

TELECOMMUNICATIONS IN RECONSTRUCTION AND STABILIZATION: THE CRITICAL LINK

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USAWC CLASS OF 2009

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE (DD-MM-YYYY) 09-03-2009		2. REPORT TYPE Strategy Research Project		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Telecommunications in Reconstruction and Stabilization: The Critical Link				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Colonel Keith L. June				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Mr. Scott Forster Center for Strategic Leadership				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army War College 122 Forbes Avenue Carlisle, PA 17013				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution A: Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT To prevent future terrorist attacks, such as those which occurred on 9/11, the United States must be prepared to assist failed states in reconstruction and stabilization. Since the end of the cold war, the United States has been involved in numerous reconstruction and stabilization efforts. A critical, though often neglected, component of reconstruction and stabilization is telecommunications or Information and Communications Technology (ICT). ICT has become a basic and essential service. Modern societies and economies cannot function without ICT. ICT is vital to security, governance, economic development, and social stability. The US experience in Iraq and Afghanistan demonstrate the need for a process and agency during post combat operations that has responsibility for ICT. Key actions include, identifying ICT basic infrastructure, identifying key actions associated with ICT as well as identifying agencies with responsibility for this area. Solutions should address both short-term and long-term problems.					
15. SUBJECT TERMS Information and Communications Technology					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UNLIMITED	18. NUMBER OF PAGES 28	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code)

USAWC STRATEGY RESEARCH PROJECT

**TELECOMMUNICATIONS IN RECONSTRUCTION AND STABILIZATION: THE
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ABSTRACT

AUTHOR: Colonel Keith L. June
TITLE: Telecommunications in Reconstruction and Stabilization: The Critical Link
FORMAT: Strategy Research Project
DATE: 09 March 2009 WORD COUNT: 5,612 PAGES: 28
KEY TERMS: Information and Communications Technology
CLASSIFICATION: Unclassified

To prevent future terrorist attacks, such as those which occurred on 9/11, the United States must be prepared to assist failed states in reconstruction and stabilization. Since the end of the cold war, the United States has been involved in numerous reconstruction and stabilization efforts. A critical, though often neglected, component of reconstruction and stabilization is telecommunications or Information and Communications Technology (ICT). ICT has become a basic and essential service. Modern societies and economies cannot function without ICT. ICT is vital to security, governance, economic development, and social stability. The US experience in Iraq and Afghanistan demonstrate the need for a process and agency during post combat operations that has responsibility for ICT. Key actions include, identifying ICT basic infrastructure, identifying key actions associated with ICT as well as identifying agencies with responsibility for this area. Solutions should address both short-term and long-term problems.

TELECOMMUNICATIONS IN RECONSTRUCTION AND STABILIZATION: THE CRITICAL LINK

The purpose of this Directive is to promote the security of the United States through improved coordination, planning, and implementation for reconstruction and stabilization assistance for foreign states and regions at risk of, in, or in transition from conflict or civil strife. The United States has a significant stake in enhancing the capacity to assist in stabilizing and reconstructing countries or regions, especially those at risk of, in, or in transition from conflict or civil strife, and to help them establish a sustainable path toward peaceful societies, democracies, and market economies. The United States should work with other countries and organizations to anticipate state failure, avoid it whenever possible, and respond quickly and effectively when necessary and appropriate to promote peace, security, development, democratic practices, market economies, and the rule of law. Such work should aim to enable governments abroad to exercise sovereignty over their own territories and to prevent those territories from being used as a base of operations or safe haven for extremists, terrorists, organized crime groups, or others who pose a threat to U.S. foreign policy, security, or economic interests.- National Security Policy Directive 44

This study will examine the role of telecommunications or information, communications and information technologies (ICT) during reconstruction and stabilization. Stabilization and reconstruction are extremely complex endeavors bringing together many diverse and complex areas. One of the most important, but overlooked parts of stabilization and reconstruction is ICT. ICT is a key component of reconstruction and stabilization. ICT involves warfighting, interagency coordination, contingency planning, economic development, governance, and technology.

For the purposes of this paper and throughout the telecommunications industry, the term, *Information, Communications and Technologies* or *ICT* refers to telecommunications. Information and communication technologies encompass the wide range of telecommunications technologies essential to providing services in a globalized economy.¹ The term specifically refers to technologies that gather, store, retrieve,

process, analyze, and transmit information.² The term has become the industry standard for defining telecommunications systems required for modern economies.

The last few years have witnessed a major paradigm shift in US thinking about war and post-conflict operations. This shift has been caused in part by the experience of the US in conflicts in Iraq and Afghanistan. The shift has forced a change in how the US Government plans and executes operations from peacetime to general war. This shift has forced planners across Department of Defense, the Department of State as well as other government agencies and non governmental agencies to examine not only their role in planning but their role in post-conflict operations. ICT is critical to other operations as well but given the breath of this study, its focus will be on post-conflict operations.

The period following the fall of the Baghdad in 2003 was one marked by rioting, looting and a general breakdown of civil authority in Iraq. After the fall of Baghdad, US Forces faced an incredibly challenging problem; the daunting challenges presented by reconstruction and stabilization of the war-torn country.

The challenges of reconstruction and stabilization would surface in Afghanistan as well. Part of the challenge in Afghanistan was the failure to create a stable and secure environment. As was the case in Iraq, reconstruction and stabilization proved extremely difficult.³

Both conflicts exposed the glaring and persistent problem of planning and successfully executing reconstruction and stabilization. These efforts are marked by volatility, uncertainty, complexity and ambiguity, or VUCA.

The US experience in both conflicts was greatly complicated by the challenges of a world that has become extremely dependent on information and information technology. Twenty-first century nations and their economies cannot function without modern ICT systems and networks.⁴ ICT has become critical to the successful reestablishment of governments and economies.

Perhaps retired Army Colonel and senior DISA civilian, William Ritchie, put it best when he said, "If people have nothing to do, they will turn to violence and it's hard to work on stabilization and reconstruction when people are shooting at you."⁵ Ritchie speaks from experience having served for a year working ICT reconstruction and stabilization in Baghdad. He witnessed firsthand the complexities associated with ICT in reconstruction and stabilization.

The Post Cold War World

Since the end of the Cold War, the United States has been involved in or contributed forces to more than 17 post conflict operations. In the last 15 years alone, the United States has spent five times more on stability operations than on combat operations⁶. Within a few years after the end of the Cold War, the United States found itself heavily involved in providing humanitarian assistance in Somalia⁷. In 1995, the United States provided thousands of Soldiers for the Peace Implementation Force (IFOR) mission in the Balkans. These two missions were but two of a large and diverse number of operations that required the deployment of thousand of US Soldiers.

In a speech at the US Army War College, the Chief of Staff of the United States Army, GEN George Casey spoke of living in an age of "persistent conflict". GEN Casey outlined a world defined by regional instability, failed states, unrestrained technological

diffusion and a global economy struggling to meet the demands of emerging and third world economies and nations. If allowed to, GEN Casey stated, “the changes wrought by this evolving global environment can quickly lead to failed states that can become havens for terrorist organizations seeking sanctuaries.”⁸

In Afghanistan, Al-Qaeda used a failed state as a sanctuary to plan, and execute worldwide terrorist attacks. This attack serves as a constant reminder of the danger of allowing terrorist organizations to operate in failed states. Failed states, such as Somalia, the Congo, and Afghanistan before the US intervention, represent the present and the future. They are indicative of a world beset with issues ranging from ethnic conflict, economic collapse and environmental degradation. They are a persistent fact of our modern age.⁹ As such, the United States and other developed nations must be prepared to intervene, stabilize and, where necessary, aid in the reconstruction of these troubled nations.

The Office of Reconstruction and Humanitarian Assistance (ORHA) and National Security Presidential Directive 44

The Office of Reconstruction and Stabilization (ORHA) will integrate all relevant United States Government resources and assets in conducting reconstruction and stabilization operations.¹⁰

In late 2002, during the planning for the US intervention in Iraq, the Bush Administration established an office to lead the reconstruction of Iraq. The organization, titled the Organization for Reconstruction and Humanitarian Assistance or ORHA, was tasked with developing plans and executing the reconstruction of Iraq. ORHA was run by and through the Department of Defense.

The office headed by Retired Army Lieutenant General Jay Garner was composed of officials from across the US Government, foreign governments and private

industry. Elements of ORHA arrived in Baghdad soon after the fall of the city in March of 2003.¹¹

ORHA was challenged from its inception. An unclear mission, unrealistic expectations, and limited support from military commanders in theater doomed ORHA to failure. By the time ORHA officials arrived in Baghdad, civil authority had all but disappeared. ORHA proved profoundly ill-manned and ill-equipped to manage the complexities of stabilizing and rebuilding Iraq.

Within days after arriving in Baghdad, Garner was replaced with Ambassador Paul Bremer. The organization, renamed the Coalition Provisional Authority or CPA, continued to be challenged by the problems associated with reconstruction and stabilization. After five-and-half years, many of these problems persist.¹²

The US experience in Iraq identified a key issue, “what agency should have responsibility for reconstruction and stabilization?” In 2005, President Bush signed National Security Presidential Directive 44 or NSPD 44. NSPD 44 outlined responsibilities for improved interagency coordination, and for the planning and implementation of reconstruction and stabilization. NSPD 44 was historic in that for the first time, the US government outlined specific responsibility for reconstruction and stabilization. In essence, the document created a US policy governing stabilization and reconstruction.¹³

NSPD 44 was developed and implemented as a direct result of US efforts in Iraq. The document assigned the US Department of State as the lead agency for stabilization operations. The policy directed the Secretary of State to coordinate and lead integrated US Government efforts and activities associated with stabilization. NSPD 44 also called

for the creation of an office within the Department of State with specific responsibility for reconstruction and stabilization. In 2005, the Department of State created the Department of State, Office of the Coordinator for Reconstruction and Stabilization (S/CRS). The S/CRS is the first US government entity with the specific responsibility for reconstruction and stabilization.¹⁴

S/CRS has developed three capabilities to aid in reconstruction and stabilization. These capabilities are the Interagency Management System (IMS) for Reconstruction and Stabilization, the Civilian Response Corps (CRC), and the Whole of Government planning framework.¹⁵

IMS works to prepare and implement the whole of government strategic and implementation efforts for reconstruction and stabilization. The CRC provides a standing “civilian response capability” with the training, equipment and resources necessary for planning and executing operations in a reconstruction and stabilization operation.

The whole of government planning framework is a matrix that integrates actions across the Federal government. The whole of government framework serves to synchronize the actions of the US government. However, ICT is not identified as a critical task. Additionally, little guidance is provided as to what agency has responsibility in this area. However, the tools developed by the S/CSR provide a basic framework for interagency coordination.

NSPD-44 has also changed how DoD approaches reconstruction and stabilization. It has in fact led to a wholesale change in DoD policy and doctrine. These changes are highlighted in two key documents that are discussed below.

Department of Defense Directive 3000.05 or DODD 3000.05 provide the military departments with definitive guidance on the conduct of stabilization operations. DODD 3000.05 outlines broad policy responsibilities. The directive makes reconstruction and stabilization operations as important as combat operations.¹⁶

DODD 3000.05 states, “The immediate goal, consistent with initial response efforts, is to provide the local populace with security, restore essential services and meet humanitarian needs”.¹⁷

In October 2008, the US Army published FM 3-07. Subtitled, “the Roadmap from Conflict to Peace”, the FM provided guidance on how the various instruments of power beyond military power can be leveraged to combat the challenges posed by stabilization operations. FM 3-07 is formal recognition of the importance the US Army has given to stabilization operations.¹⁸

Both DODD 3000.5 and Army Regulation FM 3-07 are major paradigm shifts in DOD and Army thought, policy, doctrine and guidance with regards to stabilization and reconstruction. Both documents make it clear that stabilization and reconstruction are now priority areas for the military, especially the Army. The challenge is the detailed planning and coordination required in these areas. However, as this study will demonstrate, ICT is still not identified as a priority.

Telecommunications (ICT) in a Modern Society

Throughout history, governments and industry, have invested large amounts of capital into building and maintaining basic infrastructures. Basic infrastructures drive other segments of society, especially economic development. Basic infrastructures such

as those used in transportation, electricity, water and ICT provide citizens with the services necessary for survival.

These infrastructures change over time. Ports and roads have perhaps always served as basic infrastructures. The building of canals during the late 18th and early 19th century is a classic example of infrastructure programs required for economic advancement. Perhaps the first large scale infrastructure effort was the construction of railways in the 19th and 20th century.¹⁹

ICT is the modern equivalent of the railways of the 19th century. The past 30 years have seen dramatic and far reaching changes in ICT. These changes have included advances in technology, management, and most importantly, consumer use of telecommunications. For the first time in history, over half the human beings on earth now have access to some form of modern communications.²⁰

ICT serves as basic driver of political, economic and social development. It facilitates the development of civil society and promotes economic activity by establishing new ways of working, market development and the delivery of efficient government services.

ICT in Stabilization and Reconstruction

Kinetic operations alone cannot win insurgencies. To be sure, kinetic operations may still be required as stabilization and reconstruction are underway; however, winning and creating a secure and stable environment means moving beyond kinetic operations and moving to an situation where the economy and the well-being of citizens serves as key factors, as does restoring government services, establishing legitimacy and creating an environment where citizens feel connected to each other and their government.²¹

Army Field Manual 3.07 defines stabilization as, “the establishment of a safe and secure environment.”²² The goals of stabilization are facilitating reconciliation among local or regional adversaries, establishing political, legal, social, and economic institutions, and facilitating the transition to a legitimate civil authority.”²³ Through stability operations, military forces set the conditions that enable other instruments of national power to succeed in achieving broad national objectives. Stabilization is the process by which underlying tensions that might lead to a resurgence in violence and in the breakdown in law and order are managed and reduced, while efforts are made to support preconditions for long-term development.²⁴

Reconstruction is the process of rebuilding degraded, damaged or destroyed political, socioeconomic and physical infrastructure of a country or territory to create the foundation for long-term development. Together, reconstruction and stabilization comprise the broad range of activities defined by the Department of Defense as stability operations.²⁵

However, ICT as a component of reconstruction and stabilization is often overlooked or given low priority. I was assigned to the CPA C-6 and I speak from personal experience when I say CPA gave low priority to ICT and the rebuilding of the Iraqi ICT system. This would prove especially problematic as US officials lacked the ability to conduct detailed and deliberate coordination with Iraqi officials in the immediate wake of the fall of Baghdad.

ICT is a critical component of stabilization and reconstruction. As discussed earlier, stability operations affect security, governance, economic stability and

development and social stability. Within each of the aforementioned areas, ICT is a key enabler.

The most important aspect of stabilization is security. Before any other aspect of stabilization can begin, there must be a safe and secure environment.²⁶ Creating a secure environment is a task that requires using all elements of power including the military. A nation's government must be capable of demonstrating the ability to provide oversight as well as effective command and control of security forces including the military and national police. Without modern communications, command, control, and coordination are impossible.

Governance operates in large part based on information which is in part predicated on sound ICT networks. Coordination among government officials, monitoring of national and local events, and dissemination of information to citizens, are all based to a large degree on the ability of a government to access ICT and provide information to citizens.

In Iraq, the failure of the government to provide basic services especially safety for its citizens, led to widespread unrest and distrust of government, thereby undermining public confidence in the government and public officials. The summer of 2003 was critical and indeed a dangerous period for CPA and for the Iraqi people. The fledging Iraqi government was in dire need of information and the ability to coordinate across the government. However, the government lacked the ability to conduct even the most basic communications with ministries or with coalition authorities. Assessments of ICT networks, including fiber optic systems, wireless networks and consumer use of ICT

systems could have prevented this problem or could have at least mitigated some of the issues.²⁷

ICT enables citizen partnership in government. In the case of Iraq, the ability of citizens to participate in the democratic process was a critical component of stabilization. The democratic process was facilitated by the establishment of a limited ICT network. The fact that citizens had a reliable telecommunications system helped to foster greater confidence in the new government and helped create civil order.²⁸

ICT is a major driver of economic development and activity. In the period following the fall of Baghdad, US government officials worked frantically to reestablish even small scale industries. However, the lack of a modern financial system, especially a modern banking system, proved extremely problematic. Key tools such as electronic funds transfer are critical to the functioning of a modern economy.²⁹ These systems cannot function without modern ICT networks.

Industries, including oil production, are heavily dependent on access to global information. Given the importance of oil to the Iraqi economy, access to global information is critical. The availability and shipment of products are also heavily dependent on access to information. Additionally, information is critical to attracting outside investment.

Most importantly, all of these factors drive the creation of jobs. And jobs provide opportunity and hope. Any effort to win the “hearts and minds” or in the words of Vice Chief of Staff of the Army, GEN Peter Chiarelli, the “trust and confidence” must begin with creating opportunity and hope.³⁰ Building roads, opening schools, providing clean water, running refineries, or even selling ads during soccer games, are events that spur

economic activity, thereby creating jobs. ICT is perhaps the key element in enabling economic recovery. ICT is the “glue” that connects these diverse activities.

The ability of citizens to access reliable and credible information is extremely important. Citizens will receive information from a variety of sources but web sites, web portals, internet blogs and email play an important role in providing information and helping government at all levels establish credibility. These systems connect citizens to each other. Perhaps most importantly, the systems create a feeling of normalcy. After years of war, this was a key component in attempting to end the insurgency in Iraq.

The Core Issues

The Interagency conflict assessment framework aims to build the private sector, including encouraging citizen-driven, bottom-up economic activity and constructing necessary infrastructure.³¹

The challenges associated with ICT in stabilization and reconstruction include separate and disparate networks, service gaps, lack of technology or limited technology, geographic limits, lack of ICT expertise, unreliability of existing networks, poor government regulatory structure, and limited investment capital.³² As will be discussed below, assessments and planning can mitigate these issues.

In some respects the Iraqi case represents a worst case scenario in that Iraq had been plaque by decades of war. The hope among many was that the nation’s vast oil reserves would fund development in other sectors of the economy such as the ICT. In the case of Iraq, several specific goals were identified. These goals were developed by the Business Transformation Agency (BTA). The BTA was a DoD agency specifically created to speed Iraq economic recovery.³³

The first step was conducting an assessment of the existing Iraqi ICT system. This Iraqi assessment included the ICT organization, infrastructure, current technology, consumers and market. A market study in general must include some examination as to how the ICT network will be used. Equally important is clearly defining requirements.

The second step was development of a plan or at least providing some level of research and expertise as to how the Iraqi ICT systems could be improved. Both steps are fundamental steps in aiding the development of ICT in the wake of conflict.

ICT systems vary greatly around the world as does the regulatory structure that governs them. In the case of Iraq, the assessment revealed an extremely limited ICT network as well as a poorly managed and poorly regulated system. Decades of conflict had badly damaged the ICT infrastructure. What ICT network that did exist, existed for use by the ruling party. Additionally, the UN mandated embargo had severely limited the ability of the state owned and Bath'ist controlled Telecommunications Company to upgrade facilities and infrastructure. Private investment was virtually nonexistent and given the insurgency and the precarious state of the Iraqi government, foreign firms were extremely hesitant to invest in Iraq.

The assessment found that the Iraqi ICT network and industry, was not globally connected, lacked standardization, and failed to deliver even the most basic services to citizens. Again, many of these problems were unique to Iraq; however, one must assume that some of the issues would exist in other areas plagued by long term conflict areas as well.

The Iraqi government was also sorely bereft of an ICT regulatory structure. The government under the regime of Saddam Hussein did in fact have a ministry of

communications though quite frankly; power essentially rested with Hussein and the Bath'ist party. Developing a sound regulatory structure in Iraq was quite difficult given these factors.

The assessment should also include a thorough review of technical areas including frequency allocations, fiber optic systems, satellite systems, bandwidth use, levels of competition, technical expertise, facilities and switching systems. As one might surmise, the assessment is perhaps the most important aspect of the ICT stabilization and reconstruction effort. After the assessment, time and effort must be spent on indentifying challenges, establishing requirements and developing solutions.

Planning should include solutions to address the most fundamental issues. In the case of Iraq, planning should have included some ability to install a basic wireless cell network. A cell network was established but the network only supported CPA personnel. Planning for Iraq should also have included the ability to begin building a national fiber network to support other ICT networks. Critical issues identified during the assessment should be addressed by planning.

Responsibilities

The tasks associated with ICT in reconstruction and stabilization are extremely complex, varied and are spread across several agencies. This section will address the agencies tasked with responsibilities in reconstruction and stabilization.

As discussed earlier, the Department of State has been assigned as the “lead agency” for stabilization and reconstruction. This language is somewhat vague and is so by design. Though assigned as the lead agency, other federal agencies, especially the

Department of Defense, have significant responsibilities with regards to stabilization and reconstruction.³⁴

As the lead agency, the State Department manages the interagency process, that is, the coordination among the various agencies involved including DoD, USAID and other agencies as required. Also as discussed earlier, the DoS has developed several tools including the Interagency Conflict Assessment Framework.

A second tool is the essential task list which attempts to identify key tasks associated with stabilization and reconstruction. Both tools serve as coordination devices. State's role as the lead agency has more to do with coordination than with actual "hands on" activities. This is not meant as a criticism but more as a statement of fact. Given the mission of the DoS, this makes complete sense. The DoS takes a long term approach to problems, especially development.

The Department of State identifies ICT as a function that should be managed almost entirely, by the private sector. This approach might work well in areas where conflict is not persistent. However, in areas of persistent and ongoing conflicts, like Iraq and Afghanistan, this has proven quite problematic.³⁵

The US Agency for International Development or USAID is the US Government agency tasked with providing development assistance to other nations. Given that a core function of stabilization and reconstruction is economic development, USAID has a significant role to play in stabilization and reconstruction. USAID receives foreign policy guidance from the DoS but operates as an independent agency. The agency specifically, "supports long-term and equitable economic growth and advances U.S. foreign policy objectives"³⁶.

The key element in this statement is, “long term”. USAID’s mission statement is one of assisting in long-term and sustainable growth. This approach means that short-term objectives such as providing security or supporting short-term ICT projects really fall outside the purview of USAID capabilities. Additionally, USAID has very few personnel tasked with and indeed available for the numerous responsibilities associated with ICT in stabilization and reconstruction. In accomplishing missions, USAID works primarily as a contracting agency. This is not to say that USAID has not performed a major role in Iraq in regards to providing limited and short term development assistance.

Again, both DoS and USAID have by charter long-term approaches to ICT and development. The significance of this fact is that both agencies have limited capability to provide assistance in ICT for stabilization and reconstruction.

As opposed to both DoS and USAID, the DoD has a much shorter term approach to ICT during stabilization and reconstruction. The core function of DoD is warfighting. As such, it is particularly concerned with security. Given this, DoD places a high priority on security and securing areas in the wake of conflict. DoD Directive 3000.5 identifies ICT as an, “essential service” though the directive does not identify an agency within DoD for responsibility. However, FM 3.07 is less clear in defining ICT as an essential service or in defining critical task associated with this area. The FM states “the military construction to reconstruction efforts in the telecommunications infrastructure is limited; normally, few essential services exist in this area”. The list of essential services may include an initial response in which military forces assess overall condition of the national ICT infrastructure, and determine and prioritize essential infrastructure programs and projects.”³⁷

Clearly, there is difference in the language between the two documents. The central question is what agency or staff has responsibility for this area. As one might surmise from DoS, DoD and US Army documents, responsibility for ICT in stabilization and reconstruction is somewhat unclear. Even determining if ICT is an essential service is unclear.

After over a year, the DoD and CPA officials recognized the criticality of ICT. Responsibility at this time was given to the Defense Information Systems Agency(DISA). The agency has sent several teams of experts to work ICT issues. The DISA support has been the most dedicated and comprehensive effort thus far and has shown some success. Whether DISA possesses the expertise, manning or resources to accomplish this mission long term or in future conflicts is unclear. As is whether this is a long term DISA mission is unclear as well; however, for the foreseeable future, DISA will have this responsibility. DISA has worked closely with Iraqi officials to restore critical ICT services and DISA officials have worked to combine the many ongoing ICT actions in Iraq.

There are several issues but perhaps the most important is identifying ICT as a key and essential service like power and water. This study has presented a clear case of the importance of ICT in modern societies and as a critical component of stabilization and reconstruction. Identifying ICT as a critical service would allow for prioritization and resourcing. This would also help in identifying for the long term the DoD agency with responsibility for ICT in stabilization and reconstruction.

Solutions

This study has identified several key issues. One challenge is that ICT cuts across several agencies. ICT efforts will be required at the start of a stabilization and reconstruction effort and in the end these actions may be required for several years.

Given this, the ICT effort should be divided into several periods and levels. The time periods and levels must be driven by conditions. Perhaps the immediate effort, the effort that occurs in the wake of an intervention should be handled by the COCOM Commander. After the situation has stabilized and some level of security established, DISA or a DoD level agency could provide assistance. The long term answer should be a DoS and USAID solution.

Given that stabilization and reconstruction have been elevated to the level of combat, combatant commanders and component commanders must be prepared to lead these efforts.

ICT is an extremely specialized area requiring specific expertise and training. The most logical staff section to handle the planning and coordination for ICT during stabilization and reconstruction is the G-6. However, the expertise required in this area may exceed the expertise normally found in Combatant Command J-6's. DOD should develop a planning and coordination tool to assist COCOM staff with ICT during stabilization and reconstruction. This would provide some limited capability for staff sections to perform and execute limited actions.

However, given the number of tasks and the criticality of this area, DOD must develop longer and more deliberate solutions. As discussed earlier, ICT in stabilization and reconstruction integrates many diverse areas. DISA seems best suited for this unique mission. DISA personnel could work closely with COCOM staffs, DOS and

USAID officials. These teams might serve the gap between long-term efforts and short-term actions.

Additionally, ICT during this period could greatly benefit an international effort. Closely linking this effort with the United States or another intervening power only works to delegitimize host nation authorities. Most importantly, it takes responsibility for rebuilding and providing services away from local officials to intervening officials. US involvement in the stabilization and reconstruction effort in Iraq helped to undermine the Iraqi government furthering the insurgency.

International organizations such as “Medecins Sans Frontiers” or Doctors without borders have provided invaluable medical assistance to war-torn areas. These organizations come with far less baggage than an organization or individuals associated with a particular government or nation.

“Wireheads without borders” could consist of ICT experts from around the world and would work with host nation officials in restoring critical ICT services. It might coordinate activities with the State Department Office of Stabilization and Reconstruction as well as other similar national agencies. The organization could also work with international organizations such as the International Telecommunications Union (ITU) and national telecommunications agencies such as the Federal Communications Commission (FCC), the European Commission or other national or international telecommunications agencies.

An organization of this type would have several advantages. First, by not being affiliated with any state, it would bring immediate legitimacy and would be free of political pressure. Second, bringing together a team of international experts would help

in ensuring the organization possessed the most up to date information. The organization would also bring a degree of objectivity normally not seen by national teams such as those involved in Iraq and Afghanistan.

However, creating such an organization would be extremely challenging. Funding would be the first issue. Additionally, given the critical role played by ICT in many national economies, nations might be opposed to the involvement of this type organization in national affairs even in the wake of a national crisis. Recruiting experts for this organization might also be difficult. Leadership, coordinating among international experts, deploying, equipping and continued resourcing are but a few of the many challenges associated with this idea.

Despite these challenges, “Wireheads without borders”, has tremendous potential. While it may not solve all the difficult problems posed by ICT in stabilization and reconstruction, it could well begin the process of addressing these problems in an objective manner with international support.

Another solution could be to allow greater participation by private firms to assist in ICT efforts. Private firms could fill the gap between military forces and host nation authorities. Private firms are already filling a critical role in Iraq and Afghanistan. ITT has a multi-billion dollar contract providing communications for coalition forces. The challenge in attracting private firms would be attracting firms willing to invest in conflict areas. Firms such as ITT are closely tied to the coalition effort. These firms may be less likely to invest in countries with fledging and unstable governments like Iraq. However, if a secure environment could be established, firms might well be willing to invest in

conflict areas. Despite the current environment, Middle Eastern ICT firms, including Egypt's ORASCOM, have invested in Iraq³⁸.

As this paper has illustrated, given the complexity and scale of ICT in stabilization and reconstruction, private firms will play a major role in the future.

Conclusion

The great Prussian strategist Carl Von Clausewitz stated that war is the continuation of politics by other means. Indeed, economics and politics are key factors in any conflict. As the wars in Iraq and Afghanistan well illustrate, kinetic weapons alone will not win wars. Winning wars and as importantly, winning the peace, are careful and deliberate efforts, that require the establishment of security and where necessary, in stabilizing and reconstructing nations suffering from war and conflict. Winning a war means winning the hearts and minds of the people or at least earning the confidence of citizens.

The age of persistent conflict means that winning now includes creating a stable environment and reconstructing key infrastructures such as water, power, transportation and ICT. We live in an interconnected world where ICT is a key enabler of an effective society facilitating economic, political and social systems. Like other basic infrastructures, ICT is a fundamental component of a modern nation. It facilitates security, governance, economic development and social stability. Today, nations and their citizens cannot function without ICT. Winning wars means using and integrating all elements of national power including ICT.

Perhaps the greatest impact that a robust and interconnected ICT network can provide is freedom. ICT allows connection and participation in the larger world to a

degree much greater than other basic infrastructures. Freedom is difficult to achieve, but allowing citizens greater access to information and allowing greater participation in the national and international economy no doubts helps in creating a sense of freedom.

The problems in this area are broad, complex and ill defined. However, the most basic issue is DOD identifying ICT as a basic service. Doing so would provide prioritization and resourcing. Identifying key agencies with responsibility for ICT would also aid in the stabilization and reconstruction efforts.

This study has shown the importance of ICT in stabilization and reconstruction and how and the US Government should develop capabilities to assist troubled nations such as Iraq in ICT during stabilization and reconstruction. The future is hard to predict but the fact that ICT will continue to be a play a critical role in stabilization and reconstruction is without doubt.

Endnotes

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²⁴ *Ibid.*, 1-11

²⁵ *Ibid.*, 1-15

²⁶ *Ibid.*, 3-11

²⁷ Ricks, *Fiasco, The American Military Adventure in Iraq*, 114.

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³⁴ George W. Bush, *National Security Policy Directive 44* (Washington, DC: The White House) 1.

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