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MASTER OF MILITARY STUDIES

A New Army Brigade Cavalry Squadron Structure: The Multi-Purpose Cavalry Squadron

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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Executive Summary

Title: The New Army Brigade Cavalry Squadron: The Multi-Purpose Cavalry Squadron

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Thesis: The United States Army brigade combat team structure requires a multi-purpose cavalry squadron capable of performing both reconnaissance and security missions, as well as executing infantry and armor force missions on a need basis. The brigade cavalry squadron also requires a new definition of reconnaissance to guide its actions, and an articulated strategy on how to execute collaborative planning between the brigade and squadron staffs.

Discussion: When the Unites States Army transitioned to modular brigade combat teams in 2003, each brigade was reorganized to include a reconnaissance squadron, named after historic cavalry squadrons. The squadrons were specialized in reconnaissance and not meant to fight for information, and doctrine guiding the use of the squadron was incomplete. Historic trends, including reconnaissance and cavalry operations from World War II to Operation Iraqi Freedom, show that light reconnaissance formations cannot survive the tempo of operations, and the squadrons must be able to fight for information. The reconnaissance squadron must be reorganized to fight for information in close combat, as well as maintain the ability to conduct stealthy operations. The definition of reconnaissance must be revised to guide the actions of the reconnaissance squadron. Collaborative planning between the brigade and squadron needs to be articulated in a manner to allow for effective reconnaissance planning.

Conclusion: The reconnaissance squadrons need to be formed similar in size to the other battalions in the parent brigade combat team, beginning with a standardized squad formation across all reconnaissance formations, giving the squadron the ability fight for information and survive close combat. The term "reconnaissance" needs to reflect the squadron's expectation of fighting for information. Guidance on collaborative planning between the brigade and the squadron needs to be included in the brigade field manual, FM 3-90.6.

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Preface

The following thesis was motivated by a desire to improve reconnaissance and cavalry formations within the United States Army. Many of the ideas were inspired by the great scouts and leaders in the 1st Squadron, 91st Cavalry Regiment, 173rd Airborne Brigade Combat Team, with whom it was my honor to serve. The intended audience for this paper includes the leadership of the Maneuver Center of Excellence at Fort Benning, Georgia, as well as the TRADOC Capability Managers that guide the development of each of the types of brigades. This paper was written with the intent of helping to further develop the formation and use of reconnaissance assets at the brigade level, ultimately increasing the ability of our soldiers to fight and win our nation's wars. With this intent in mind, I humbly submit my recommendations.

Special thanks are in order for Dr. Edward Erickson for his knowledge and patience in guiding my professional development. Dr. Francis Marlo, LtGen (R) Paul Van Riper, COL (R) Christopher Kolenda, and COL Kirk Dorr also deserve thanks for guiding my education and serving as sounding boards during the writing of this paper. My thanks and love to wife, Erin, and my children, Ellie, Emma, and Jared, for their patience and support. As always, thanks to the Lord Jesus Christ for making this education possible for me.

"You can never have too much reconnaissance"

-General George S. Patton Jr.[1]

When the Army transitioned to modular brigade combat teams (BCT)[2] in 2004, a reconnaissance squadron was included in the task organization of each brigade.[3] Each of these squadrons was smaller than the battalions of the parent brigade and designed specifically for the function of reconnaissance and security. This organizational change was made during the course of two wars, both counter-insurgencies, during which the reconnaissance squadrons were used primarily as "land-owners," acting as battalions. In the course of combat, the use of the squadrons helped combat leaders discover they lacked personnel to effectively serve as a line battalion, and that the squadron was not able to survive close combat with peer competitors. History from World War II to Operation Iraqi Freedom only reinforces the current experience of the smaller, lighter, and specialized brigade reconnaissance squadrons and the problems they are currently experiencing.

The requirements placed on squadrons exceeded the squadron's capability, exposing problems in doctrine and organization. The doctrinal reconnaissance definitions are vague and do not offer much substance to guide the use or formation of the squadron. Doctrine guiding the integration of the squadron at the brigade level does not fully address collaborative planning. The squadrons lack the manpower and equipment to fight for information. The lack of a defined scout squad formation limits the squadron's effectiveness in the combination of mounted and

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[1] George S. Patton, *War As I Knew It*, (Cambridge: Riverside Press, 1947), 400.
[2] The acronym "BCT" refers to the Army's redesigned brigade-sized, combined arms formations. During the course of this paper, use of "brigade" refers to the Army's current "BCT" to enable understanding for non-Army readers.
[3] John J. McGrath, *Scouts Out! The Development of Reconnaissance Units in Modern Armies* (Fort Leavenworth: Combat Studies Institute Press, 2008), 180.

dismounted operations, hindering the standardization of training to allow scouts to fight in close combat situations. The squadrons are currently authorized at about half the strength of a line infantry battalion, limiting their utility in manpower-intensive counter-insurgency operations. The very specialization of the squadron itself is a limiting factor in its use by the brigade.

Instead of specialized squadrons, army brigades require multi-role reconnaissance squadrons that can fight for information, conduct specialized reconnaissance, and conduct landowner type operations, such as in a counterinsurgency. The squadron needs revised reconnaissance doctrine guiding the planning for and use of the squadron within the brigade. Reconnaissance assets, including the squadron, need to be re-organized and re-structured to allow the squadron to fulfill the brigade's reconnaissance and security requirements and fight for information. Army brigades require a multi-purpose cavalry squadron capable of operating effectively in all combat situations, along with doctrine guiding their use, to increase the effectiveness of both the squadron and the brigade in combat.

Historical Background on Effective Reconnaissance and Cavalry Organizations

The appropriate strength and capability of reconnaissance units has often been an issue in military history. Since World War II, multi-purpose reconnaissance and cavalry formations have experienced success in combat using motor vehicles and aircraft. Prior to the development of motorization and aircraft, cavalry units employing horses conducted reconnaissance and security efforts within a combat organization.[4] These horse cavalry units often possessed similar though lighter firepower capabilities that line infantry units possessed, but had the advantage of speed

[4] McGrath, 1.

over the infantry. The mounted scouts could move faster than their dismounted counterparts, allowing them the advantage of overcoming distance and time to find information and report it in a timely fashion. The cavalry also maintained an ability to act as shock troops, moving into combat rapidly and using surprise as a weapon.[5] This advantage was greatly reduced as motorized vehicles and aircraft entered the inventory of armies.[6]

As close combat organizations began to motorize, so did the cavalry. Reconnaissance and security organizations were developed at the operational and tactical level to fulfill the information requirements of commanders. However, infantry and armored units now possessed an equal amount of ground mobility as the cavalry, reducing a major advantage that the reconnaissance forces possessed. Militaries began to think about how to organize, equip, and use cavalry forces, which created a heavy versus light cavalry question. Specifically, armies that chose lightly equipped cavalry units saw them degraded through combat with heavier units, leading commanders to decide not to commit the lighter units at all. When heavy cavalry has been used, it has been used, at least partially, for missions outside reconnaissance.[7] The German Wehrmacht addressed the heavy versus light cavalry problem as World War II progressed.

During the initial years of World War II, the German Wehrmacht formed their reconnaissance and cavalry units. In their 1940 campaign against the French, German reconnaissance formations were specialized and light, with their reconnaissance organizations at the division and below levels equipping their scouts primarily with motorcycles, with some armored cars in the reconnaissance units at division level.[8] As the war progressed, the Germans learned that their light, specialized reconnaissance units could not survive contact with enemy

[5] McGrath, 2.
[6] McGrath, 4.
[7] McGrath, 4-5.
[8] McGrath, 79.

forces, particularly as the tempo of operations increased. Faster paced operations offered less opportunity for light scouts to conduct stealthy movements. By 1944, the Wehrmacht replaced the majority of their motorcycles with armored cars, half-tracks, and light tanks. The addition of armor increased the survivability of the German scouts in combat.[9]

The American Army in World War II took these lessons from the Germans and applied them to their own formations, creating mechanized cavalry groups, essentially a cavalry brigade, as well as cavalry squadrons. The American cavalry used scouts in jeeps, but also organized with an equal number of scouts in armored cars, as well as placing tanks in both the group and the squadron.[10] While the cavalry was survivable, the groups in particular were more often used as a combat formation than as reconnaissance elements. Though reports do not indicate the reason for the difference in usage of the group, field commanders in need of more combat formations could readily use their cavalry groups to fill in for infantry and armor formations.[11] By the end of World War II, analysis conducted by the United States Army indicated that the field force did not need a specialized reconnaissance force. The field army required reconnaissance formations capable of conducting the missions of the obsolete horse cavalry. Prior to World War I, horse cavalry served as a mobile, multi-purpose force, capable of reconnaissance, security, counter-reconnaissance, offense, and defense.[12] The army recognized that the tempo of operations in the close combat of World War II required this type of cavalry

[9] McGrath, 96-97.
[10] McGrath, 99, 105.
[11] McGrath, 100.
[12] McGrath, 109-110.

force, equipped with armor and scouts in mechanized and motorized vehicles. The army also determined that effective reconnaissance almost always involved fighting.[13]

After World War II, the army transitioned its cavalry and reconnaissance forces in accordance with the lessons learned from 1941-1945, primarily shaped by the combat experiences in Europe and North Africa. In 1948, American reconnaissance squadrons and cavalry regiments looked similar to the squadrons that fought in World War II. The squadrons contained a mix of jeeps, armored personnel carriers, and tanks.[14] As the army underwent a reorganization in 1962 from the Pentomic Division structure to the Reorganization Objective Army Division (ROAD), army reconnaissance and cavalry formations remained a mix of armored personnel carriers and tanks; they added reconnaissance helicopters but eliminated jeeps from their formation due to lack of survivability.[15] The struggles of light reconnaissance forces in the Israeli Defense Force from 1956 to 1973 showed that the move away from jeeps was the right decision.

The IDF reconnaissance formations in 1956 consisted mostly of scouts operating from jeeps. While the Egyptians they opposed found it difficult to fight against IDF armored forces, they destroyed IDF scouts in jeeps.[16] Again in 1967, the IDF found that lighter reconnaissance forces struggled to survive in close combat. IDF reconnaissance units in 1967 were equipped with jeeps, half-tracks, and light tanks, which took heavy losses fighting the Egyptians as the Israelis advanced across the northern areas of the Sinai Peninsula.[17] By 1973, the IDF replaced

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[13] Curtis D. Taylor, "Trading the Saber for Stealth: Can Surveillance Technology Replace Traditional Aggressive Reconnaissance?" *The Land Warfare Papers*, no. 53 (September 2005): 3.
[14] McGrath, 148, 150.
[15] McGrath, 153.
[16] McGrath, 128.
[17] McGrath, 128-129.

its lighter equipment with modern tanks and armored personnel carriers, but still retained jeeps and lighter scouts. The 87th Armored Reconnaissance Battalion conducted reconnaissance, attacked, and defended as part of the 1973 Yom Kippur War. In doing so, the 87th Battalion was attrited to the point that the IDF disbanded the unit.[18]

The American cavalry and reconnaissance experience after World War II differs from the experience of the IDF. While the IDF moved toward a heavier reconnaissance force over time, the American Army chose to armor its reconnaissance formations after 1962. Lessons from the American cavalry and reconnaissance squadron experience in Vietnam proved that heavier cavalry was survivable, and that the formations were capable as multi-purpose formations.[19] When the army chose to reorganize again in 1986, the armored squadrons and regiments became heavier, adding the M1 main battle tank and the M3 cavalry fighting vehicle; the latter which replaced the armored personnel carrier.[20] The army also chose to retain some wheeled reconnaissance formations, despite lessons from World War II and the IDF. The reorganized reconnaissance and cavalry force faced its biggest challenge in 1991 during Operation Desert Storm.

Cavalry and reconnaissance formations that participated in Operation Desert Storm excelled as multi-purpose formations. The 2nd Armored Cavalry Regiment (ACR), armed with M1 tanks and M3s, advanced as the lead formation in VII Corps. The regiment was tasked with advancing to determine the location and activities of the Iraqi forces the corps faced. In the close combat at the Battle of 73 Easting, the regiment discovered Iraqi forces, and nearly destroyed two enemy brigades in the process, taking a small number of casualties in the process before

[18] McGrath, 130-132.
[19] McGrath, 159-160.
[20] McGrath, 161, 165.

transitioning to a reserve force.[21] 1st Squadron, 4th Cavalry Squadron successfully conducted reconnaissance, security, and attack missions during the campaign.[22] After Operation Desert Storm, the "*Tait Report*" indicated that reconnaissance formations during the war needed to fight for information and to remain survivable, and even the heavier, reorganized cavalry and reconnaissance forces required more firepower support organic to the formations. Lighter scouts, using the High Mobility Multipurpose Wheeled Vehicle (HMMWV), were limited in their effectiveness due to a lack of survivability. Many commanders chose not to commit their light scouts for fear of their destruction. The tempo of operations limited the time-consuming, stealthy reconnaissance techniques that lighter scouts needed to use to survive.[23] The role of cavalry as a multi-purpose reconnaissance force was validated.

During the post-Cold War draw down, the army retained its heavy cavalry but added light reconnaissance formations in the light infantry divisions, as well as equipping battalion scouts with HMMWVs, the modern day equivalent of the jeep, which was proven on the laser battlefields of training but lacked survivability in battle.[24] The heavy and light cavalry formations were tested again in 2003. That year, the United States military attacked Iraq, prior to the transformation that placed a squadron in each brigade. Two cavalry squadrons and a cavalry troop were the organic reconnaissance force available for use by the United States V Corps during the invasion. Traditionally, an American corps in combat was allocated an ACR to conduct reconnaissance, as was the case during the first American encounter with the Iraqis in 1991 during Operation Desert Storm. In 2003, V Corps designated the 3rd Infantry Division as its main effort. V Corps operated without an ACR, and the 3rd Division's cavalry squadron, 3rd

[21] McGrath, 173.
[22] McGrath, 174.
[23] Taylor, 5-6.
[24] McGrath, 168.

Squadron, 7th Cavalry Regiment (3-7 CAV) became the de facto lead ground element for V Corps.[25]

With 3-7 CAV in the lead, the squadron attempted to accomplish the ACR mission for V Corps despite possessing less than a third of the combat power of a full-strength ACR. The organization of 3-7 CAV included armored cavalry fighting vehicles, tanks, and scout helicopters. The squadron led V Corps and fought for information as well as conducted dedicated reconnaissance and security. In addition, 3-7 CAV also fought as a separate maneuver force by the division when the situation required it, another use of armored cavalry as a multi-purpose force.[26]

After the invasion, General William Wallace, the commander of V Corps, said, "the lead unit is the recon unit."[27] This statement was validated by the research of the Operation Iraqi Freedom Study Group (OIF-SG), formed by then Army Chief of Staff General Eric Shinseki.[28] The study found that tempo drove reconnaissance. The speed of the attack severely limited stealthy, deliberate, reconnaissance techniques by division and brigade reconnaissance formations, often making reconnaissance operations exclusively a reconnaissance in force, essentially a movement to contact, validating General Wallace's claim.[29] The OIF-SG report showed that light scouts could not survive or support high-tempo operations. Most units in the 3rd Infantry Division did not use their light scouts in the prescribed methods of reconnaissance due to their lack of survivability. Battalions used their light scouts as logistical convoy escorts behind the front lines, or kept scout within eyesight of the main force for firepower support. In

[25] McGrath, 175.
[26] McGrath, 175-177.
[27] McGrath, 197.
[28] Taylor, 6.
[29] Taylor, 7.

the case of 2nd Battalion, 69th Armor Battalion, and the division's 2nd Brigade Combat Team, the commanders did not use their light scouts in a reconnaissance role at all.[30]

After OIF I, the army began its transformation efforts. Brigades added reconnaissance squadrons with specialized organization and equipment, in contrast to the lessons learned from World War II through OIF.[31] The Army organized the squadrons in the heavy brigades (HBCT) with a combination of light and medium vehicles with limited dismounted manpower. In the motorized infantry brigades, called Stryker brigades (SBCT), the manpower existed but there was no squad structure to guide dismounted operations.[32] In the infantry-based brigades (IBCT), the squadrons were motorized but lacked manpower.[33] None of the squadrons were created based on a common squad structure, and doctrine for their use as part of the brigade was vague. The placement of a battalion sized reconnaissance asset at the brigade level also created planning problems that are currently unaddressed in doctrine. None of the squadrons were formed with the intention of participating in close combat.

The problems of adding a specialized reconnaissance squadron to each brigade became evident in after action reports, studies, and interviews during counter-insurgency operations in Iraq and Afghanistan. Reconnaissance commanders in the field cited a lack of scouts, particularly dismounted scouts, which limited reconnaissance operations.[34] The Army Center of Lessons Learned (CALL) validated this claim when it completed a study of reconnaissance units in Multi-National Division-Baghdad, and determined that all three types of reconnaissance

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[30] Taylor, 10-11.
[31] Headquarters, Department of the Army. *Armor/Cavalry Reference Data, Brigade Combat Teams*. Fort Knox Supplemental Manual (FKSM) 71-8. (Fort Knox, KY: Directorate of Training, Doctrine, and Combat Development, May, 2010), A-29, B-29. B-31, C-24.
[32] Stryker Brigade Combat Team (SBCT) is essentially motorized infantry and cavalry.
[33] FKSM 71-8, B-29, B-31.
[34] Matthew L. Blome, "Observations on the Stryker Cavalry Reconnaissance Troop in OIF I and II, Part 2 – Issues and Recommendations," (working paper, Fort Benning, Georgia, 2009).

formations needed more scouts to both man vehicles and to conduct dismounted reconnaissance.[35] In addition to more manpower, reconnaissance leaders cited the lack of a standardized scout squad across all formations as a limiting factor in conducting close combat and in training.[36] One brigade commander in Afghanistan commented that he did not want his small, specialized reconnaissance squadron altogether, and wanted it replaced it with an infantry battalion. He added infantry to his reconnaissance squadron and formed a small infantry battalion as a result.[37] The problems in using a specialized, light reconnaissance force, first discovered in World War II and validated through OIF I, were not heeded in forming the new squadrons, and the results have not been ideal.

The problems with the current squadron design and usage can be separated into doctrinal and structural problems. The doctrinal problems are a result of flaws in reconnaissance squadron doctrine. The doctrinal definition for reconnaissance is vague, offers little insight into how organizations should be structured, and includes internal contradictions that confuse the reader on how the squadron should be used. The small amount of doctrine that exists guiding the interaction between the brigade and the squadron does not fully address collaborative planning between the two organizations. The second set of problems is structural and organizational. No common scout squad structure exists to use as a building block to create cavalry and reconnaissance squadrons. The lack of a standardized scout squad also limits the ability of reconnaissance soldiers to fight in close combat. The squadrons themselves are lightweight and

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[35] U.S. Department of Defense, *NFTF – Reconnaissance Squadrons in a Counterinsurgency (COIN) Environment* (Center for Army Lessons Learned), January 3, 2008.
[36] John Hegadush, "A Better Recce Troop," *Armor Magazine*, Vol. CXV, no. 5 (September-October 2006): 37-39.
[37] David B. Haight, "Commander Interview, COL David B. Haight, Commander, 3rd Brigade Combat Team, 10th Mountain Division, FOB Shank, Afghanistan," by Kit Parker, *Center for Army Lessons Learned*, June 14, 2009, https://call2.army.mil (accessed February 22, 2012).

specialized, do not possess the manpower to accomplish much more than reconnaissance by visual contact, and clearly do not possess enough firepower and protection to survive in close combat. Most of the normal close combat missions that cavalry squadrons executed in the past are now doctrinally considered only possible in permissive environments, in which combat with peer competitors is unlikely. The sum of the doctrinal and structural problems create a specialized reconnaissance squadron that cannot survive close combat, which history shows it must be able to do to conduct effective reconnaissance.

Defining Reconnaissance Operations and Reconnaissance Missions

Revision of reconnaissance doctrine, which reflects the historical trend of maintaining capability to fight for information, is the first step in improving the effectiveness of reconnaissance and cavalry squadrons. The squadron's field manual (FM), FM 3-20.96 *Reconnaissance and Cavalry Squadron*, requires cavalry squadrons to conduct four forms of reconnaissance and four forms of security, as well as maintain capability to conduct offensive, defensive, and stability tasks. Discounting the stability tasks, the army requires that its cavalry conduct thirteen missions in all, covering reconnaissance, security, offense, and defense. Of the thirteen missions, the cavalry within the brigade are fully capable of accomplishing six of the required missions. The squadron, as currently organized, is capable of accomplishing the other seven missions under a permissive environment. Those missions include reconnaissance in force, guard, attack, movement to contact, area defense, mobile defense, and retrograde. The common thread with all of these missions is contact with the enemy. To accomplish these missions, the squadron enters into direct fire contact with the enemy. By doctrine, the squadron

is not organized to do so unless the environment is permissive.[38] The army defines a permissive environment as an environment where host nation military and law enforcement have control.[39] The squadron needs reinforcements from outside of the squadron's structure, or it cannot fight a peer competitor. The squadron cannot conduct close combat with the enemy.

FM 3-20.96 also maintains that when the squadron undertakes close combat operations, it no longer conducts reconnaissance.[40] Yet, reconnaissance in force, guard, attack, movement to contact, area defense, mobile defense, and retrograde directly involve close combat. Two of the squadron's tasks as a reconnaissance and security element, reconnaissance in force and guard, cannot be accomplished in the face of a conventional enemy. A reconnaissance in force is a deliberate combat operation to determine or test an enemy's strength, and determine an enemy's disposition and intentions.[41] A guard is a form of security designed to protect a main force by fighting to gain time, while also observing and reporting information.[42] Both of these tasks include close combat in their execution, with reporting an implied or specified task conducted during execution of the mission. The army has created reconnaissance squadrons that cannot survive close combat, and therefore cannot accomplish what cavalry has traditionally executed, and specifically, over half the missions that it could potentially be tasked to do. The specialized reconnaissance squadron that cannot fight was created despite evidence, which indicates that reconnaissance forces must be able to fight in close combat.

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[38] Headquarters, Department of the Army, *Reconnaissance and Cavalry Squadron*, FM 3-20.96 (Washington, DC: U.S. Army, March 12, 2010), 1-4.
[39] Headquarters, Department of the Army, *Operational Terms and Graphics*, FM 1-02 (Washington, DC: U.S. Army, September 21, 2004), 1-138.
[40] FM 3-20.96, 1-3.
[41] FM 1-02, 1-158.
[42] FM 1-02, 1-90.

A change in doctrinal definitions might make the role of the squadron clearer. The army articulates to its brigade commanders and staff that the reconnaissance squadron is the "eyes and ears" of the brigade, progressively obtaining information to build situational awareness and understanding for the brigade.[43] The squadron accomplishes this role by conducting reconnaissance and security operations.[44] Security operations are those operations taken by a commander to provide early and accurate warning of a threat to a protected force, and to provide the protected force with maneuver space and time to react.[45]

The army defines reconnaissance as "a mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an enemy or adversary, or to secure data concerning the meteorological, hydrological, or geographic characteristics of a particular area."[46] The army expands upon the definition by saying that reconnaissance starts before the execution of operations, and continues throughout the operation. Reconnaissance is normally done to fill the information gap, or meet the information requirements established during the planning.[47]

The army has determined that surveillance can occur as a separate task assigned to intelligence, reconnaissance, and maneuver assets, depending on the information requirement and the capabilities of the unit. Surveillance is the systematic observation of aerospace, surface, or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other

[43] Headquarters, Department of the Army, *Brigade Combat Team*, FM 3-90.6 (Washington, DC: U.S. Army, September 14, 2010), 6-2.
[44] FM 3-20.96, 1-3.
[45] FM 3-20.96, 4-1.
[46] Headquarters, Department of the Army, *Operations*, FM 3-0 (Washington, DC: February 22, 2011), 4-9.
[47] Ibid.

means.[48] Reconnaissance units assigned the task can conduct surveillance. A unit conducting reconnaissance collects information, and surveillance is the systematic observation to gather information. Surveillance, in many cases, is inherent to a squadron conducting reconnaissance.

Defining the squadron's role beyond "eyes and ears" could remedy the doctrinal contradiction. The army could benefit from a definition of reconnaissance articulated in a manner that helps scouts on the ground conduct their mission, and helps planners in constructing the squadrons themselves. A solution may be found in the distinction between, and a combination of, reconnaissance and surveillance definitions. The distinction is important because surveillance is more descriptive in articulating the activity that a unit undertakes. Surveillance prescribes the detection medium: visual, aural, electronic, photographic, or other means. Doctrine articulates the reconnaissance medium as visual or other means.[49] The definition of surveillance offers insight into the detection medium beyond eyesight. A unit conducting surveillance should be able to gather information from sound, for example. The definition of reconnaissance only offers visual contact as the medium, and therefore only offers insights into optics, as an example.

A better definition of reconnaissance might come from the synthesis of the current definition and the eight forms of contact, resulting in something similar to the current definition of surveillance. The doctrinal definition of the eight forms of contact includes contact through direct fire, indirect fire, non-hostile contact, obstacle contact, chemical/biological/radiological/nuclear/high-yield explosives (CBRNE) contact, air contact, visual contact, and electronic contact.[50] A new definition of reconnaissance could be *a mission*

[48] Ibid.
[49] Ibid.
[50] FM 3-20.96, 3-11.

undertaken to obtain information about the activities and resources of an enemy or adversary, or to secure data concerning the characteristic of a particular area, through planning to make deliberate contact. The contact could then be defined as the doctrinal eight forms of contact, plus aural contact. Contact can take the form of overt reconnaissance by fire, or covert and stealthy visual contact. Contact can take any of the forms previously mentioned, and it must be planned deliberately.

Planning to make deliberate contact is the key part of the new definition. Most units describe contact as "actions on contact", which are a series of activities taken upon contact with the enemy.[51] The actions are designed to help units survive initial contact, whether contact is sought or the contact is one of chance. The squadron seeks the contact, and deliberately plans for it. All of its mission planning and execution revolve around the first encounter or contact, whether that contact is simple visual observation by a small element, or direct fire contact.

The shift in definition would eliminate the contradiction of close combat, and no longer describes the squadron in the vague terms of "eyes and ears." The squadron must not only be able to survive all forms of contact, including direct contact, but also initiate it in all environments without augmentation. FM 3-20.96 claims that units can conduct close combat or reconnaissance. This claim is false because the two actions are integral parts of the reconnaissance in force and guard missions that often happen simultaneously. It may be true that while some part of the squadron is engaged in close combat, as a whole, the squadron and its units are still capable of reporting and continuing reconnaissance. The change in definition clearly articulates that squadrons must survive close combat situations, and continue reconnaissance while doing so. The structural redesign of the cavalry squadron, discussed later

[51] FM 1-02, 1-2.

in the paper, offers a solution that enables scouts to conduct reconnaissance and fight, at the same time.

Defining Collaborative Planning Between the Brigade and Squadron

Effective coordination instructions guiding interaction between the brigade and squadron must be articulated in doctrine. To gather and use information, the army combines two processes. The brigade intelligence officer (S-2) creates an estimate of the situation using a process called intelligence preparation of the battlefield (IPB). IPB uses predictive analysis to determine what the adversary will do and what environment the brigade will encounter. When the S-2 does not have information, it creates an intelligence gap,[52] articulated in planning as an information requirement (IR).[53] The brigade's operations officer (S-3) creates a reconnaissance plan designed to find the unknown information.[54]

The brigade uses a six-step process in reconnaissance planning, the first step mostly fulfilled by the S-2 in generating the information requirements. The brigade S-3 evaluates collection resources against the requirements in step two, and then creates a plan to actively acquire the information needed in step three. Steps four through six are part of a feedback loop, where the new information is assessed, potentially changing the S-2's assessment, and starting the cycle over.[55]

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[52] Headquarters, Department of the Army, *Intelligence Preparation of the Battlefield/Battlespace*, FM 2-01.3 (Washington, DC: October 15, 2009), 1-1.
[53] Headquarters, Department of the Army, *The Operations Process*, FM 5-0 (Washington, DC: March 26, 2010), Appendix B.
[54] FM 2-01.3, 1-4 - 1-5.
[55] Headquarters, Department of the Army, *The Combined Arms Battalion*, FM 3-90.5 (Washington, DC: April 7, 2008), 4-4.

The problem arises when a brigade staff and a reconnaissance squadron staff conduct IPB and the reconnaissance process during combat. The intelligence planning is initially shaped by the brigade's area of operations (AO), the boundaries of the command's area of operations.[56] As the brigade staff conducts IPB and plans reconnaissance within the AO, this information is passed to subordinate reconnaissance units. When past army brigade designs organized a reconnaissance company at the brigade level, this information fed into the subordinate command's planning process since the company did not possess a staff. The army replaced the brigade's reconnaissance company with a squadron. The squadron has a battalion-sized staff that will execute the same intelligence and reconnaissance processes that the brigade executes.[57] As the primary reconnaissance asset within the brigade, the squadron's AO often overlaps with the brigade AO to the degree that they are nearly the same. This "stacked staff" situation creates redundant effort and wastes time, since both staffs are conducting IPB and reconnaissance planning on the exact same area. This situation remains true even when taking into account that the brigade is organized with additional personnel that form a planning team. The brigade planning team, or plans cell, doesn't alleviate the overlap of AO's and the "stacked staff" situation. Assuming that the brigade and squadron staffs are both competent, the IPB completed at the brigade offers the same insights and analysis as the IPB created at the squadron level. The brigade resource-requirements evaluation also occurs at squadron level, creating overlap. Chapter six of the army's brigade manual, FM 3-90.6, does not recognize this overlap, and therefore offers no solutions.[58]

[56] FM 2-01.3, 2-3.
[57] FKSM 71-8, A-25, B-26, C-19.
[58] FM 3-90.6, 6-6.

Collaboration guidance between the brigade and the squadron can alleviate the interaction problem. The current doctrine mentions collaborative planning only in a geographical sense, e.g.: where the command posts of the brigade and the squadron are located physically. Current doctrine contradicts itself to a degree when it mentions the brigade's "intelligence, surveillance, and reconnaissance working group," but only lists the squadron's S-2 and/or its S-3 or representative as attendees to the working group.[59] It does not make sense for a squadron headquarters of over 100 soldiers to expend effort collocating with the brigade headquarters to allow two squadron staff members to take part in a working group.

True collaborative planning takes more than collocation and attendees to a working group. It requires the staffs of both the brigade and the squadron to work together through the reconnaissance and/or security plan. While there are more options, the brigade commander and staff have two primary options for collaborative planning that should be decided upon and articulated to both the brigade and squadron at the outset of undertaking a mission.

The first option is collaborative planning centered around the brigade staff, where the brigade retains control of the IPB and reconnaissance planning processes (see Appendix A). The squadron intelligence and operations staffs, along with other identified staff members, augment the brigade staff during IPB and the reconnaissance planning process. The additional intelligence personnel help the IPB processes go faster, and the squadron's operations staff offers manpower as well as expertise in employment of the squadron. The collaboration can be one of collocation or can be done through digital means, and ends after step two in the reconnaissance planning process.

[59] Ibid.

The second option delegates the IPB and the reconnaissance planning process from the brigade to the squadron (see Appendix B). The brigade offers its personnel with expertise in the IPB and reconnaissance planning process to the squadron. When IPB and reconnaissance planning are complete, along with their outputs (see Army Field Manual 5-0, Appendix B for more information regarding the outputs), the products are forwarded to the brigade S-2 and S-3 for review and approval. The review and approval, done through in-progress reviews (IPR), are necessary since the brigade must choose to adopt the squadron's IPB and reconnaissance process as its own.

The two collaboration options should be added to chapter six of FM 3-90.6, giving brigade commanders the ability to effectively combine the efforts of brigade and squadron staffs. The collaboration between the two staffs saves time by avoiding replication of planning products applicable to both organizations. The brigade benefits from the reconnaissance expertise of the squadron, and the squadron gains insight into the overall situation through the brigade.

Establishing a Structural Building Block: the Scout Squad

Effective fighting formations need to be structured correctly, from the squad up, to maximize combat performance. Through the decades since World War II, the U.S. Army and other armies have experimented and used numerous cavalry and reconnaissance squadron organization designs. Some of the designs are light in structure and organized with dismounted scouts and trucks, but have struggled to survive on the battlefield.[60] Other designs also use dismounted scouts, but are heavier in structure, organized with armored scout carriers, cavalry

[60] McGrath, 183.

fighting vehicles, tanks, and helicopters, sometimes in the same squadron. These formations were effective, but often used for missions outside of reconnaissance.[61] Today, the army employs three distinct types of cavalry squadrons. Two types of squadrons are a blend of motorized and dismounted scouts. The squadron in the infantry brigades has three troops (a reconnaissance company), two of which use HMMWVs, and one troop of just dismounted scouts. The squadrons in the Stryker brigades organize with their Stryker reconnaissance vehicles and dismounted scouts together in the same troop. The third type of squadron, organized in the heavy brigades, uses a hybrid formation. Each troop is equipped with HMMWVs and mechanized tracked vehicles, carrying its dismounted scouts.[62] All of the types are light in nature, compared to the squadrons with tanks and armored carriers, organized as a special purpose unit, and carry the same design flaw, like a DNA mutation, that each squadron suffers from. There is no set standard for the scout squad. There is no building block from which to base organizational structure or training, leading to a squadron with less capacity to fight and win during close combat.

Army infantry benefits from a set design building block in the form of their nine-man squad. An infantryman can expect to see similar formations, with similar techniques, in every infantry battalion regardless of whether the battalion is dismounted, motorized, or mechanized. Training can be standardized, in a general sense, making battlefield interactions and personnel transfers smoother and more feasible. The nine-man squad also serves as the basic building block of infantry organizations, from platoon through company to the battalion, both in terms of personnel and equipment. For instance, there are two squad automatic gunners in every infantry squad, and each gunner is equipped with the infantry squad automatic weapon (SAW), the

[61] Ibid.
[62] FKSM 71-8, A-29, B-29, B-31, C-24.

M249. There are three line infantry squads in every infantry platoon. These types of similarities and commonalities are gained from the use of the standardized nine-man infantry squad.[63]

A solution to the structural issue may already exist in the infantry brigade. The dismounted reconnaissance troop (DRT) is part of the infantry brigade's cavalry squadron, and is currently using the eight-man scout section as its building block formation.[64] A small change to this scout section could make it applicable for use in all formations. The current eight-man scout section is organized with two sergeants and six scouts, used in two four man teams. If the section was called a squad, and organized into two three-man teams, with the squad leader and radio-telephone operator in the formation as well, the scout squad gains the same benefits that infantry formations enjoy by using a standard nine-man infantry squad. The eight-man scout squad (see Appendix C) is capable of limited infantry battle drills, giving it a multi-purpose capability. The scout squad would also serve as the basic building block for cavalry formations from platoon through troop to squadron.

Prior to transformation, scout platoons in most cavalry organizations used six vehicles divided into two three-vehicle sections. A vehicle commander, a gunner, and a driver crew all of the vehicle types. Minus the platoon leader and platoon sergeant, two eight-man squads could man both three-vehicle sections.[65] In this manner, the eight-man squad can be adapted to man scout sections, as well as function as dismounted scout squads. With the eight-man squad forming the building block of cavalry organizations, platoons can be constructed to form reconnaissance squadrons.

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[63] Headquarters, Department of the Army, *Infantry Rifle Platoon and Squad*, FM 3-21.8 (Washington, DC: March 28, 2007), 1-17.
[64] Headquarters, Department of the Army, *Dismounted Reconnaissance Troop*, ATTP 3-20.97 Washington, DC: November 16, 2010), 1-3, 4.
[65] Headquarters, Department of the Army, *Cavalry Troop*, FM 17-97 (Washington, DC: October 3, 1995), 1-3.

In the infantry brigade, the dismounted troop retains the same structure, with the six reconnaissance sections forming six reconnaissance squads, organized into two platoons of three squads each. The dismounted troop "scout section," now a squad, also retains its ability to divide into two four-man teams, retaining current techniques but also adding the potential techniques used by an eight-man squad divided into two three-man teams with a headquarters element.

The motorized recon troops should reform around the eight-man squad. The current motorized troop uses three twenty-four man platoons operating six HMMWVs each. Each platoon would require an additional two soldiers, bringing their end strength to twenty-six. The platoon would be organized into three squads. The first and second squads would man three HMMWVs each and operate as a unit. Eight of the platoon's soldiers would dismount and operate as an independent dismounted reconnaissance squad, organized and equipped the same as the dismounted troop's squads, forming the common link for techniques and equipment. The last two soldiers in the platoon would be the platoon leader and platoon sergeant. Each motorized troop would be organized with three of these platoons (see Appendix D).

The scout platoons in the cavalry squadron of the Stryker brigade are organized differently than the scout platoons in the infantry brigade, but the eight-man squad concept is still valid. The Stryker reconnaissance platoons are currently organized with twenty-three soldiers that man four Stryker reconnaissance vehicles. Four additional soldiers are required to make the transition to eight-man squads. The first eight-man squad mans the four Stryker vehicles, providing a driver and gunner for each vehicle. The second and third squads are both formed as eight-man squads along the standard model based off the dismounted troop in the infantry brigade, presented earlier in the paper. The addition of the platoon leader and platoon sergeant

brings the platoon manpower count to twenty-six. The twenty-seventh soldier would be a vehicle commander, designed to take the place of the platoon leader in his vehicle when he dismounts (see Appendix E).

The scout platoons in the heavy brigade's cavalry squadron require the most modification of any of the three platoon types, though the modifications are in equipment and vehicles, and not overall manpower. The current heavy squadron scout platoon is organized with thirty-six soldiers that operate three M3 Cavalry fighting vehicles and five HMMWVs. The hybrid organization requires twenty-four of its thirty-six soldiers to crew vehicles, leaving only twelve soldiers to conduct dismounted reconnaissance. Though this construct could work, particularly if the platoon used two six-man squads, the design would wreck the commonality of reconnaissance organizations by creating new techniques that could be foreign to scouts that had never served in a heavy cavalry unit. The wheeled-tracked hybrid formation also has survivability issues in training and in combat. The organization is not heavy enough to fight in a non-permissive environment. Heavy brigades that encounter enemy heavy organizations could see their HMMWV's scouts destroyed early in the conflict. When the German Wehrmacht witnessed their lighter scout vehicles destroyed in close combat against the Soviets in World War II, they chose to use heavier scout vehicles, which were more survivable.[66] With the combination of the wheeled HMMWVs and tracked M3s in the current heavy scout platoon, five of the platoon's eight vehicles, and almost half its manpower, could not be expected to survive close combat.

A better solution than the light-tracked mix would be a return to a fully tracked heavy scout platoon. Armored reconnaissance platoons in cavalry squadrons have used a six M3

[66] McGrath, 96.

formation with success in the past.[67] The scout platoons in the heavy squadron would return to this formation, reducing the survivability issues and adding to the number of scouts available for dismounted reconnaissance by reducing the vehicles from eight to six, while maintaining an end strength of thirty-six soldiers.

The heavy scout platoon would be organized into four eight-man squads. The first and second squads would man the six M3 vehicles. Each squad would provide a driver, gunner, and vehicle commander for two M3s, and the driver and gunner for the third M3. The commander of the third M3 in each squad would be the platoon leader and platoon sergeant, respectively. The third and fourth squads would be dismounted, organized and equipped in the same manner as the common eight-man squad model. The platoon would reach its end strength of thirty-six by adding a vehicle commander to take the place of the platoon leader when he dismounts, and a radiotelephone operator (RTO), who would move with the platoon leader when he dismounts (see Appendix F).

In the new model where scout platoons are built off of eight-man squads, three of the four platoon types combine mounted and dismounted capabilities. In their reconnaissance role, these platoons move primarily mounted, stopping when the situation calls for dismounted reconnaissance, e.g.: to gain observation of a danger area. The platoon leader can opt to use mounted and dismounted scouts together, or completely apart, depending on the situation he faces. In certain situations, if the platoon is required to conduct its reconnaissance or security mission completely dismounted, the platoon is already organized by squads, in which the mounted squads dismount and take the organization of the dismounted squad, which is their natural state according to the new model. The new formation could also allow scouts to serve as

[67] FM 17-97, 1-3.

infantry on a limited basis, enabled by the commonality of the squads, and the similarity of the eight-man scout squad to the nine-man infantry squad.

The Multi-Purpose Cavalry Squadron

History shows that the most effective reconnaissance formations are multi-purpose cavalry squadrons capable of fighting for information. After the 2003 invasion of Iraq, John McGrath argued that specialized reconnaissance and cavalry formations are not needed in current conflicts by conventional forces. This statement implied that any unit could be the recon unit simply by being the lead unit of a moving element. McGrath, a retired army officer and a former researcher and writer for the United States Army Center for Military History, studied cavalry and reconnaissance formations throughout history while working at the U.S. Army's Combat Studies Institute. McGrath suggests that a new paradigm in reconnaissance and security operations exists, where general-purpose battalions execute reconnaissance as a mission tasked by the parent headquarters.[68]

McGrath argues specialized reconnaissance forces are either too light to survive contact, or heavy in nature and therefore misused for roles other than reconnaissance. He argues that general-purpose formations, such as infantry battalions or combined-arms battalions, with tanks and infantrymen combined, can be tasked with the mission of reconnaissance instead of requiring that army brigades organize with a separate squadron for the task.[69]

McGrath's solution of replacing squadrons with line battalions is not feasible. Scouts are specialized in the same manner that engineers are specialized. Engineers have primary tasks that

[68] McGrath, 202-204.
[69] McGrath, 203-205.

they train to accomplish. If necessary, the engineers are organized, equipped, and reasonably trained to serve as infantrymen in certain situations undertaking limited missions. They are not infantrymen, though, and do not possess the full repertoire of skills to serve as infantry full-time in all mission sets. The reverse is also true. Infantrymen can accomplish the tasks of engineers in certain situations for limited missions. They are not engineers. Infantrymen do not possess the skills nor receive the training to accomplish the full spectrum of engineer tasks.

The same relationship between scouts and infantrymen exists. Infantrymen can and do conduct limited reconnaissance to gather specific information. They are not equipped or trained to classify bridges and evaluate roads, determine specific terrain characteristics, or gather information critical to evaluate an enemy force. Replacing reconnaissance squadrons with general-purpose battalions dilutes the quality of reconnaissance within the brigade. However, the same multi-purpose role of the engineer can also apply to the scout. While not as effective as infantry, scouts can operate as infantry in certain situations undertaking limited missions. The key is to organize the scouts into formations where they can not only execute their reconnaissance role, but also take on the secondary role of infantry, if needed.

McGrath's model is useful in finding overall structural solutions for the cavalry squadron design. While general-purpose battalions are not the answer, neither are specialized reconnaissance squadrons. A multi-purpose reconnaissance squadron could execute its reconnaissance and security role within the brigade, and also offer more capability to the brigade with an ability to undertake missions normally assigned to the battalions, organized with infantry and tanks. Additionally, a break from specialization and the creation of multi-purpose squadrons would allow the squadron to fight, alleviating the doctrinal problem discussed earlier in this paper.

Cavalry squadrons can take on the ability to serve in a multi-purpose role if the squadrons were structured similar to the battalions they supported. The scouts within the squadron would man specialized equipment, such as optics and communications devices, that enable their reconnaissance mission. In the event that the brigade needs more infantry than dedicated reconnaissance formations, such as in a counter-insurgency, the squadron is formed similar to the battalions it supports, and can take on a similar mission.

A squadron structured similar to the battalions within the brigade-type gives the brigade four total combat elements instead of three. Battalions in the infantry brigade are formed with three light infantry companies and a mounted weapons company. The squadron in the infantry brigade should mimic this formation, containing three dismounted reconnaissance troops, and one motorized reconnaissance troop (see Appendix G). The brigade can then use the squadron as an infantry battalion if required. The cavalry squadrons in the other two brigades would form in similar fashion. Stryker brigade battalions have three motorized infantry companies, with each company containing three infantry platoons and a mounted weapons platoon. The current Stryker brigade squadron is organized with three reconnaissance troops, with three scout platoons in each Troop (see Appendix H). That would not change. A mounted weapons platoon would be added to each troop, similar to the weapons platoons in the infantry companies of the Stryker brigade. With a squadron organized similar to the infantry battalions, the Stryker brigade could use the squadron as an infantry battalion if needed.

The squadron in the heavy brigade is more difficult to organize. The Combined Arms Battalions (CAB) are formed with two mechanized infantry companies, and two armor companies. The CABs are designed to task-organize in combat, swapping tanks and infantry platoons between companies, and the manner is in accordance to the situation, and therefore not

uniform. A squadron organized on the basis of one of the many CAB task organization models may not be the best design for reconnaissance, since the squadron's structure would be planned to maximize reconnaissance capability, and not specifically for the versatility that the CAB's design allows.

The CAB is organized with six mechanized infantry platoons divided evenly between two infantry companies. The CAB also has six tank platoons under two tank companies. The squadron would mimic the organization of the CAB at the platoon instead of the company level, and organize with six scout platoons (see Appendix I) and six tank platoons. Three reconnaissance troops would be organized with two scout platoons, and one tank platoon. Older cavalry designs, at the regiment and division level, placed two scout platoons and two tanks platoons in the same troop.[70] These designs gave the troop enough firepower, provided by the tank platoons, to tempt commanders to use them in close combat roles often, sometimes superseding their reconnaissance purpose even when tasked with reconnaissance by a higher headquarters. A commander with two scout platoons and one tank platoon would be more apt to conduct reconnaissance with his scouts, while maintaining his tank platoon as a mobile reserve. An armor company organized in the squadron, with three tank platoons, would give the squadron commander a mobile reserve to support each of his three reconnaissance troops. If the squadron was required to serve in its multi-purpose role, serving as the fourth CAB in the brigade, a swap of one tank platoon from the armor company and a scout platoon from a troop would allow the squadron to match a common task organization option used by the CAB.

Other changes are needed to enable the cavalry squadrons to fulfill their role of gaining contact in one of the nine doctrinally recognized means discussed earlier. Each type of squadron

[70] FM 17-97, 1-2.

would add an engineer reconnaissance platoon in its headquarters troop, filling the requirement of the squadron to gain contact with obstacles. The nuclear, biological, and chemical (NBC) reconnaissance platoon would move from the brigade's Special Troops Battalion (STB) to the squadron. Assets from the STB military intelligence company would either be moved to the squadron, or new assets would be added to the squadron to meet its contact requirements. These assets include the Tactical Unmanned Aircraft System (TUAS) platoon and signal intelligence assets. These additions allow each squadron to add visual, air, engineer, and NBC capabilities required to gain contact.

Specialized Squadrons

Specialized reconnaissance squadrons, equipped with optical and aural technology, and networked via tactical internet, have the ability to fulfill the reconnaissance requirement in the brigade. This concept is similar to how the current army reconnaissance squadrons are formed. Specialized squadrons can rely on a high level of technology to lower the number of soldiers required to conduct reconnaissance. The current squadrons in the brigades have far fewer soldiers than infantry battalions or CABs, and can be augmented with a higher level of technology to accomplish their mission.

There are two reasons that this type of squadron is not desirable in the army's brigades. Historical examples of smaller and lighter reconnaissance units, post-World War I, however technologically advanced, have not been survivable. Stealth and added technology, such as the radio, have not made these units any more survivable. Additions of Internet-based reporting network, and equipping scouts with better detection equipment isn't going to make them more

survivable.[71] The army should form larger squadrons that are able to fight as well as relying on technology.

Misuse of cavalry in combat roles has been a common complaint since World War II.[72] Cavalrymen and reconnaissance soldiers should stop arguing that reconnaissance squadrons are misused in combat roles, since many of the tasks that a cavalry squadron undertakes involve close combat. In the guard and reconnaissance in force missions, close combat is a requirement. The added manpower allows the squadron to fight as an infantry battalion or CAB as the mission dictates, but also to fulfill its reconnaissance and security requirement. Cavalry was meant to fight and it should.

The combination of added manpower to mimic the battalions within the brigade, and the addition of technology, enables the squadron to both conduct reconnaissance and conduct close combat. Adding technology and manpower are not mutually exclusive, and when used together, can create a true multi-purpose formation. The squadron gains capability by adding more scouts into the area of operations, with each scout using technology. The advances in detection technology used together with a battalion-sized squadron allow the scouts to report more information faster and more accurately.

This multi-purpose squadron will not completely solve the heavy-light debate in terms of what type of squadron to build. If the squadrons are built to mimic the formations of the battalions in their parent brigade, then the squadron and the brigades, as a whole, share the same structural advantages and risks. Most brigades are employed in accordance with the threat, with the capabilities and weaknesses of the brigade in mind. Infantry brigades are not often asked to attack into armored formations of an enemy, meaning that the light cavalry, dismounted and on

[71] McGrath, 198.
[72] McGrath, 202.

HMMWVs, will not be asked to undertake this mission. Heavy brigades, with armor and without wheeled vehicles, are more suited for this task, bringing with them heavy cavalry, also with armor and without lighter reconnaissance units.

The battalion-mimicking structure also avoids a mobility mismatch between the squadron and the rest of the brigade. With the squadrons formed to the size of the infantry battalions and CABs, they have the manpower to fight and sustain themselves. The establishment of the eight-man squad as the building block also allows the Army to change equipment and vehicles, or even removed vehicles, in order to meet the requirements of the operational environment. This type of equipment change is how the army approached Iraq and Afghanistan, issuing vehicles to light infantry on a "as needed" basis.

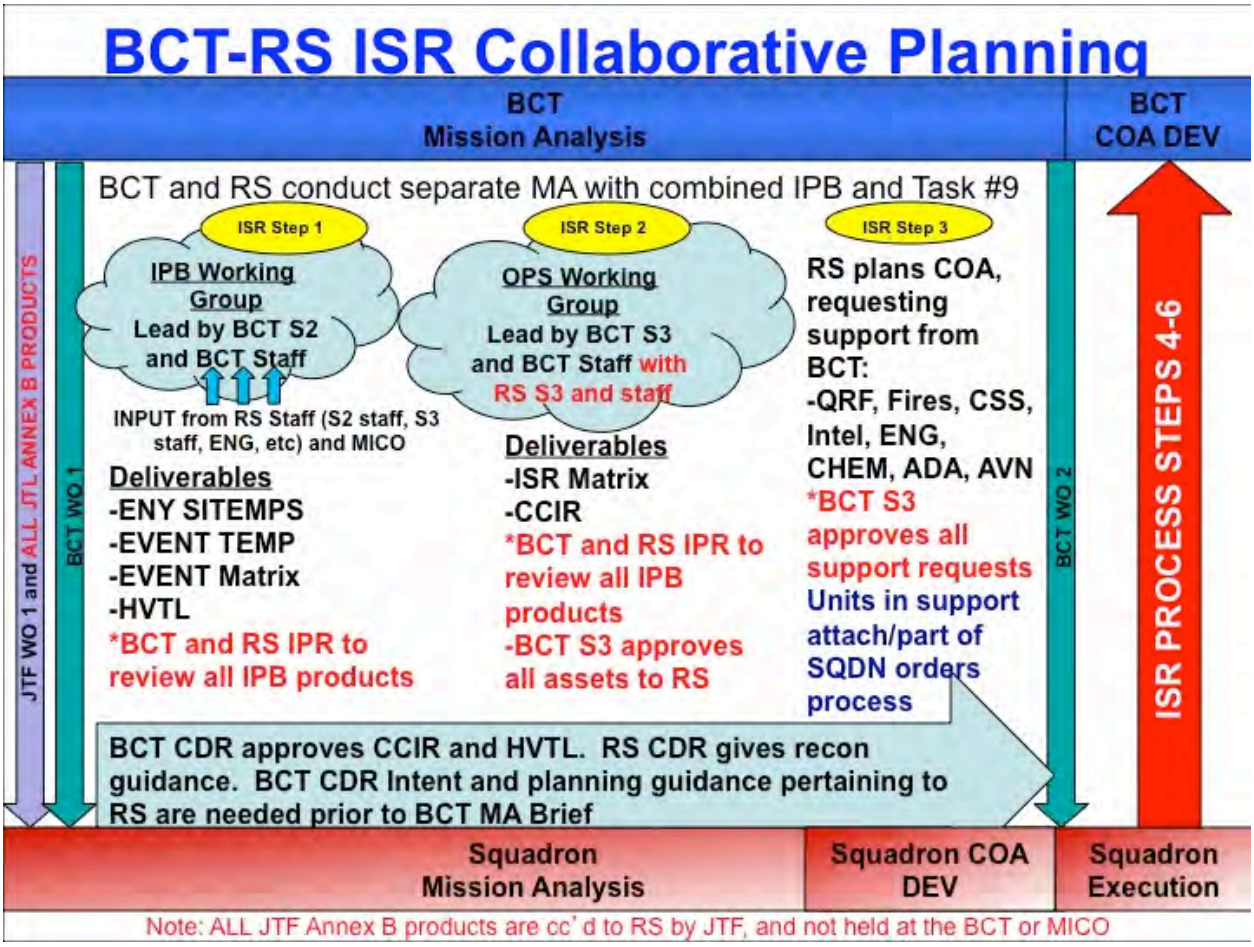
Conclusion

The mismatches between the brigade reconnaissance requirement and the reconnaissance squadron capability are doctrinal and structural. The brigades require doctrine for use of the squadron within the brigade, and a reconnaissance squadron capable of fulfilling reconnaissance and security requirements. The proposed doctrine gives the brigade and squadron staffs planning options to avoid redundant or overlapping responsibilities. It is also recommended that the Army refine its definition of reconnaissance to clarify the role of the squadron within the brigade. The doctrinal approach of using cavalry to gain contact, along the eight forms of contact, makes the use of the squadron clear – it is a multi-purpose formation required to fight and report at times, as well as fight as an infantry battalion or CAB. The structural changes outlined allow the army

to form squadrons that can accomplish these missions, form common training, and ease personnel transitions as scouts move from one type of cavalry squadron to the next.

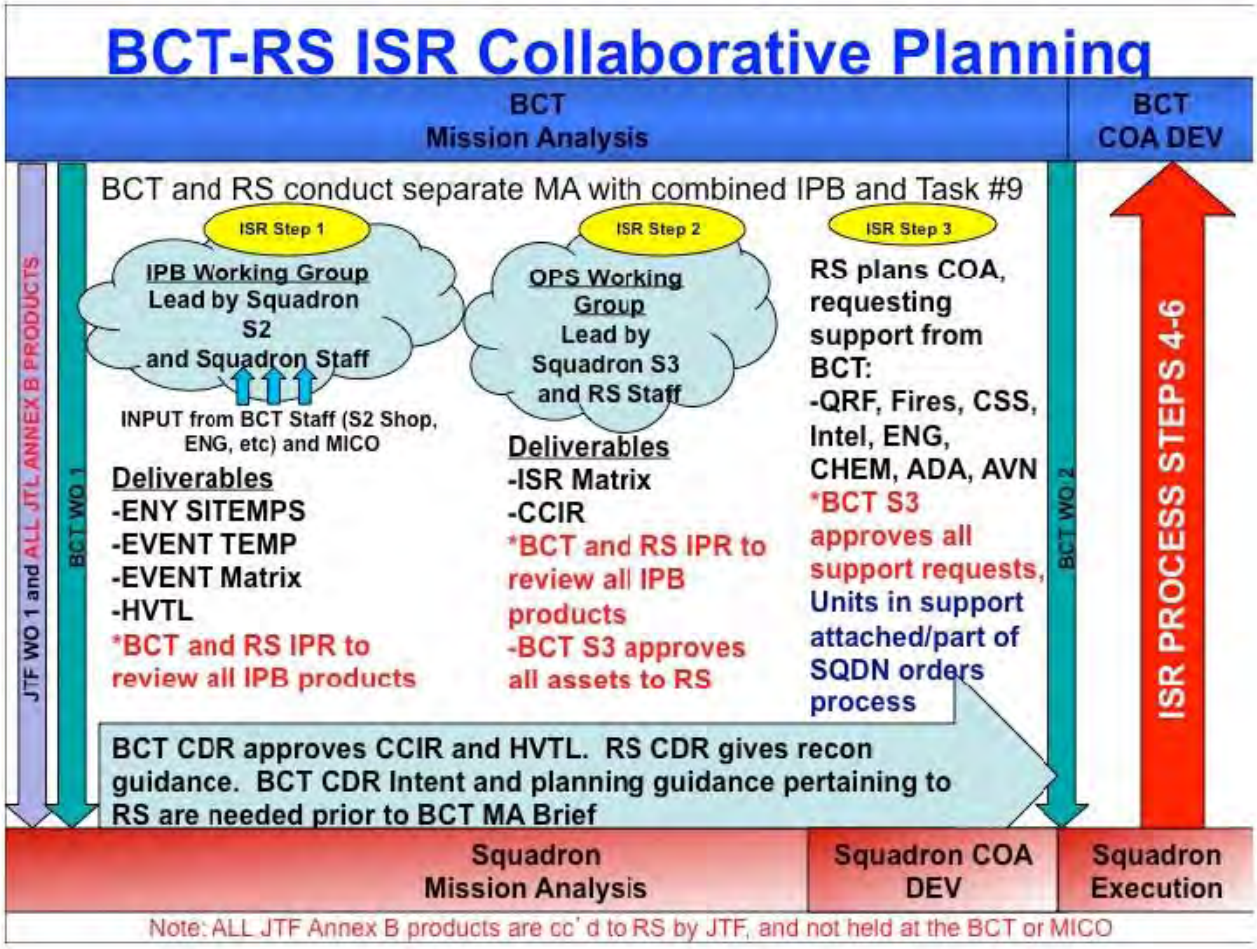
The army can maintain capability in its brigades even with a smaller overall number of brigades by transitioning to larger, multi-purpose reconnaissance squadrons. With the current financial issues the United States government is working through, a smaller military needs to maintain fighting organizations with as much flexibility to future threats as possible. The multi-purpose cavalry squadron gives each brigade a robust formation to determine the unknown, as well as an additional fighting formation in the event those future conditions call for less reconnaissance at the brigade level. Instead of specializing, the multi-purpose cavalry squadron is first and foremost a reconnaissance and security formation, and a secondary combat formation for the brigade, fighting in close combat in both roles. That is what cavalry was intended to do.

Appendix A: Recommended Brigade-led Collaborative Planning Model[73]



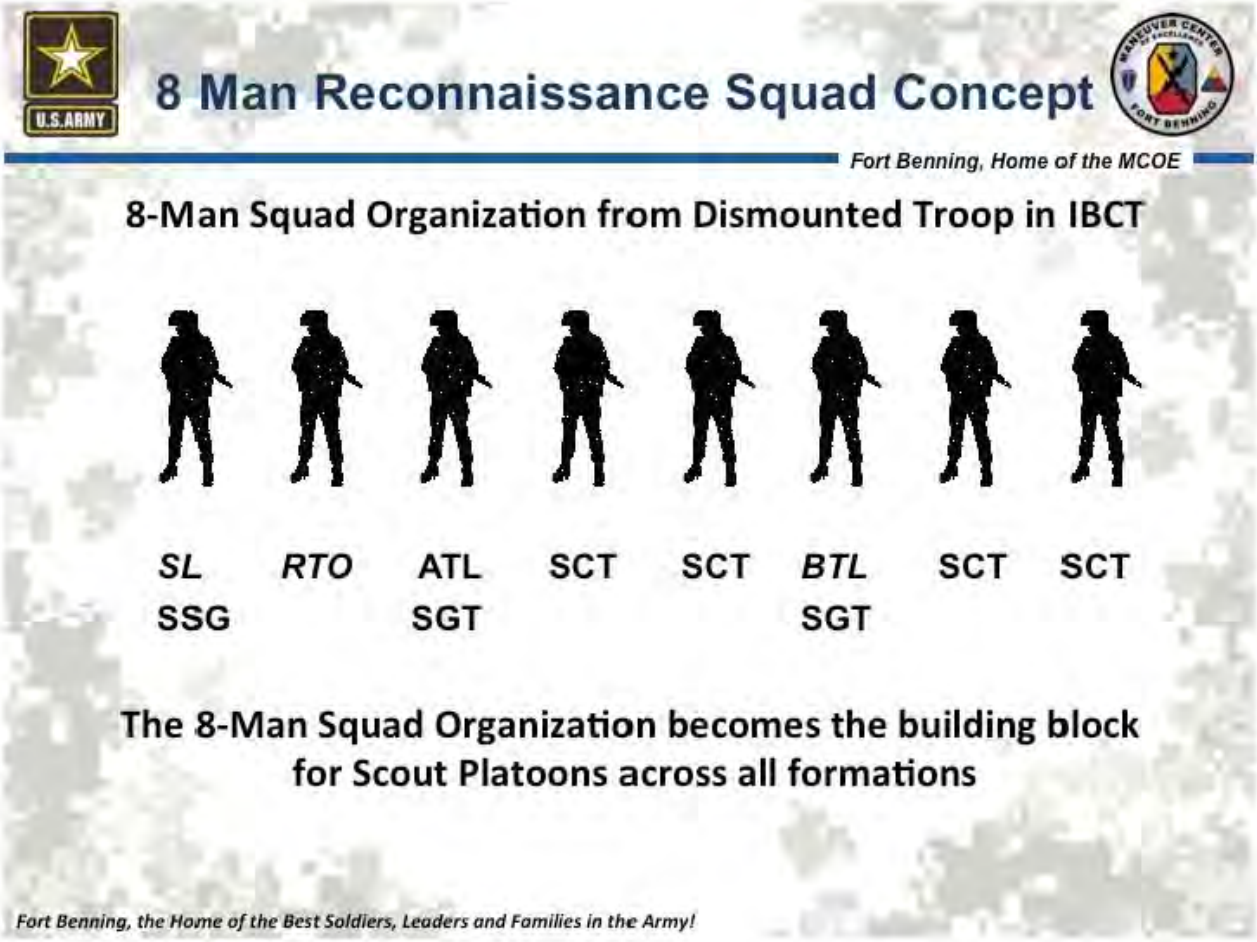
[73] Model designed by author while serving as an instructor at Army's Maneuver Captain's Career Course at Fort Benning. Model is based off existing planning models in the curriculum in January 2009. The model was constructed while author redesigned reconnaissance planning module to articulate reconnaissance planning to students.

Appendix B: Recommended Squadron-led Collaborative Planning Model[74]



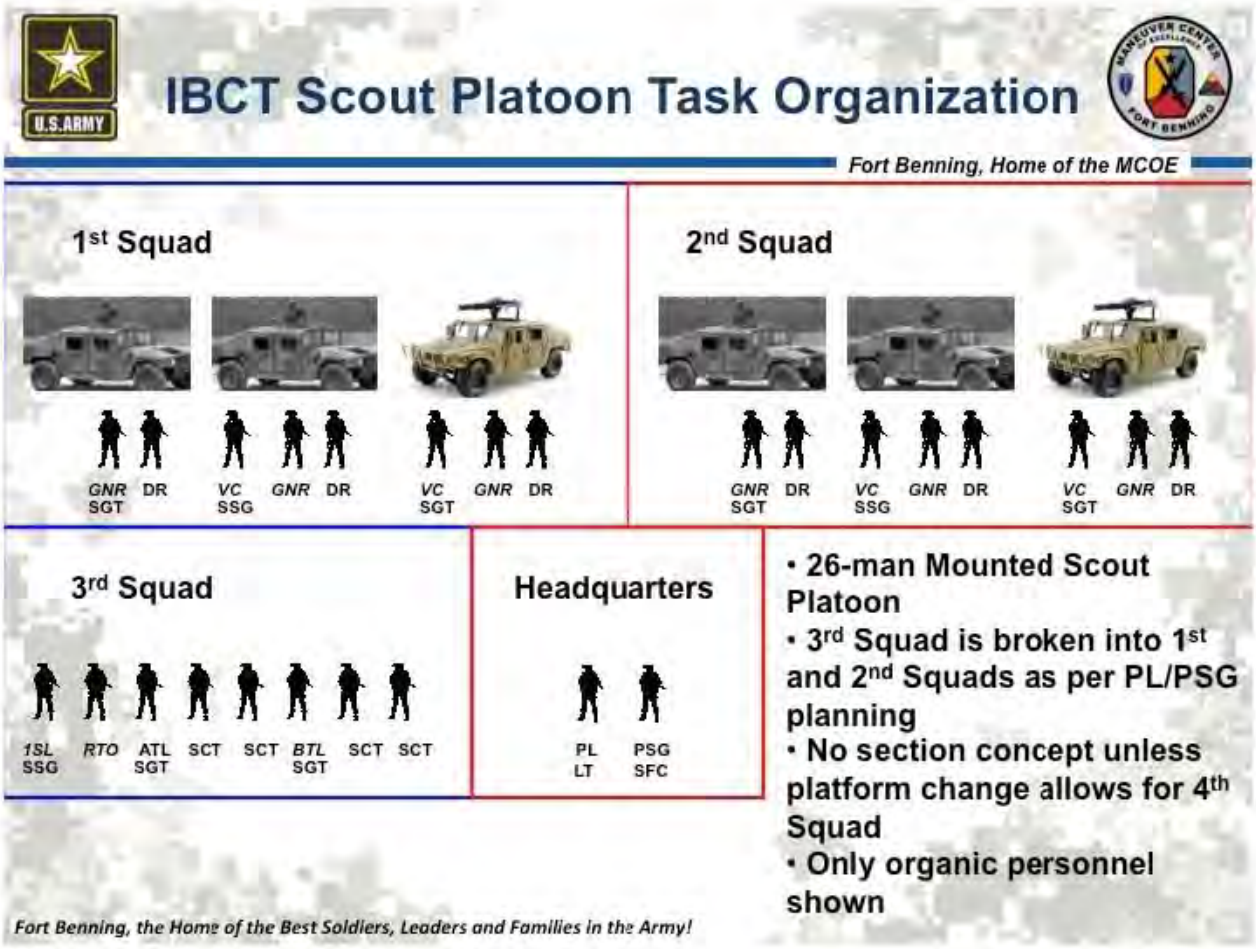
[74] Ibid.

Appendix C: Recommended Structure for Reconnaissance and Cavalry Squads[75]



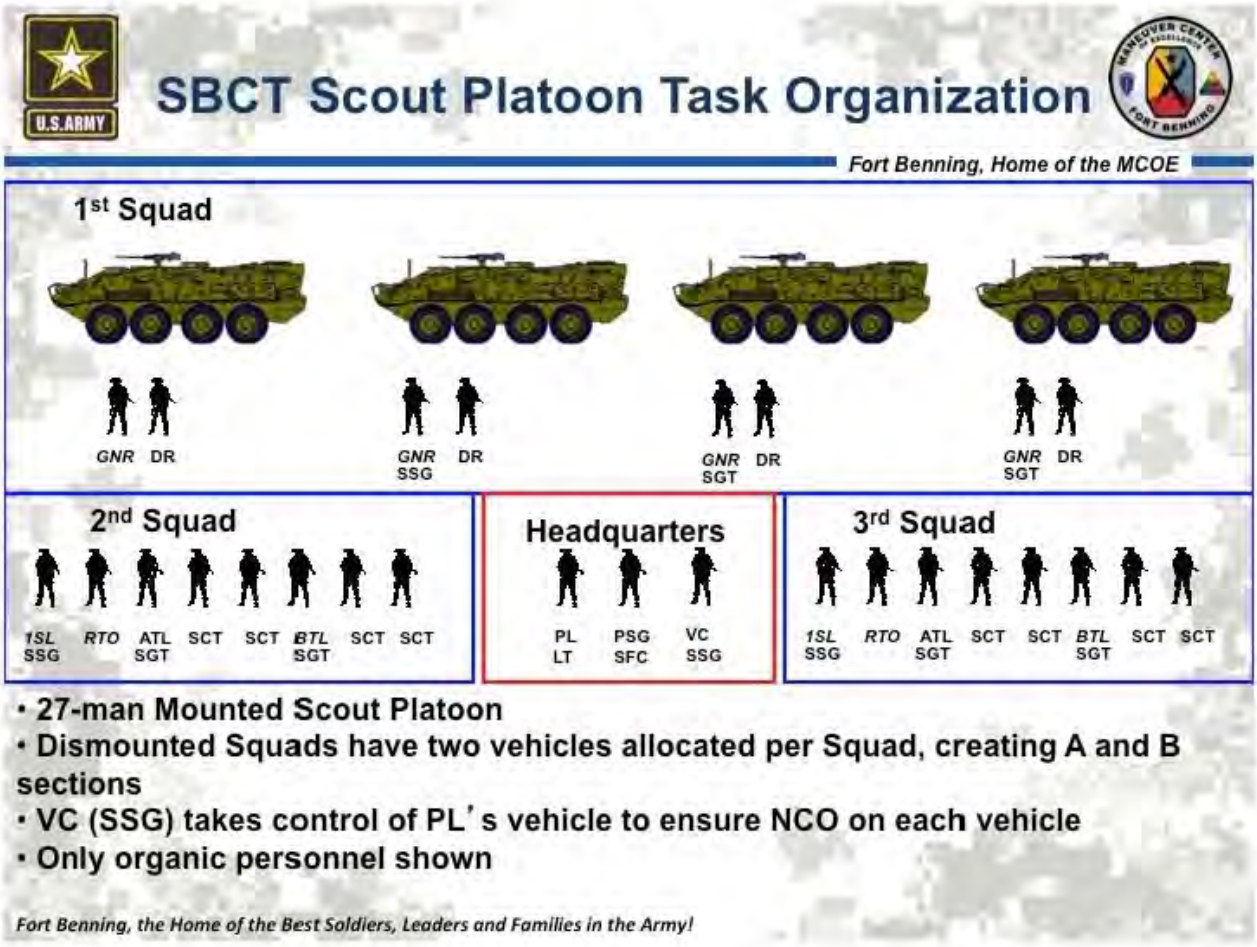
[75] Structure designed by author while serving as an instructor at Army's Maneuver Captain's Career Course at Fort Benning. Design refined during Army Reconnaissance Summit held at Fort Benning in April, 2011. Author used eight-man section concept outlined in ATTP 3-20.97 while in command of C Troop, 1-91 CAV, 173rd Airborne Brigade in Afghanistan, and determined it's limitations during that time.

Appendix D: Recommended Structure for Mounted Scout Platoons in IBCT Reconnaissance Squadron[76]



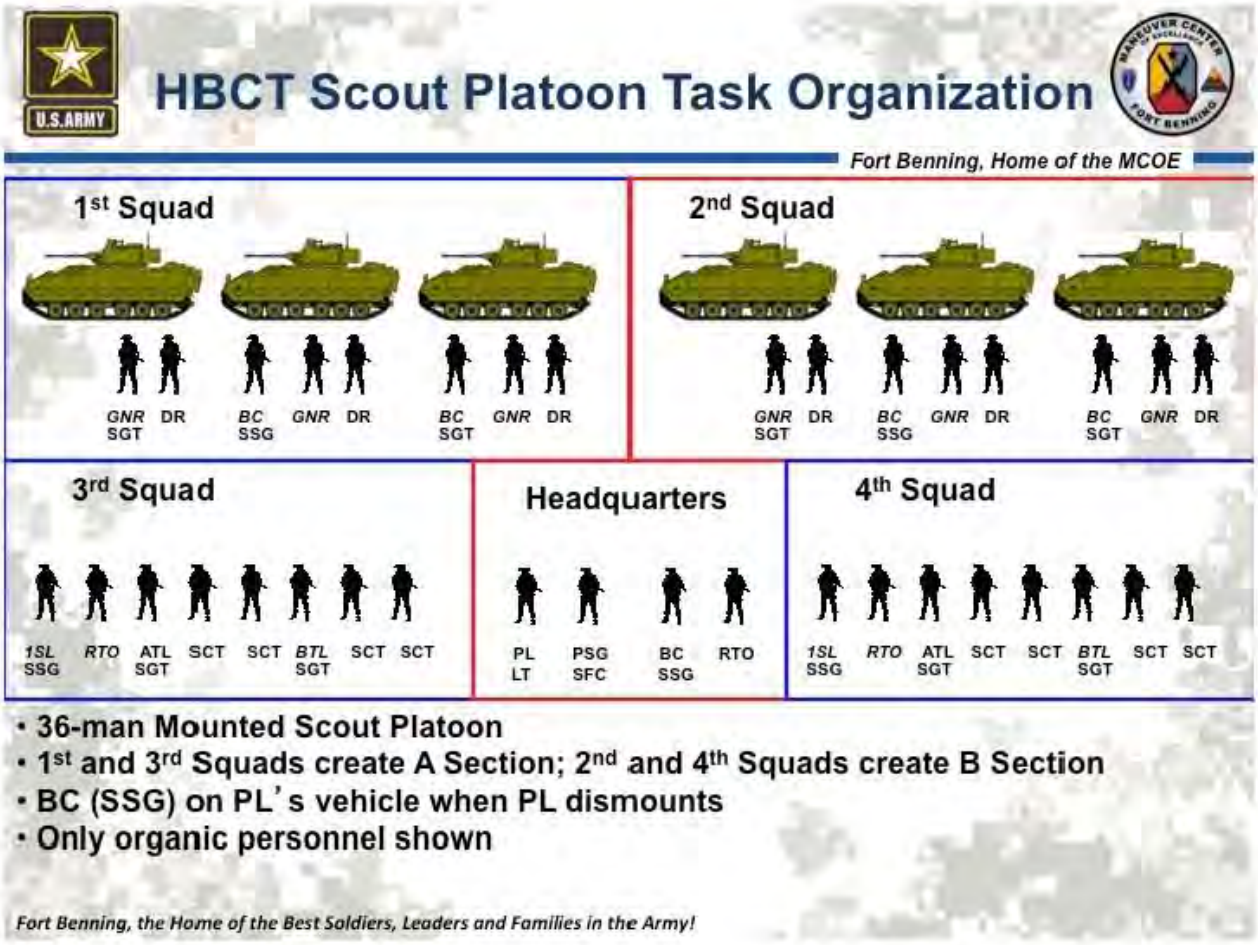
[76] Ibid.

Appendix E: Recommended Structure for Scout Platoon in SBCT Reconnaissance Squadron[77]



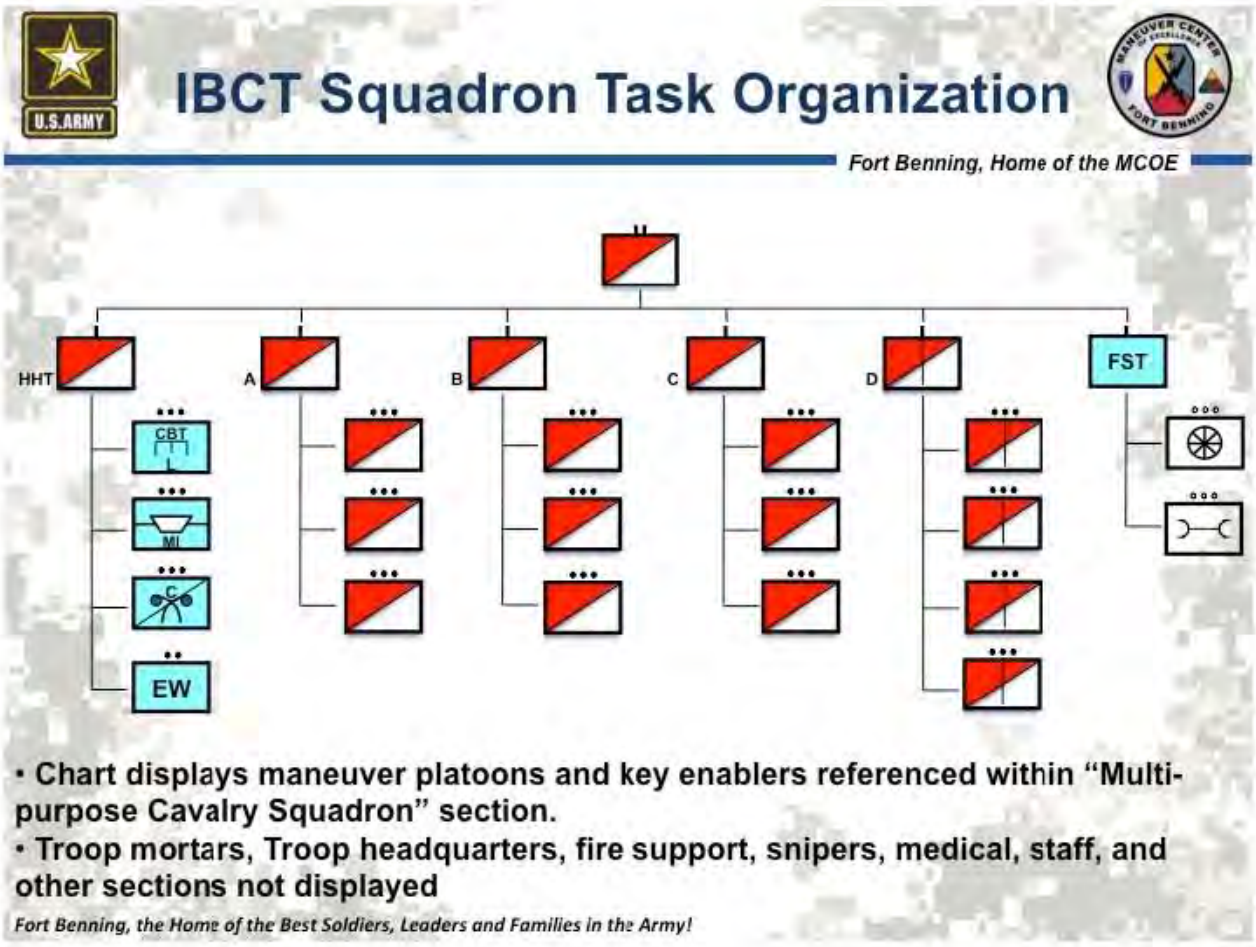
[77] Ibid.

Appendix F: Recommended Structure for Scout Platoon in HBCT Reconnaissance Squadron[78]



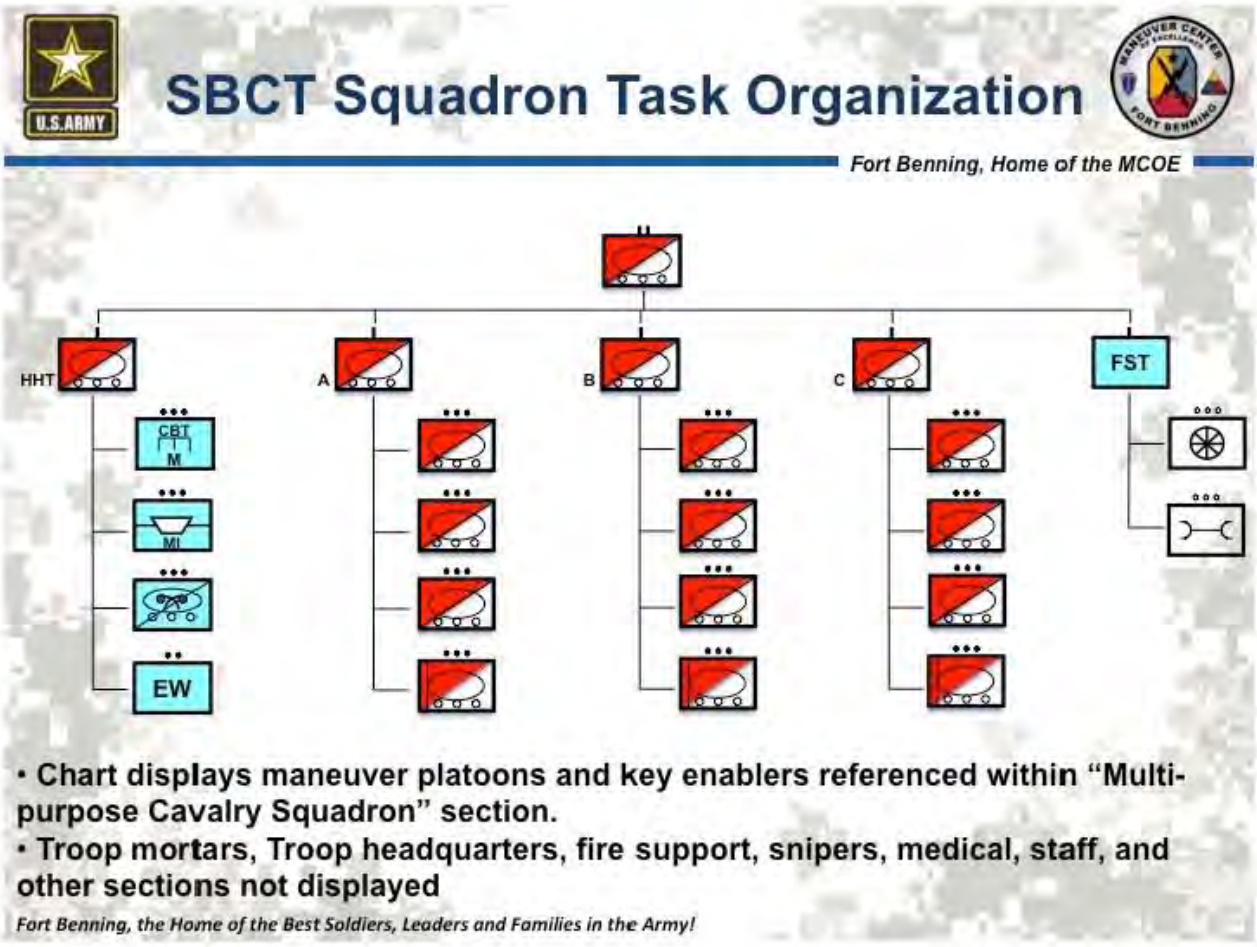
[78] Ibid.

Appendix G: Recommended Structure for IBCT Reconnaissance Squadron[79]



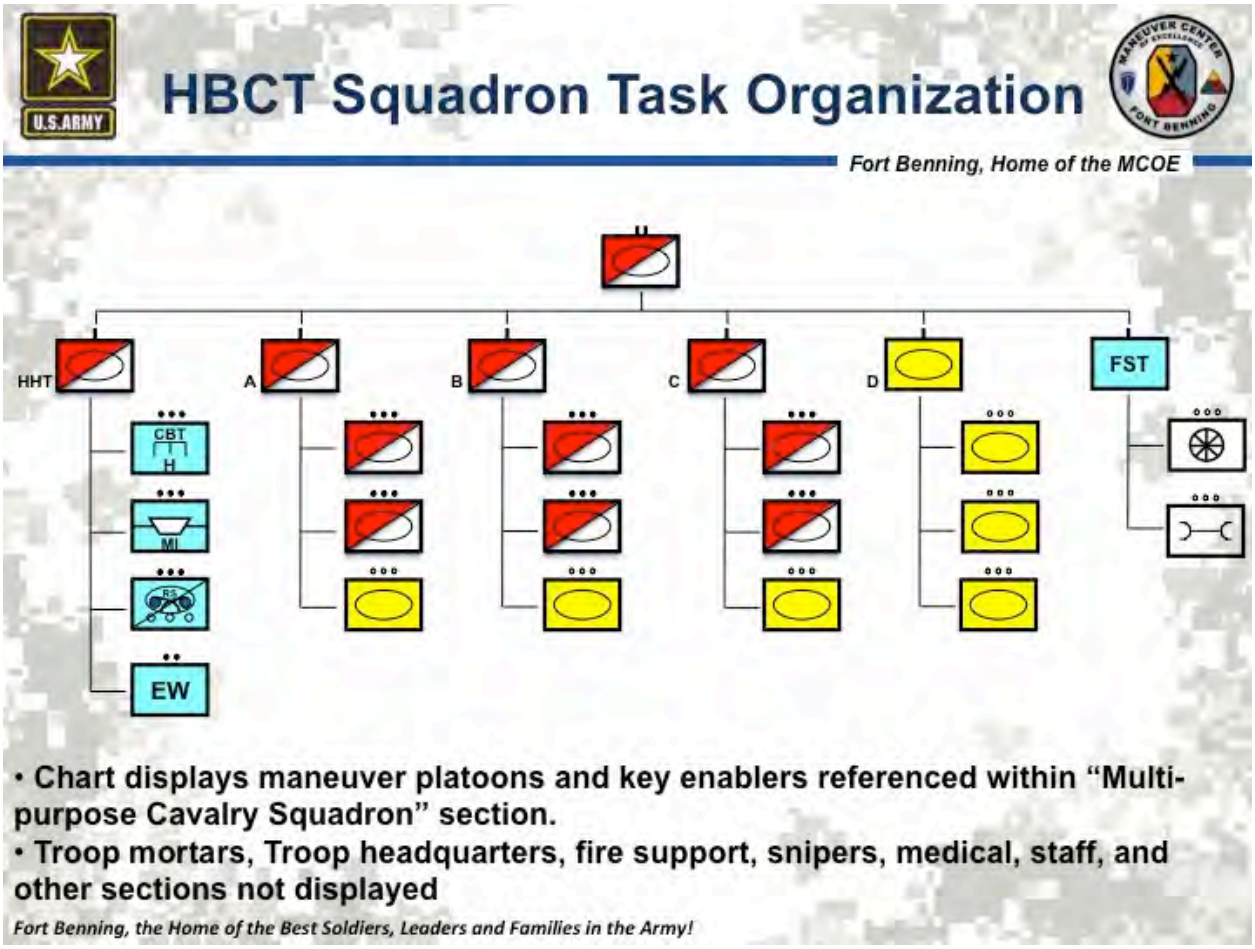
[79] Chart created by author in support of the Multi-Purpose Cavalry Squadron concept

Appendix H: Recommended Structure for SBCT Reconnaissance Squadron[80]



[80] Ibid.

Appendix I: Recommended Structure for HBCT Reconnaissance Squadron[81]



[81] Ibid.

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