Larry Smith, *Patton's Best: An Informal History of the 4th Armored Division*, Hawthorn Books, Inc., New York, 1989.

² John Wood, Commander, 4th Armored Division. Letter to Commander, XII Corps, referencing the "rotten map situation."

³ Samuel E. Morison, *The Invasion of France and Germany, 1944-1945. History of United States Naval Operations in World War II, Vol. II*. Atlantic Monthly Press, Little Brown and Company, Boston, 1957, p. 304.

⁴ Roland G. Rupenthal, *Logistical Support of the Armies*, Vol. II, 1958, p. 46.

⁵ Alfred M. Beck, et al. *United States Army in World War II. The Technical Services. The Corps of Engineers: The War Against Germany*, Center of Military History, Washington, D.C., 1985, p. 297.

⁶ Rupenthal, p. 100.

⁷ Gordon A. Harrison, *Cross-Channel Attack*, 1997, pp. 423, 426.

⁸ Interview with Daniel Kennedy, Rolla, Missouri, 3 October 1996.

⁹ Rupenthal, p. 216.

¹⁰ Beck, p. 454.

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