ENSURING THE CONTINUED RELEVANCE OF LONG RANGE SURVEILLANCE UNITS

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

ENSURING THE CONTINUED RELEVANCE OF LONG RANGE SURVEILLANCE UNITS, by MAJ VALERY C. KEAVENY, JR., 104 pages.

Long Range Surveillance Units (LRSUs) provide a unique and necessary capability to today's commanders and to commanders who will fight in the future. In looking to the future operational environment, LRSUs must ensure their ability to operate across the full spectrum of operations at a rapid tempo and in a short-notice, force projection Army. Current LRSU doctrine is primarily built around the AirLand Battle doctrine of the Cold War, a conventional threat, linear battlefield, and employment at great distances behind enemy lines. As a result, LRSU doctrine and Tactics, Techniques, and Procedures (TTPs) require update or change. These changes will ensure continued LRSU relevance and their maximum effectiveness.

This study identifies an increased and unaddressed emphasis on target acquisition, Stability and Support Operations, and operations in urban environments. These operations lend themselves to non-traditional and creative tasking of LRSUs and will necessitate increased requirements for friendly unit coordination, vehicular insertion, and potential task organization of reconnaissance elements.

This study recommends changes to doctrine, tactics, techniques, procedures, and training based on lessons learned by LRSUs on recent operational missions and the lessons of similar units. These changes require proponent leadership, LRS community teamwork, and warrant additional Army oversight and assistance.

ACKNOWLEDGMENTS

Most importantly I would like to thank my wife, Kimberly, for sacrificing some of “the best year of our lives” while I sat in front of a desk full of books and a computer. I would also like to thank the outstanding officers, NCOs, and soldiers of the LRS community with whom I have had the pleasure to serve. Their professionalism, commitment, and desire to continuously improve instilled my drive to advance the Army’s knowledge and appreciation of this small community.

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ACRONYMS

ACE	Analysis and Control Element
ADC(O)	Assistant Division Commander (Operations)
AI	Area of Interest
AO	Area of Operation
AOB	Alternate Operations Base
AOR	Area of Responsibility
APC	Armored Personnel Carrier
ASI	Additional Skill Identifier
AWE	Advanced Warfighting Experiment
BCTP	Battle Command Training Program
BRS	Base Radio Station
BRT	Brigade Reconnaissance Troop
C2	Command and Control
CAS	Close Air Support
CASEVAC	Casualty Evacuation
CCT	Combat Control Team
CGSC	Command and General Staff College
CINC	Commander in Chief
CM&D	Collection Management and Dissemination
COB	Company Operations Base
COLT	Combat Observation and Lasing Team

CPU	Central Processing Unit
CTC	Combat Training Center
DCD	Directorate of Combat Developments
DOB	Detachment Operations Base
E&R	Evasion and Recovery
EXEVAL	External Evaluation
FEBA	Forward Edge of the Battle Area
FM	Field Manual
FLOT	Forward Line of Own Troops
G2	Assistant Chief of Staff, Intelligence
G3	Assistant Chief of Staff, Operations
GS	General Support
GSR	Ground Surveillance Radar
HALO	High Altitude Low Opening (Parachute Technique)
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HUMINT	Human Intelligence
IBCT	Interim Brigade Combat Team
I-DIV	Interim Division
IEW	Intelligence and Electronic Warfare
IPB	Intelligence Preparation of the Battlefield
JP	Joint Publication
JRTC	Joint Readiness Training Center
JSOTF	Joint Special Operations Task Force

JSTARS	Joint Surveillance Target Attack Radar System
KFOR	Kosovo Force
LLVI	Low Level Voice Intercept
LOC	Line of Communication
LRP	Long Range Patrol
LRRP	Long Range Reconnaissance Patrol
LRSC	Long Range Surveillance Company
LRSD	Long Range Surveillance Detachment
LRSLC	Long Range Surveillance Leader's Course
LRSUs	Long Range Surveillance Units
LZ	Landing Zone
MAGTF	Marine Air Ground Task Force
MEF	Marine Expeditionary Force
MFF	Military Free Fall
MI	Military Intelligence
MNB (E)	Multinational Brigade (East)
MOS	Military Occupational Specialty
MOOTW	Military Operations Other Than War
MOUT	Military Operations on Urbanized Terrain
MRE	Mission Rehearsal Exercise
MTT	Mobile Training Team
NAI	Named Area of Interest
NCA	National Command Authority

NCO	Noncommissioned Officer
NCOES	Noncommissioned Officer Education System
NGF	Naval Gunfire
ODA	Operational Detachment Alpha
ODCSPER	Office of the Deputy Chief of Staff for Personnel
OOTW	Operations Other Than War
OP	Observation Post
OPCON	Operational Control
PGM	Precision Guided Munitions
PO	Peace Operations
QRF	Quick Reaction Force
R&S	Reconnaissance and Surveillance
REMS	Remotely Employed Sensors
RRD	Ranger (Regiment) Reconnaissance Detachment
RSTA	Reconnaissance, Surveillance, and Target Acquisition
RTB	Ranger Training Brigade
SASO	Stability Operations and Support Operations
SATCOM	Satellite Communications
SEAD	Suppression of Enemy Air Defense
SERE	Survival, Evasion, Resistance, and Escape
SF	Special Forces
SIGINT	Signal Intelligence
SOF	Special Operations Forces

SOP	Standard Operating Procedures
SOR	Specific Orders or Requests
SR	Special Reconnaissance
SRF	Special Reconnaissance Force (Hungary)
TAI	Targeted Area of Interest
TO&E	Tables of Organization and Equipment
TOC	Tactical Operations Center
TRADOC	Training and Doctrine Command
TRAP	Tactical Recovery of Aircraft and Personnel
TTPs	Tactics, Techniques, and Procedures
UAV	Unmanned Aerial Vehicle
USASOC	US Army Special Operations Command
USMC	United States Marine Corps
WMD	Weapons of Mass Destruction
XO	Executive Officer

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CHAPTER ONE

INTRODUCTION

> If you don't like change, you're going to like irrelevance even less. The naysayers and those who say we are going too fast endanger the Army's relevance to national security. It's not a debate. The Army must change because the nation cannot afford to have an Army that is irrelevant. (Naylor 2001, 10)
>
> General Eric Shinseki, Chief of Staff

Topic

Long-Range Surveillance Units (LRSUs) must transform with the Army to ensure their continued relevance.

Scope

This study addresses the required training and employment changes that LRSUs must make to remain relevant to the commander operating in the future operational environment. It considers LRSU employment across the full spectrum of operations, including offensive, defensive, stability, and support operations. The study also considers LRSU employment within the varied possibilities of the operational framework (linear and nonlinear operations and contiguous and noncontiguous areas of operation). Finally, this study addresses training for and employment against traditional military threats or against the variety of emerging threats that can be expected on future battlefields or in future stability and support operations.

This paper seeks to identify training and employment changes that will enhance the LRSU's relevance in the future operational environment. Anticipated changes include doctrine; tactics, techniques, and procedures (TTPs); integration with other

reconnaissance assets; collective interunit and intraunit training; and possible institutional training improvements.

The Problem

When left to provide for their own, Army history repeatedly shows that small and specialized units lose attention, support, or relevancy. In the end, this leads to improper utilization or inactivation. If LRSUs fail to change, they risk losing relevance to the commanders of the current legacy force, the interim force, and the objective force (see Transformation in Glossary).

There are several factors that indicate a need for change. LRSUs are often not employed to their full capability. LRSU operations are resource intensive and hazardous in nature and require very detailed staff targeting, planning, and support. Occasionally, the detailed requirements to support LRS missions and the special selection and training of LRS soldiers contribute to a negative perception of the LRSUs. Compounding the problem, many staff officers do not understand the capabilities and limitations of LRSUs, nor are they educated in their employment. These contributing factors often lead to a staff preference for utilizing technological assets or employing LRSUs in less than optimum fashion. Each of these factors, indicating a need for change, is discussed in the following paragraphs.

The detailed planning and operational support specifically required for a LRS mission significantly outweighs that required for any similarly sized organization within a division or corps. A six-man LRS team typically receives its tasking from the assistant chief of staff for operations (G3) and receives detailed planning support from several elements of the division or corps staff (FM 7-93 1995, chaps. 2 and 3). Doctrine calls for

mission approval from the LRSU commander (FM 7-93 1995, 3-5). Even so, due to their typical deep insertion forward of friendly lines, the LRSU final mission approval routinely comes from either the assistant chief of staff for intelligence (G2), the G3, the chief of staff, the assistant division commander (operations) (ADC(O)), or occasionally the commanding general.

Following mission approval, the team's insertion into the area of operations may require suppression of enemy air defense (SEAD); supporting fires from close air support (CAS), artillery, or attack helicopters; command and control and casualty evacuation support; unmanned aerial vehicle (UAV) support; electronic warfare support; and a host of other actions in support of the team (FM 7-93 1995,chap. 3). Like any deep air assault operation, planning and execution require detailed integration and synchronization of many staff members and supporting units. The expense, in time and effort, continues throughout a team mission as the unit and staff remain prepared to support the contingencies of evasion and recovery, in-flight abort, downed aircraft, emergency resupply, emergency extraction, and loss of communications with a team (FM 7-93 1995, 3-1). Many of these contingencies involve planning and executing another deep air assault as part of the contingency's corrective action.

The perception of LRSU elitism can cause additional friction to effective training and employment. In many cases, selectivity in manning and special training allowances provided to the LRSU may cause an unspoken envy, distrust, or dislike of LRSUs. LRSUs typically hand select their soldiers. Although these soldiers are not always the optimum choice, the fact that LRSUs can be selective has caused irritation to those who cannot be selective and to those who provide the troops that the LRSUs select.

Additionally, LRSUs typically receive special training benefits that run from removal from post support activities to attendance at special military schools. These facts can fuel the perception that LRSUs drain other units of their best personnel or absorb the preponderance of available schooling opportunities. These perceptions can negatively affect the training support and tactical employment of the LRSUs by tainting the attitude of those responsible for LRSU support or employment.

A significant factor affecting the effective utilization of LRS hinges on the limited experience that many staff officers have in LRS operations. In fact, most staff officers have little to no exposure to LRS operations. According to the Military Strength Analysis and Forecasting Division of the Office of the Deputy Chief of Staff for Personnel (ODCSPER), there were 64,829 Army officers on active duty on the first of September 2001 (Arnhart 2001). At full strength, only fifty-six company and field-grade officers would be directly involved with LRSU training or employment. This total would include fourteen serving as LRSU commanders or executive officers; twenty-one serving as the parent military intelligence (MI) battalion commander, executive officer, or operations officer; and twenty-one officers serving as the division or corps intelligence officer, operations officer, or chief of staff. Even if the total of 56 officers was increased tenfold to 560 officers to account for past experience and indirect involvement, the number of officers with experience in LRSU operations would amount to less than one-thousandth of the overall officer strength. This problem is exacerbated by the lack of institutional training or a quality doctrinal reference for staff officers to read in order to grasp LRSU requirements. This study covers the doctrinal shortfalls in detail in chapter two.

As a result of these factors, although senior leaders appreciate LRSUs capabilities and contributions, many planners view technological assets as less of a risk and a possible replacement for the LRSU. In this time of reduced assets, some planners in the Directorate of Combat Developments (DCD) at the Infantry School were considering inactivation of additional LRSUs as a possible solution to force structure limitations. Before reductions occurred, LRSUs were forecast in the Interim Division (I-DIV) structure (Pound 2001, 8) and Long Range Surveillance Detachments (LRSDs) were one of the few units mentioned by name in the Objective Force white paper *Concept of the Objective Force* (2001, 16). Even though LRSUs are currently included in future force structure, the characteristics and tempo of the future operating environment will exacerbate the current problems with effective utilization.

Until recently, a significant problem for LRSUs has been the lack of a proponent and the accompanying equipment standardization and support. This lack of a "guardian angel" has allowed significant equipment shortfalls and the inactivation of several units. In the active component, only five LRSDs and two Long Range Surveillance Companies (LRSCs) remain in active service (see figure 1).

Until recently, disagreements between the Infantry School and the Military Intelligence School left the LRSUs without a proponent. Both schools appreciated LRSU capability, but could not agree on who should assume responsibility for the small force. Part of the issue revolved around the mission and role of the LRSU--reconnaissance is an Infantry specialty and surveillance (specifically with technology) typically falls into the MI arena. The Infantry School's Ranger Training Brigade (RTB), specifically the 4th Battalion, accepted proponent responsibility in 2000.

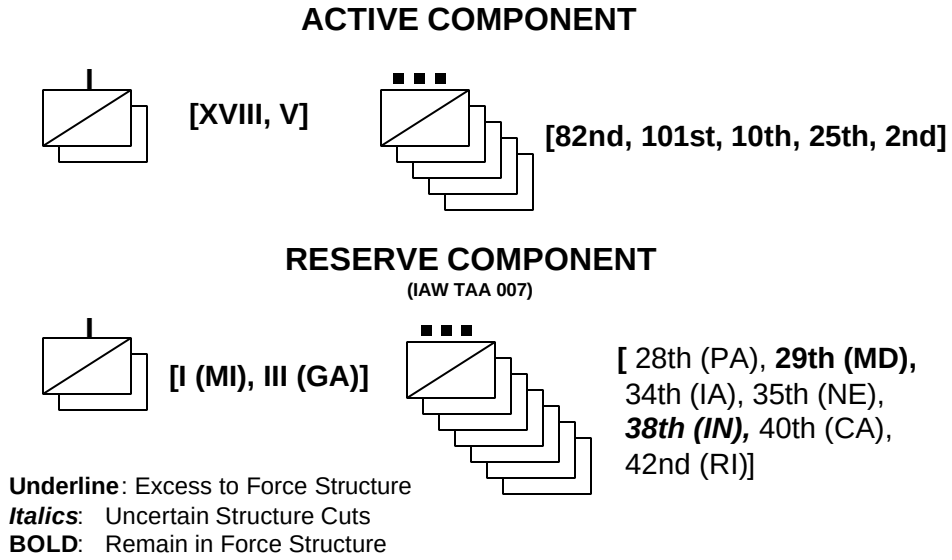

Figure 1. Current LRSUs (Pound 2001, 4)

Delta Company of the 4th RTB runs the Long Range Surveillance Leader's Course (LRSLC) and is currently tasked with proponent oversight of LRSUs. This oversight includes doctrine, organization, and equipment. Although the twenty-man company has accomplished a great deal over the last two years, bureaucracy and echelon limit the immediate changes it can effect. As a result, individual LRSUs are modernized independently, primarily based on the needs, capabilities, and desires of their parent MI battalion and division. The disparity in active component equipment is significant; it is exponentially worse for the National Guard. Further, doctrinal changes primarily come from the experience base of LRSUs--former company and detachment commanders and NCOs. These highly professional individuals are the best equipped to consider TTPs, but

they rarely possess a detailed view of--link to--the strategic and operational concerns of the future operational environment.

These factors, reinforced by the Army's transformation and a changing operational environment, necessitate this study to determine the changes that LRSUs must make to remain relevant to the commander operating in the future operational environment.

The Research Question

This current state addresses the question: How must LRSUs change to remain relevant to the commander operating in the future operational environment?

Subordinate Questions

This primary question raises several subordinate questions that must be answered. First, can machines provide the same capability at reduced cost? Do LRSUs, as currently organized, provide a unique and necessary capability required in the future operational environment? Does the future operational environment require a change to LRSU doctrine and employment procedures? Does the future operational environment require a change in TTPs associated with LRS employment? Does the future operational environment require a shift in current training methodology for LRSUs?

Each of these questions when answered will validate the continued need for LRSUs and identify the changes they must make to remain relevant. Before answering the questions, the framework for the study must be established. This study uses assumptions, limitations, and delimitations to define the area of study. It also requires a clear understanding of the history of LRSU from its inception to the present, as well as an

understanding of the future operating environment. These topics are discussed in the remainder of this chapter.

Assumptions

This study makes three assumptions. The first assumption is that LRSUs will remain a part of the legacy force and will remain programmed for the IDIV and Objective Force. The basis for this assumption rests on the appreciation of division and corps commanders who have LRSUs and the desire for such a unit by those without LRSUs. The validation for this assumption comes from the recently published FM 3-0 and the *Objective Force White Paper*, both of which specifically mention the LRSU (FM 3-0 2001, 11-9; *Concept of the Objective Force* 2001, 8).

The second assumption is that technology will not produce an all-weather, long-duration collection asset with human abilities, senses, and logic within the next twenty years. This assumption is based on the difficulties of developing artificial intelligence. Commanders of the future will still require an all weather, sustained, human reconnaissance asset to collect information beyond a brigade's battle space.

The third assumption is that Army employment in the future operational environment will necessitate more frequent employment of LRSUs. This assumption is based on the fact that LRSU capabilities are particularly well suited for sustained surveillance against traditional or nontraditional threats within the area of operations (AO) and area of interest (AI). This capability applies on any type of operation and in any battlefield geometry--linear, nonlinear, contiguous, or noncontiguous. LRSU capabilities can be employed in stability and support operations, force protection

missions, or to the standard tactical missions of reconnaissance, surveillance, target acquisition, and battle damage assessment.

Limitations

This study has two primary limitations. The first limitation is time. This study only addresses LRSUs and their predecessors from their inception during the Vietnam conflict through the present (mid-1960s through December 2001). The period studied considers only that information applicable to the history and current state of today's LRSU and like organizations. The intent of this limitation in researching possible changes is to ensure the applicability of possible solutions and to ensure solutions are kept in context.

The second limitation is the small amount of available printed reference material. LRSUs and similar units are comprised of relatively few people. Due to the limited population of subject mater experts, the availability of written reference material is also limited. This limitation promises to significantly reduce applicable information or repetitious reports.

Delimitations

This is not a study of national, strategic, or brigade and below reconnaissance assets. Although some TTPs are very similar and may become recommendations for LRSUs, this paper makes no recommendations for assets other than LRSUs.

This paper does not address the Table of Organization and Equipment of the LRSC or LRSD. Several others have proposed the establishment of a LRS battalion (Anders 1999; Meadows, 2000). One of those authors recommended additional research

in the areas of training leaders and soldiers. His specific questions related to the training of LRSUs, employment at Combat Training Centers (CTCs), how LRS leaders are trained, and how division staffs are trained to employ LRSUs (Anders 1999, 89). These recommendations directly contributed to the focus of this study.

This paper addresses possible cooperation and mutual support among LRSUs and other reconnaissance and surveillance units. It considers the sensor assets within the LRSU's own parent MI battalion, national agencies, sister services, Special Operations Forces (SOF), and targeting assets.

To gain insight into possible TTPs for the future operational environment, this paper studies sister service and foreign armies' lessons learned in their employment of tactical reconnaissance assets. Comparisons include task organization, doctrine, training, tactics, and employment procedures. The US Marine Corps' Force Recon, the Ranger Regiment's Reconnaissance Detachment (RRD), and US Army Special Forces are a few of the specified subjects for comparison and evaluation. The lessons of other reconnaissance forces should provide valuable insights for potential LRSU training and employment in the future.

With the framework and scope of the study and the specific research questions in mind, the reader is now prepared to begin the study of LRSUs and their future relevance. To accurately identify the changes required to ensure continued LRSU relevance, the reader must understand the history of LRSUs, their current state, and the future operational environment. These discussions follow.

Background

One must understand the background and history of the LRSUs and the importance of the information they provide to adequately determine recommended changes for continued relevance. This understanding begins with the realization of the value and reliability of information from human intelligence.

Importance and Value of Human Intelligence

Human intelligence (HUMINT) remains a necessity on the modern battlefield. HUMINT entails risk and is expensive in terms of required support, but it has continually proven its worth. Throughout history, senior military leaders have stressed the importance of reconnaissance and combat intelligence. Recently, technological assets have eclipsed HUMINT, but the need for HUMINT clearly remains. In the aftermath of the 11 September 2001 terrorist attacks on the United States and the subsequent operations in Afghanistan, HUMINT has received greater national attention and will presumably continue to receive additional focus in the future.

Although combat intelligence is said to be critically important, the United States Army has historically and repeatedly activated its conventional reconnaissance units in times of conflict and subsequently inactivated them in peace. There are several reasons for this fickle nature towards reconnaissance units, but the overarching reason might be summed up with one single word--cost. Peacetime resources and attitudes rarely support all combat requirements.

Traditionally, reconnaissance units are more expensive than other units. That expense can be measured in terms of time and dollars and, in the case of soldiers on the ground, in terms of lives at risk. Modern public and political reluctance to accept

casualties and the availability of technological collection assets lead many to believe that the days of dismounted human reconnaissance are numbered. The employment of ground troops represents a weighty decision on the part of our political leaders and is often watched very closely by the American public. In the aftermath of the 11 September 2001 attack, the rapid introduction and employment of SOF in the special reconnaissance (SR) role validates the requirement for HUMINT. The public welcomed the immediate success of SOF reconnaissance. Even so, public attention, concern, and tremendous operational support surrounded publicized missions. The public remains comfortable with the utilization of technological assets, such as unmanned aerial vehicles (UAVs) and satellite intelligence. Trepidation remains regarding the use of ground forces, especially small teams operating behind "enemy lines."

Regardless of the risks involved with the employment of ground reconnaissance troops, the reward in information repeatedly proves worth the cost. The most reliable, adaptable, and long-duration collection asset remains the soldier on the ground. Human eyes and a thinking soldier provide the most reliable, continuous, and the most versatile collection asset on the battlefield. The soldier collects more than mere data--he analyzes the conditions, intent, purpose, and capability of his target. "Ground reconnaissance personnel, able to exercise on-the-spot judgment and expertise can respond flexibly to unexpected developments and observations" (MCWP 2-15.3 2000, F-1). Colonel Leonard J. Sambrowski, then Chief of Initiatives group for the US Army Deputy Chief of Staff for Intelligence, briefed at the 2001 LRS Conference that "LRS is absolutely essential to Army Transformation" and that LRS is "the best 24/7, all weather Central

Processing Unit (CPU) on the battlefield." Chapter two of this study will specifically compare LRSU capabilities against technological assets.

Currently, LRSUs are the division and corps commanders' only deep, long-duration, all-weather HUMINT assets. These LRSUs have a notable history of contributions to corps and division commanders. One must understand how the LRSU evolved and why they are in the Army inventory today to fully recognize LRS capabilities, understand their current state, and identify required changes.

History

The real lineage of today's LRSUs predates the nation and can be traced back at least to Rogers' Rangers of the French and Indian War (Martinez 1997, XVIII). The most similar units in size and mission include the Alamo Scouts of World War II (Wells 1989, 26). Following World War II these units were inactivated. Ranger companies were formed to conduct deep patrols in the Korean War and were subsequently inactivated. In Vietnam the Long Range Reconnaissance Patrols (LRRPs) were established to conduct reconnaissance. They were replaced by or renamed Long Range Patrols (LRPs) and replaced again by lettered Ranger companies. The change to lettered Ranger companies brought with it a gradual escalation into limited offensive missions. All subsequent references to Vietnam era units will be by the title LRPs.

Typically, LRSUs trace their direct lineage back to the Vietnam LRPs. Although not recognized by the Department of Heraldry, Vietnam LRP veterans and LRSUs believe in this lineage for several reasons. Among the reasons are similarity in mission, unit purpose, organization, and TTPs.

The most compelling reason may be a bond of brotherhood, as depicted in the following statement.

> Today, our brothers in the Long Range Surveillance Detachment (LRSD) of the 101st Airborne Division carry the fire. They are us. We are them. It was a privilege to serve in this legendary unit. And the legend lives on. (Linderer 1997, 2)

This bond exists partly because of the similarity in missions. The LRPs were designed for and conducted long-range reconnaissance missions in six-man teams, beyond enemy lines, and away from friendly support. Current LRSUs train for the same missions. Current Army doctrine states that LRS teams are a primary source of HUMINT and are specially trained and equipped to collect HUMINT about forces deep in the enemy's rear (FM 7-93 1995, 1-1).

Purpose is another reason for the ties from past to present. Veterans knew and current LRS soldiers understand that they serve as the eyes and ears for the division or corps commander. One Vietnam veteran commented that although the units changed names several times during the war, their mission remained the same--"serving as the eyes and ears of the different unit commanders within the . . . Division" (Chambers 1998, 7). That is a tremendous responsibility for a team of six soldiers--they know it and their commanders know it. In a personal visit during a Joint Readiness Training Center (JRTC) rotation, Major General Clark, then the 101st Commanding General, made the following statement to soldiers of his LRSD: "LRS is absolutely indispensable to this division. . . . What you do is absolutely critical to our success! Many decisions I make are hinged directly on what LRS sees and reports" (Clark 1999).

Beyond mission and purpose, the basic TTPs are very similar when comparing Vietnam LRPs to modern LRSUs. It was the Vietnam era units that established much of

the current organization and techniques used today. Six-man teams, special selection processes, high-frequency radio communications, helicopter and special insertion and extraction techniques, three days of planning for a five-to-seven-day mission, and countless tactical techniques all started in Vietnam and continue with some modification today.

The LRPs of the Vietnam era accomplished a great deal, established many standard operating procedures that generally remain today, and certainly proved their worth. By the end of seven years in Vietnam, one LRP company boasted hundreds of patrols, three distinguished service crosses, two Medal of Honor nominations (one still in consideration), two future general officers, one colonel, and several sergeants major and command sergeants major (Linderer 1997, 353). In fact, "it can be reasonably estimated that over 23,000 LRRP patrols were conducted during the war. Of those, in excess of 14,5000 resulted in sightings of the enemy with nearly 10,000 hostiles killed" (Lanning 1988, 168). LRRPS were utterly fantastic in their ability to out-guerilla the guerilla, inflicting well over twenty-two enemy deaths for every recon man killed in combat" (Lanning 1988, 169). LRP accomplishments and the things they established were of great value, but in keeping with the historical pattern, departure from Vietnam brought about inactivation.

As the conflict in Vietnam drew to a close, Ranger companies were disbanded. The last two lettered companies (A and B) were disbanded in 1974 after the 1st and 2nd Ranger Battalions were formed (Landau and Landau 1992, 32). Inactivation of individual Ranger companies and the formation of battalions were not designed to produce larger reconnaissance units. The Army wanted light infantry units that could

deploy rapidly around the globe. The Rangers were no longer reconnaissance units (Landau and Landau 1992, 32). Once again, the Army had sacrificed its formal reconnaissance and surveillance organization (Lanning 1988, 184). This shortcoming remained for eleven years.

In 1985, under Division '86 and the Army of Excellence, the Army began activating division and corps LRSUs to provide a reliable HUMINT collection asset to their respective commanders (Wells 1989, 26). These LRSUs were organized using the Vietnam unit model, but designed to support the battlefields of Western Europe. In fact, the Training and Doctrine Command pamphlets, circulars, and field manual closely resemble the 1960s documents that established the LRRPs--"so much so that many phrases and even entire paragraphs are identical" (Lanning 1988, 184). Once again, the organization centered on the six-man team. Missions focused on static surveillance from well-established subsurface sites with secondary missions of reconnaissance, target acquisition, and battle damage assessment. These units have evolved very little over time and form the basis of the LRSDs and LRSCs that exist today.

Since entering the Army in the mid to late 1980s, LRSUs have served and contributed during Operation Desert Storm (Leslie 2000) and on Joint Task Force Six (JTF-6) missions. Even so, the end of the Cold War and the conclusion of Desert Storm were immediately followed by a downsizing of the Army. The 1990s military reduction included inactivation of sixteen LRSUs (Anders 1999, 11). This string of inactivation continues today in the Army National Guard. As a result, all mechanized division commanders have lost their only organic, all-weather, specially trained deep reconnaissance asset--the LRSD. Similarly, I and III Corps have lost their LRSCs.

Current State

One must understand current LRSU organizational structure, responsibilities, and the basis of current LRSU doctrine to appreciate the current situation. One must also understand existing gaps in the collection of combat information and units specifically organized to fill in some of those gaps. Finally, one must understand forecasted requirements for reconnaissance units in the Interim Brigade Combat Team (IBCT), the I-DIV, and the Objective Force resulting from the Army's most recent transformation.

Today, reconnaissance assets are irregularly placed in Army tactical units. Currently, infantry battalions have scout platoons, light brigades have no reconnaissance capability, mechanized infantry brigades have a newly developed brigade reconnaissance troop (BRT), light divisions and two corps have LRSUs, and mechanized divisions and I and III Corps lack LRSUs. This irregular placement can be attributed to doctrinal shifts. The 1996 FM 71-100, *Division Operations*, stated that brigades do not have reconnaissance assets because they do not normally act independently, rather as part of a corps or division. It continued to state that the brigade could task their subordinates or rely on the division (1996, A-7). Chapter two will highlight a shift in doctrine and a renewed focus on reconnaissance assets at all levels.

Today's LRSUs provide light infantry division and the XVIII and V Corps commanders with their only organic HUMINT asset capable of providing sustained, all-weather reconnaissance deep within enemy territory. LRSCs and LRSDs were designed to fill the intelligence collections gaps within their respective areas, between strategic reconnaissance assets and "close fight" tactical reconnaissance units (see figure 2).

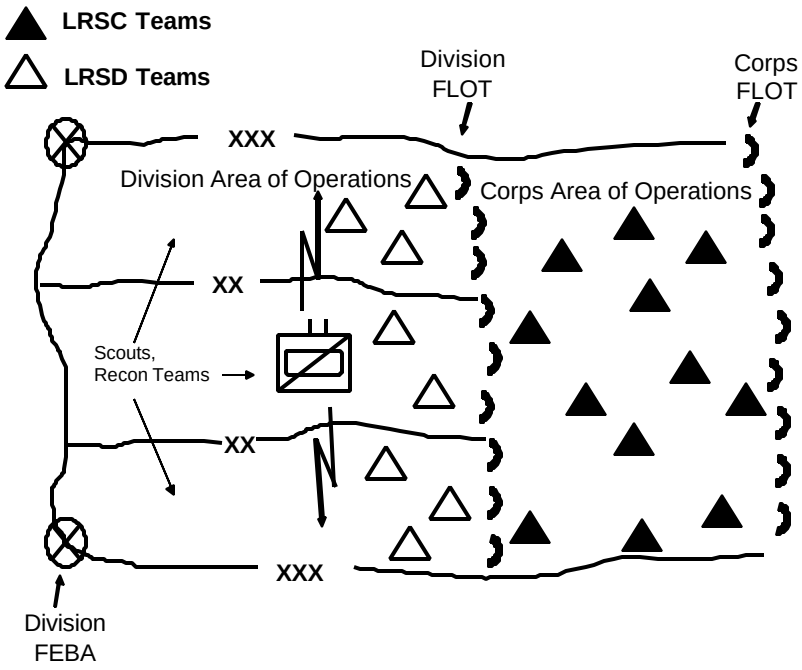

Figure 2. LRSU Areas of Operation (FM 7-93 1995, 2-10)

LRSU missions entail great risk in that American soldiers are placed beyond the forward edge of the battle area (FEBA) and must rely on their training and planning for survival. Even if employed outside of a linear, contiguous battlefield framework, the relative importance of the LRSUs mission demands special training and planning for force preservation and mission accomplishment. LRSUs and their LRS teams are relatively small. The hub of the corps LRSCs and division LRSDs is the six-man LRS team (see figures 3 and 4).

Although small in size and operating with Cold War based doctrine (discussed in chapter two), today's LRSUs are making contributions in the Balkan theater. As individual units, they are making necessary adaptations to the new environment and producing results for their supported unit. Their tactics and techniques vary and are focused solely on that specific operating environment.

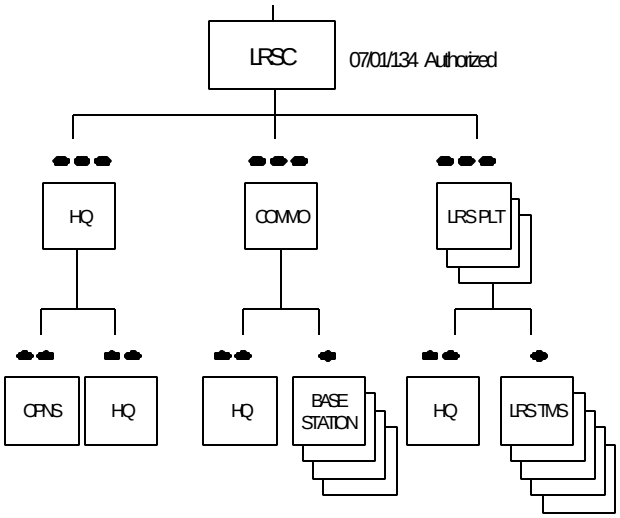

Figure 3. LRSC Organization (FM 7-93 1995, 1-6)

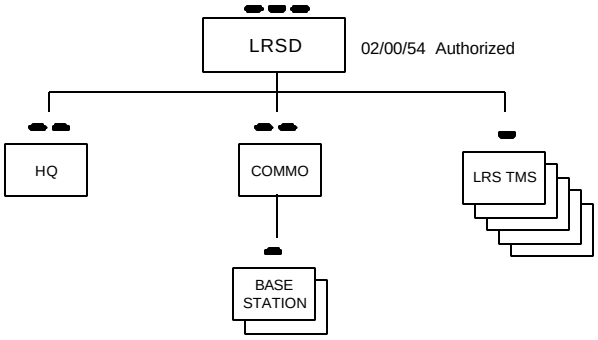

Figure 4. LRSD Organization (FM 7-93 1995, 1-8)

Potential LRSU contributions within the full spectrum of the future operational environment remain unexplored. To identify the changes LRSUs must make to remain relevant in the future, one must describe the future operational environment.

The Future Operational Environment

The future operational environment promises to test leaders, at all levels, and force them to make decisions like never before. "Distinctions between the strategic, operational, and tactical activities blur because the actions of individuals or small groups of soldiers have the potential to rapidly influence the international environment" (FM 100-5 1997, 2-9). While less experienced leaders face the possibility of making decisions with strategic implications, "situational awareness is dulled by the uncertain quality of information, large amounts of data, and the inability to rapidly discern the important from the inconsequential" (FM 100-5 1997, 2-6). Leaders may quickly become overwhelmed with the amount of information available, the amount of information needed, and the decisions required of both.

Beyond information, a continually changing and fluid environment with greater complexities than previously experienced in combat operations now exists. State and nonstate actors, coalitions, partnerships, alliances, news agencies, significantly more civilians on the battlefield, and nongovernmental organizations will affect contemporary and future conflicts. Technology and the speed of global information will make operational security difficult and increase the probability that a compromise and resultant loss of life will occur. News agencies may use satellites, UAVs, and advanced communications capabilities to access operational areas without consent, while advanced weapon systems increase the potential for destruction and death. Combat areas will expand to previously exempt areas including friendly homelands and cyberspace. Adversaries will move toward complex and urban terrain in an attempt to raise the number of casualties and negate US advantages. This environment, coupled with

cultural, religious, and humanitarian concerns, promises to exacerbate combat operations (TRADOC 2000a).

The future operational environment promises to challenge combat leaders with enormous amounts of information, greater complexity, exponential lethality, and the weight of decisions that span from tactical to strategic importance. With this emerging environment, one can understand the value of combat information and must identify the requirements for reconnaissance in that environment.

Reconnaissance Needs in the Future Operational Environment

The future operational environment requires an increased reliance on reconnaissance assets and the information they provide. The most current operations manual, FM 3-0, refers to reconnaissance no fewer than eighteen times and states that reconnaissance precedes all operations and continues aggressively throughout (FM 3-0 2001, 11-10). The Interim Brigade Combat Teams (IBCT) design includes an organic reconnaissance, surveillance, and target acquisition (RSTA) squadron. These RSTA squadrons respond to previously mentioned historical shortcomings at the brigade level and indicate that the Army Transformation plan emphasizes a reconnaissance focus. The RSTA squadron will fill the intelligence gap that today's light brigade commanders must deal with--the lack of an organic, tactical reconnaissance unit at the brigade level.

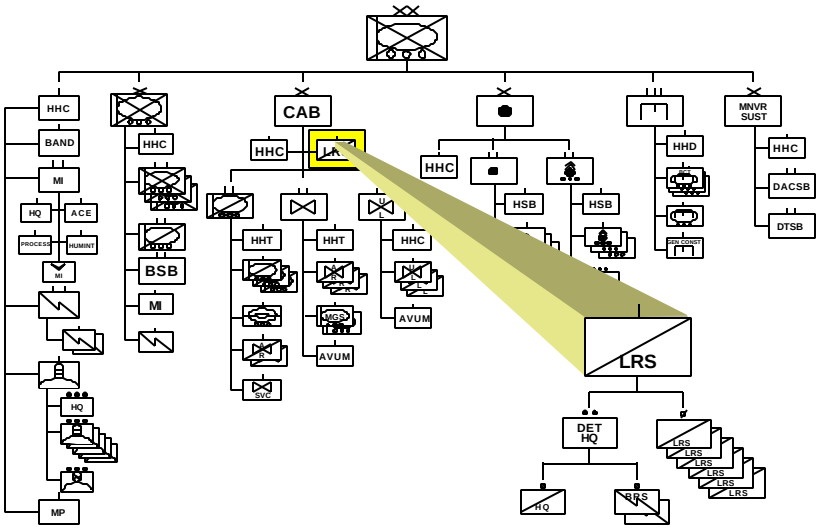

Figure 5: LRS in the Interim Division (Pound 2001, 8)

What will fill the gap between brigade RSTA squadrons and Special Forces teams collecting on strategic objectives? One solution is LRSUs at division and corps level. Transformation planners have placed LRSDs within the future parent organization of the IBCT (the I-DIV) (see figure 5) (Pound 2001, 8) and within the Objective Force (*Concept of the Objective Force* 2001, 16). The emerging operational environment clearly depicts a need for HUMINT on the battlefield and suggests the need for this study to identify methods for LRSUs to maintain their relevance.

Significance of the Study

LRSUs have proven to be valuable assets to commanders operating on the battlefield. At the present, LRSUs fill a key requirement for tactical intelligence from the battalion security zone to the limits of the corps battle space. Combat information requirements will increase with the future operational environment and the requirement

for LRSUs will similarly expand. Therefore, LRSUs must identify TTPs and training to ensure their continued relevance. With change, LRSUs will be major contributors to the commanders operating in the future operational environment. This thesis will identify some of the changes LRSUs must make to remain relevant on the future battlefield.

CHAPTER TWO

LITERATURE REVIEW

> Intelligence plays a vital role in the conduct of successful joint operations. Proper employment of collection and analysis assets is essential if joint force commanders are to gain and maintain information superiority. Without accurate intelligence, our joint forces will lose the essential advantages of surprise, operational security, and flexibility.
>
> We must also be cognizant of the changing roles and missions facing the Armed Forces of the United States and ensure that intelligence planning keeps pace with the full range of military operations. The future battlefield will demand high levels of joint interoperability and force enhancement, and the value of intelligence support, as an exploitable multiplier cannot be overstated. (JP 2-0 2000, Forward)
>
> Henry H. Shelton, Chairman of the Joint Chiefs of Staff

A literature review captures the background of knowledge and experience from which recommendations and decisions are made. That applies equally to military operations. This chapter's opening quote depicts the significance of intelligence in modern operations at the joint level. This chapter highlights that intelligence and reconnaissance are receiving more emphasis at all levels in the Army's quest for information superiority on the modern battlefield.

Literature has its own unique history--from past to present and from one echelon to the next. This study identifies historical patterns and context in order to recognize the thought process used to develop current literature. Literature is reviewed sequentially from Army level down to the LRSU and from past to present to gain an understanding of concept nesting and doctrinal evolution.

To gain understanding of the current state of LRSU relevance and an insight into necessary changes for continued LRSU relevance, one must understand doctrine as it applies to LRSU employment. There are three primary areas that provide insight into current and future LRSU employment possibilities. These references include past doctrine, current doctrine, and a body of literature describing the future operational environment and its associated requirements.

After reviewing the available references, one will understand why there is a limited amount of available reference material that specifically addresses LRSU employment, as well as the history of those references. One will also understand why LRSU doctrine has stagnated and what the resultant gaps are in today's LRSU employment literature. Further, the reader will gain appreciation for the continued relevance of HUMINT, LRSUs in particular, in the future operational environment. Finally, the reader will recognize the gaps in literature addressing LRSU employment in the future operational environment. With this understanding, the reader will better understand the necessity of this paper and the value of the recommendations that this paper will produce.

Past Doctrine

A study of recent and current doctrine should begin with the body of literature leading to that doctrine. As with any body of knowledge, military doctrine has adapted to meet changes in technology and its environment. With the technological revolution of the last few decades, the world has experienced an unparalleled increase in the areas of communication and information flow. Similarly, the world's political landscape has changed dramatically--most notably as a result of the fall of the Soviet Union. These

dramatic changes have affected virtually every institution, including the military. The military is seeking to remain relevant and to ensure readiness to perform the missions required by the nation.

Current military doctrine is the result of an evolution that began with the conclusion of hostilities in the Vietnam conflict. The focus of the post-Vietnam Army returned to the rolling plains of Europe and a defensive, linear battle of containment against the Soviet Union. This doctrine relied primarily on heavily armored forces and forward-deployed units. "The post Vietnam force design had neglected, well into the 1970s, the contingency threat. This resulted in an almost exclusive focus on the development of heavy forces as late as 1979" (Romjue 1993, 15).

General Starry assumed command of the United States Army Training and Doctrine Command (TRADOC) in 1977. He had been the V Corps commander previously and had been to the site of Israeli victory in the 1973 Yom Kippur War. He sought to structure the new heavy division on "battlefield functions" where a division fought a "central battle" defined as that part of the field where all firepower and maneuver are brought together for decisive action. His experience and vision of "seeing deep" to the enemy's follow-on echelons led to a focus on disrupting second echelon enemy forces (Romjue 1993, 16, 87). This doctrine was known as AirLand Battle and rested on the theory of "deep attack" (Romjue 1993, 9). This theory required the capability to sense and acquire deep targets and resulted in doctrinal integration of that concept in 1985 (Romjue 1993, 88).

"In 1979, the Shah of Iran was overthrown and the Soviets invaded Afghanistan, which led to the realization of the need for flexible contingency forces--light infantry

divisions" (Romjue 1993, 16). This shortfall brought about another round of doctrinal revision and eventually led to the establishment and testing of light divisions and an increased focus on Special Operations Forces (SOF). The demands of rapid deployment and force projection required early situational awareness and reinvigorated the need for advanced and deep reconnaissance. In 1983, the 9th Infantry Division at Fort Lewis, Washington, conducted tests on evolving concepts--one of which was the LRSU (Romjue 1993, 41). "Inclusion of the long range surveillance detachment in the cavalry organization of all divisions resulted from a Department of the Army directive in March 1985." In 1986, LRSDs were moved to the division MI battalions, and LRSCs were placed in the tactical exploitation battalion of the MI brigade (Romjue 1993, 95). Additionally, the increased need for special operations forces was recognized, partly due to their ability to support deep attacks and to produce HUMINT. With these organizational changes, TRADOC recognized SOF force design and insertion and extraction capabilities as deficiencies in doctrine (Romjue 1993, 34).

Changes in organization, doctrine, and training continued through the 1980s and into the 1990s when the Army was faced with the development of a post-Cold War doctrine. Although this new doctrine, released in 1993, was to reorient on force projection, most of the Airland Battle doctrine carried forward (Romjue 1993, 61, 89).

> Though oriented to a new strategic world, the 1993 doctrine of the United States Army had its roots in the doctrinal past. Its direct and close antecedent was the 1980s AirLand Battle doctrine so recently and successfully demonstrated in Operation Desert Storm. But it also traced back to earlier military principles and experience. (Romjue 1993, 5)

Two areas that received strong focus in the 1993 doctrine were the importance of reconnaissance in all operations (Romjue 1993, 125) and clarification on how the Army

would conduct war and operations other than war as part of a joint team (Romjue 1993, 114). Much of this 1993 doctrine remains in place today.

The most significant reference in studying recent past doctrine is an examination of the Army's capstone manual--FM 100-5, *Operations*. The 1997 edition was the most current operations manual until FM 3-0 was published in 2001 and, therefore, is the most recent past source of overarching Army doctrine. The base of FM 100-5 revolved around four categories of operations (offense, defense, stability, and support) and on five core functions (see, shape, shield, strike, and move) (FM 100-5 1997, vii). This created a significant shift to an increased focus on operations other than war.

General Hertzog, October 1995, stated:

> Our core doctrine should be unified. We must fold our approach to peace operations, humanitarian assistance operations, and other military activities short of general war into the body of our Army operational doctrine and not treat these as separate and special subsets. (FM 100-5 1997, 2-1)

Some key points in FM 100-5 are relevant to this study because they impact LRSUs and much of the rest of Army doctrine. This manual had identified the influence of nonstate actors and that modern struggles would occur "where state fragmentation; struggles for resources; nationalist, tribal, and ethnic motivations; expansions of populations, urbanization, and natural environmental degradation; and the proliferation of weapons of mass destruction are ever more the norm" (FM 100-5 1997, 2-5). The manual identified the requirement to complement technical intelligence with information gained from aggressive patrols (FM 100-5 1997, 5-3) and identified the opportunities for employment of reconnaissance in offensive, defensive, stability, and support operations.

Current Doctrine

Because of changes in threats and technology, US military doctrine gained a new focus--working in a truly joint environment across the full spectrum of military operations. This new focus resulted in the appearance of joint doctrine and further adaptations to Army doctrine. The program for joint doctrine received its first major focus as a result of the Goldwater-Nichols National Security Act of 1986, which centralized operational authority through the Chairman of the Joint Chiefs, encouraged joint assignments and led to the establishment of joint mission essential tasks and doctrine (USJFCOM 2002, Goldwater-Nichols National Security Act, 2). Joint doctrine has continually filled improved and expanded since 1986. As joint doctrine was published, the individual services then, adjusted their doctrine to ensure mutually supportive concepts. Due to this sequential process, both joint and service doctrine has continuously changed over the last fifteen years. For this reason, there are several unaddressed issues that remain today at the tactical level of military employment. These issues will become apparent below. For ease in understanding and to reflect the methodology for current doctrine development, this review addresses joint, Army, and LRSU doctrine in that order. Continued revision of doctrine results in some higher-level doctrine being published after the current subordinate reference.

Joint Doctrine

The current library of joint literature consists of eighty-five joint publications (JPs) concerning the various doctrinal aspects of joint war fighting. Of those references, there are four that have potential impact on the conduct of reconnaissance (LRSU) operations. The four applicable Joint Publications fall into two subcategories--the JP 2

series for intelligence and the JP 3 series for operations. The four applicable JPs are: JP 2-0, *Doctrine for Intelligence Support to Operations* (2000); JP 2-01, *Intelligence Support to Military Operations* (1996); JP 3-0, *Doctrine for Joint Operations* (1995); and JP 3-55, *Doctrine for Reconnaissance, Surveillance, and Target Acquisition Support for Joint Operations* (1993). The subordinate JPs to 2-0 and 3-0 were both written prior to the applicable capstone intelligence or operational reference.

Both JP 2-0 and JP 2-01 stress the importance and value of intelligence and reconnaissance. JP 2-01 stresses the importance of intelligence resources at every echelon and that "intelligence plays a critical role across the range of military operations from peace to war" (JP 2-01 1996, vii). Of particular interest, it also stresses that intelligence enables commanders at all levels to protect their force (JP 2-01 1996, I-3). JP 2-0 emphasizes the essential intelligence needs in "disaster relief, foreign humanitarian assistance, non-combatant evacuation in a permissive environment, most support to counterdrug operations, and security assistance" (JP 2-0 2000, 1-6). LRSU doctrine does not mirror this focus and provides no significant employment or TTP guidance.

The JP 3 series focuses on joint operations. Both of the operational manuals are significantly older than their sister intelligence manuals. JP 3-0 provides little more than a reiteration of the value of information and intelligence.

JP 3-55, as its title implies, focuses on three of the four LRS missions: reconnaissance, surveillance, and target acquisition (RSTA). Of particular interest, JP 3-55 stresses the value of ground reconnaissance, but cautions commanders to fully understand capabilities and limitations, consider the survivability, and weigh the risks to

determine if the information is worth it (JP 3-55 1993, iv). Interestingly, this publication was published in April 1993--prior to the October 1993 experiences in Somalia. Even prior to the experiences in Somalia, doctrine began to reflect a change in attitude toward endangering soldiers.

Was this "risk averse" force protection or a reflection of the American public's attitude? Had we overemphasized limiting casualties during Desert Storm? Interesting questions, but the implications in this doctrine--commanders should lean toward technological solutions rather than take "unnecessary" risks with soldiers on the ground--support the inclination to exclusively employ technological assets. The publication stresses casualty awareness in stating that tactical RSTA forces "provide the detailed information . . . needed to plan and employ forces successfully" and that that support "provides opportunities for offensive and defensive actions and helps reduce casualties and achieve victory" (JP 3-55 1993, I-3).

JP 3-55 continues in its risk adverse tone by stating that aerial systems are the primary source of RSTA for the joint force commander and that their advantage is that "they are relatively threat insensitive because they do not put friendly personnel at risk" (JP 3-55 1993, II-3, 4). The publication does point out that aerial assets are susceptible to weather and that the advantages of HUMINT lie primarily in that they are organic to the tactical commander (JP 3-55 1993, II-5). The final significant piece of information regarding RSTA from this publication comes in a warning to commanders.

> Not only are RSTA assets vulnerable, they are also scarce, and commanders must consider how they would compensate for the loss of a RSTA capability should any specific asset be destroyed or otherwise become unavailable. Beside careful mission planning, intelligent tasking, and effective employment tactics,

> redundancy and overlap of capability are perhaps the best ways of ensuring the survivability of specific RSTA capabilities and functions. (JP 3-55 1993, II-10)

Several lessons that the Army had applied or would apply are taken from the joint doctrine. First, intelligence is important across the full spectrum of operations. Second, organic HUMINT assets provide significant benefits to the tactical commander. Third, detailed planning is a requirement in the employment of reconnaissance assets. Finally, risk should be avoided and technological platforms employed whenever possible. While these are four fine points, the last two have led to the gradual decline of commanders and staffs who are willing, or know how, to employ LRSUs across the spectrum of military operations as evidenced by the lack of LRSU participation in most recent operational deployments. This is the joint message. How does it translate to the Army?

Army Doctrine

There are four current Army manuals that address LRSU operations. One is the most current capstone doctrine FM 3-0, *Operations* (2001). Two address division operations. They are FM 71-100-2, *Infantry Division Operations* (1993), and FM 71-100, *Division Operations* (1996). The last Army reference this study discusses is the LRSU manual, FM 7-93 *LongRange Surveillance unit Operations*.

FM 71-100-2, *Infantry Division Operations* (1993), addresses LRSUs repeatedly. It specifically provides examples of the utilization of the LRSU in the deliberate attack (page 3-9), the movement to contact (page 3-22), exploitation and pursuit (page 3-34), the defense (page 4-7), in covering force operations (pages 5-25, 5-26), retrograde operations (page 7-8), breakout from encirclement (page 7-22), and in airborne operations (page 7-

37). In ten years following the identification of a need for LRSUs, the Army had completely interwoven the LRSU into its combat operations.

FM 71-100-2 did miss one area that the most recent Army and joint doctrine have focused on--operations other than war (OOTW). OOTW, consists primarily of stability operations and support operations (SASOs). The manual did recognize that force protection and security in OOTW were "just as important as any other operation" and that terrorism would be the primary threat (FM 71-100-2 1993, 6-7). Even so, it fails to address specific employment possibilities for the LRSU as it did for the combat operations. Instead, it stated that LRSU operations may be complicated and careful coordination with the Joint Special Operations Task Force (JSOTF) would be required (FM 71-100-2 1993, 6-23). This gap in literature continues in Army doctrine.

FM 71-100-2 does inform staff officers regarding LRSU employment planning. It reminds the staff officer that reconnaissance is essential and should precede all operations, that reconnaissance is not the same as a security mission, and that a unit should not have a reconnaissance and security mission at the same time (FM 71-100-2 1993, 5-21). It also highlights to the staff officer that mission type orders for a reconnaissance asset are insufficient--instead, orders should specify "where to look, what to look for, and what information is required" (FM 71-100-2 1993, 5-22). It reminds the staff officer that "reconnaissance missions inherently place units in harm's way," that "stealth cannot be ensured," and that "firepower, aggressive action, and deception are required for survival and mission accomplishment" (FM 71-100-2 1993, 5-23).

The manual also emphasizes that ground units can "provide detail and verification that IEW [Intelligence and Electronic Warfare] assets cannot" (FM 71-100-2 1993, 5-21),

and that IEW assets are reduced by terrain, weather, enemy, and electronic countermeasures (FM 71-100-2 1993, 5-24). In targeting, it states, "Risk is reduced when the target is under surveillance by HUMINT or SIGINT [Signals Intelligence]" (FM 71-100-2 1993, 5-18). An additional valuable lesson to be taken from this source applies to the technology versus HUMINT question. The manual states:

> Ground reconnaissance is employed when and where air and technical reconnaissance assets are ineffective. JSTARS and Guardrail can cover large areas to alert or cue other assets once an enemy force or target is identified. Then UAVs [Unmanned Arial Vehicles] or ground reconnaissance may be dispatched to verify the information and track the enemy for targeting purposes. (FM 71-100 1996, A-3)

This provides a good argument for the necessity and relevance of HUMINT and the LRSU in the future. These particular points are very important in that they argue against the joint doctrine preference for technological assets and provide examples how technology cannot perform the same tasks as efficiently as a LRSU.

In fact, an over reliance on technological platforms could cause commanders to make future plans which rely on assets that will not necessarily be available. The Joint Surveillance Target Attack Radar System (JSTARS) is presently one of the most popular tools in a commander's arsenal when he needs situational understanding. Major Timothy Albers writes that the JSTARS mission has expanded with every contingency it has been required to support since Desert Storm. With increased utilization comes increased expectations and now JSTARS is expected at every fight. The danger is partial or no coverage due to competing demands (Albers 2001, iii). Technology is a tremendous asset when used to enhance (not replace) human capabilities.

The next Army reference is FM 71-100, *Division Operations* (1996). This manual also stresses the importance of reconnaissance as a precursor to all operations

(FM 71-100 1996, A-1). Additionally, it states that not all reconnaissance and surveillance assets are effective in OOTW (FM 71-100 1996, A-2). Although written after FM 71-100-2, it only briefly mentions LRSUs twice and does not address their employment. Again, this could be because of the emerging "risk averse" view on ground troop employment or possibly due to a lack of experience in LRSU employment.

The final Army manual that this study reviews is FM 3-0, *Operations* (2001). This manual is the most recent and the most coupled with emerging joint doctrine, as well as the forecasted future operating environment. This manual also stresses the value of aggressive reconnaissance at every level (FM 3-0 2001, 6-10). It addresses the use of reconnaissance in extended and noncontiguous areas of operation, in offensive and defensive operations, and the criticality of getting surveillance and reconnaissance assets into theater quickly as part of strategic responsiveness (FM 3-0 2001, 11-21). It also reminds planners: "The purpose of reconnaissance is to gain information through stealth, not initiate combat" (FM 3-0 2001, 11-10).

FM 3-0 addresses the impact of modern communications and the modern information environment as reducing time to plan and prepare (FM 3-0 2001, 7-25). It makes the following statements that strongly confirm facts that staff planners should know regarding LRSUs and support the argument that technology cannot replace the LRSU on the future battlefield.

> Modern Army forces avoid movements to contact altogether, developing the situation largely out of contact. Advanced surveillance and reconnaissance assets refine the picture of the enemy, while precision fires and IO destroy enemy cohesion. Reconnaissance and security elements maintain contact only as required to collect information that unmanned sensors cannot. (FM 3-0 2001, 7-28)

> When available, near real time surveillance platforms--such as the joint surveillance, target attack radar system (JSTARS)--provide moving target indicators. Additionally, long range surveillance units can provide extremely accurate and valuable information. (FM 3-0 2001, 11-9)
>
> Operational priorities within the theater may limit ground commanders' ability to task theater surveillance systems. Therefore, Army commanders compliment surveillance with aggressive and continuous reconnaissance. Surveillance, in turn, increases the efficiency of and reduces the risk to reconnaissance elements by focusing their operations. (FM 3-0 2001, 11-10)

This reference validates the current need for reconnaissance and surveillance assets, highlights the importance of information superiority, and confirms that technology cannot replace the human sensor on the ground--the LRSU soldier.

LRSU Doctrine

The LRSU doctrinal reference is FM 7-93, *Long Range Surveillance Unit Operations* (1995). This manual is for the LRSU leader and soldier and addresses unit operations. It is clearly focused on the linear battlefield and "collecting HUMINT about enemy forces deep in the enemy's rear" (FM 7-93 1995, 1-1). Further indicators of this linear mind-set exist in the descriptions of the LRSU environment as depicted in figure 2 in chapter one and in the extensive focus on long-range insertion and extraction techniques. It states that the primary mission of LRS operations is surveillance (FM 7-93 1995, 1-4). While historically true, the increased role of ground-guided precision strikes has created an additional focus on the mission of target acquisition.

With this linear battlefield focus, it does not address employment examples in full spectrum operations, especially stability and support operations. In the three pages devoted to OOTW, it speaks to a few of the possible types of missions that may be required in a mission descriptive method. For example, it states that peace enforcement

operations tasks include “observation, surveillance, and information gathering” (FM 7-93 1995, 5-1). It does state that OOTW are “likely to be nonlinear, with no identifiable FLOT [forward line of own troops], and that surveillance must extend in all directions” (FM 7-93 1995, 1-2). It only addresses surveillance and communications sites in the field environment of the Cold War (FM 7-93 1995, Annex E). It does not provide examples to the unit or a staff officer on possible methods of employment such as in a force protection role. It fails to address TTPs for operations in or around a populated area or urban environment. Finally, it does not address vehicular insertion techniques outside of a vehicular movement to the FLOT in a linear battlefield environment (FM 7-93 1995, 6-38).

Probably, the biggest shortcoming is the totality of focus on the LRSU itself. The manual contains no executive summary, checklist, guidance, or chapter for staff officers on planning and operational considerations. As stated, this is the sole reference for LRSU operations. This narrow focus on the LRSU contributes to the limited expertise among staff officers on the employment of LRSUs.

Findings and Gaps in Existing Literature in Relation to LRS Employment

Having now reviewed the available literature relating to LRSUs, several findings become readily apparent. First, reconnaissance must precede every operation. It must occur across the full spectrum of operations and continue throughout every operation. Reconnaissance assets require detailed planning, parent unit support, and stealth to be successful. In reconnaissance unit employment, casualty awareness must be considered but the value of the information obtained may warrant the risk. Finally, the necessity for

HUMINT assets remains and likely will not be replaced by technological assets in the foreseeable future.

The shortfalls in the literature are also fairly obvious on analysis. Current doctrine offers little guidance on the employment of the LRSU in stability operations and support operations. The concept of LRSU employment remains anchored in the Cold War mentality of a linear battlefield against conventional forces. The LRSU capabilities, while very effective in the "deep fight," also offer capabilities at a shorter range and in closer proximity to friendly troops. Future conflicts will involve various threats and may have a faster tempo of operations. Current LRSU doctrine is based on Cold War employment models requiring extensive time for planning. There are no doctrinal references that address rapid planning for employment in an established theater or short distances. However, LRSUs can have both of these employment capabilities.

There is no definitive doctrinal reference that a staff officer can use to find what is required of him to plan, support, and execute a LRSU operation. LRSU employment requires expertise at every level, yet the staff officer has no resource with which he can establish a basic expertise.

Although FM 7-93 briefly mentions working with other collection assets, there are no documented TTPs on complementary missions between LRSUs and other reconnaissance and surveillance (R&S) assets.

With these findings and shortfalls as the focus, this study will continue to examine what changes LRSUs must make to remain relevant to the commander operating in a future operational environment.

CHAPTER THREE

RESEARCH DESIGN

Chapters one and two examined questions concerning the continued need for the capabilities provided by the LRSU. With the findings that LRSU capabilities are required in the future and that machines cannot duplicate those capabilities, the remainder of this study will identify the changes in doctrine, TTPs, and training that LRSUs must make to remain relevant. This chapter outlines the sequential and methodical approach taken to conduct the research.

Primary and Secondary Question

The primary question asks how must Long Range Surveillance Units (LRSUs) change to remain relevant to the commander operating in the future operational environment? The primary question is complemented by five secondary questions. First, can machines provide the same capability at reduced cost? Second, do LRSUs, as currently organized, provide a unique and necessary capability required in the future operational environment? Third, does the future operational environment require a change to LRSU doctrine and employment procedures? Fourth, does the future operational environment require a change in TTPs associated with LRS employment? The last secondary question is, Does the future operational environment require a shift in current training methodology for LRSUs?

Research Design

The research design of this study includes four broadly categorized areas: historical review, assessment of LRSU relevance in the emerging security environment,

doctrinal references, and considerations for future employment. Three of the four categories (history, relevance, and doctrine) were discussed in chapters one and two. Examination of these three areas confirmed the need for this study. Research on TTPs for future employment is the focus of chapter four and will lead to recommendations in chapter five. Chapter four addresses subordinate questions three through five and, finally, the primary question.

The historical review addressed the history of special reconnaissance units resulting in modern LRSUs, the past contributions of reconnaissance units, reconnaissance unit evolution, and the present organization and status of LRSUs. This analysis provides a road map from past to present, as well as the current state of LRSU organization and employment. It provided quantitative information in terms of reconnaissance unit activations and inactivations and identified remaining LRSUs in the force structure. The study yielded qualitative assessments in terms of contributions of LRSUs and their value to the force--past, present, and future.

Analysis concerning the relevance of LRSUs included recent and on-going military operations, an examination of the future operational environment, future unit modeling, doctrinal requirements, and comparisons of technological assets and human reconnaissance. This research was based on current unclassified information concerning the Army's transformation. This research provided the reader with background understanding of the importance of HUMINT and the need to identify areas in which LRSUs must adapt to remain relevant in the future operational environment.

Doctrinal research was conducted to explain the evolution LRSUs followed and to display the current state of LRSU doctrine. This analysis served as an introduction to

current doctrine, a validation of the continued need for LRSUs, and a tool to identify the current shortfalls in doctrine as it applies to LRSUs. The shortfalls identified confirmed the need for this study.

Research to this point established several facts that serve as boundaries and focal points for remaining research. First, LRSUs are specifically identified as part of future force structure. Second, LRSU doctrine remains locked in a Cold War mentality and does not adequately addressed the current or future operational environments. Third, few staff officers are familiar with LRSU operations and there is no doctrinal reference or educational program for these staff officers. Finally, the name "Long Range Surveillance Unit" may no longer be appropriate and may lead to underutilization of the LRSU as future employment distances may not be at the great ranges of the Cold War, operations in close proximity to friendly forces are possible, and reconnaissance and target acquisition could become the primary missions. These future operational characteristics may warrant a name change to "Corps or Division Reconnaissance Company."

The aforementioned facts lead to several conclusions that must be addressed to answer secondary questions three through five and the primary question. First, changes are required in LRSU doctrine, TTPs, and employment procedures to ensure relevancy to the commander operating in the future operational environment. LRSUs must be prepared to operate in offensive, defensive, stability, and support operations. They must be prepared to operate in nonlinear operations and noncontiguous battlefields, in open terrain or urban areas, and against conventional and unconventional threats. LRSUs must be capable of increasing their operational tempo, working with other reconnaissance units and assets. Second, these doctrinal and TTP changes require modifications to current

LRSU training. These changes include individual and collective training for LRSU personnel and those responsible for planning LRSU employment.

In light of these findings, several tertiary questions arise that must first be answered in order to answer secondary questions three through five. The following paragraphs link supporting tertiary questions to their supported secondary question.

Secondary question three asks if the future operational environment requires a change to LRSU doctrine and employment procedures. Its tertiary questions ask how LRSUs could conduct operations in nonlinear operations and noncontiguous battlefields, how they could contribute to operations in stability and support operations, and how they could decrease planning timelines in an established theater to increase operational availability and tempo. Additional tertiary questions ask what roles and missions could LRSUs perform in the future operational environment, what the considerations are for LRSU employment in urban terrain, and what issues should be addressed in terms of LRSU interaction with digitized and force projection forces. For example, should LRSUs be organized on a regional basis to support the conventional commander in the same way that Special Forces are regionally organized to support CINCs?

Secondary question four asks if the future operational environment requires a change in TTPs associated with LRS employment. Its tertiary questions ask what changes could be made to current insertion and extraction procedures, what new procedures should be considered, what TTPs should be considered for operations within urban terrain, and what technological tools should be adopted. Finally, it asks if LRSUs should work with other collection or fire control assets to increase effectiveness, obtain mutual support and reduce risk (i.e., Combat Control Teams (CCT), Combat Observation

and Lasing Teams (COLT), low level voice intercept (LLVI), ground surveillance radar (GSR), remotely employed sensors (REMS), UAVs, other government agencies, etc.).

The final secondary question, number five, asks if the future operational environment requires a shift in current training methodology for LRSUs. Its tertiary questions expand the issue by asking if the individual LRS soldier requires additional expertise such as language training, target acquisition training with sister services, automation training, a unique Noncommissioned Officer Education System (NCOES), or training with other agencies. Another tertiary question asks if additional individual training would warrant a separate military occupational specialty (MOS), more senior ranks within the unit, or special programs to ensure stability of soldiers within LRSUs. The next tertiary questions ask if staff officers require a special school or if an updated doctrinal manual and an explanatory brief would be appropriate. The final tertiary question asks if LRSUs should deploy, train, and operate with units other than their parent division or corps to prepare for future operational employment--to include with brigades at CTCs, or with the FBI, Border Patrol, or sister services. This final tertiary question requires even deeper consideration and begs the question, Should LRSUs be more closely aligned with special reconnaissance assets, such as the Special Forces?

In chapter four, the study focuses specifically on secondary questions three through five and the associated tertiary questions discussed above. The questions mandate a sequential approach to the analysis and an exposition of trends vice a single best answer. Analyzing the findings to tertiary and secondary questions in order, and then the primary question, should support a continuous narrowing of scope designed produce realistic and worthwhile findings.

The analysis for questions 3 and 4 consists of written source research and interviews. Analysis will address foreign and sister service experiences, as well as the more current experiences of LRSUs returning from recent US operations in Kosovo. Written sources will include foreign and sister service professional journals, doctrinal references, historical works, and personal accounts. Interviews will include foreign and sister service subject matter experts, as well as LRSU leaders with recent experience in Kosovo. Analysis will include innovations undertaken by LRSUs training for Balkan missions during their Mission Rehearsal Exercises (MREs) at the Joint Readiness Training Center (JRTC).

With a dearth of applicable LRSU references involving the future operational environment, any successful technique used by another force in a similar context warrants consideration. The goal is to identify successful TTPs of other services and units and to incorporate those trends in the findings of the study. For a TTP to be worthy of analysis, the force must be similar to the LRSU.

Research will focus on operations conducted in areas with characteristics the LRSUs can expect in the future operational environment. These environmental characteristics include operating in stability and support operations, nonlinear operations and noncontiguous battlefields, and in urban terrain. Threats include nonstate actors, failed governments, anarchistic societies, forces that employ weapons of mass destruction (WMD), terrorist organizations and traditional conventional threats.

Foreign and sister service units must be similarly organized and have similar missions to those of the LRSUs. They must receive similar support and training as the soldiers of the LRSU. Finally, their operations must pose similar challenges to the

foreign or sister service that the LRSU would experience. For example, lessons from a Korean reconnaissance unit operating in Korea might not benefit the LRSU because the LRSU will have a language and race barrier that the Korean unit would not have. These criteria narrow the scope to small units operating independently in threat environments, possibly outside of immediate assistance, and with the challenge of blending in with the local population.

The intent of this study is to capture doctrine, TTPs, and training of those units that conduct similar operations in similar environments to those LRSUs can expect in the future operational environment. The context of the organization and situation are key discriminators in this research. Analysis will result in a summation of successful methods utilized by LRSU-like units as opposed to the single most effective TTP.

CHAPTER FOUR

COMPARISONS AND ANALYSIS

LRSUs provide a necessary capability for current and future battlefield commanders, yet LRSU doctrinal references and training remain locked in the Cold War era. This chapter compares units with similar organizations and capabilities to the LRSU in order to discover possible changes LRSUs might make to ensure future relevancy.

Units throughout the United States armed forces and across the world pride themselves on their own uniqueness. Special missions require specially designed and trained soldiers and units. For that reason, the chance of finding mirror units in different services or in the militaries of two countries is fairly remote. Considering there will always be differences between organizations, this study focuses on similarities in organization and characteristics.

Before selecting requirements of comparison units, the capabilities and limitations of LRSUs must be reviewed. According to FM 7-93, LRSUs have several unique capabilities. First, they can be infiltrated into enemy territory by stay behind techniques or by land, water, or air, including parachute insertion. Second, they can operate in enemy territory for up to one week with little external direction or support. They can conduct reconnaissance, surveillance, target acquisition, and damage assessment missions in any terrain or weather condition. To communicate, LRSUs are capable of establishing HF, VHF, UHF, SATCOM, or airborne relay between the surveillance team and the base station or controlling headquarters. They could resupply through planned drops or special equipment cache sites set up by the LRSU or other friendly forces. They might also use captured equipment or supplies. Finally, after completing the mission, LRSUs

can be recovered by air, land, or water. They may even link up with advancing forces or return using evasion techniques (FM 7-93 1995, 1-9).

According to FM 7-93, LRSUs also have several limitations that must be considered. First, LRSU movement within the area of operations is primarily by foot. Second, deployed teams might only be able to report critical combat information or establish communications at scheduled times due to battery limitations or enemy radio and electronic surveillance capabilities. Teams are limited to individual first aid and have only small arms for self defense. For this reason, they fight only to break contact.

Due to their small size, LRSUs require a great deal of support from higher headquarters. Most importantly, LRSUs rely on their division or corps headquarters to provide intelligence products. They rely on their parent division or corps for logistic and personnel services and support. They rely on signal support to provide frequency management for HF and SATCOM and local communication integration. They rely on specialists to pack, rig, and load equipment for aerial resupply and parachute insertion operations. Finally, they rely on ground transportation assets and Army or Air Force air transportation to move the LRSU into the area of operations (FM 7-93 1995, 1-10).

Unit Selection Criteria

Based on the above examination of LRSU capabilities and limitations, this study has detailed the criteria used to select units for comparison. The units must meet several basic criteria to serve as comparisons.

1. The units' primary mission must center on reconnaissance, surveillance, target, acquisition, and battle damage assessment.

2. The unit must be capable of conducting operations at greater than fifty kilometers from friendly forces and within enemy territory.

3. The unit must operate in small teams of specially selected men.

4. The unit must utilize stealth in movement and special equipment or skills to infiltrate to its mission and in the execution of the mission.

5. Units must have similar mobility and firepower.

6. Units must use long-range communications devices to communicate with their headquarters in the rear.

Using these criteria, four units were selected as the comparison group. Although not all are identical to LRSUs, the units offer sufficient similarity to allow comparison. Table 1 provides a snapshot comparison of the similarities of these units. The study must also consider the lessons of the two LRSUs that have recently conducted innovational missions on operational deployments. The six comparison units are:

1. United States Army Special Forces (SF) Operational Detachment Alpha (ODA) on a Special Reconnaissance (SR) mission.

2. Ranger (Regiment) Reconnaissance Detachment (RRD).

3. United States Marine Corps (USMC) Force or Division Reconnaissance

4. Hungarian Special Reconnaissance Force (SRF)

5. V Corps LRSC--Kosovo, April through October 2000

6. The 101st Airborne Division (Air Assault) LRSD--Kosovo, KFOR 3A, May through November 2001.

Current LRS doctrine is still very effective when used in conventional combat operations. This finding is based on the similar TTPs of comparison units when

employed in a linear battlefield, the general success of the TTPs at JRTC, and on the successes of SOF personnel while conducting SR and target acquisition missions in Afghanistan from 2001-2002.

Table 1: Unit Selection / Comparison Criteria

	SF ODA (SR Mission)	**RRD**	**Force Recon Division Recon**	**Hungarian SRF**
Primary missions: reconnaissance, surveillance, target, acquisition, and battle damage assessment	"Currently, SF has a dual mission focus." They are direct and indirect missions. SR is most often conducted as a direct mission. (Tovo 1995, 2) "[SR] missions identify operational and strategic echelons." (Tovo 1995, 4)	"Ranger Regiment's organic and, at times, primary intelligence collection asset. The detachment conducts reconnaissance and surveillance." (Compton 1999, 7)	Deep ground reconnaissance and surveillance; terrain reconnaissance; counter reconnaissance; implant or remove sensors / beacons; conduct terminal guidance of helicopters, parachutists, and PGMs; post strike reconnaissance; collect imagery (MCWP 2-15.3 2000, 2-2)	"Reconnaissance, special reconnaissance, including target acquisition, battle damage assessment, and area assessment, and post-strike reconnaissance." (Koltai 2001, 6) "Focused on deep and special reconnaissance." (Koltai 2001, 30)
Operates at significant tactical or operational distances from friendly forces and within enemy territory.	"Conduct operations in remote areas and hostile environments for extended periods of time with minimal external directions and support." (USASOC 2001, SF Fact Sheet, 1)	"The detachment's strength lies in its ability to conduct tactical reconnaissance against targets of operational significance." (Compton 1999, 7)	"Usually inserted into the supported commanders [AI] (usually the deep area), often well beyond MAGTF supporting arms and in the vicinity of the enemy's operational reserve, staging and marshalling areas, and key lines of communication [LOC]" (MCWP 2-15.3 2000, 2-2)	"Operate deep behind enemy lines and far from friendly units." (Koltai 2001, 30)
Small teams of specially selected men.	12 man team composed of 1 officer, 1 warrant officer, and 10 NCOs. (USASOC 2001, SF Fact Sheet, 1)	Five man teams; Special Selection and Training Element (Compton 1999, 35)	4 Man Teams (MCWP 2-15.3 2000, 2-2) 6 Man Teams (MCWP 2-15.3 2000, 2-10)	8 Man Teams = 1 officer, one NCO, one RTO, and five recon soldiers (Koltai 2001, 32)

Table 1--Continued				
	SF ODA (SR Mission)	RRD	Force Recon Division Recon	Hungarian SRF
Stealth in movement; special equipment/skills to infiltrate and execute missions.	"Infiltrate and exfiltrate specified operational areas by air, land, or sea." Can include SCUBA, closed circuit rebreather, Zodiac boat, Kayak or Military Free Fall (MFF). (USASOC 2001, SF Fact Sheet, 1)	High Altitude Low Opening (HALO) Parachute Techniques and long range foot infiltrations (Compton 1999, 35)	"Must maintain the capability to Clandestinely insert and extract teams over extended distances…." Means include foot movement, swimming, aircraft, small boat, and commercial assets. (MCWP 2-15.3 2000, 2-3) "Accomplishes its mission through stealth, maneuver, and rapid reporting." (MCWP 2-15.3 2000, 2-11)	Deploy by land, water, air and stay-behind (Koltai 2001, 7)
Use long range communications	"A teams are equipped with communications, i.e. [SATCOM], [HF] radios" (USASOC 2001, SF Fact Sheet, 1)	"Includes HF, FM, UHF, and [SATCOM]" (Compton 1999, 29)	HF is "used exclusively for tactical traffic between employed ground teams" and their higher headquarters (MCWP 2-15.3 2000, 2-2)	High Frequency (HF) Radios to talk to higher Koltai 2001, 44)
Limitations	None published for unlimited distribution. Size of team and standard weaponry implies similar limitations to units in columns 3 and 4.	None published for unlimited distribution. Size of team and standard weaponry implies similar limitations to units in columns 3 and 4.	Organic Firepower only; no transportation or casualty evacuation (CASEVAC) capability; dependent on higher for support (MCWP 2-15.3 2000, D-27)	"Light armament and equipment provides only limited self-defense"; Teams cannot maintain continuous radio communications; limited to foot mobility; rely on higher for intelligence; medical capability is first aid (Koltai 2001, 47)

Damage assessments that do not incorporate human intelligence assets, like LRSUs, are of widely varying quality. In Kosovo, for example, officials first claimed the destruction of 93 tanks, 153 armored personnel carriers (APCs), and 389 mortars and artillery systems through airpower. Following the ground inspection by assessment

teams, however, the revised battle damage assessment was fourteen tanks, eighteen APCs, and twenty mortar and artillery systems (Fogarty 2000, 6). The ability to infiltrate small teams of men over great distances into enemy territory to conduct reconnaissance, surveillance, and target acquisition is clearly a required skill set.

Early in the war in Afghanistan, Senator Christopher J. Dodd was quoted: "Right now, we don't have enough people on the ground. We're guessing a lot here. We don't have the human intelligence on the ground to tell us what is really going on" (Price 2001, 1). As the war progressed, Army SF ODAs infiltrated into theater and began conducting a variety of SF missions, to include SR and target acquisition. These teams became "crucial to [the] Afghan air war" (Lowe 2002, 10). Success and the effectiveness of airpower dramatically increased with the introduction of highly trained reconnaissance units. Similar, but less publicized, evidence exists about LRSU contributions in the Balkans. These contributions are discussed later in this chapter.

A counterargument is that the successes in Afghanistan were due to SF soldiers (not LRSUs); therefore, this success story does not validate any LRSU doctrine. The counter to this argument is that LRSUs and SF use a great deal of identical doctrine. In fact, a review of LRSU and applicable SF doctrine reveals that LRSUs adopted many parts of the SF doctrine. The basics in the planning and execution of reconnaissance and surveillance are the same.

Another point that suggests strong similarities in techniques between LRSUs and SF is the SF communities' attendance at the LRSLC. Master Sergeant Carey Smith, 7th SF Group, while a student in LRSLC stated: "You just can't beat it. A lot of guys don't like it because you don't get an award for it. It's not a sexy course--you're out here,

you're [defecating] in a bag, you're humping. . . . There are only a few schools out there that are teaching combat skills" (Cox 2000, 18). As a final note to this comparison, the commander of the LRSLC stated, "The phones have been ringing off the hook since September 11th" because of the numerous requests from SF Groups and LRSUs for LRSLC Mobile Training Teams (MTTs) (Turpin 2002).

In several cases, research answers for tertiary questions overlap in such significance that an answer to one is just as easily an answer to the other. The simplest method of quantifying findings is to capture the lessons by source. The following findings are subdivided into findings from comparison units and miscellaneous findings.

The richest mime of LRSU specific lessons learned in nonlinear and noncontiguous environments and SASO are the LRSUs that recently completed six-month operational deployments in Kosovo. Interestingly, the lessons learned by V Corps LRSC significantly resemble the lessons learned during the 101st LRSD Mission Rehearsal Exercise (MRE) held at the JRTC. Those lessons were again confirmed during the 101st LRSD's participation in Kosovo Forces (KFOR) 3A from 21 March through 3 April, 2001. A summary of these lessons follows.

For the V Corps LRSC, which participated in operations in Kosovo from April through October of 2000, several lessons were paramount. First, LRSUs can serve as an important member of the operational team in a small-scale contingency or stability and support operations, at or at less than current doctrinal distances. In fact, the unit conducted forty-eight team missions during their six-month tour (Kluna 2001, 26). They also established the "value of [an] in-country MRE" and "demonstrated the ability to

train and integrate new soldiers during mission execution." They also validated the need for better communications and optics equipment (Kluna 2001, 40).

The unit revisited many TTP lessons learned by LRSU predecessors (Kluna 2001, 18) and established the framework for an unprecedented form of insertion, support, and extraction. This new form of insertion, support, and extraction revolved around the use of heavily armored high-mobility multipurpose wheeled vehicles (HMMWVs), complete with mounted weapons systems (Kluna 2001, 16). Some of the interesting and unfamiliar aspects of this emerging insertion technique include the relative proximity of other friendly, "opposition," and civilian elements; the requirements to coordinate a ground quick reaction force (QRF); and the detailed requirements for coordination between units. All of these lessons applied during the 101st KFOR MRE and during the 101st rotation in Kosovo.

During JRTC Rotation 01-05 (KFOR MRE) from 21 March through 3 April 2001, the author served as the senior LRSU observer-controller and, in conjunction with the 101st LRSD, captured the following lessons.

1. Helicopter insertions would pose significant challenges for three reasons: (1) the continual demands and higher priority VIP helicopter requirements; (2) the vast majority of terrain was populated or observable by KFOR, civilians, or possible belligerents; and (3) the scarcity of adequate landing zones coupled with a policy requiring that a landing zone be surveyed on the ground before its use. These operational constraints reinforced the need to establish viable TTPs for ground insertion.

2. Relative proximity of other KFOR elements required unprecedented levels of coordination with friendly units. Coordination ensured the following: (1) Lack of

interference between the two forces; (2) Communications to the nearest friendly element and an agreement for that unit to provide a QRF for the LRSU, should it be required; (3) Sharing of intelligence between the LRSU and maneuver battalion--before, during, and after the mission; (4) Use of maneuver battalion base camps, observation posts (OPs), and traffic control points as potential LRSU staging or command and control (C2) sites; and (5) Contingent use of other friendly base camps, outposts, and units reducing the need for LRSUs to plan for evasion and recovery (E&R) in great detail, which reduced the time requirements during the planning phase of operations.

3. LRSUs would have to blend in with the remainder of KFOR if they were to be an effective member of the team and if they were to successfully move to their named areas of interest (NAI) without raising suspicion. LRSUs would need to look the same as they moved about. They would wear typical uniforms, Kevlar helmets, and body armor and would drive around in the same type of convoys as the rest of KFOR. LRSUs learned a new dimension to the art of camouflage.

Having learned these lessons during the MRE, the 101st LRSD deployed to Kosovo and incorporated those lessons learned. From May to November 2001, the unit "conducted 42 LRS surveillance and reconnaissance missions" in a SASO environment that "varied in many ways from a high intensity conflict" (O'Connor 2001a, 1). After six months of operating as part of the Multinational Brigade (East) (MNB(E)), the 101st Airborne Division's LRSD confirmed and identified numerous lessons learned in this new operating environment.

The valuable lessons of the 101st LRSD provide an important insight into LRSU employment in the SASO environment. These lessons are easily subcategorized in

accordance with the five phases of LRSU operations--planning, infiltration, execution, exfiltration, and recovery. Without delving into unit specific TTPs, the following paragraphs capture general lessons that differ from current doctrine.

For planning, this new environment "necessitates different procedures" primarily because "all of the missions conducted were located in another unit's AOR [area of responsibility] as opposed to the normal forward of the FLOT missions" (O'Connor 2001a, 1). Total isolation was no longer possible or desired due to the close proximity of teams or other collection assets. Close proximity and coordination allowed for mutual support, if required. Friendly unit coordination was essential to deconflict terrain, to ensure availability of support, and to facilitate the dissemination of collection results to the most appropriate level (O'Connor 2001a, 2). This unit coordination also helped to dispel the mystique around LRSUs and helped educate those who were not accustomed to working with them (O'Connor 2002). "There are numerous misconceptions about LRSD missions and capabilities" (O'Connor 2001b, 16). Even so, when operating in an unfamiliar unit's area, it proved valuable to establish several LRS areas of operation to ensure that any operational security violations would not compromise a team's exact location or mission (O'Connor 2001a, 2).

Two additional planning lessons learned included the establishment of aviation "No Hover" areas to prevent friendly aircraft from hovering over a team, as well as the programming of team radios with the common air net frequency. Evasion planning was reduced to match employment distances and to capitalize on local friendly units. The unit recognized that abort criteria for a high-intensity conflict may not be appropriate for SASO and that teams might have more freedom of action in the case of detection on a

SASO operation (O'Connor 2001a, 2). All leaders, at a minimum, should have had top secret clearances to facilitate planning and coordination. Finally, of great interest when looking at LRSU relevance to the objective force, the unit found that less-planning time was required when operating in a familiar area or when reseeding NAIs. In a stabilized SASO environment, "24 hours of planning is feasible, 36 to 24 hours if the environment is hot" (O'Connor 2002).

The infiltration phase validated many of the lessons learned by V Corps LRSC and during the MRE. Helicopter insertions became rare, and the need to blend in while conducting vehicular insertions became paramount. One particularly successful TTP was to use the military vehicles of the unit or country into whose area the team was to insert. Route selection and reconnaissance became paramount, as not all maps were accurate. Self-recovery of vehicles was a new lesson for a LRSU, but proved to be important. HMMWVs would not always reach the destinations required by the LRS teams, which led to the identified requirement for additional mobility using motorcycles or ATVs (O'Connor 2002). Finally, the TTP of occupying friendly unit positions as the hide (C2) site was validated (O'Connor 2001a, 3).

During the execution phase, most LRSU TTPs proved relevant and successful. The majority of lessons learned revolve around the need for advanced equipment and the need to work in concert with other forces. Teams found that they were prepared to observe, but not completely prepared to photograph or videotape at night. The unit found that commercially purchased computers and software were "instrumental in sending digital photographs and messages via radio" (O'Connor 2001a, 5). Due to the natural curiosity and presence of dogs and other domestic animals, the unit found the need for a

dog deterrent device that emitted a high-frequency sound to drive animals away. Animals posed the most-significant threat of detection (O'Connor 2001b, 5). Finally, the unit found that metal detectors proved very useful in searching out underground cache sites (O'Connor 2001a, 5).

The unit conducted operations in conjunction with other collection assets, to include low-level voice intercept (LLVI), remotely emplaced sensors, and signals intelligence units. They found that one unit could cover the gaps of another, confirm exactly what the other unit had detected, or cue the other unit to initiate coverage. These techniques proved extremely valuable in populated areas.

In addition to the identification of the equipment needs, they also learned that the high-intensity battlefield process of reporting only during communications windows was not applicable in this new environment. This enemy did not possess an electronic warfare threat, continuous FM communications were possible due to ranges and battery life, and the nature of the reports and proximity to other friendly forces mandated immediate reporting (O'Connor 2001b, 4).

Other lessons for the execution phase included the ability to conduct limited operations in urban terrain, the need for more equipment and training for target acquisition and battle damage assessment missions, and the validity of serving as a division asset. They confirmed that LRSUs can conduct surveillance of nontraditional targets in an urban environment through the use of buildings that were either abandoned or under construction. The unit observed that local maneuver forces sometimes had reaction times of greater than twenty-four hours from the time the LRSU had submitted a report. This reinforced the need for LRSUs to serve as the sensor-to-shooter or sensor-to-

reactionary element link vice sensor to G2 link. Finally, as a division asset in general support, the unit contributed more efficiently to the operation. Brigades requested operational control (OPCON) of LRS, but lacked the knowledge, experience, and ability to support LRSU operations (O'Connor 2002).

Lessons that apply to the final two phases of LRSU operations were fewer in number, but just as important. In exfiltation and extraction, they found that departure without detection was extremely important. It enabled friendly forces to take action on LRSU findings without providing belligerents the time to remove or change evidence. In debriefing, rather than the initial debrief to the G2, the LRSU would stop in at the local unit and conduct an immediate debrief to ensure time sensitive information made it to the user level expeditiously (O'Connor 2001a, 6).

The Hungarian SRF provides some additional lessons for employment in various environments. The SRF teams are designed and trained to be augmented with "chemical, engineer, medical, communications specialists from other branches, and/or interpreters" depending on their mission (Koltai 2001, 33). Their teams are also equipped with an MRP-4 locator detector set that "detects radio frequencies and gives direction of the strongest signal so SRF teams can locate radar sites and C2 nodes" (Koltai 2001, 44). Captain Arnold Koltai, in his thesis on the Hungarian SRF in peace operations (POs), speculates that (recon force) limitations may be less restrictive in a PO environment. He provides this opinion based on the requested participation of most PO forces and the ability to move by methods other than foot patrolling. Interestingly, Captain Koltai notes, "Neither their [Hungarian SRF] knowledge nor their capabilities have ever been used to an optimum level in supporting military efforts protecting Hungary's national interests.

In fact, they have been somehow neglected" (Koltai 2001, 48). This observation suggests an interesting parallel to LRSU capabilities and employment. Finally, he provides some valuable insights regarding potential applications of the Hungarian SRF in a PO environment. He recommends use of the SRF in a force protection role, to acquire information on weapons smuggling, drug trafficking, in locating persons indicted of war crimes, and in combating terrorism (Koltai 2001, 61).

Gerald Compton, in his thesis written on the RRD, proposes the "greater value of blending technology with human intelligence gathering." He lists modern technological innovations, including "people sniffers, seismic and acoustical devices, radars, SIGINT interceptors, Micro-UAVs", and others (1999, 9). In his conclusions, he recommends that the "[Ranger] Regiment should augment the MI detachment with personnel who are trained . . . to operate and maintain [REMBASS, SIGINT, and Micro-UAV]" (1999, 49). His thought is that these specialists would attach to the RRD team as needed for specific missions. The obvious relationship is for LRSUs to habitually train to incorporate technology or skill-set experts as attachments or to conduct mutually supportive operations.

The United States Marine Corps has a very good doctrinal reference that parallels Koltai's and Compton's recommendations. *Ground Reconnaissance* (MCWP 2-15.3) lists collateral activities for their reconnaissance personnel. These tasks include: (1) implant and recover sensors; (2) control supporting arms (target acquisition); (3) initial terminal guidance; (4) clandestine tactical recovery of aircraft and personnel (TRAP); and (5) limited scale raids. The manual does recognize the additional risk to reconnaissance personnel required to conduct these missions (MCWP 2-15.3 2000, 4-16).

A more important contribution to this study is the Marine Corps manual's section that outlines reconnaissance unit contributions in military operations other than war (MOOTW). The section highlights the unusual importance reconnaissance forces can play in these operations, as well as the high visibility, political ramifications and world opinion associated with these operations. It states that reconnaissance may "emphasize non-traditional objectives, for example, the location and identifications of lines of communications, services, and infrastructure to support threatened civilian populations." It notes that the special skills that reconnaissance units possess in terms of insertion and extraction and the ability to communicate over long distance make them very useful. The special skills "may be used in anything from locating hostile guerrilla bands to finding lost children or groups of frightened, starving refugees" (MCWP 2-15.3 2000, 4-14). It further continues to list uses in an urban environment, including the exploitation of inland waterways, underground tunnel and drainage systems, and others (MCWP 2-15.3 2000, 4-15).

The final unit from which this study seeks lessons learned is the SF ODA executing an SR mission. In his thesis on the urban challenge that Army SF faces in the twenty-first century, Colonel Mathew McGuiness states, "An intelligence architecture to support urban warfare ranging from the strategic level to the tactical level must be developed" (2000, 1). He refers to Army After Next war games held at the War College in which "it was observed that an enemy could take advantage of a large urban center to offset US advantages in firepower and maneuverability" (2000, 3). He recommends SR in areas "adjoining the urban center, along hostile borders and in remote areas of the invaded country" (2000, 5). Specifically, elements "could be employed effectively to

provide reporting on conditions in areas outlying the urban center and monitor the flow of support and assistance into the urban center" (McGuiness 2000, 17). He also states that in future fights, especially in urban environs: "There is a blending of the tactical, operational, and strategic levels of war" (2000, 6).

Colonel McGuiness addresses some points regarding SF that reinforce the LRSU lessons previously listed. They include: (1) use in a force protection role; (2) close interaction with all nearby units--specifically in the coordination of a QRF; and (3) communications with SATCOM or hand-held radios (2000, 22). He also states SF "will have heavier demands placed on them as they attempt to provide adequate coverage [in an urban environment]." Target acquisition is also explained, including the importance of employing accurate and effective fires in the urban scenario. Finally, like the LRSU in Kosovo, he refers to the difficulty in using helicopters in an urban environment and the need to rely on vehicles (2000, 7).

The comparison units provided significant lessons in this study, nevertheless, there are a few more lessons or opinions which must be considered. Several briefers at the 2000 and 2001 LRS conferences at Fort Benning, Georgia, stressed the importance of LRSUs identifying ways to contribute to future SASO or urban conflicts. Some suggestions included surveillance of drug fields, terrorist groups or individuals, economic activity, or demographic activity (V Corps 2000, 6).

Another interesting set of recommendations came from the (then) G2 of the 101st Airborne Division (Air Assault), Lieutenant Colonel Stephen G. Fogarty. With his background as a former LRSD commander, S2 of the Ranger Regiment, and G2 of the 101st, he possessed a unique insight into the capabilities of the LRSU and his

expectations of it. In his brief, he provided "LRS employment factors, What the D-Staff owes LRS, What the G2 owes LRS" and various other thoughts, including G2 expectations of LRS. Beyond the normal expectations, he expected LRS to: (1) receive and integrate attachments; (2) perform infiltration and exfiltration by ground, HALO, and rotary wing; (3) perform direct action--emplace minefield, designate targets, adjust fires, emplace demolitions, and destroy selected high payoff targets; (4) get top secret clearances for all LRS members; (5) have digital imagery and text capability; and (6) learn their AOR now, and create battle books (Fogarty 2000, 19).

Obviously, there are many lessons learned, recommended changes to doctrine, and solutions to problems that will help ensure the continued relevance of LRSUs. LRSUs could contribute by: (1) preparing to insert by vehicle within close proximity of friendly forces (includes driver, vehicle weapons, and recovery training); (2) conducting detailed friendly unit coordination to collocate C2 nodes, debrief, insert or extract with, receive QRF support from, or to simply educate the other unit and leaders; (3) reducing planning and isolation time requirements through the development of battle books, conducting preoperation study, and identifying in-theater standards and systems as quickly as possible; (4) obtaining equipment that enables photography and videotaping at night, facilitates digital imagery and text transmissions, and deters animals; (5) maintaining the capability to work with and incorporate other forces including sensors, CCT, LLVI, engineers, and others; (6) preparing to conduct operations on the periphery and within the urban environment; (7) increasing readiness to conduct target acquisition operations; and (8) preparing to conduct nontraditional surveillance against domestic enemies or in a force protection role within the United States or along its borders.

LRSU integration with digitized or rapid deployment forces and the concept of regionally oriented LRSUs are closely related and mutually supportive. Analysis provides potential methods by which LRSUs could be more versatile and responsive to change in the fast tempo of the future operating environment.

Before discussing findings, a brief recap of associated problem areas is appropriate. First, there is no doctrinal reference for planners that explains staff requirements in supporting LRSU operations. Second, LRSUs use FM 7-93 as their doctrinal foundation. This baseline is too ambiguous, does not address LRSU employment in urban terrain, and inadequately addresses LRSU employment in operations other than war. Finally modernization in LRSU equipment is largely left to ad hoc decisions of each parent MI battalion, or division, or corps.

In light of these challenges, this study seeks potential solutions from similar units and other sources. A comprehensive review of existing LRSU doctrine is a fundamental beginning in ensuring the future relevancy of LRSUs. Changes to FM 7-93 would have to include a section solely designed to inform staff officers of their duties and what they should expect from the LRSU. Three items are the development of Specific Orders or Requests (SOR) for the LRSU (see figure 6), the difference between LRSU operations and tasks, and standard contributions to a LRS target folder. Currently, none are discussed within the LRSU manual, which contributes to confusion on these points. Figure 7 depicts an operation to task relationship. As “attacks to seize” or “defends to block” are to the infantry, so are “conducts reconnaissance to locate, confirm, deny, etc.”

Another requirement for inclusion in the revamped doctrine would be a standard processes for the acceptance and integration of assets that may be employed in the

conduct of any given mission. These adjustments to doctrine would significantly improve LRSU interaction with other forces.

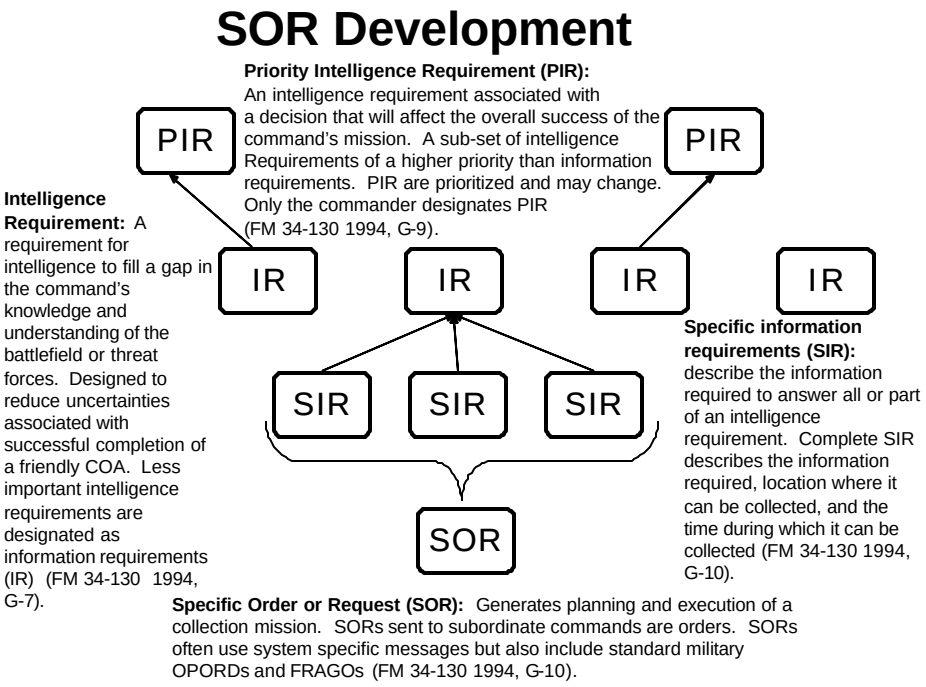

Figure 6. SOR Development

The Marine Corps' *Ground Reconnaissance* manual addresses the nature of maneuver warfare and the employment of ground reconnaissance assets in "rapidly developing and fluid situations" (MCWP 2-15.3 2000, 3-19). Due to this environment, the manual recommends reconnaissance units operate in general support (GS) because "the owning unit commander and his staff are usually best equipped to determine the best use of reconnaissance assets . . . , provide the necessary support . . . , and disseminate the results" (MCWP 2-15.3 2000, 3-19).

LRS
Operation to Task Linkage

Operation	SURVEIL	RECON	TGT AQUIS	BDA
TASKS	Observe		Mark	Verify
	Locate	Locate	Locate	
	Detect	Detect	Detect	
	Determine	Determine		
	Identify	Identify	Identify	
	Evaluate			Evaluate
	Confirm	Confirm		Confirm
	Deny	Deny		Deny
	Report	Report		Report
		Pinpoint	Pinpoint	Measure

Figure 7. LRS Operation to Task Linkage (Turpin 2002)

Army doctrine would do well to emulate the Marine Corps' doctrine. It addresses: (1) reconnaissance fundamentals in chapter 1; (2) organization, capabilities, and limitations of every Marine and sister service reconnaissance asset (including LRSUs) in chapter 2; (3) command, control, and coordination including the duties and responsibilities of every staff officer in chapter 3; (4) employment considerations including insertion and extraction; operations in offensive, defensive, retrograde, and MOOTW environments and collateral tasks in chapter 4; (5) the supported commander's planning and coordination in chapter 5 and the reconnaissance unit's planning in chapter 6; (6) reconnaissance training from individual to team to operations with the Marine Expeditionary Force (MEF); (7) and concludes with thirteen appendixes that serve as unit

standard operating procedures (SOPs) for briefings, C2 boards, and planning (MCWP 2-15.3 2000, TOC 2).

The Marine Corps doctrine serves everyone involved in ground reconnaissance unit planning, coordination, or employment. It standardizes operations and procedures, so that a new staff officer, a recently attached reconnaissance unit, and reconnaissance Marines all have one common reference to which they can refer. This improves unit compatibility and the ability to cross-attach, and it facilitates the rapid reception of replacement reconnaissance Marines.

The ability to rapidly receive and integrate replacements is key to any organization. The special skills required of a reconnaissance solider or Marine make this ability even more important. In fact, Marine Corps doctrine highlights a fact that the Army has not yet adequately addressed.

> Under most circumstances, a company commander can expect to familiarize a newly assigned Marine with all of the skills and techniques associated with the billet of reconnaissance scout during the Marine's first year in the unit. By the end of the second year, the Marine should be proficient in all of the skills of his billet, and he should become highly proficient during his third year. (MCWP 2-25.3 2000, 8-8)

The manual refers to a training pipeline that begins with screening during basic training at the Infantry Training Schools and continues through the four phases of training, including basic and advanced individual and unit training (MCWP 2-15.3 2000, 8-6). This early identification and training pipeline works. In fact, Air Force CCT and Pararescue, Navy SEALs, RRD, Special Forces, and the Hungarian SRF have similar processes. The conventional Army should use a similar process to identify and train their reconnaissance personnel.

Some would argue that the previous examples are all SOF. While that is true for most, it is not true for the Marines. In fact, the Marines are the only one of the four major services that does not have elements in any of the special operations commands. Even so, Marines recognize the special skills required of a reconnaissance Marine. One should question why the Army has a separate MOS for an infantry mortar man and a cavalry scout, but not for an infantry reconnaissance specialist. What would be the drawback to an infantry reconnaissance MOS in which the soldiers continuously served in scout platoons, RSTA squadrons, LRSDs, or LRSCs? This would be a topic for a separate study.

Another option to increase flexibility, responsiveness, and quality of training would be to establish one or several LRS battalions. While others have studied this proposition in great detail and made specific recommendations, this study notes that such a unit would increase standardization of training and equipment and enable subordinate LRS companies to focus on a particular method of insertion or regional area.

The organization of Special Forces supports the assertion that organizational centralization of specialty personnel increases effectiveness and efficiency. Equally important, the SF training model validates the success and professionalism that result through this approach. Finally, SF doctrine provides specific instruction for staff officers, TTPs for employment, and standardized procedures to facilitate uniformity among units.

The analysis of these questions lead to several conclusions. An update to the LRSU doctrinal reference is required. It should include a section for staff officers that assists them in understanding what their duties and responsibilities are, what the LRSU

capabilities and peculiarities are, and how to properly plan for and employ the LRSU. It should also include examples of possible LRSU employment in each of the potential types of operations, to include offensive, defensive, and SASO. The doctrinal reference should include SOP appendixes that would facilitate cross-attachment of the unit or personnel with special skills, moves from unit to unit within the LRSU community, and facilitates the integration of replacement personnel.

This study agrees with the recommendations of others that there would be significant benefit in the establishment of a LRSU battalion (Meadows 2000, 76). Efficiency and efficacy would be improved by establishing an infantry reconnaissance MOS and a reconnaissance soldier training process. The institutional training component of this process already partially exists as LRSLC. Additionally, the proponent wants to establish a singular additional skill identifier (ASI) for all reconnaissance personnel who become LRSLC qualified (Turpin 2001, 5). However, before establishing a LRS battalion or a separate reconnaissance MOS, this study recommends additional analysis to determine second and third order effects.

LRSUs capabilities are far greater than currently appreciated. LRSUs can be valuable contributors across the full spectrum of military operations. In looking to the future operational environment, LRSUs must improve their ability to operate at a rapid tempo in an Army relying on unprecedented force projection capabilities. As a result, LRSU doctrine should be revamped with an increased emphasis on target acquisition for self-protection and to facilitate force projection, SASO, and operations in urban environments. These operations lend themselves to nontraditional and creative employment of LRSUs and increased requirements for friendly unit coordination,

vehicular insertion, the potential task organization of reconnaissance elements, and the resultant need for LRSU standardization. Likewise, LRSU relevance would be enhanced through the acquisition and employment of technological assets that provide digital imaging and reporting through a common radio interface.

Doctrinal changes necessitate changes in TTPs. The following TTPs should be established.

Vehicular Insertion and Extraction

Applicable TTPs must consider passage through, drop-off, or pick-up in populated and unpopulated areas, in close proximity to friendly troops, or at extended ranges where aerial insertion is not feasible due to air defense threats or other factors. TTPs must include manning of weapon systems, required communications, and the application of standard mounted battle drills. These TTPs will lead to the identification of additional training, personnel, vehicles, communication devices, and weapons required to conduct such an infiltration.

As discussed in chapter two, the current LRSU doctrinal manual treatment of land infiltration is inadequate (FM 7-93 1995, 3-14). The manual does address actions to be taken on contact and refers the reader to its Annex J (FM 7-93 1995, 3-14), but the annex only discusses dismounted battle drills (FM 7-93 1995, J-6). Again due to a Cold War and linear battlefield focus, vehicular insertion has not received comparable attention to aerial or water insertion.

Target Acquisition Missions

Current operational trends and lessons from like units and LRSUs in Kosovo all indicate the need for additional focus on target acquisition skills. The establishment of the RSTA Squadron within the IBCT improves the Army's focus on reconnaissance asset ability to target enemy forces with deep or precision fires. Current LRSU doctrine does not adequately explain target acquisition and provides no TTPs or doctrinal procedures for the conduct of target acquisition. As the author observed during thirteen rotations at the JRTC, LRSUs adhere to their existing doctrine by training for and conducting surveillance as the preeminent mission. Reconnaissance, target acquisition, and battle damage assessment receive cursory, if any, attention.

A target acquisition chapter should be added to the current doctrine. It should discuss the characteristics and capabilities of possible fire support elements including mortars, field artillery, naval gunfire (NGF), attack helicopters, and close air support (CAS). It should also address nonlethal means from psychological operations to electronic warfare. The manual must stress that targeting and target acquisition are for lethal and nonlethal effects.

This chapter should provide sample calls for fire, standard (nine line) briefing forms, and the standard air and ground coordination for fires for each of the assets. It should discuss the employment of available target acquisition and target designation devices, as well as systems of marking friendly forces. It must also discuss the tasks associated with conducting a target acquisition mission and the characteristics of targeting for lethal or nonlethal attacks. In doing so, it must reinforce the fact that target acquisition is conducted across the full spectrum of operations including offensive,

defensive, and SASO. Finally, it should examine fratricide and collateral damage prevention or mitigation techniques.

Clearly, the lessons learned have identified the need to update doctrine on the employment of LRSU in SASO environments. Analysis of similar units identified the need for several important TTPs. They include multiple liaison requirements and associated checklists; friendly unit coordination, briefings, and associated checklists; mutual support capabilities of other reconnaissance and maneuver units; increased reliance on vehicular insertion, associated checklists and battle drills; and the application of LRSU missions and tasks to nontraditional targets.

In updating LRSU doctrine and TTPs, it would also be beneficial to include general characteristics and concepts applicable to the SASO environment. This discussion would best align with similar shifts in IPB, mission analysis, and employment procedures.

LRSU Employment in Urban Environments

Although debate continues on the inevitability of future combat in urban areas, most agree that many future operations will occur in urban areas. "A . . . factor, which indicates that US military personnel will continue to be involved in urban operations, is the location in urban areas of many ports and airfields, essential points of entry into any area of operation" (Villella 1998, 1). Given this future environment, doctrine must address it. Current LRSU doctrine covers jungle, desert, mountain, and cold-weather operations (FM 7-93 1995, Annex C), but does not address urban operations.

LRSU doctrine and TTPs must be established for operations within an urban environment. However, the question of what to address remains. A systematic approach

should cover all five phases of a LRSU operation (planning, infiltration, execution, exfiltration, and recovery). Other topics include TTPs for IPB; camouflage, infiltration and movement techniques; hide and surveillance site selection, construction, occupation, and activities; communications; reporting formats; sustainment operations; exfiltration techniques; and debriefing formats for an urban environment.

Consideration must also be given to the numerous contingencies a LRSU may experience within an urban environment. What would a break-contact drill look like from a farmhouse or barn, a construction site on the edge of a village, or an abandoned warehouse in the industrial district? What effect do buildings have on HF and satellite communications, and how does a soldier overcome those effects during extended operations or a contingency? What actions should be considered for water resupply, evacuation for injury or illness, or loss of communications? TTPs should be identified for the employment of fire support assets, whether they are field artillery or aircraft. In sum, if a TTP exists for open terrain, it should be considered for inclusion in doctrine addressing an urban environment.

Lessons from Kosovo identified evasion as an area that required less planning due to the close proximity of friendly units. While true in that situation, "urban evasion [is] a necessary component of urban operations" (Villella 1998, 1). Villella backs up her assertion by arguing that US personnel will operate in urban environments and, if captured or detained, it will take place within that urban setting. She also notes that current "training continues to stress the traditional open battlefield, and avoidance of built-up areas" and basic advice at the time of her writing was "to evade out of the city"

(Villella 1998, 2). Clearly, survival, evasion, resistance, and escape (SERE) and evasion and recovery (E&R) in the urban context must be covered when establishing TTPs.

Urban environments certainly will not be the only environments in which LRSUs are employed in the future, but operations will be conducted in urban areas. In fact, the "most effective method of isolating an urban objective may be by using a combination of sensors, reconnaissance elements, and maneuver forces," and "this technique requires skillful reconnaissance units and responsive fires" to be successful (Durante and Sanchez 1999, 4-3). For LRSUs to be relevant in that operational environment, doctrine must identify the necessary TTPs for that environment. Additionally, LRSU relevance would be enhanced through the ability to integrate specialty personnel including sensors for the conduct of missions in an urban environment.

Integration of Attachments

This study has established that LRSUs can actively contribute in SASO and in an urban environment. It has also established that modern operations place an increasing emphasis on target acquisition and sensor-to-shooter links for precision-guided munitions (PGMs). Additionally, recent operational lessons learned have validated the success of overlapping and mutually supportive reconnaissance and surveillance coverage.

Given these facts, LRSUs should develop TTPs for the rapid integration of specialty personnel. One argument against this recommendation would be that attachments might not be physically or mentally prepared to conduct an operation with the LRSU. The argument goes that attached personnel lack the physical conditioning, insertion skills, or field craft required to participate in LRSU operations. This may, in fact, be the case for past LRSU employment concepts but, as previously noted, the

lessons learned from recent LRSU employment in Kosovo showed that vehicular movement and reduced distances were the norm. Marine reconnaissance elements, Hungarian SRF, and RRD all practice and recommend the use of attachments. Of course, there are concerns in accepting attachments. These concerns must be addressed and mitigated-- but they should not be allowed to deny the capability and potential improved effectiveness of new employment concepts.

LRSUs must be capable of integrating attachments or operating with other units. Possible attachments or mutual support might include Air Force CCT, a COLT Team, LLVI, GSR, NBC specialist, engineer, or a linguist. Accepting the fact that an attachment must meet some minimum qualifications, great advantage can be realized through the use of attachments.

Necessary qualifications should be identified in the revamped doctrine, so the LRSUs and staff officers can refer to that single reference for everything, including the reception of attachments. An example minimum requirement would include a high level of physical fitness. Attachments must be willing and able to share the load--the cross-load of equipment and the burdens of an extended mission in close quarters. The attachment must be qualified with his personal weapon and at ease with moving at night with a night vision device. He should have sufficient military experience to ensure the ability to navigate, think clearly under stress, accept solitude for days and accept the chain of command--even if a junior-ranking soldier is leading the mission. These requirements are not an exhaustive list. They are intended to identify a framework by which this single TTP might be established.

TTPs should be established for the reception and integration of attachments. They should cover the minimum tasks and times required to train the individual attachment and the entire unit. TTPs should include incorporation of attachments into movements, halts, battle drills, and contingencies. They should also outline a modified isolation and planning timeline which allows for the adequate integration of the attachment.

The list of possible TTPs is potentially endless, but there must be a common set by which all LRSUs can operate. Not only will a base reference ease the LRSU burden, it will also standardize operations across the entire community. The Marines and Special Forces have benefited significantly from standardization. LRSUs would also benefit from common equipment and procedures. Not only could units interact more easily as required, common systems would facilitate the transfer of soldiers from LRSU to LRSU.

Accepting that LRSUs need more standardization than they currently possess, what are the possible solutions? Some have already been provided in the above recommended TTPs and doctrinal changes. Additional standardizations could emulate the Marine Corps' reference, *Ground Reconnaissance*, and include standardized planning, tracking, and reporting procedures.

Equipment requires immediate attention to obtain standardization. A common radio is a hard requirement. Some have recommended using "cellular phones with built in GPS receivers" in urban operations (Villella 1998, 3) while others recommend cell phones and pagers as a means of communicating and reporting, especially in the urban environment (Carter 1999, 7-10). As a LRSD commander and JRTC senior LRS OC, the author has witnessed LRSUs using off-the-shelf video camcorders, digital cameras, HF

radios, and digital transmission devices--each unique to that unit. During the Advanced Warfighting Experiment (AWE) held at Fort Polk, Louisiana, in October of 2000, the author observed testing of several new pieces of equipment ranging from video cameras to communications devices. Some items promised great benefit and would serve to integrate the LRSUs into the Army's transformation effort. Lessons learned from equipment trials must be captured in doctrine and TTP for inclusion in an updated LRSU capstone manual.

There are substantial existing references within the Army's body of doctrine that could serve as examples for the future LRSU doctrinal reference, including FM 31-20-5 *Special Reconnaissance Tactics, Techniques, and Procedures for Special Forces* and FM 3-20.971 *Reconnaissance Troop (2d Coordinating Draft).* Although a few are very detailed and long, each of these references serves as a model for a single source reference for the conduct of that type of unit's operations. Each provides doctrine and TTPs which address vehicular movement, urban operations, standardized reporting and battle drills, integration of attachments, target acquisition and the employment of the different forms of fire support, and much more.

An additional source of potential input is the military operations on urbanized terrain (MOUT) homepage. "This site is designed to aid those researching urban military operations by providing a 'one-stop' link to MOUT resources on the Internet" (MOUT homepage 2002). This web page links to hundreds of sites, each with numerous documents and briefings, on lessons learned and emerging doctrine in the area of urban operations.

This study identified LRSU doctrine and TTPs that require change or must be established to ensure the continued relevance of LRSUs. Each identified need produces a recommendation for further study. The references listed above would assist another scholar in establishing the requisite TTPs and doctrine identified in this study.

Recapping findings to this point: First, LRSUs will remain a valuable and necessary part of the Army force structure. Second, LRSU doctrine was founded and largely remains rooted in the Cold War era's doctrine of AirLand Battle. Third, current LRSU doctrine and TTPs must change to ensure continued LRSU relevancy. Finally, the future operational environment demands that LRSUs consider SASO, urban environments, interaction with other units, and an increased focus on target acquisition.

With these facts established, this study examined specific areas of doctrine and TTPs that require change or initialization. These changes increase demands on the number of tasks, level of training, and proficiency required of the individual LRSU soldier. This study has identified that all LRSU soldiers will need to maintain current capabilities to fight the linear battlefield missions of current doctrine. Additionally, each individual will have to train on target acquisition and designation equipment; common digital image and reporting equipment, software, and radios; mounted movement and all of the associated maintenance, navigation, weapons, communications, battle drills, and others; and each individual must train to work with other collection assets and units.

Can all of these tasks be trained at home station and a soldier's own unit? The answer must be a qualified yes, assuming the individual has longevity, the equipment is available, and the unit has the appropriate amount of training time and support. Does the

additional training require a special NCOES? With such a small group of soldiers, a separate NCOES is probably not warranted or feasible.

This study finds the need for a distinct reconnaissance MOS or ASI to be mandatory. One argument for a separate reconnaissance MOS is that ground reconnaissance soldiers would all benefit from a standardized initial level of training. This entry-level training would facilitate the standardization of equipment and the ability to use it upon arrival at the soldier's first unit. This common initial training would prepare soldiers to work with other reconnaissance assets early in their Army experience. Finally, this common MOS or ASI would facilitate the repetitive assignment of reconnaissance soldiers to reconnaissance units. This pattern of reassignment would enhance continuous skill refinement and longevity in each unit due to the concomitant reduction in the need for specialty schools. Infantry mortar men receive special initial entry training. Why not reconnaissance soldiers?

This study has shown that most "like-units" used in the comparison group have a separate MOS and all have a formal training system for soldiers who conduct missions similar to the LRSU's. The study identified that each of the like units, on average, spends years of individual and unit training before it considers its reconnaissance soldiers proficient.

Those against a separate MOS may argue that a separate reconnaissance school already exists--LRSLC. In fact, it does exist, and is now open to ground reconnaissance soldiers ranging from the SF or SEAL NCO or officer to the private in a battalion scout platoon. The point, however, is that LRSLC is not mandatory, nor can most units afford

to send their soldiers. In fact, in the author's own observations during ten rotations at JRTC, only two LRSU commanders had been to the school.

Why is the school not a comprehensive solution? One factor is that units do not mandate attendance and graduation. Some try to avoid the school's hardships and challenges--the school has an average graduation rate of 69 percent (Baron 2001, 11). Most conventional units only get to select a reconnaissance soldier after he has proven himself on the line. This usually allows a unit only one year to train and employ that soldier. When units choose to send their soldiers to school, many opt for schools like airborne, Military Free Fall (MFF), SCUBA, and air assault. While this does a great deal for soldier morale, these schools do not teach the skills required during mission execution.

A well-trained reconnaissance soldier requires a great deal of institutional education to ensure readiness to perform as a member of a reconnaissance team. Minimum requirements should include a base reconnaissance school (MOS or LRSLC), airborne, Ranger, and SERE. This study has shown that all of the similar type forces require additional schooling in infiltration techniques, including MFF, SCUBA, and swimming. Unfortunately, most junior LRS soldiers have limited training, including airborne school and perhaps Ranger school. Some leaders will go to SERE and to LRSLC. Base training is always a problem because new arrivals, including officers and NCOs, may have absolutely no LRS experience and must start from scratch.

This study finds that there should be a separate MOS, basic entry-level reconnaissance training, and a system for repetitive reconnaissance unit assignments. Implementing these findings requires a separate research study. This study should

consider all associated costs, including instructors, housing, supplies, transportation, and associated miscellaneous costs. It should also consider the benefit of improvement to standing LRSUs, BRTs, and scout platoons, as well as the emerging IBCT RSTA squadrons.

This study finds that the Army lacks a singular doctrinal reference to which a staff officer could turn when considering LRSU employment. The revamping of current doctrine would correct this problem. One chapter would specify staff officer responsibilities, LRSU requirements, and LRSU duties. The chapter should also specify a standard LRS mission target folder and what each staff officer is responsible for in the folder.

Staff officers do not require a special school to support LRSUs. A doctrinal capability brief at the MI Captains Career Course or for majors at the Command and General Staff College (CGSC) would be appropriate to audiences focused on assignment to light divisions, the 2nd Infantry Division, or V and XVIII Corps. Beyond LRSU capabilities, the brief should detail required support and staff responsibilities. The current treatment of LRSUs is inadequate.

While a capability brief in an institutional environment is appropriate, a comprehensive, current doctrinal reference will make greater, more accurate, and longer lasting improvements to staff officer education. Beyond these issues for the proponent and institutional schools, it is incumbent upon the LRSU leaders to actively conduct information outreach regarding their unit to other unit leaders on post. This includes professional demeanor and unit performance, as well as interaction with other unit leaders--that is, LRSU commander with battalion and brigade S3s, as well as the plans

staff; and the LRSU first sergeant with battalion, brigade, and division command sergeants major. If LRSU leaders do not make the effort to inform others of their unit's capabilities and limitations, they will be inadequately understood.

Should LRSUs work with other units? Absolutely! This study has shown that the future operating environment requires unit-to-unit coordination in some very complex environments or situations. LRSUs, to remain relevant, must participate in force projection, stability, support, and urban operations. The ability to contribute to the fight as part of a rapidly adaptable team is essential.

LRSUs should continue to remain aligned with division and corps headquarters for several reasons. First, divisions and corps have the capability and assets to properly plan for and support a LRSU operation. Second, reconnaissance assets do better when in general support. Third, future brigades will have RSTA squadrons--division and corps commanders will still have their LRSUs. Maintaining this habitual alignment, however, does not mean that LRSUs should only interface with divisions and corps headquarters.

LRSUs should also work with other units while working for their division or corps--the future operational environment will demand it. LRSU experiences in Kosovo have shown LRS teams operating within or in close vicinity to other friendly units and benefiting from the available mutual support. Working with other collection assets is also beneficial. LRSUs could easily work with other units at home station to increase their capability, to educate other leaders on LRSUs, and to identify TTPs for working with other units or accepting attachments. If possible, LRSUs should work with sister service reconnaissance units, MI assets from their own battalion, SOF when available, and other federal agencies.

Training scenarios at the JRTC retains LRSU under division control, but places the LRS team in the same maneuver box as the rotational brigade. Many view this as an artificiality and miss the potential training benefits. The scenario could easily facilitate many of the lessons learned identified by this study by requiring the following: (1) target (or intelligence) handover from the LRSU to the rotational brigade for forced entry and attacks on Shugart-Gordon; (2) mutual support between LRSU and rotational brigade collection assets; (3) if terrain does not allow enough space for both LRSU and brigade operations, give the LRSU a target acquisition mission in support of a brigade flank or fragmentary order mission. No matter what form it comes in, the ability to interact with another unit and conduct coordination will only enhance unit capabilities and improve TTPs.

This chapter has examined the potential nature of the future operational environment and the changes that LRSUs must make in doctrine, TTPs, and training in order to remain relevant in that environment. The study used doctrine, TTPs, and lessons learned from several similar units and from LRSUs operating in Kosovo. It also used lessons learned relating to reconnaissance, urban operations, and the future operations environment.

The study identified requirements for doctrinal change based on the research findings. From identified need for doctrinal change, it identified TTP changes required. Finally, it identified changes to training that should be enacted to fully prepare LRSUs for relevance in the future.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

This study provides two distinct sets of conclusions. The first set of conclusions substantiated the need for the study. The remainder of the study examined findings that address the doctrinal, TTP, and training changes required to ensure continued LRSU relevance. The findings establish the foundation for recommendations for change and further research.

In chapters one and two, the study demonstrated that technology alone cannot provide the same capability as LRSUs and that LRSU capabilities are required in the future operational environment. Reconnaissance is an absolute must as a precursor to every operation; it must occur across the full spectrum of operations, and it must continue throughout every operation. Reconnaissance assets require detailed planning, parent unit support, and stealth to be successful. Future conflicts will include conventional and asymmetric threats and promise to have a faster tempo of operations. In future employment, distances from the parent unit may not be great and the LRSU may be called upon to perform missions other than surveillance as their primary role. Missions supporting larger unit force protection may have an increased role at reduced operational ranges. Reconnaissance, target acquisition for precision fires, and battle damage assessment are missions that will be more prevalent on the future battlefield. Finally, the value of the information provided by reconnaissance units will continue to justify the acknowledged risk.

Current doctrine offers negligible guidance on the employment of the LRSU in SASO operations. LRSU doctrine remains locked in the Cold War era's framework.

LRSU capabilities are unexplored in closer proximity to friendly troops. Current LRSU doctrine is based on Cold War era projections and requires extensive time for planning. There are no doctrinal references that address less than twenty-four-hour planning for employment in an established theater or at less than linear battlefield distances. Planning for LRSU employment is staff intensive, yet very few staff officers are familiar with LRSU operations, and there is no doctrinal reference or educational program for these staff officers.

The current doctrinal reference must be rewritten; it is long overdue. The overhaul of LRS doctrine must abandon a singular focus on a linear battlefield with clearly defined friendly or enemy lines. It must cover LRSU employment in offensive, defensive, and stability and support operations. It must address LRSU employment within urban areas. Within the context of these operations and environments, the doctrine must address the details of vehicular insertion, friendly unit coordination and mutual support, and the preparation required to conduct nontraditional surveillance against combatants or criminals, as well as in a force protection role.

The new doctrine must stress the increased importance of target acquisition and designation missions for lethal and nonlethal effects, munitions, and forces. It must identify standard target acquisition and designation equipment and the doctrine for the employment of that equipment. It must also standardize technological equipment, including communications, digital messaging, imaging, photographic, videotape, and animal deterrent equipment.

Additionally, it must identify procedures to reduce planning time requirements. This is necessary to ensure relevance to commanders operating in the forecasted rapid

operational environment. Techniques should include the preparation of country studies or battle books based on OPLANs and detailed study or creation of standardized operational systems specific to the theater.

The new doctrine must identify and stress the importance of the capabilities and advantages of working with attachments (CCT, REMBASS, LLVI, engineers, NBC, etc.) and the ability to emplace sensors. The doctrine must also include annexes that serve as SOPs for all LRSUs to increase interoperability, facilitate the integration of attachments, and facilitate LRS personnel reassignment from one LRSU to another.

Finally, the new doctrinal reference must be the one reference required to conduct LRSU operations. As such, it must include a separate section for staff officers to assist them in planning for and supporting LRSU employment. This must include an example of an LRS target folder with descriptions of each item and what each staff officer must contribute in the creation of the folder. It should clarify LRS tasks versus missions and detail the PIR-SIR-SOR linkage. The combination of previously listed doctrinal changes coupled with a separate chapter focused on the staff officer will better prepare a new staff officer to plan for and support LRSU employment.

This study also leads to three miscellaneous doctrinal findings. First, the Army should consider changing the LRSU name, possibly to "Division or Corps Reconnaissance Company." This name allows for changes in operational environment (less distance, force protection role, etc.) and facilitates employment in offensive, defensive, stability, and support operations in a reconnaissance, surveillance, or target acquisition role. Second, standardization and compatibility in equipment, unit level TTPs, and SOPs must be established. Failure to establish and enforce Army-wide

standardization will result in a growing disparity between units, thus decreasing interoperability, overall efficiency, and the future relevance. Finally, this study seconds the recommendations of other authors to create one or more LRS battalions. These higher headquarters would accomplish much by serving in an oversight and proponent capacity and, most importantly, by standardizing equipment, training, TTPs, and SOPs.

Required Changes to LRS TTPs

Changes in doctrine results in changes in TTPs. Specific needs for change in TTPs are in the areas of vehicular insertion and extraction, target acquisition, employment in SASO, employment in urban environments, the incorporation of attachments, the standardization of digital imagery and reporting, and unit SOPs.

Vehicular insertion and extraction is inadequately addressed in current LRS publications. TTPs should be established which address passage through, insertion, or extraction in populated and unpopulated areas, in close proximity to friendly troops, or at extended ranges where aerial insertion is not possible due to other factors. TTPs should cover vehicular weapons, communications, battle drills, and camouflage techniques, at a minimum.

The increased employment of PGMs, along with lessons learned in Kosovo and Afghanistan, mandate that reconnaissance assets enhance their target acquisition and designation capabilities. The LRSU reference lacks any doctrine or TTPs for target acquisition. The revamped doctrine must address the mission. It should provide standard tables and charts of capabilities and call for fire procedures for each system. It should standardize acquisition and designation equipment and provide TTPs for the marking of

targets and of friendly units to prevent fratricide. Finally, it should address TTPs for the employment of lethal and nonlethal effects, weapons, and forces.

Stability and support operations demand the creation or adaptation of numerous TTPs. Many of the TTPs required for these operations stem directly from the close proximity of LRSUs to other friendly forces and the resultant increase for coordination. TTPs must be adopted for friendly unit coordination, specifically for intelligence sharing, mutual support, QRF support, base camp utilization, and others. TTPs must also be established for IPB in a SASO environment and for LRSU employment considerations in nontraditional roles and missions such as force protection operations. These operations introduce an unexplored environment for the LRSU--the urban area.

Urban operations require adaptation in existing TTPs. LRSU TTPs must be developed which address urban IPB; camouflage; infiltration and movement techniques; hide and surveillance site selection, construction, occupation, and activities; communications; reporting formats and peculiarities; sustainment; exfiltration techniques; and debriefing formats. Contingency operations must also be addressed within the urban environment. They must include TTPs for E&R, SERE, emergency evacuation, break contact drills (mounted and dismounted) and the employment of fire support assets.

LRSU TTPs must be established to integrate attachments in any environment and on any type of operation. LRSU lessons in the Balkans and the lessons learned from like units highlight the fact that overlapping coverage, mutual support, and the ability to work with technical experts enhances the capabilities of the reconnaissance unit. LRSU TTPs should outline minimum requirements for attachment personnel. They should identify

training requirements, to include insertion techniques, movement, halts, and contingency drills. In short, they should facilitate the rapid integration of specialty personnel. An added benefit is that these TTPs will further enhance the integration of LRSU replacement personnel.

LRSU standardization is key to breaking the current LRSU doctrinal framework focused on the Cold War era. Revamping the doctrine and TTPs and enforcement of those changes are vital to LRSU operational enhancement and future relevance. Without standardization of equipment and associated TTPs, LRSUs will continue to be varied in their individual capabilities, strengths, and weaknesses. Standardization requires oversight and the fielding of common digital reporting, imagery, and communications equipment--and the associated TTPs. In the end, standardization will come from changes to doctrine, changes to TTPs, changes to current training methodology, common equipment, and oversight and enforcement of all of the above.

Required Changes to Current Training Methodology

As requirements for change in doctrine drove the need to adjust or create TTPs, doctrinal and TTP changes also impact the necessary changes to training. The net effect is that every identified doctrinal change results in an additional training requirement for a force that already has difficulties in reaching desired proficiency levels. These challenges, in large part, come from the lack of a reconnaissance MOS or entry-level reconnaissance training, the continuous turnover of personnel, and the requirements to recruit from other units within one's own division or corps. Of all similar units, the LRSU is the only unit that lacks a separate MOS or initial-entry training system. Beyond initial reconnaissance training, the study has identified that reconnaissance soldiers need

additional training in target acquisition, incorporation of other reconnaissance or technological experts, conducting operations in SASO environments, and conducting operations in urban terrain.

Therefore, this study finds that the Army needs a separate reconnaissance career field with an associated training system and repetitive reconnaissance assignments. This would enable reconnaissance assets at all levels to significantly increase their proficiency.

The result of a consolidated reconnaissance MOS would be the repetitive assignment of reconnaissance specialists to reconnaissance units. Proficiency and capability would increase significantly and an evolutionary improvement of doctrine and TTP would follow. The major missing factor for improvement of reconnaissance doctrine, TTPs, and training systems is enforceable oversight. Several authors have proposed the organization of a LRS battalion. This study reaffirms the necessity of a battalion headquarters to facilitate the standardization of doctrine, TTPs, equipment, and training. This concept would also allow subordinate units to specialize in particular theaters or specialty skills.

Given the identified lack of entry-level training and oversight, one must ask how current LRS institutional training fairs. Institutional training must be divided into two subcategories: training for the LRS soldier and leader and training for the staff officer. The LRSLC is the core of LRS training, yet it historically has received little emphasis from LRSUs. Many factors contribute to this problem including the limited time units have LRS soldiers. Driven by the need to recruit soldiers from within the parent division or corps, LRSUs often only have their soldiers for one or two years. This lack of retention often magnifies the challenges to dispatching a soldier for a school.

Additionally, LRSLC does not produce a badge, award, or special recognition--as compared to airborne, SCUBA, MFF, SERE, or Ranger schools. Finally, many units do not emphasize the importance of LRSLC and have no accountability or oversight from a higher organization. In the end, many units mistakenly focus their institutional education on infiltration and exfiltration techniques and fail to establish core proficiencies.

Another institutional training issue is the training provided to staff officers who plan for and support LRSU operations. This study finds that there is no effective institutional training program at the Infantry or Military Intelligence Schools or at the Army's Command and General Staff College. This lack of training, coupled with a LRSU doctrinal reference that does not provide guidance or examples for the staff officer, is a shortfall in current staff officer training. This shortfall has resulted in the underutilization and misuse of LRSUs and the stagnation of LRSU doctrine in a Cold War and linear battlefield mind-set. This study finds that an updated doctrinal reference coupled with a capabilities brief would prepare a staff officer with basic tools to plan for and support a LRSU mission. Basic capabilities briefs should be conducted at the MI Captain's Career Course and at the Command and General Staff College for officers going to light divisions and corps.

In addition to the institutional training for LRS soldiers and staff officers, collective training must occur. In many LRSUs, the majority of collective training is conducted at the team level and planned within the unit. Most LRSUs conduct externally directed collective training in the form of biannual Battle Command Training Program (BCTP) Warfighter exercise or JRTC rotations. In the case of BCTP, training focuses on the staff and LRSU headquarters. In the case of JRTC, training focuses on the teams and

LRSU headquarters. An entire year can pass without the division or corps staff training with their LRSU. Like the Marine Corps requirement within their *Ground Reconnaissance* manual for each reconnaissance unit to participate in at least one large (division) scale exercise annually (MCWP 2-15.3 2000, 8-18), the Army should consider BCTP exercises and JRTC rotations as an annual external evaluation (EXEVAL). This requires observer-controller coverage for the LRSU during the BCTP exercise. Additionally, parent organizations should be required to conduct an EXEVAL of the entire LRSU in years that do not include a JRTC or BCTP. This would ensure oversight, training to standard of the entire LRSU, the development of junior officers and field grades on the staff, and team building between LRSUs and staffs.

Many will argue that BCTPs only train LRSU headquarters and that JRTC unrealistically forces LRSUs to work in close proximity to brigades. Observations at the JRTC show that collective training at the headquarters level is often the most overlooked area of training--partly due to a lack of oversight and support. Consequently, this area of training, although detailed and extensive, needs the additional focus of BCTP exercises to obtain proficiency. The JRTC provides good collective training for unit level C2, CSS, and the teams, in addition to forcing coordination with division and brigade headquarters. JRTC serves as an excellent example of current operational experiences--LRSUs working for the division, but within or in close vicinity of brigade units. Many lessons can be learned and TTPs developed while at JRTC by identifying problems and solutions to the modern battlefield. Not only should LRSUs work in close vicinity of brigade units, they should practice mutual support and target handover with other reconnaissance assets.

Recommendations for Further Research

This study has developed several findings that help direct LRSU leaders in their preparation for future battlefields. The study has identified areas in doctrine, TTPs, and training that LRSUs must change to remain relevant. A follow-on study is required into the precise costs and procedures needed to establish a separate reconnaissance MOS within the Army. The author also recommends further research into Army-wide LRSU TTPs and SOPs. A possible technique is to assign each current LRSU a set number of TTPs and SOPs to establish or refine. At the next annual LRS conference, each unit would brief its project to the group as a whole. Following briefings, the conference would break into subcommittees to refine and approve TTPs and SOPs. If the LRS community comes together to make this happen, future relevance and interoperability will be enhanced. Action must come from within the community.

Conclusion

LRSUs provide a unique and necessary capability to today's commanders and to future commanders. To ensure continued relevance, the Cold War mind-set must be broken. LRSUs can guarantee their continued relevance by coming together as a team to refine doctrine, TTPs, and training. The LRS community must focus on developing and refining TTPs for target acquisition, vehicular insertion, urban operations, and for the integration of attachments. Revamped doctrine must include standardizing SOPs and a chapter designed to educate staff officers. The Army must establish a separate reconnaissance MOS and, finally, the Army must establish an enforceable oversight authority.

GLOSSARY

Long Range Surveillance Units (LRSUs). LRSUs are a very unique, and very small, part of othe Army force structure. In the active force, LRS soldiers account for less than 700 men. These men and their units conduct operations in areas usually unoccupied by other friendly units. They use special tactics and techniques. As such, LRSUs have many unique terms and accompanying definitions. An understanding of these terms is required for the purpose of this study. Key LRSU missions, organizations, and operational terms and definitions follow:

LRSU Missions and Tasks

Battle Damage Assessment: The timely and accurate estimate of damage resulting from the application of military force, either lethal or nonlethal, against a predetermined objective. Battle damage assessment can be applied to all types of weapons systems (air, ground, naval, and special forces weapons systems) throughout the range of military operations. It is primarily an intelligence responsibility with required inputs and coordination from the operators. It is composed of physical damage assessment, functional damage assessment, and target system assessment (FM 101-5-1 1997, 1-17). (Note: One of the four LRS mission essential tasks.)

Reconnaissance: An operation designed to obtain information on the enemy, potential enemy, or geographic characteristics of a particular area. The precursor to all operations, which may be accomplished through passive surveillance, technical means, or human interaction (spies or human intelligence (HUMINT)), or through fighting for information. Forms of reconnaissance include route reconnaissance, zone reconnaissance, area reconnaissance, and reconnaissance in force (FM 101-5-1 1997, 1-130). (Note: One of the four LRS mission-essential tasks.)

Surveillance: The systematic observation of aerospace, surface or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means (FM 101-5-1 1997, 1-148). (Note: One of the four LRS mission-essential tasks.)

Target Acquisition: The detection, identification, and location of a target in sufficient detail to permit the effective employment of weapons (FM 101-5-1 1997, 1-151). (Note: One of the four LRS mission-essential tasks.)

LRSU and Supporting Organizations

Alternate Operations Base (AOB): The primary mission for the AOB is to act as a communications relay for the COB or DOB and deployed LRS teams. Typically, AOBs set up at the Corps or Division Rear Main Command Post. AOBs can set up with Tactical Command Posts when communication with the DOB or COB

and deployed teams is reliable. The AOB can also locate with a brigade to facilitate information sharing and linkup operations (FM 7-93 1995, 2-13).

Analysis and Control Element (ACE): The G2's primary organization for controlling intelligence and electronic warfare (IEW) operations. The ACE performs collection management, produces all-source intelligence, provides IEW technical control, and disseminates intelligence and targeting data across the range of military operations (FM 101-5-1 1997, 1-9).

Base Radio Station (BRS): The primary mission of the base radio station is to receive and transmit messages between the operations base(s) and employed teams. Each base radio station consists of two AN/TSC-128s and monitors all deployed team frequencies. LRSCs have four BRSs while LRSDs have two.

Company or Detachment Operations Base (COB) or (DOB): A location from which the LRSC or LRSD operated. It locates in the vicinity of the collection management and dissemination (CM&D) of the G2 and includes areas for a tactical operations center (TOC), headquarters, base radio station, motor park, isolation facility or area, LZ, and platoon or team defensive areas (FM 7-93 1995, 2-11).

Miscellaneous Definitions

Abort Criteria: A predetermined set of circumstances, based on risk analysis, which makes the success of an operation no longer probable; thus the operation is terminated. These circumstances can relate to changes in safety, equipment or troops available, preparation or rehearsal time, weather, enemy, losses during execution, or a combination of the above (FM 101-5-1 1997, 1-1).

Combat Intelligence: That knowledge of the enemy, weather, and geographical features required by a commander in the planning and conduct of combat operations (FM 101-5-1 1997, 1-31).

Doctrine: Enduring systems and principles and new concepts that constitute a commonly accepted body of thought on the conduct of military operations (Romjue 1996, 6). General Curtis E. Lemay, USAF, 1968, stated: "At the heart of war lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of men, equipment, and tactics. It is fundamental to sound judgment." (JP 2-0 2000, 1-1)

Emergency Resupply: A resupply mission that occurs based on a predetermined set of circumstances and time interval should radio contact not be established or, once established, is lost between a special operations tactical element and its base (FM 101-5-1 1997, 1-59).

Evasion and Recovery (E&R): The full spectrum of coordinated actions carried out by evaders, recovery forces, and operational recovery planners to affect the

successful return of personnel isolated in hostile territory to friendly control (JP 3-50.3 1996, GL-4).

Human Intelligence (HUMINT): A category of intelligence derived from information collected and provided by human sources (FM 101-5-1 1997, 1-79).

Long-Range Surveillance (LRS): Surveillance of an enemy force or specified area over extended distances using long-range surveillance units; special operations forces; division, corps, theater, or national monitoring devices; or any combination of these to provide information to the commander (FM 101-5-1 1997, 1-94).

Named Area of Interest (NAI): A point or area along a particular avenue of approach through which enemy activity is expected to occur. Activity or lack of activity within the NAI will help confirm or deny a particular enemy course of action (FM 101-5-1 1997, 1-107).

Proponent: The U.S. Army Training and Doctrine Command (TRADOC) subunit / organization tasked to develop tables of organization and equipment (TO&Es) for units, based on their wartime missions. After TO&E development, the proponent is also responsible for the development of doctrine for the employment of the unit. For LRSUs, the proponency is delegated to Delta Company, 4th Ranger Training Battalion, Ranger Training Brigade, at Fort Benning, Georgia.

Survival, Evasion, Resistance, and Escape (SERE): Training and actions taken by military members to assist them in surviving in hostile environments, resisting enemy activities, escaping enemy forces, and evading enemy forces until the individual or unit can be reunited with friendly forces (FM 101-5-1 1997, 1-148).

Targeted Area of Interest (TAI): The geographical area or point along a mobility corridor where successful interdiction will cause the enemy to either abandon a particular course of action or require him to use specialized engineer support to continue, where he can be acquired and engaged by friendly force (FM 101-5-1 1997, 1-152).

Transformation: The strategic transition the Army is currently undertaking to prepare for crisis and war in the twenty-first century. The Army is transforming to become strategically responsive and dominant across the full spectrum of military operations. Transformation includes technology, training our soldiers, and growing leaders who are agile, versatile, and adaptive.

The end state of transformation lies in objective force capabilities. They are: deploy a combat capable brigade anywhere in the world in 96 hours; a division on the ground in 120 hours; and five divisions on the ground in theater within 30 days.

The Interim Force fills the gap between the "Legacy Force" (today's units) and the Objective Force. The interim force hinges on the Interim Brigade Combat

Team (IBCT) which falls in between today's mechanized and light infantry units. IBCT soldiers will utilize wheeled personnel carriers to move to battle and fight as light infantry (Army Vision 1999).

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