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SUCCESSFULLY CHANGING THE COMMUNICATION CULTURE IN MILITARY ORGANIZATIONS

by

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Introduction

In 2004, General James "Hoss" Cartwright blazed a new trail for the use of social media in the military when he introduced the concept of a blog system to tie together all of the United States Strategic Command (USSTRATCOM) headquarters. After the military's first use of chat in command and control using basic "mIRC chat" back in the 1990s[1], the inclusion of social media in military networks had not gained significant traction. Although some type of social media was eventually included in the designs of each service's main internet portals, Cartwright's mandate represented one of the first top-down command-directed organizational changes for social media use. In the new communicationcentric environment, this change had tremendous potential -- either for dramatic success or disappointing failure. Through a period of challenge, adaptation, and public fanfare, USSTRATCOM assumed the role as the military's social media and communications vanguard. Seven years later, military organizations can use the Cartwright blog to improve current and future uses of social media as effective communications tools.

The Wikimedia definition of social media, as accepted and re-published by the Air Force, includes the “digital, computerized, or networked information and communication technologies"which contribute to "the various activities that integrate technology, social interaction, and the construction of words, pictures, videos and audio.”[2] The organizational introduction of social media in the Air Force, and within the military as a whole, has been incremental at best. Popular social media tools such as Facebook, Twitter, YouTube, blogs and "wikis" have been widely adopted by the general public for a multitude of advantages related to collaboration in both business and personal information enterprises. With the improved access provided by these tools, information seekers and information-sharing users can collaborate with improved efficiencies. Some estimate that the nine percent of time spent by information workers

on query activity is improved dramatically with social media. By saving time and minimizing redundant information queries, social media users can be more effective in solving more problems within the same work day.[3] Despite these advantages, military staff members met obstacles implementing communications improvements through social media. Defense policy restricting use of government information technology (IT) equipment (computers, networks, and internet access points) to "official business only" was prohibitive in nature. In their standard defensive approach, communications squadrons set access limits using active firewalls and network sign-on banners reiterating the prohibitions. The capability to create and post publically accessible web content was limited to qualified "webmaster" personnel who were required to complete extensive vetting of any posted information through the legal staff, public affairs staff, and the command element of the organization involved in the posting. The effort appeared to be designed to prevent the enterprise-wide fraud, waste, and abuse by DoD users who might otherwise access personal websites or conduct network activities that are logically prohibited -- like viewing pornography or conducting business online for personal profit. But blocking these activities across the board also prevented users from practical, value-added information streams. By the time the social media train had left the station, military users were consequently still packing their bags for the trip. After initial backlash against the lack of access allowed, users were afforded access to some personal use sites (current events sites, personal shopping, limited sports coverage, etc) only on a "non-interference basis."[4] Public Affairs personnel broke through the access barriers with exceptions allowing them to visit wikis, blogs or media sites that published defense-related information in order to counteract the effects of errant or misleading posts. Later, the same staffs convinced senior leaders of the need to publish original information on social media sites of their own. Prohibitions on internet access were eased for specified

personnel to support the effort. However, it was not until the end of the decade that senior leaders began to recognize the response power needed to create any reasonable effect in the communication environment through the use of social media tools. With the release of AFD 091210-043, "Social Media and the Air Force," and OSD Directive-Type Memorandum (DTM) 09-026 - Responsible and Effective Use of Internet-based Capabilities, the military establishment provided guidance for "responsible and effective use of Internet-based capabilities, including social networking services" and recognized that "Internet-based capabilities are integral to operations across the Department of Defense."[5] But beating internal barriers is not enough to ensure the success of large scale change. Review of different concepts of organizational change and how they might be used to shape the communications culture is also necessary.

Countless authors describe their ideas of how major organizational change can be affected. The United States Air Force adopted steps similar to John Kotter's *Leading Change* as the primary framework for its Air Force Smart Operations in the 21st Century (AFSO21) program. Eight main steps for problem-solving similar to Kotter's were adapted within the AFSO21 Guidebook as a practical checklist for executing a specific organizational change from its decision point through its complete implementation.[6] Timothy Clark is another author who favors much of the Kotter model. His book, *EPIC Change - How to Lead Change in the Global Age*, advocates many of the same techniques as Kotter's model but includes greater fidelity in concept development as well as in methods for consolidation of change.[7] These two major approaches highlight need-to-know types of changes for commanders to initiate in their daily processes and operations. But another concept is also important to understand when we consider change in the culture of members using social media. Dr. Leandro Herrera introduced an idea for "viral change" which "focuses mainly on creating the diffusion of new ideas and

processes through social contagion of behaviors that spread via social networks."[8] Using a medical analogy, viral change is one that defines success through the degree of its "infection" of an organization.[9] One drawback of the viral change approach as a method for large-scale organizational change is that it is significantly limited from the aspect of control. Contrary to the standard methods of change implementation advertised in the military guidebooks, control is a negative in the world of viral change.[10] This type of strength is highlighted in other works as well. In their popular volume, *The Starfish and the Spider*, Brafman and Beckstrom highlight how information age technologies such as social media have enabled the power of change across the spectrum of decentralized organizations.[11] Taken separately, these approaches are clearly valuable to the specific arenas they address. In the unique case of spreading social media into military networks, it may be useful to combine the aspects of these perspectives in order to reap the benefits of both worlds.

In conducting this examination, General Cartwright's blog initiative serves as an instrument for review in a case study format. To make the case study methodology more valuable to military organizations, several questions for successful change leadership behavior are addressed. What can other military leaders learn from Cartwright's social media change? How can this case provide lessons for continuing improvements in social media communications methods? What potential obstacles might impede successful implementation, and what viable solutions could be employed? By studying Gen. Cartwright's ideas, change methodology, and leadership style, there can be valuable lessons to the military reader who is exploring his or her own communication culture change.

"4-Star Blog" at USSTRATCOM

The Strategic Knowledge Integration Web -- or "SKI-Web" -- is a blog tool developed at USSTRATCOM after Cartwright's arrival.[12] As with other organizations he had led, Cartwright found that USSTRATCOM was "built extremely well to make sure that they didn't talk to anybody."[13] In the post-9/11 era, USSTRATCOM appeared to be mired in the old-school nuclear mission as its only significant area of concern. Cartwright envisioned a more dynamic organization capable of handling all "strategic" military engagements ... not just the nuclear enterprise. Where the old mission allowed *minutes* to respond to a given scenario, the expanded USSTRATCOM mission of global information operations (including all global communications) required responses in mere *seconds* in order to get within the enemy's decision loop.[14] The basic purpose of the blog[15] was to provide a "common location within the command where anyone can pose a question and people will respond with answers."[16] The blog was not like a standard site one might see on the world-wide-web. It resided only on the military's secure internet protocol router network (SIPRnet), and looked more like a dinosaur than the type of content seen on Facebook or Google websites. The system could "allow users to view and contribute information in a near real-time environment...[and] define what they see and how they see it."[17] According to Gen. Cartwright, he needed personnel to recognize the speed required when dealing with information in the global age:

> It's not only about how fast you can make something fly or how fast you can find a target—it's putting all of the pieces together in an hour. That's the challenge. Technology can find things, get something that far, that quickly—technology can make it precise; but how do you put it all together inside the decision timelines of your adversary? Gen. James "Hoss" Cartwright, as USSTRATCOM Commander[18]

Initially, the entire project was developed and launched in minimum time in order to achieve an 80% solution as soon as possible. Rather than waiting for engineers and designers to critique the systems for six months in search of a 95% solution, Cartwright believed an earlier implementation would promote a more rapid change in culture within the headquarters.[19]

At the heart of the change was Cartwright's vision of a new communication taxonomy. Rather than limiting operations to the way current tools worked, USSTRATCOM needed to develop the right tools for the problem. As Gen. Cartwright discerned, "I saw an opportunity there to raise everyone's game, to increase everyone's participation through the organization -- and across disciplines -- while at the same time reducing the way time zones and geographic distance slow down our decision-making cycle."[20] In identifying tools, several communications and social media formats were evaluated.

Attributes By Format	Invitation	Communication Need	Response Time	User Availability	Resultant Relative Speed
Chat	All **Active** Users	Dynamic	Real Time	Immediate Availability Required	High
Blog	**All Users**	Dynamic	Real or Extended Time	Persistent User Data	High
Email	Single or Multiple **Specific** Users	Detail-centric	Measured	Persistent User Data	Medium to Slow
Phone	**Single** User	Person-to-Person or Direct	Real Time (only if available)	Immediate Availability Required	Medium (due to average availability)
VTC	Multiple users	Direct	Scheduled Per Asset	Scheduled Availability	Slow

Table 1 - Comparison of Attributes by Social Media Format[21]

Overall, the analysis revealed varying attributes suited to different requirements. For the particular USSTRATCOM need he was addressing, Cartwright identified the blog as the most advantageous format. "Ideally, you want information to flow and be available when you need it rather than limiting your access by using a specific tool."[22] Nonetheless, he realized the unique capabilities of each competing communications medium, and he was therefore flexible in adapting tools in the long term which would continue the communications culture change.

Initial implementation went quickly and the entire command headquarters was brought into the business of "blogging" almost overnight. Cartwright adopted a proposal for the software tool from his J3 staff, then developed the entire software program with in-house engineering in little time.[23] The program was simple, easy-to-understand, and made available only on the SIPRNet thereby limiting the risk of compromise by outside electronic threats. Additionally, the USSTRATCOM information management staff led training for all personnel on the system and made a priority to complete training with new arrivals to the command as soon as possible. Cartwright led the change effort from the top as well. He referenced the new social media tool frequently to both internal and external audiences. Before long, the "blogosphere" was buzzing with news of the "4-star blogger" changing the way of communicating within USSTRATCOM.[24] He was a frequent (almost omnipresent) user as well. It was not unusual to see his blog postings at all hours of the day or night. In Cartwright's view, social media tools increased the ability to put out a question and get fast and well-informed responses from across the community. He acknowledged the limitations of the direct feed concept, saying "Sometimes the answers wouldn't be complete -- but commanders always deal with partial information. My view as a decision-maker is, first, partial information is better than late [information] and, second, broader diversity and perspective will always give me a better outcome."[25] Unfortunately, his idea would be subject to a different algorithm -- one that his subordinates felt included more review by the chain of command.

The main obstacle to SKI-Web's implementation came from the military mindset itself. Within the defense establishment, the hierarchal nature of the chain of command is well-respected as unchanging doctrine. Undoubtedly, the capability to effectively issue orders to the masses through multiple tiers of subordinate commanders down the chain of command is

essential to military effectiveness. Generally speaking, a Soldier, Sailor, Airman or Marine at the end of the whip of information depends on the accuracy, timeliness, and delivery of orders through his immediate superior. An order from a different soldier's chain of command may not apply to the first soldier or his specific mission requirements. Over time, the opposing flow of information -- or how a commander received answers back up the chain of command -- became similarly standardized. An answer cannot usually be provided to a higher echelon of the chain of command without going through the same tiers of supervisors en route back to the commander. Consequently, Cartwright's request to get answers to his questions straight from the source was anathema to his subordinate commanders and division chiefs. Despite the loss of speed in responding to a SKI-Web query from the general, they established an informal process for vetting their answers prior to allowing their subordinates to respond. Topics would come "off the web" when initially arriving in a division at USSTRATCOM, then they would be vetted through email traffic like standard military coordination before a response would be posted to the 4-star's blog. The staffs and subordinate commanders were primarily interested in preserving the accuracy of information returned to the commander; they thought the "wiki" concept was like running a unit by committee, and they assumed that the first wrong answer given by one of their subordinates would also be the last (before they lost their own job). Within the first months of implementation, everyone appeared to get what they wanted -- the commander got his high-tech collaboration gadget, and middle management continued to control the accuracy of information.[26] Yet this was not how the natural speed and power of a blog is gained, and Cartwright was soon to correct the problem himself.

Cartwright began to recognize a pattern in the responses to his blog queries. Aside from the lack of speed he desired, he noticed that all his responses were coming from the same small

group of bloggers. Although he was getting answers, they were not up to his expectation for speed, and they were clearly being reviewed by others rather than coming from the primary source of the raw data. In dramatic fashion, he corrected the problem. He brought together his senior staff leaders, then made the rounds with all officers, senior NCOs and civilian leaders. With each group, he wanted to get the message out to the command regarding who was expected to share information with him directly on SKI-Web:

> The metric is what the person has to contribute, not the person's rank, age, or level of experience. If they have the answer, I want the answer. When I post a question on my blog, I expect the person with the answer to post back. I do not expect the person with the answer to run it through you, your OIC, the branch chief, the exec, the Division Chief and then get the garbled answer back before he or she posts it for me. The Napoleonic Code and Netcentric Collaboration cannot exist in the same space and time. It's YOUR job to make sure I get my answers and then if they get it wrong or they could have got it righter, then you guide them toward a better way... but *do not get in their way*. [emphasis added]
>
> Gen. James "Hoss" Cartwright[27]

This was accompanied by an ultimatum to his staff as well. If he caught another division doing the same pre-vetting process instead of providing direct answers, they would end up with a new division chief.[28] While apparently harsh, this tactic was effective in causing an immediate and active course correction toward the major change he desired inside the organization. The real question was whether or not the change would endure.

From 2004 until 2007, Cartwright personally kept collaboration projects like SKI-Web active. With the same "just do it" attitude that he used to sweep the blog system into existence, Cartwright maintained a high level of interest and activity within the system. In doing so, he also allowed and encouraged a great deal of flexibility for what the technical parts of the system actually looked like. The original blog system launched within the headquarters was early in development it was actually the design prototype -- not an actual final product.[29] While this limitation seems unusual, it also represented a major advantage to Cartwright's change

methodology. While SKI-Web fulfilled his own design, it was still simply a tool for changing the culture of information sharing within the headquarters. As long as the primary interface gave him the speed of response he desired, he allowed his staff to adjust sights on the overall project requirements as they were officially developed.[30] Requirements for the system improved as users adjusted their desires for additional collaboration. "I wanted to improve the way we shared information and made decisions, and I gave it a push by introducing SKI-Web to our process," said Gen. Cartwright. "Before long though, the whole thing evolved based on the needs and creativity of individuals. This wasn't really about SKI-Web [alone], it was about finding the competitive advantage within the technology."[31] What started as a simple "bucket list" of event logs began to drive interactive features that improved its collaborative capabilities at each turn. From the addition of dedicated division logs to selectable Global Operations Center (GOC) highlighting, the system improved bit by bit. More logical derivations followed, including specialized search capability and a customizable user interface named "My SKI-Web".[32] By the time Cartwright departed USSTRATCOM in 2007, the final project was just being put into action.

With just more than three years and about $1 million invested in the new collaboration idea, Cartwright had accomplished far more than just teaching his headquarters how to blog. He enabled a culture change for information-sharing that spread successfully throughout his own headquarters in Omaha, Neb., then leaped into the staffs of other combatant command headquarters and down into his own component commands.[33] Gen. Cartwright noted the impact:

> Once we got things moving, we realized something else -- we weren't just making better decisions, the whole process became self-correcting. Information in the system constantly improved and we didn't have problems with the chain of command. If junior people had good information, they spoke up -- but military professionalism held true. There was a clear distinction between the "chain of information" and the "chain of command."

Gen. James "Hoss" Cartwright[34]

Even though his successor, Gen. Chilton, had far less personal interest in specific SKI-Web inputs, the tipping point for the change had been reached. SKI-Web continued to be used successfully in the USSTRATCOM GOC and subordinate commands operations centers throughout the next few years -- even as successor systems were brought online. By the time SKI-Web began dropping from use in later years, the information sharing and collaboration culture at USSTRATCOM had changed the way the command did the business of global decision making. By 2010, the command had shifted from the legacy system of SKI-Web to a more flexible and capable current technology chat engine known as XMPP chat.[35] The growth of the overall collaboration infrastructure for DoD (arguably sparked by USSTRATCOM leadership in the area) was now supporting its own advances between commands using the Defense Connect Online (DCO) backbone available on both the classified SIPRnet and unclassified networks.

Case Study Analysis

Viewing the Cartwright blog through a couple of theoretical change management perspectives, we can analyze where practical methods played a role in this major change. The actions of Cartwright and the USSTRATCOM SKI-Web development team are compared against two processes for change management -- Clark's "EPIC Change" and Herrera's "Viral Change" methods.

Clark's EPIC Change methodology centers on four definable stages of change management. The "EPIC" title is actually an acronym for these stages -- Evaluate, Prepare, Implement, and Consolidate.[36] Can a connection be discerned between the success of Cartwright's actions and

the EPIC model? On initial glance, his "just do it" method makes this seem unlikely, but a structured set of stages actually did exist in the process. The Evaluate phase of making a change regarding collaboration had begun before Cartwright ever arrived at USSTRATCOM. Work to consolidate a single accessible event log for the GOC had been underway prior to the initiation of SKI-Web as a specific focused outcome. A team of communications officers and engineers from the USSTRATCOM J-3 had been evaluating the need for additional collaboration capability. Cartwright's experiences in his previous commands also contributed to his desire for a culture change in the command's *willingness* to collaborate. He weighed the need, the costs, and the resources available within the command prior to initiating the change, thereby accomplishing an Evaluate stage compliant with Clark's ideas. The Prepare stage involved the employment of a larger development team and the building of a coalition to support the change. Though brief, the initiation of prototype development and contract requirements support for SKI-Web represented a key feature resembling this stage. Additionally, Cartwright had began to build his coalition of support almost immediately -- his internal and external audiences were continually energized by his persistent calls for new ideas and methods for sharing information more quickly and effectively. Aligning with Clark's model, the Implement stage incorporated the overt "just do it" emphasis delivered by the general. But it also included much of the key flexibility proposed by Clark as critical to long-term success. Users of SKI-Web were allowed to change, adapt, and modify what they saw and accessed within the system -- even to the point of breaking the system at times.[37] USSTRATCOM further experienced the Consolidate stage related to their change in communications culture. The continued emphasis and vectoring by senior leadership to get it right demonstrated how the overall change was being ingrained within

the cultural fabric of the organization.[38] While this simple comparison finds agreement with Clark's concepts, there is also an impact to consider related to the viral change methodology.

Viral change, as conceptualized by Dr. Leandro Herrera, provides an alternative view to the success of change within USSTRATCOM. Viral change focuses heavily on the human interaction factor in managing change. Specifically, "living systems make their own choices about what to do and can only be 'disturbed' – influenced through impulses rather than orders."[39] The obvious conflict stands out immediately -- a military organization clearly responds to "orders" rather than "impulses". While this is an inherently accurate statement about the raw military culture, there is still room for a military member to choose when to harness his discretionary effort (a Clark concept) in support of a major change movement. One of the key benefits to the viral change methodology in this case is its predisposition to advance collaborative change:

> Collective goals, and the sharing of knowledge and learning (beyond formal job descriptions), through processes that are semi invisible and often spontaneous, leads to the development of informal communities of interest or practice. This helps the organization move from a designed/formal structure (teams/ formal structures) to spontaneous collaborative (connections between individuals) structures. Viral Change Wiki[40]

Where viral change makes its greatest impact on how change was successful at USSTRATCOM is in the need for peer-to-peer influence. The initial fear of division chiefs to relinquish control of answers posted to SKI-Web eventually fell away as the "story" of successful posting and interactions directly with the 4-star entered into the lore of the command's culture. In fact, this same lore is supported by individual postings to private blogs outside the command -- a significant sign of viral "infection." Herrera's four main components of change -- language, behaviors, the social tipping point, and culture -- are all resident in Cartwright's case. The language (or framing of the direction)[41] equates to Cartwright's effective signals to initiate

change and frame it through his own words and deeds. The behaviors (Herrera's real vehicle of change)[42] align with the actions of the average USSTRATCOM SKI-Web users who overcame the barriers of communication inherent in the military culture in favor of Cartwright's desired direct response paradigm. "The basic idea was that if we behaved differently -- in this case, shared information more readily -- then our work and performance would improve," said Gen. Cartwright.[43] The social tipping point[44] for the change becomes apparent when you consider the course correction action provided directly by Cartwright to his senior leaders and managers -- the command enjoyed both the speed and the accuracy of its information sharing flow after that point in the initiative. According to Gen. Cartwright, "The biggest challenge was overcoming the cycle of retrenchment. About every six months, people would start to fall back into the old ways of doing business. It took about three cycles before the change finally stuck."[45] The final component is the development of new routines, new culture, or a new way of doing business.[46] In the case of USSTRATCOM, the advantage of collaboration using SKI-Web (and the suite of adaptations that followed) was clearly signaled by its embrace across multiple combatant commands and component headquarters. As Gen. Cartwright observed, "We really shifted from an emphasis on information control and delivery to an approach that placed more value on information management and exchange."[47] Is it possible these two conceptually differing approaches both contributed to the success of the change?

This is exactly what appears to be evident. The highly discretionary effort required to change the way an organization thinks -- how it communicates, clarifies, and collaborates ideas and answers both up and down the chain of command -- is exactly the type of organizational change which worked by using military order and structured change combined with a type of viral "infection" for greater effectiveness. The implementation of any social media concept has

the potential to expand the collaborative awareness, speed, and accessibility of multiple areas of military activity. As Gen. Cartwright emphasized, "The idea of the 'strategic corporal' is pretty common today -- what I'm getting at is the value in a whole crowd of corporals who are collectively smarter than Einstein."[48] But simply telling the troops to "just do it" frequently short-changes the initiative in the long run. Instead, a methodology which is structured for the military hierarchy (like the EPIC Change concept, Kotter's eight steps, or the AFSO21 methodology) can be exercised with a viral change tolerance or encouragement factor within its development. This synergy can provide the same long-lasting effects shown in Cartwright's transformation of the culture of USSTRATCOM.

Recommendations

USSTRATCOM's improvement of the collaboration culture highlighted the potential for change in multiple information sharing regimes.

1) Some information sharing systems are being exploited within the commercial sector, but are not being pursued on a large scale within the military. These include "To Do" lists, net meetings, project manager tools, and blogs for command and control or group situational awareness. Even mobile communications systems such as handheld personal data assistants, bar code scanners and radio frequency identification systems could be employed in more effective collaborative ways.

2) Many information sharing systems already employed within DoD require significant improvement in training, changes to operating procedures, or a relaxation of operating restrictions in order to reap greater benefits from them. Enterprise IT programs such as

Microsoft Office and Sharepoint fit in this category as well as basic web site creation and management.

3) Finally, a clearly defined and resourced IT enterprise is absolutely essential to further improve the collaboration culture. Investing in personnel resources is a good start, but establishing a more thorough and active Knowledge Management corps is equally important.

Conclusion

In conclusion, it appears that Gen. Cartwright's idea for improving collaboration within USSTRATCOM worked. So why didn't "SKI-Web" last within USSTRATCOM? In perspective, the loss of SKI-Web as a singular tool for collaboration was inconsequential. Enduring success has been the change in culture for collaboration within the command and expansion of collaborative activities to include other combatant commands and component headquarters. Change is not easy when it comes to information sharing. The discretionary effort required for adopters to embrace this type of change is far more difficult than simply ordering the troops to "just do it" and waiting for the results. Change leaders must be acutely capable of managing change -- sometimes in orderly process-based stages, and sometimes amidst the viral spread of a good idea -- before they can enable long-term success for their organization. In getting there, many will realize the need for other changes as well, such as the need for new commercial software, the need to improve the use of software already on hand, and the need to adopt better enterprise-wide tools for managing knowledge rather than just handling information. The new era of communication dominance is like a fast train leaving the station. Even without a ticket, there's still a chance to sprint to the end of the platform and jump on board.

Bibliography

AFD 091210-043. Social Media and the Air Force. Ver 2, November 2009.

AFSO 21 Playbook. Available at www.au.af.mil/au/awc/awcgate/af/afd-090327-040_afso21-playbook.pdf, accessed 13 December 2010.

Cartwright, James E., Gen. Interview via email (coordinated by Major Cliff Gilmore, USMC). 11 February 2011.

Cartwright, James E. IFPA Fletcher Conference [speech], "Warfighter Perspective on Integration of Strategy, Analysis and Technology," 15 December 2005. Available through http://www.jhuapl.edu/urw_symposium/proceedings/2007/papers/Cartwright.pdf, accessed 17 October 2010.

Cartwright, James E. "Information Sharing is a Strategic Imperative." Crosstalk, July 2009. http://www.stsc.hill.af.mil/CrossTalk/2006/07/0607Cartwright.html.

Collings, Deirdre, and Rafal Rohozinski. "Bullets and Blogs -- New Media and the Warfighter." Carlisle Barracks, Pennsylvania: United States Army War College, 2009.

Herrerro, Leandro, Dr. *Viral Change: the alternative to slow, painful and unsuccessful management of change in organisations.* United Kingdom: Meeting Minds, 2006.

Inside the Pentagon. "STRATCOM Chief Sets Up Blogs to Quicken Intra-Command Communication, Vol. 21, No. 32, 11 August 2005.

Katzman, Joe. "Special Notice: STRATCOM's 4-star blogger." Personal weblog. Accessed 17 October 2010.

Kuhn, Matt, Major (Chief of USSTRATCOM Knowledge Management). Interview. 13 December 2010.

McVay, Patrick, SES (former executive assistant to USSTRATCOM commander). Interview. 11 December 2010.

Stilwell, Eric, CAPT, USN (former USSTRATCOM staff). Interview. 10 January 2011.

Thaden, Frederick D, Major, USAF. "Blogs v. Freedom of Speech: A Commander's Primer Regarding First Amendment Rights As They Apply To The Blogosphere." Maxwell Air Force Base, Alabama: Air Command and Staff College, 2006.

Thon, Scott (Chief Knowledge Manager, USSTRATCOM J-36). Interview. 13 December 2010.

Rogers, Everett M. Diffusion of Innovations. New York: Free Press, 1983.

Vassiliou, M.S. "The Evolution Towards Decentralized C2." Alexandria, Virginia: Institute for Defense Analysis, 2009.

End Notes

[1] Microsoft internet relay chat, or "mIRC" chat was a simple shareware chat program that worked through any Windows basic operating system

[2] AFD 091210-043, "Social Media and the Air Force," p 3.

[3] David Erlichman, "Social Networking Tools Help Government Users Solve Business Problems." http://fcw.com/Microsites/Solutions-for-Transparent-Gov/Social-Transparency.aspx, accessed 13 November 2010.

[4] DoD 5500.7-R, "Joint Ethics Regulation," August 1, 1993, para 2-301.

[5] DTM-09-026, "Responsible and Effective Use of Internet-based Capabilities," Change 1, 16 September 2010.

[6] AFSO21 Playbook, p B-1.

[7] This is my opinion of *EPIC Change* compared to the AFSO 21 methodology.

[8] Wikipedia wiki on Viral Change. http://en.wikipedia.org/wiki/Viral_Change.

[9] Herrerro, 12.

[10] Wikipedia wiki on Viral Change. http://en.wikipedia.org/wiki/Viral_Change.

[11] Brafman, Ori and Beckstrom, Rod A. *The Starfish and the Spider--The Unstoppable Power of Leaderless Organizations.* New York: Penguin Books, 2006, pp 1-9.

[12] Smiley, George. "Will He Bring the Blog?" In From the Cold blog site. 29 June 2007 post. http://formerspook.blogspot.com/2007/06/will-he-bring-blog.html, accessed 23 September 2010.

[13] Thaden, 26.

[14] Stilwell interview.

[15] A blog works like an electronic bulletin board. An issue of interest is entered into a website bulletin board or weblog (shorten this term to get the popular slang word, "blog"). It usually includes the author's finding, or a request, or an opinion of some sort. If the author has an internet following, this update is immediately available to anyone monitoring his site. Many popular websites even include the capability for users to receive alerts when a blog of interest is updated or when a new topic is blogged in their area of interest. Additionally, a blog is not a blog without the capability for users to respond to the author on the same site. This record of commentary and response can then be evaluated, categorized, grouped, quoted, re-accessed, popularized, recorded or corrected by other inputs. For example, a blog author, or "blogger", might enter a query like "What do you get when you add 2 plus 3?" Other bloggers respond with a variety of perspectives. "Five," says the first response using simple math. "An average American family if you count the dog," says the second. A third input clarifies the parameters of the question by asking "Is it a base-10 number system, or a base-5? It makes a difference." With time and interaction, the original blogger can acquire a great deal of information on his original input, especially if his website has a popular following. The accuracy of the aggregate responses improves with the increase in users who contibute. This is the same context used with "open source" software programming and the "wiki" concept -- multiple users correct the mistakes or the misconceptions of the few. Regardless of population, the window for blogs usually spans a short period in time. Success can be reached when the original blogger reaches an acceptable level of fidelity for the topic -- this could be a single post or a sampling ... the original blogger decides.

[16] Thaden, 26.

[17] SKI-Web tech support, http://skiweb01.ngtechnotes.net:7778/skiweb-web/, accessed 17 October 2010.

[18] Cartwright, James E. IFPA Fletcher Conference [speech], "Warfighter Perspective on Integration of Strategy, Analysis and Technology," 15 December 2005. Available through http://www.jhuapl.edu/urw_symposium/proceedings/2007/papers/Cartwright.pdf, accessed 17 October 2010..

[19] McVay interview, 13 December 2010.

[20] Cartwright email interview.

[21] Ibid.

[22] Ibid.

[23] McVay interview

[24] Inside the Pentagon. "STRATCOM Chief Sets Up Blogs to Quicken Intra-Command Communication, Vol. 21, No. 32, 11 August 2005.

[25] Cartwright email interview.

[26] Ibid.

[27] Katzman, Joe. "Special Notice: STRATCOM's 4-star blogger." Personal weblog. Accessed 17 October 2010.

[28] McVay interview.

[29] Kuhn interview.

[30] Ibid.

[31] Cartwright email interview.

[32] Ibid.

[33] Thon interview.

[34] Cartwright email interview.

[35] Ibid.

[36] Clark, Timothy. *EPIC Change - How to Lead Change in the Global Age*. pp. 27-28 .

[37] Kuhn interview.

[38] McVay interview.

[39] Viral change on Wikipedia. http://en.wikipedia.org/wiki/Viral_Change, accessed 13 Dec 2010.

[40] Ibid.

[41] Ibid.

[42] Ibid.

[43] Cartwright email interview.

[44] Ibid.

[45] Ibid.

[46] Ibid.

[47] Ibid.

[48] Ibid.