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**Images were obtained from the now inactive Defense Imagery Center.**

The findings in this Research Product are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.
What is “eLeadership”?

Nearly everything a leader does requires communication – from issuing orders to motivating and influencing Soldiers. The explosion of communication technologies available to Army leaders in the last decade makes leadership more complex, forcing leaders to understand both the advantages and challenges of having these technologies at their disposal. Army leaders are often operating under conditions in which their subordinates, chain of command, and supporting units are all in different locations, making standard, face-to-face, leadership practices impossible or impractical. As a result of this new communication reality, the term eLeadership has evolved to describe the actions leaders take to conduct their core responsibilities and functions through electronic means of communication.

eLeadership: The act of inspiring and influencing others across a dispersed area through electronic means of communication.

eLeadership refers to the act of inspiring and influencing others across a dispersed area through electronic means of communication in order to accomplish team and organizational objectives. It is important to note that in this context the term “dispersed” refers to both physical and psychological distance. Thus, eLeadership may also be prevalent in-garrison where senior leaders are physically close, but may be more likely to communicate with subordinate leaders through the use of technology such as email, text, or instant messaging.
How Is eLeadership Different?

Types of technology used by military leaders can range from micro-level systems, managed and operated by individuals, to macro-level systems, managed and operated at an organizational level. Technology-mediated means of communication (TMMC) is the term we will use to refer to the many different forms of electronic communication used by military leaders. TMMC impacts how leaders conduct their duties and responsibilities; yet the precise nature of these changes and their effects on leader performance are not yet fully understood.

We do know that technology increases the sheer volume of data and information available to leaders, and thereby increases the complexity of the leader’s environment. Leaders must manage and prioritize incoming data, make sense of the data, and turn it into concrete actions in order to provide meaningful direction to other organizational members. Technology has also increased the interconnectedness of organizational members, enabling a greater degree of collaborative work. The collaborative nature of work can be useful for mission effectiveness, yet potentially requires unique skills for success. For example, one challenge for leaders is to manage the need for collaboration, yet still maintain clear lines of command and control, while avoiding the dangers of micromanagement. Finally, in a digital environment, leaders’ communication skills are paramount. Communication has always been a key leadership skill, but the vast domain of TMMC places a priority on both verbal and written forms of communication, as well as skills needed to communicate to large groups across a distributed environment.

How to Use This Handbook

This handbook contains best practices and lessons learned regarding effective and ineffective ways to lead through technology. These were compiled through extensive interviews with Army leaders at multiple levels, and were supplemented by findings from scientific literature. The best practices and lessons learned are presented in the first portion of the handbook as themes. The purpose of these themes is to help Army Soldiers become more effective leaders.
by presenting key considerations for leading through TMMC. The themes, in conjunction with other portions of the handbook, will also help leaders plan for positions that may require distributed leadership.

In addition to best practices, this handbook attempts to outline a strategy to systematically identify and organize the vast TMMC choices available to military leaders and their usefulness for different leadership functions. Leaders will be introduced to a method for considering factors such as the capabilities of the technology, the technological requirements for various leader functions, and the match between available technology and leader needs.

Lastly, this handbook contains a number of appendices that provide additional, detailed information relevant to leaders, such as a compilation of Army leaders’ opinions related to various TMMC; definitions for technology characteristics and key leader functions; a matrix that can be used to link technology and key leader functions; and a list of the knowledge, skills, and abilities that Soldiers identified as being the most important for leaders to possess and develop.

Best Practices and Lessons Learned from Army Leaders

The themes presented cover global practices for eLeadership, managing interpersonal relationships through technology, and developing structures and processes for implementing eLeadership.
Global Practices for eLeadership

Theme 1: Maintain Professionalism

The number and variety of technologies available to leaders has been steadily growing, blurring the lines between personal and professional space. Technology originally designed for personal use has now morphed into professional tools (e.g., Unit Facebook pages) and vice versa (e.g., email). These transitions in technology have blended some personal and professional habits and behaviors, creating challenges and pitfalls for Soldiers.

Three best practices to maintain professionalism through technology are:

1. **Use a professional tone:** One of the most remarkable changes due to technology is the growing use of internet acronyms (e.g., “lol” for “laugh out loud”) and emoticons (e.g., use of punctuation to denote a happy face “:-)”) in professional settings. Another trend is the use of grammatically incorrect sentences in email or PowerPoint slides. Leaders must recognize the prevalent use of this form of communication and provide guidance to subordinates that such language should be minimized in professional settings and is often unacceptable.

   This blend of personal and professional habits is further complicated by the perceptions of anonymity associated with some forms of technology. Soldiers interviewed described situations where both senior leaders and subordinates did and said things via technology that they would not typically do or say face-to-face (i.e., they were “braver behind the technology”). To encourage professionalism through technology, leaders should remind subordinates that electronic communication always leaves a trail. Messages are easy to store, retrieve, and forward to other recipients; thus, it is impossible to know who could have access to information posted online or sent via email. Leaders should stress to subordinates that unprofessional behavior communicated through technology may have a lasting impact on their career.

**Lessons from the Field:** “One time, two junior officers started arguing over email, and they were still cc’ing others in the back-and-forth communication. It got personal and unprofessional very quickly. Someone forwarded the exchange to higher. When the Commander read the email exchange and asked for explanations, they couldn’t provide any. They both got chewed out. It is easy to do or say things over email that you wouldn’t generally do in face-to-face meetings.”
2. **Lead by example:** Although this is a standard leadership principle, it is a particularly important consideration when leading through technology. Just as with face-to-face interactions, leaders set the tone and culture of their organizations when using technology. By maintaining a professional persona, even through the use of everyday technologies such as email and social media, leaders set the standards that subordinates will follow.

**Leader’s Quote:** “Technology is an aid, not a replacement for leadership … traditions, customs, and context are important and critical for unit cohesion... and we must maintain them through electronic communication.”

3. **Establish and maintain boundaries:** Two important leader functions are establishing expectations and goals, and structuring and planning, especially regarding how technology should and shouldn’t be used. In a distributed environment, leaders must be especially conscious of establishing boundaries (e.g., right and left limits) regarding what is acceptable and unacceptable behavior, both within and outside the unit. As an example, one of the biggest dangers of social media is the ease with which lines of authority can be breached (see Chain of Command as a Critical Boundary on page 8). As with the preceding best practices, establishing and maintaining boundaries involve providing guidance to subordinates and role modeling distinct personal and professional behavior.

**Leader’s Quote:** “I was the Platoon NCO-IC, and one day I was disciplining a young Soldier for doing something they shouldn’t have. The Soldier’s response to my comments was to tell me that I couldn’t discipline the Soldier since we were ‘friends’ on Facebook. That incident made me re-evaluate how I interacted with other Soldiers online.”
Chain of Command as a Critical Boundary:

A benefit and drawback of utilizing technology in a distributed environment is the ability to connect people throughout the chain of command. This ease of communication can have unintended and serious consequences for maintaining and upholding the proper chain of command (CoC). As most leaders who addressed this issue stated, in general, Soldiers do not violate CoC structures or processes. However, technology makes it easy for:

- Subordinates to bypass direct leaders and bring issues, complaints, and opinions to higher level leaders,
- Senior leaders to bypass more junior leaders and get involved in issues that are not appropriate for them to be involved in, and
- Family members to reach out to personnel in leadership positions in ways that create difficulties for all involved.

Lessons from the Field: Search functions within AKO are useful for getting contact information for most individuals. It is too easy to send an email to someone higher up the chain of command. Sometimes, people use it to vent frustration or to file complaints at the wrong level, thereby elevating trivial issues. This can result in people getting into trouble (both the sender and his/her superior).

Critical Incident: A Soldier was conversing with multiple spouses within the unit via email regarding living conditions. Through these email messages, the Soldier was able to rally support on his/her behalf. After spouses responded to the Soldier’s complaints, the Soldier forwarded the email trail to the G6. Rather than voicing a complaint to an immediate supervisor, the Soldier inappropriately jumped the chain of command and was using spouse comments to influence leadership. Ultimately, the issue was pushed back down to immediate supervisor and dealt with at that level.
Theme 2: Remember Follow-up

One of the biggest drawbacks of many technological applications is the lack of accountability, or the ability to tell if the intended recipient of a message received and understood the communication. As an example, one of the most prevalent forms of eLeader communication is email, with tools such as computers, tablets, mobile phones, and various Army platforms incorporating this functionality. It is such an easy tool to use that most people do not give much thought to how it should be used in a professional setting. Leaders we spoke with stressed the importance of communicating to subordinates that email is not a “fire and forget” tool – it may require follow-up if receipt of the message is critical. This lesson applies to other TMMC as well.

Two key best practices include:

1. Institute redundancy: Because of the lack of accountability in many different types of technology, effective leaders institute a number of different redundancy protocols to ensure electronic communications are received. One of the most common methods mentioned was to follow-up through a different medium. While redundancy can be helpful, it is also important to prioritize information so Soldiers are not overwhelmed, a topic covered in a later section.
2. Verify understanding: Research has shown that nonverbal communication is a rich source of information during face-to-face communications. As such, electronic communication, which may lack visual cues, can result in the loss of meaning or intent. In particular, emotions such as urgency and criticality can be difficult to transmit effectively through electronic forms of communication. This lack of clarity can lead to misinterpretation and miscommunication between parties.

The primary goal of follow-up is not just to acknowledge receipt, but also to ensure the expectations and intent of the message are understood. One strategy to ensure understanding is to introduce feedback loops, where subordinates are required to respond to messages with a brief summary of action items they must address. Feedback systems such as this capture and address both the content of the message and implied factors such as criticality.

Lessons from the Field: Leaders recommended using redundant systems when leading distributed units. For example, National Guard leaders report using email to coordinate training events; however, for some Soldiers, access to email is limited or sporadic. In situations such as these, leaders may also utilize text messages and/or phone calls to ensure everyone has received the message. Similarly, Active Duty leaders suggest that critical information that is sent out over email (the most common technology used) should be followed by a phone call or face-to-face meeting to ensure the message was received and understood.
Theme 3: Prioritize Information

Information technology makes vast amounts of data readily available to leaders, who can easily transmit the information to a large number of individuals without much effort. This feature of information technology can be a major disadvantage for effective eLeadership. As a result, leaders must learn to scan information, and synthesize and prioritize data before retransmitting.

Best practices related to prioritization include:

1. Decide whether to act: Leaders must avoid taking impulsive actions and reactions when it comes to distribution of information. Just because information is readily available and easily communicated does not mean that it should be sent. Too often leaders overwhelm subordinates with the amount of information they transmit; thus, effective leaders consider how information may affect their unit’s priorities and battle rhythm prior to transmission.

2. Highlight key information: A key leader function is to have a high situational awareness and to effectively communicate this awareness to subordinates so that they understand what is going on and can respond appropriately. In order to facilitate situational awareness, leaders should scan information they receive and highlight key points for subordinates that they consider important, or for which actions are required.

Lessons from the Field: Leaders who push out information without first analyzing it, or who fail to highlight relevant pieces for their subordinates, are actually impeding the situational awareness of their team. Soldiers interviewed for this handbook suggested that instead of just forwarding emails, leaders should take the time to summarize key points in forwarded email using bullet points. By emphasizing and prioritizing the key components of the message, leaders provide context for information that is being sent.
3. Communicate priorities: In a technology-mediated environment it is especially important for leaders to prioritize information and set expectations regarding how information is going to be tracked, who is responsible for tracking versus acting on information, and how quickly requests must be addressed. Priorities must then be continuously updated and communicated. Information that has a higher priority should be communicated in such a way that others will understand and acknowledge that change is required, and it must be clear how that change is to take place.

Leader’s Quote: “Because there is so much information being exchanged, it is easy to lose focus and not prioritize work tasks as appropriately as one should. As a result, everything becomes a priority. There is almost too much situational awareness, which in turn, reduces focus on work tasks (i.e., it is easy to lose focus on what is important).”

Leveraging Technology: It is important to sustain information sharing in a distributed environment. Forums/portals are useful technologies that can be used for this purpose by establishing ‘ongoing meetings.’ In one example, a unit used Defense Connect Online (an older version of DCS) to share information on an ongoing basis. In this instance, each shop managed and ran their own portal. As priorities changed, the unit was able to address changes through the shop portals - in this way information could be given to the unit as a whole, or targeted to specific groups on a ‘need to know’ basis. As a result, shops were clear on their priorities and courses of action and were not overwhelmed by information that was irrelevant to their day-to-day operations.
Building and Maintaining Interpersonal Relationships through eLeadership

One of the biggest challenges for leaders is building and maintaining interpersonal relationships through technology. For example, the absence of nonverbal cues in some forms of TMMC can disrupt the development of shared understanding, trust, and rapport. Most individuals interviewed agreed that, to the extent possible, leaders should first build rapport through face-to-face interactions and then transition these relationships to TMMC.

Theme 4: Build Trust and Rapport

Army leaders interviewed for this handbook agreed that establishing trust – both the leader’s trust in his/her subordinates and the subordinates’ trust in the leader – was a requirement for effective leadership. Establishing and maintaining this trust can be a major challenge for leaders.

Best practices for building trust and rapport include:

1. **Leverage technology to learn about subordinates:** In a distributed environment, face-to-face time with subordinates is not easy. As such, leaders must plan in advance how they will get to know their subordinates. Social media, which provides greater access to what is going on in subordinates' lives, is an example of a technology that can be used to build rapport (see Advantages and Disadvantages of Social Media in page 15).

2. **Establish a leadership presence:** Soldiers repeatedly stressed how difficult it is to build trust when subordinates do not have the opportunity to get to know the leaders in their chain of command. Besides learning about the Soldiers in their unit, leaders can use TMMC (e.g., unit Facebook sites, blogs) to establish a presence when face-to-face interactions are scarce – this serves as a mechanism for subordinates to learn about the leader and may cultivate a climate of approachability. While social media and interactive technology can be powerful tools that leaders leverage in order to reach out to subordinates, when not used properly, or thought through in advance, these technologies can pose serious pitfalls for leaders. One example is “leading by email.” Some leaders become bogged down by technology, such as email, and fail to maintain sufficient face-to-face interactions with their troops. Effective leaders are conscious of this pitfall and utilize their time management skills to prevent this from occurring.

**Lessons from the Field:** "Technology has made demands on a leader's time and attention a serious time management issue. It is so easy to reach out and 'touch someone' ... It is very easy to spend most of the day reading and responding to emails at the expense of interacting with your Soldiers. [As a leader] I would set limits on when I was at my desk, as well as the amount of time I spent on email, to avoid neglecting other duties. I did not want to ‘lead by email’.”
3. Build credibility: Individuals who are relying on technology as a tool to enact leader functions may need to work harder to establish themselves as leaders who are involved and genuinely concerned with the wellbeing and success of their subordinates. Interactions through technology can leave the subordinate wondering whether the leader cares about the perspective and well-being of his or her subordinates. For example, while showing concern for the welfare of subordinates is important for trust to develop, the lack of emotional expression (e.g., tone, inflection, facial expressions) in most TMMC can make leaders appear distant or uninvolved. Interactions with subordinates through technology which appear inconsistent with face-to-face interactions may also impact trust and commitment among subordinates.

4. Manage expectations: One best practice, tagged by several leaders as one of the most important, is the need to set and manage expectations regarding the use and implementation of technology. Most leaders expressed the view that, although there are general “opinions” and “expectations” regarding standards for technology use, these are not always universal and can lead to serious miscommunication. Leaders who were interviewed also expressed the feeling of being caught in a paradox. That is, technology has bred expectations of faster and more frequent communication. However, at the same time, Soldiers criticize the demands that constant communication places on them, making information overload an obstacle for effective job performance. When expectations are not met (for either the leader or the subordinate), trust may be broken and rapport damaged. Given this, successful leaders provide guidance regarding their expectations for the use of technology. In addition to leading by example, one way to do this would be to provide a Commander’s policy letter for the use of technology. Like most important topics, guidance regarding the use of technology is something that must be continuously monitored and adjusted if needed (See Theme 8: Develop SOPs and Metrics for eLeadership on p. 21.)

Lessons from the Field: If possible, unit climate and trust should be established with initial face-to-face interactions. Leaders can then demonstrate authenticity by engaging in TMMC actions and behaviors that are consistent with face-to-face behaviors - these initial TMMC interactions can be further reinforced by future face-to-face communication. Through both face-to-face and TMMC interactions, a cycle of authentic interaction is therefore established.
Advantages of Social Media (e.g., Facebook, Twitter, blogs, etc.):

- Social media can be continuously updated. In this manner, leaders can provide personal information about their views, expectations, and Commander’s Intent.
- When sending out information, leaders can incorporate different types of media such as text, images, videos, and sounds; providing a “media-rich” experience.
- Messages can also include a certain amount of interactivity. One leader can reach many subordinates at a time and can provide the opportunity for subordinates to interact by asking questions, posting messages, etc.
- Social media can also allow leaders the opportunity to keep up with Soldiers’ lives. This type of information can be used to better build rapport.
- Leaders can build a “professional persona” through social media. Blogs or professional networking organizations provide opportunities to be linked with a mentor or, alternatively, where leaders can mentor others.

Disadvantages of Social Media:

- Leaders must ensure that information provided by themselves or others adheres to operational security protocols.
- For a number of reasons, not all unit members will have access to this type of technology. In addition, unit members might be unfamiliar or uncomfortable with the use of social media. Similar to other types of technology solutions, leaders must assess the prevalence and frequency of use of the various types of technology before implementing TMMC solutions.
- Lack of accountability may be a problem. Most types of social media solutions do not allow the manager to verify that individuals have accessed or read information posted on a particular site. In addition, in situations where interactivity is possible (e.g., posting on a Facebook page), it is not always possible to verify that a person posting a message is the real owner of that account.
- Potential erosion of authority is another possible disadvantage of social media. If a leader does not establish clear boundaries for the use of social media, it could lead to inappropriate comments, unprofessional conduct, and invasion of personal privacy. It may also lead Soldiers to circumvent the chain of command.

Leader Consideration:

- People can obtain personal information about each other on social media.
- This information can lead to the formation of positive or negative impressions and characterizations of others. Although leaders are cautioned against doing so, this information can also be used for disciplinary actions in instances in which UCMJ violations are found. Leaders should be aware that using information gleaned online for disciplinary actions may be viewed as a violation of trust. If TMMC will be monitored leaders should be sure to set those expectations at the outset, as well as expectations for areas such as online content.

Army guidance on social media can be found at:
https://www.army.mil/socialmedia/
Theme 5: Build Morale and Motivate Soldiers Through Technology

Leaders must be able to build morale and motivate their Soldiers when leading through technology. Finding ways to connect with subordinates (so as not to appear out-of-touch), and utilizing strategies to build unit cohesion, are essential for the effective completion of these critical tasks.

To build morale and motivate Soldiers through TMMC, leaders should:

1. Convey positive emotion through TMMC: While the absence of nonverbal cues in many forms of TMMC makes conveying emotions challenging, when possible, effective leaders use visual cues and attachments (e.g., videos, pictures) to express positive emotion and to motivate in written messages. Including the unit motto in emails is one example of using symbols to build esprit de corps. In another example, a leader disseminated his vision for a discrete campaign by creating a video message. The video portrayed the leader in battle gear and was viewed as very inspiring by subordinate leaders. Effective leaders also carefully craft messages to subordinates to ensure that accurate emotions are coming through. Specifically, successful leaders think about the words they use, their meaning, and how they will be interpreted by Soldiers.

2. Disseminate messages widely: Technology gives leaders the capacity to reach a much larger audience with their message and to interact with Soldiers they would not normally have the opportunity to interact with. Although leaders should be thoughtful in how they do this, distributing messages to a broad Army audience can build morale and sustain motivation.

3. Use TMMC to provide public praise and support families: A number of Soldiers cited examples where deliberately including others in TMMC was a means of motivating subordinate leaders or building morale. For example, cc’ing someone in the rating chain when providing positive feedback to a subordinate can be very motivating because it provides “visibility” the Soldier might not normally receive. Using VTC to involve others in promotional ceremonies is another means of publically praising a junior leader that can lead to increased motivation within the unit. When Soldiers are able to interact with their family members it builds morale and increases positive emotions. Thus, media can also be used to keep in touch with, or involve families, while deployed.

Lessons from the Field: In one example of using email to build morale, a commander received a “dear boss I quit” letter, in which the dissatisfied Soldier cc’d all Soldiers in the same position in the European command. The Commander’s 2 ½ page reply ‘to all’ acknowledged the Soldier’s concerns and showed that the Commander cared about the welfare of his subordinates. In the words of one subordinate, “the email was forwarded to all kinds of people because the response showed the Commander was actually paying attention and listening - it was motivational because the Soldier who wrote the email probably thought he would never hear back, so the fact that the Commander replied (and to everyone) was very motivating.”
Theme 6: Provide Feedback

Providing feedback is a core leadership function that is critically important for effective Soldier and unit performance. Leaders can use feedback to motivate subordinates, as well as to correct behavior. Feedback can be informal and unstructured in nature (e.g., sharing an idea or expressing an opinion), or formal and structured (e.g., in the form of an official performance evaluation).

Effective feedback entails:
(1) providing detailed information with concrete performance examples, (2) including behavioral and/or attitudinal components, (3) setting achievable goals, and (4) providing recipients with the opportunity to ask questions and seek further information. Achieving all of these components can be difficult to accomplish through electronic means.

Because of the sensitive nature of giving and receiving feedback, leaders should be aware of the following best practices for providing feedback:

1. **Formal feedback should be face-to-face:** Under most circumstances, formal feedback (e.g., OERs/NCOERs, counseling) should be done face-to-face. In situations where this is not possible, it is important to utilize media that allow for nonverbal communication to occur and provide the opportunity for the recipient to ask questions and seek clarification.

2. **Avoid appearance of impersonality:** Leaders who need to use TMMC for feedback should consider providing the Soldier with a rationale for using the technology, while also stressing the importance of feedback. Care should be taken to avoid the appearance that feedback is not a priority to the leader, or that the content of the feedback is not important enough to solicit face-to-face communication. Failure to address these issues when providing feedback through technology can make a leader appear impersonal, and devalue the importance of the content of the feedback.

**Lessons from the field:** It is important to consider the effects of public feedback over TMMC before providing it. One leader said, “One time when my least confident battery CDR blew an ATACMS mission I lost my patience with him on the command net and really dressed him down. That was a mistake. I had spent six months trying to build up, bolster, and reinforce this guy’s confidence, and all that work was undone in that one moment ... for this particular officer, that was his undoing. He never regained the confidence nor got the fire in the belly that I wanted him to have.”

**WARNING:** Many Army leaders cautioned that feedback that is serious or sensitive should be conducted face-to-face. When it is done over email or phone, it can lose its meaning, seem impersonal, or appear to be a low priority.
3. **Use developmental feedback tools that are available**: Technology can also be a useful tool for collecting and analyzing performance information that can be used for developmental purposes. For example, there is the Multi-Source Assessment and Feedback tool that collects performance feedback via surveys from superiors, subordinates, and peers. According to Soldiers, this tool is useful for gaining self-awareness regarding how they are perceived within an organization; in addition, they provide some level of anonymity for raters, a potential advantage of some forms of TMMC.

**Technology Characteristics for Providing Feedback**: Synchronicity, streaming capabilities, and full accountability are critical requirements for conducting feedback through technology. They ensure that feedback is received by the intended party, they protect the privacy of the recipient, and they provide the opportunity for discussion and for questions to be asked.

Videoconference, phone, and VOIP are the best TMMCs to use for providing feedback when face-to-face communication is unavailable. Information conveyed through a leader’s tone of voice, and emphasis placed on spoken content, communicates meaning, giving subordinates a clearer picture of their leader’s intentions. Because these modes of communication are in real time, subordinates also have the opportunity to respond to leaders and seek clarification.

**More information on the Multi-Source Assessment and Feedback tool**: [https://msaf.army.mil](https://msaf.army.mil)
Theme 7: Avoid Micromanagement

One of the major pitfalls encountered by leaders, and a major obstacle for building and maintaining interpersonal relationships, is the opportunity TMMC can provide for leaders to micromanage. Although certain leadership functions, such as monitoring team performance, are important, most leaders interviewed for this handbook agreed that technology makes it too easy to “over-observe” or “over-control” the work of subordinates. Micromanagement has serious negative consequences for interpersonal relationships and leadership functions such as building trust and establishing a positive social climate.

In order to avoid micromanagement practices, leaders should:

1. **Remember your role:** Technology tools have made it very easy for leaders to monitor unit performance – even in a combat environment when units are conducting tactical operations. While a leader’s role is usually to support subordinates by providing guidance, solving problems, and/or providing resources, technology makes it easy for leaders to become overly involved in the work of subordinates. A senior leader who takes on the role of a junior leader by doing his or her job - or telling him or her how to do it - is micromanaging. Micromanaging subordinates can create conflict in interpersonal relations and can be detrimental to performance, particularly if it is perceived as a lack of trust in the subordinate’s ability to do the job.

**Critical Incident:** A senior leader was monitoring a subordinate unit conducting tactical operations in a battle zone. Instead of providing information when requested, the senior leader began to order the junior leader to conduct specific actions. The leader on the ground felt that his senior commander didn’t trust his situational awareness and judgment. This further created problems for the unit, because unit members began to lose respect and trust in the junior leader. Soldiers assumed that the senior leader had to intervene because he felt the junior leader was not tactically proficient.
2. Respect other people’s time: Another way leaders micromanage their subordinates is by monopolizing their time. For example, leaders may monopolize subordinates’ time by frequently requesting status updates or by sending or requesting too much data. To some extent leaders must establish the conditions for success and then trust that subordinates are doing the right thing and are managing their time wisely. Effective leaders set their subordinates up for success by providing ample guidance in their Commander’s Intent Statement, by setting realistic expectations for technology use, and by prioritizing requests.
One of the main goals of this handbook is to assist in the development of structures and processes that will help Army leaders be effective when leading through technology. The following two themes highlight how different processes and structures should be instituted so that eLeadership can be effectively conducted.

Theme 8: Develop SOPs and Metrics for eLeadership

All unit members must have a shared understanding of how to properly utilize technology. A large part of this shared understanding is completed through unit training. However, training can be enhanced by leaders regularly articulating their expectations about, and through, technology. Leaders interviewed for this handbook expressed the need for units to develop specific SOPs on how to use technology throughout the organization. This is critically important because familiarity and comfort with technology will vary among Soldiers, leading to significant differences in how technology is used and implemented. Although respecting individual differences in technology use is generally good, these differences can create problems when units are not able to coordinate and collaborate with each other. These differences can lead to a misalignment of duties and responsibilities and create inefficiencies or a breakdown of performance. In addition, leaders should be sure to draw on subordinates’ experience/understanding of technology (i.e., through “backwards mentorship”) to increase their shared understanding of TMMC capabilities.

Four considerations when implementing processes for eLeadership:

1. Establish clear SOPs for using technology

Although it is important to allow a certain amount of flexibility of action, ambiguity about procedures and lack of guidance can have harmful consequences. The focus of SOPs should be on ensuring that all unit members have a shared understanding of the capabilities of different technology platforms and expectations on their use within the organization. When establishing SOPs, leaders should address:

- How technology is to be used, as well as when, and under what conditions (see the Key Technology Questions provided on the following page)
- Standards of conduct, professionalism, OPSEC, knowledge management, and chain of command

Lessons from the field: In order to establish clear SOPs, leaders must have an accurate view of the capabilities of various systems. Appendix A – Guidance from the Field for Developing SOPs, provides experiences from Army leaders on the pros and cons of various technology systems.
Key Technology Questions:

1. **Who** has access to what pieces of technology? Who should have access to the different technology platforms?

2. **What** technology is available and what is the frequency or ease of access to the different technology media? What are Soldiers’ familiarity and level of proficiency with different types of technology?

3. **Why** are we using or planning to use a certain technology medium? Does it meet requirements or serve a function?

4. **How** is a technology medium going to be used to facilitate critical functions such as decision making and problem solving, or to support unit climate and trust development? Under what conditions will it be deployed? How is it going to be replaced if it fails? How will information be prioritized? How will intent and understanding be confirmed? How will information be protected?

5. **When** does the information need to be transmitted; is there a fast or slow suspense? When do relevant parties need confirmation that the information was communicated and received?

2. **Establish response protocols:** Leaders should have SOPs for how to acknowledge and respond to situations involving technology. For example, how will a leader or unit respond when inappropriate comments are made in Facebook or some other social media? As previously mentioned, technology makes it easy to violate chain of command protocols (whether on purpose or by accident). Leaders recommend that units have resources readily available that help re-direct individuals to the right person within the chain of command. This is especially true for instances involving complaints from family members.
3. Institute decision making processes: Another critical area that requires monitoring by leaders involves decision making and command and control processes. In virtual collaboration environments, situations can arise where it is unclear who is making decisions. Having individuals make decisions on behalf of others has serious, even legal, repercussions. Leaders must institute SOPs and training regarding how these situations will be addressed, as well as procedures for verifying the identity of an individual in circumstances where clarity is required.

Leader’s Quote: “Even when using call signs, you need to know that the right person is giving the order – and that they have the authority to give that order. Sometimes you have someone saying something over chat – CPOF for example – but when you ask who it is, you realize it is someone acting on behalf of someone else, and they don’t have the authority to actually give out that command. It is important to have that clear up front and to double check when in doubt.”

4. Develop metrics and standards for evaluating the adoption of technology: In general, leaders agreed that technology use is mostly based on the familiarity and comfort of a given leader with a piece of technology. The drawback to this approach is that useful innovations or efficiencies can be missed. On the other hand, leaders generally agreed that technology should not be used or incorporated just because it is available. If it does not serve a purpose, or facilitate operations, then its criticality or applicability should be questioned.

Deciding on the adoption of a new technology or SOP can be costly to a unit in terms of training time, funding, loss of initial performance, etc. Thus, leaders agreed on the need to set metrics for evaluating the usefulness and costs associated with different technology systems. For example, important questions to ask when evaluating technology include:

- What are the training and maintenance costs associated with a given technology?
- What are the functions that are going to be reliant on this technology?
- If a technology fails, what redundant systems are available?
- Are there other systems already in place that can be utilized instead (i.e., is there a need to adopt a new technology)?
- Will this system “communicate” with other systems (e.g., is there compatibility between systems)?
- Under what circumstances is a given system helpful/inefffectual?
- “Why are we doing this? What purpose does it serve? How are we going to measure effectiveness?” For example, if a leader wants to use Facebook to disseminate his Commander’s Guidance/Intent, how will he/she evaluate if this medium is effective?
Lessons from the Field: “A new unit commander stated that he wanted a Unit Facebook page created. He saw that other units were developing their own Facebook pages and didn’t want to be left behind. However, at no point did people ask themselves specific questions about what need the Facebook page was supposed to meet, how it would utilized, how effective it would be, if people would have access to it, and most importantly who was going to manage it and police it. The Facebook page had all sorts of unintended consequences that we were not expecting. In the end, it generated more problems than solutions. A lot of these issues could have been addressed if there had been more direct guidance or thought put into it in advance.”
Theme 9: Matching Technology to the Leader’s Task Requirements

Effective eLeadership requires planning. The following section outlines a strategy, including questions and best practice discussions, to systematically match available technology to individual leadership requirements:

**Leader Question:** What technology is available to me and what are the capabilities of each system?

1. **Identify technology capabilities:** There are many different technologies available to Soldiers, and the “latest and greatest” technology changes frequently. Because of this rapid pace of change, it is important for leaders to think about technology in terms of its capabilities and properties rather than in names of brands and devices. Understanding the capabilities and properties of technology will improve a leader’s ability to adapt to new technology by providing a systematic way of understanding the characteristics of the technology and how to apply them for effective leadership. See information on the “Six Characteristics of Technology” below that describes the primary capabilities that can be used to describe any type of information technology.

**Six Characteristics of Technology:**
- **Synchronicity:** Synchronous or Asynchronous
- **Sender-Target Ratio:** One-to-One, One-to-Many, or Many-to-Many
- **Perceptual Medium:** Audio, Text, Graphic, Streaming
- **Bandwidth:** Low, Medium, High
- **OPSEC:** Unclassified, Secret, Top Secret
- **Receipt Accountability:** No accountability, partial accountability (confirmation that information was received, but no verification that information was processed), full accountability.

(See Appendix C for a more detailed description and definition for each of these characteristics, and how these definitions can be used to describe 4 different technologies currently used in the Army.)
2. Identify capabilities required for eLeadership:
To apply technology in a structured way to leadership, we need to think about leadership activities in a structured way as well. Appendix D describes 10 critical leader activities - or functions - that are important for effective leadership. As a mental exercise, it is useful to think about how technology impacts leader communication when accomplishing these different functions and whether different technology characteristics support or detract from what the leader is trying to accomplish. For example, if a leader is working to establish unit expectations and goals, how important is synchronicity in conveying the information? Could the perceptual medium impact the success of the communication (i.e., is audio helpful or is text sufficient)? How important is receipt accountability, or ensuring the information was received and processed by the recipient? Leaders must plan in advance how they will utilize available technology so they can set expectations regarding technology use, as well as provide opportunities for their units to practice and master effective performance through technology.

Leader Question: For each leadership function, what are the capabilities that I require in a technological device?

3. Cross-walk technology capabilities to leadership functions: The next step is to match information technology capabilities to the requirements of leadership functions. The goal of this exercise is not to define which technologies to use for each leader function, but to build the habit of asking and answering the question about how well a technology fits an action. This will ensure that communication is based on careful planning and thought, rather than a prevailing method, or a leader’s preferred method. Once a leader knows what technology is available to them and the characteristics of each type of technology, the leader can then decide which technologies are best suited (e.g., have the required capabilities) to carry out critical leadership functions in a distributed environment. This process is called “cross-walking” capabilities to requirements (see next page).

Leader Question: How do the available devices meet the requirements for each leadership function?
Cross-Walking Technology Capabilities to Leadership Functions

An effective way to think about the intersection between technology capabilities and leadership functions is to consider the following questions:

1) For each leadership function, what are the capabilities that I require in a technological device?
2) What technological devices are available to me?
3) How do these devices meet the requirements for each leadership function?

An example of cross-walking leadership functions with technology capabilities is provided in Appendix E. In this example, a leader estimates that in order to effectively train and develop subordinates through TMMC, a technology that has the following capabilities is needed: is synchronous, has a one-to-many sender to target ratio, is capable of transmitting any type of perceptual medium, has the capability to transmit large amounts of data (e.g., videos or high-definition images), can transmit unclassified material, and has partial accountability. Based on this cross-walk, the leader concludes that Adobe Connect meets those requirements, is available, and therefore, is the right tool for job.

Leader Question: How might the context in which I am operating impact the choice of technology?

4. Make adjustments: As leaders map out and consider how technology will be used to carry out their duties and responsibilities, they should also consider the type of environment in which they will be operating. For example, technology that is available in-garrison might not be available when deployed, or it may not operate as efficiently under training/deployed conditions. Referencing the example above, Adobe Connect might be the right tool while in garrison, but may not be appropriate in a deployed environment because of the lack of bandwidth that is available. Therefore, leaders need to consider what other technologies are available to them, and how other technologies meet the stated requirements. If not all requirements are met, can some of the requirements be modified or dropped? Appendix E can be used to map out and plan the relationship between technology, technology characteristics, and leadership functions in different environments. It can be used as a way to structure and make decisions regarding how technology will be used during assignments.
Summary

The purpose of this handbook was to introduce the concept of eLeadership and provide guidance and ideas on how to use technology-mediated means of communication better. We discussed the importance of understanding the effects of technology-mediated means of communication on leader requirements and practices, and introduced a definition for eLeadership. Information and vignettes were collected from a variety of officers and NCOs, and served as the foundation for a series of eLeadership best practices that covered themes such as maintaining professionalism and building trust. While the ideas presented here should resonate with Soldiers as common sense concepts, this handbook provides a structured approach to thinking about leading through technology. It compiles these ideas into a framework that encourages systematic planning and consideration of the match between technology characteristics and leader objectives, and provides an initial process for how to approach functioning as a leader in a distributed technological environment.
Appendix A – Soldiers’ Thoughts on Technology Platforms

This appendix contains a collection of thoughts and opinions from Army leaders regarding the impact (positive and negative) of different technology platforms on leadership in distributed environments. These thoughts and opinions were collected through one-on-one interviews, focus groups, and surveys. These do not constitute official U.S. Army policy, but are intended to serve as a repository of knowledge and experience gained by Army leaders.

GENERAL PRACTICES

- Commanders should establish digital rules of engagement – for example, what information should be available via TMMC and who should have access.
- The chain of command is still important. The flow of information must go up and down using the chain of command to provide a system of checks and balances and increase accountability.
- Good leaders use media to enhance leadership, not as a substitute for leadership. Good leaders use a balanced, hybrid approach, with different technologies and face-to-face communication.
- The environment may affect the choice of technology (i.e., deployed versus in garrison).
- Command preference often determines usage – this may not always result in “best tool for the job.”
- Leaders should learn from/utilize the expertise of subordinates in technology usage in order to identify team capabilities.
- Sending a message does not mean that a message is received/understood; information is lost when communicating through technology (i.e., technology provides a snapshot of message).
- It is important to manage expectations – technology has bred an expectation of faster and more routine communication.
- Leaders must understand how to validate and acknowledge accomplishments using technology – lack of this can create problems with retention.
- It is important to follow up on communications, no matter what technology is used.
- Mentoring/Coaching can be done through electronic media, but starting with face-to-face communication first is recommended. Then use other media resources to follow-up and make others accountable.
- OPSEC is difficult in technology-mediated environments. For example, problems can occur if a large number of Soldiers report the same information on social media sites - all the pieces add up. Also, communication with family/significant others is hard to monitor because there are so many outlets.
- Soldiers need to be trained on how to effectively use technology AND how to operate if technology fails. Currently there is no real formal training offered for officers on how to effectively use technology media to lead Soldiers. Most training is on-the-job training. As an example, Soldiers see value in a course that teaches leaders how to filter, prioritize, and manage information flow.
- One serious pitfall of TMMC is micromanagement.
- One factor to consider when choosing a type of technology to use is dependability. Some tools are more reliable than others in specific environments.
SYSTEMS with AUDIO/TEXT/VISUAL (STREAMING)/GRAPHIC CAPABILITIES

Defense Collaboration Services (DCS)
Capabilities
- DCS has file sharing, chat (IM), audio, and video capabilities.
- Virtual collaborative functions are particularly useful downrange.
- This technology allows preset discussion on forums and voting/polling from group members.
- DCS combines the ability to see slides/presentation material as well as the ability to hear/see a presentation.

Utilization
- Useful for conference calls and distribution of information.
- Useful for mapping and plotting (DCS can be used to provide graphics).
- Good resource for gathering lots of individuals for one meeting, such as for operational updates.
- Useful for training (e.g., to do coursework).

Leader Considerations
- Connection speed can make some features cumbersome.

Social Media
(Facebook, Twitter, Flickr, YouTube, etc.)
Capabilities
- Social media sites allow leaders to communicate via text and audio, to share pictures and videos, and to provide links to additional resources.
- Facebook is a good resource because it provides real-time information and reaches a large audience.
- These are powerful tools with quick distribution capabilities.

Utilization
- These can be used to distribute basic information.
- They are a good resource to keep family and community informed when deployed.

Leader Considerations
- Social media provide greater access to what is going on in subordinates’ lives – can be used to build rapport (e.g., Soldier posted that he was thinking about getting out, leader was then able to follow up with the Soldier) or to mentor subordinates who are not directly in the Chain of Command. Too much “real life” information should not be posted, however, and leaders must be careful that they do not appear to be “snooping” into their subordinates' lives.
- Military courtesy should be used on social media. Being Facebook "friends" does not remove the need for military courtesy.
- OPSEC: Enemy intelligence can use these sites to gather intelligence.
- Leader quote: “They will purposefully go on pure social media sites and get all kinds of information about the leadership, about the unit. They'll even become members. The unit will unknowingly let them become members of their Facebook site. They [the enemy] will take all this information and put it on propaganda and it’s waiting for them on the battlefield...about all kinds of stuff they shouldn’t know, but they do. Pictures of company commanders, platoon leaders, a brigade commander (e.g., He’s got a wife and..."
three kids and a dog named Hershey). It’s all out there...It’s just a simple little search.”

- Leader quote: “It’s negated a lot of our defense and Army doctrine for when you’re captured. Now you can get captured and they can tell you what your wife is wearing today, when you're sitting in a cell isolated. They’ll tell you what she bought at the store, who her friends are, who your kids are, what units you’ve been in, what your units’ histories are, your entire career is laid out. So all the deniability, all the layers that you had to survive for a period of time prior to rescue have been stripped away. So you’ve got two things: they either know everything or they know you know something. There’s no deniability, no taking your rank off and saying “oh I’m just a medic.” You can’t do that because they know who you are. So I don’t think a lot of people realize the dire straits they put themselves in when they use social media.”

- The other reason for security is that the enemy also monitors unit sites and they should be prevented from knowing that their attacks are being successful (i.e., via blackout on unit Facebook page).

**Personal Facebook Sites**

**Capabilities**
- See Social Media Capabilities

**Utilization**
- Allows leaders to keep up with Soldiers’ lives – information can help build rapport.
- Can help build friendships within the unit.

**Leader Considerations**
- Leaders should avoid using negative information from Facebook for disciplinary actions – information gathered from social media should only be used for building rapport.
- These can create issues with operational security (see Leader Considerations regarding social media on p. 15).
- Control of comments and posts can be an issue.
- When Soldiers are “friends” with their leaders they may be more aware of the choices they are making (i.e., there is a “big brother” effect).
- Becoming friends with subordinates on social media sites can create issues related to chain-of-command and authority. Some Soldiers seem to think that if they are “friends” with someone on Facebook that means they can not be disciplined by that person.

**Unit Facebook/Social Media Sites**

**Capabilities**
- See Social Media Capabilities
Utilization
• In some cases unit Facebook sites were advocated by the unit; considered to be a “Unit Bulletin Board.”
• Useful for meeting and resource information.
• Good resource to keep family and community informed, especially while deployed.
• Can be used to inform community [and family] of rewards, recognitions, and shared experiences.
• A valuable resource to provide relocation information and information about upcoming and community events.

Leader Considerations
• Soldiers are accustomed to having greater access to information – social media fulfills this need.
• There were times when a tactical situation occurred (e.g., aircraft shot down, someone is killed, wounded) and Facebook was a source of leaks.
• Management of the site is key for effective use. Commander should determine:
  o What kinds of info will be released (e.g., standard info or links posted on Facebook).
  o How the site will be used.
  o Who can access the information.
  o Who can post.

CPOF (Command Post of the Future) Capabilities
• Provides situational awareness of the battlefield through real time text and graphic representation.
• Allows Soldiers to share images such as maps and pictures; annotate the images; and discuss issues via voice over internet protocol (VoIP).

Utilization
• Good resource for tactical communication, and for tracking, synthesizing, and monitoring basic information.
• Can be used in deployed environment; useful for planning purposes.
• Enables leaders to establish a common operating picture.

Leader Considerations
• Although CPOF has many capabilities, there is not enough structure (i.e., CPOF is a little too flexible and has too many features to enable ease of use).
• Not everyone understands CPOF’s full capabilities. People learn to use it based on personal experimentation and trial and error.
• How it is used depends on the familiarity and comfort of the leader.
• Like any other skills, proficiency in its use is a perishable skill. Soldiers need to be able to practice on it prior to use downrange.
• It requires a lot of bandwidth which may not be available at many installations.
• When communicating through it, it may be difficult to know who the originator of the mes-
sage is. Even when using call signs, both the identity of the person and whether or not they have the right to give the order should be known.

**SYSTEMS with TEXT/VISUAL (streaming)/GRAPHIC CAPABILITIES**

**Weblogs (Blogs)**

*Utilization*

- Depending on the author, these can be a good resource to keep family and community informed.
- Good resource for leaders to use to reach out to large audiences.
- Useful for disseminating news about the organization, providing information on how to do something, or for emergency notifications (e.g., weather).

**Leader Considerations**

- It is difficult to ensure the accuracy of information. What is the best way to test the veracity of information posted on a site?
- There are potential OPSEC issues (i.e., concern about secure information being circulated on blogs).
- Communication is [ideally] a two-way road - but blogs may not successfully meet this communication requirement.
- It may be difficult to ensure that the message is getting across.
- Because there are so many blogs, people may not respond to them - the official site may become white noise in media spectrum.
- Moderators are needed to correct misinformation, respond to questions, or to guide others to the correct source of information.
- Important questions for leaders:
  a. What is the goal of the blog/message?
  b. Who is the intended audience? Who will have access to the content?
  c. Who is going to create content, manage it, moderate it/police it, record it?
  d. What is the best way to evaluate whether or not the intent of a message was understood?

**SYSTEMS with AUDIO and/or VISUAL CAPABILITIES**

**Verbal Communication (phone/radio/etc)**

*Note: Voice inflections can communicate mood, and allow both the listener and the person speaking to elaborate or adjust the message based on verbal cues. If this is needed, choose media that allows for verbal transmission.*

**Radio Over IP (RoIP)**

*Utilization*

- Used to solve problems or fine tune mission plans.
- The right internet connection can overcome limitations (e.g., range) of other types of radios. This is especially relevant for when voice communication is desired.

**Leader Considerations**

- This allows for increased input from lower echelons.

**Voice Phone**

*Utilization*

- Good to use for initial information exchange to establish mutual understanding: A situation and relationship can be developed and questions can be answered. Other modes such as email or text can be used for follow up.
- Good for when timely, immediate responses, are desired and/or if there is a need to ask
questions, clarify the message, or receive/give immediate feedback.

**Leader Considerations**
- It is important to find an appropriate balance for the use of these types of media between work and home.
- Mobile phones make individuals always accessible. As a result, the Soldier has to stay responsive. In some instances, they may need to notify their supervisor when their phone is off or they are not accessible. Otherwise this may cause problems because they are non-responsive.
- During personal time, these should only be used for messages that require immediate response. Otherwise, the message should wait until they are back to work. This is a hard balance because information will continue to be exchanged around the clock and an Officer/Soldier wants to be able to turn his phone off and not check email during personal time.

**Ventrilo**

**Capabilities**
- This is a software program that allows multiple people simultaneous voice communication through internet connection.

**Utilization**
- Ventrilo can be used for meetings/briefings (graphics provided thru CPOF).

**Face-to-Face**
*(may include Video TeleConference, Ventrilo)*

**Utilization**
- Good to use for disciplinary matters, Serious Incident Reports (SIRs), operational orders, information with short-term suspense time, information that involves changes to normal procedures, and messages that require acknowledgment.
- Useful for controversial information – it can be more candid and detail oriented.

**Leader Considerations**
- Face-to-face is necessary to maintain rapport with troops, and keep morale steady.
- Being able to see visual cues, body language and emotions is important to get the message across.
- Counseling and discipline should always be done face-to-face. Email may be used to set up meeting, but actual counseling needs to be face-to-face.

**Video Teleconference (VTC)**

**Utilization**
- Good tool for communicating with others at remote locations because it allows for face-to-face contact without travel time and expense.
- Can be used to connect Soldiers with families while deployed.

**Leader Considerations**
- This allows for relationship building because both visual and verbal cues (e.g., tone) can be exchanged.
- A lack of graphics can impede understanding the mission objectives (i.e., the bigger picture), so other technology media may need to be incorporated to facilitate a common operating picture during distributed meetings (e.g., power point).
- This can be good for morale building (e.g., it allows Soldiers to connect with family members
while down range, it can be used to involve more people in award ceremonies, etc.):
• In a combat environment, bandwidth is a huge concern. Leader quote: “We don’t have a lot of satellite bandwidth, so we really have to manage that. That’s where DCS comes in. It becomes so constrained, we’ll turn off a lot of stuff to do one briefing. Especially in combat operations, we’re relying on satellites. In garrison, not so much.”
• The other issue, besides bandwidth, that reduces the use of VTCs is classification. It’s much easier to go secure on a voice line than setting up a Top Secret or higher VTC.
• VTC capabilities can save money.

**Leader Considerations**
• Email increases the volume of information being exchanged. As a result, leaders need to be careful not to overburden others/subordinates.
• The ability to prioritize is a key eLeadership skill. In the case of email leaders need to prioritize or help others prioritize their intent. Leader quote: “Because there is so much information being exchanged, it is easy to lose focus and not prioritize work tasks as appropriately as one should. As a result, everything becomes a priority. There is almost too much situational awareness, which in turn, reduces focus on work tasks (i.e., it is easy to lose focus on what is important).”
• Setting and managing expectations is another key skill: as one Soldier stated, “officers receive numerous emails, and everyone expects immediate replies.”
• Email can suck up your time, making time management an important leader skill. What are the best methods for cleaning up an inbox, reading emails, and responding, while still doing other duties? Leaders must make a conscious decision to get up from the desk and visit Soldiers face-to-face. Leader quote: “Situation down-range can be difficult for leaders in terms of time management. For example, in coalition environments, it is normal for leaders to have 3 or more email accounts that need to monitored, e.g., SIPRNET (classified), NIPRNET (unclassified), AKO, ISAF account, etc.” Leader quote: “I set up times that are specifically for reading and responding to emails.”
• Many officers did not agree with getting counseled by email. Leader quote: “I don’t have a
problem with being tasked by email, [...] but] When someone tries to counsel or teach/coach/mentor by email, that leader loses a lot of credibility. He doesn’t have the courage to talk to me face-to-face. No matter what people say, it’s a personal/people business. It is about relationships, you have to build trust. You can’t build trust through email or other non-face-to-face technology.”
• Email is a powerful tool, but there are significant detractors. For example, loss of nonverbal cues may make it difficult to properly interpret the sender’s message and intent. Leader quote: “You don’t get the interpersonal interaction, inflection, tone of the message, etc. We have to school Soldiers that the opportunity for instantaneous communication can create problems. Taking the time to write a letter or using a phone that includes inflection can help avoid problems. There’s also just so much of it that you’re inundated with emails and you have to pick and choose what to read and so you lose a lot. Info management is a major concern.”
• A message sent does not mean the message was read and understood by the intended receiver, thus leaders should not “fire and forget.” In some cases (e.g., when suspense time is less than three days), it is extremely important to follow-up email with actual face-to-face or phone conversation. It is also important to ask for confirmation that your message was received.
• OPSEC needs to be stressed when using personal email accounts.
• Email allows users to reach beyond the immediate chain of command and to keep others informed. This has potential advantages and disadvantages. Leader quote: “People use it [email] to vent frustration and file complaints at the wrong level – it elevates trivial issues and gets them into trouble.”
• There are times that a leader may use technology to inspire. For example, a message may be sent with video, pictures, etc. to attach emotional sentiment. Email can also be used to recognize, reward, or praise subordinates. For instance, by cc’ing others in the rating chain, leaders can provide subordinates with representation/exposure to senior leaders (a positive example of the previous bullet).
• Leaders must establish guidelines for email use. Email protocol should address leader preferences regarding:
  o Who to include on emails (e.g., when should senior leaders be cc’d on email communication).
  o What information to include in emails (e.g., how much background information do leaders want).
  o How and when should subordinates respond to emails (e.g., how will subordinates know when immediate action is required).
  o What format to use when communicating information (e.g., Bottom Line Up Front (BLUF), followed by discussion bullets).

**mIRC chat (Internet Relay Chat)**

**Capabilities**

• This is a chat system that allows the user to open multiple windows of discussion for different topic areas.

**Utilization**

• It is a good resource for tactical communication.
• Information is time stamped, making it a great resource for tracking information and time sensitive materials.

Leader Considerations
• It is not supposed to be used for personal communication, but it is not an official means of communication either. An individual should be dedicated to managing and monitoring the system.
• Information can be received quickly. It allows for real time tracking of information.

Text Messaging
Utilization
• Good to use for messages that require simple yes/no responses or acknowledgment.
• Good resource for sending/receiving quick message updates or when timely response is needed.
• Good resource to use when deployed and during training exercises. Leader quote: “Often mobile phones had better coverage (signal) than FM radio, so Officers/Soldiers would communicate with text messages rather than SIPR, radios, etc. Participants felt the Army radios had limited capabilities compared to text messaging and other mobile phone capabilities.”

Leader Considerations
• Some people confuse a text message or an email as an order. Leader quote: “You can’t task me with a text message or email unless there’s something directly telling me to do something. The Army has Fragmentary Orders (FRAGOs) or Operation Order (OPORDs) or a number of other methods for formally tasking a person and so forth.”
• Usually, the sender and receiver know each other so there is an understood language and communication intent embedded within the message. Lingo and short phrases can be used because the recipient is known and there is a common language between sender/receiver.
• There is an assumption of privacy, that only the intended recipient will receive the message. Additionally, some people wrongly assume that this is a secure mode of communication that would not be intercepted in a deployed environment.

Online Knowledge Management Sites
Forums
Capabilities
• It is an online discussion site.
• Members can post questions and have other members respond.
• Previous questions and topics can be maintained as reference sources.
• The site can be organized by topics (“threads”) and members can post questions or answers in the appropriate section.

Utilization
• Can be used for training purposes.
• Good resource for lessons learned (helps maintain institutional knowledge), tackling common problem sets, and sharing information that will make one’s organization better.
• Facilitates collaboration.

Leader Considerations
• This format allows people to participate on their own schedule and enables the distribution group to communicate even if they are not available at the same time.
• Establishing sustainable communities can be difficult.

**Portals/SharePoint**

**Capabilities**
- A website allows for various resources and information to be uploaded and maintained in one place.
- It can serve as a resource center for individuals with access to the site.

**Utilization**
- Place to find pertinent info (e.g., policy letters), establish expectations, hold meetings, and provide mission updates.

**Leader Considerations**
- It is a computer-based system and not everyone will have access to the internet at home or at work; it cannot be assumed that everyone will be able to access.
- Leadership must be behind this type of technology for it to be useful. The biggest defeating mechanism is the failure of most superiors to understand how to utilize SharePoint. If the superior can’t understand how to log on and navigate and contribute to it, it’s dead.
- The more clicks required to access the information, the less likely people will be to get the information.

**OTHER SYSTEMS**

**PowerPoint**

**Utilization**
- This should be used to summarize and highlight a message, not used as a crutch or the only means to communicate.

**Leader Considerations**
- Many leaders need training on how to properly use it. For example, not using too many bullets, using an appropriate font size, etc.
- Sometimes too many things are done through PowerPoint and Soldiers spend more time putting together a slide deck than actually processing information.

**Word Document Track Changes Feature**

**Capabilities**
- Provides ability to track changes and provide written feedback in Word documents.

**Utilization**
- This provides the ability to track changes and provide written feedback within Word documents.

**Leader Considerations**
- This is a good resource for developing subordinates because it allows for information exchange and focused feedback.
### Appendix B: eLeadership KSAOs and Definitions

<table>
<thead>
<tr>
<th>KSAO</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Adaptability/ Flexibility</td>
<td>Willingness to learn new things or try new approaches.</td>
</tr>
<tr>
<td>Basic Computer Skills</td>
<td>Typing proficiency; ability to use common computer hardware and software.</td>
</tr>
<tr>
<td>Building Morale</td>
<td>Skill at developing interpersonal and team cohesion, and inspiring others.</td>
</tr>
<tr>
<td>Relationship Building</td>
<td>Ability to establish and maintain work relationships with other individuals, teams, units, or organizations.</td>
</tr>
<tr>
<td>Communication – Verbal</td>
<td>Ability to express oneself verbally, and to understand others verbally.</td>
</tr>
<tr>
<td>Communication – Written</td>
<td>Ability to express oneself through writing, and to understand others through writing.</td>
</tr>
<tr>
<td>Conflict Management</td>
<td>Skill in diffusing tensions and resolving differences between self and others, or among others.</td>
</tr>
<tr>
<td>Coordination</td>
<td>Balancing and effective interaction of actions among different parties.</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>Uses systematic approaches to gather, analyze, and evaluate information to make sound, well-informed, and timely decisions or recommendations.</td>
</tr>
<tr>
<td>Delegating</td>
<td>Skill at distributing work load appropriately, and ensuring accountability for task performance.</td>
</tr>
<tr>
<td>Emotion Regulation</td>
<td>Ability to identify emotions in oneself and others, and to control emotions through direct or indirect behavior.</td>
</tr>
<tr>
<td>Impression Management</td>
<td>Skill at using appropriate behavior and speech in order to present oneself in the best manner possible.</td>
</tr>
<tr>
<td>Influence Skills</td>
<td>The act or power of producing an effect without apparent exertion of force or direct exercise of command.</td>
</tr>
<tr>
<td>Innovation</td>
<td>Skill at using new or existing technologies or methods in novel ways.</td>
</tr>
<tr>
<td>Integrity</td>
<td>Consistently adhering to moral and ethical principles; avoids shortcuts or implementing inadequate solutions.</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>Ability to effectively interact with others; demonstrated by building rapport, persuading others, and/or inspiring others.</td>
</tr>
<tr>
<td>Media Savvy</td>
<td>Skill at understanding the best technology to communicate a message to gain compliance.</td>
</tr>
<tr>
<td>Negotiation</td>
<td>Skill at effectively reaching agreement or settle discussion through various means of technology.</td>
</tr>
<tr>
<td>Personnel Capabilities</td>
<td>Knowledge of the strengths and weaknesses of subordinates with respect to use of technology.</td>
</tr>
<tr>
<td>Perspective-Taking</td>
<td>Ability to see issues from another person’s point of view or put oneself in someone else’s place.</td>
</tr>
<tr>
<td>Political Savvy</td>
<td>Skill at applying sound judgment and diplomacy when dealing with others.</td>
</tr>
<tr>
<td>Prioritizing &amp; Filtering Information</td>
<td>Ability to manage incoming information/data, prioritize it, and pass on relevant information to others.</td>
</tr>
<tr>
<td>Self-Awareness</td>
<td>Knowledge of one’s strength and weaknesses and how others view oneself.</td>
</tr>
<tr>
<td>System Capabilities</td>
<td>Knowledge of the capabilities and limitations of common hardware and software.</td>
</tr>
</tbody>
</table>
1. **Synchronicity**: the extent to which individuals can work/communicate on the same activity at the same time. Technology can be described as being:
   a. **Synchronous**: communication occurs real-time between two or more parties. There is no time lapse between message delivery and response.
   b. **Asynchronous**: communication occurs in one direction at a time. There is a time lapse between message delivery and response.

2. **Sender-Target Ratio**: the number of different parties involved that can communicate simultaneously. There are three types:
   a. **One-to-one**: communication originates from one individual and message is directed to one individual.
   b. **One-to-many**: communication originates from one individual and message is directed to many individuals.
   c. **Many-to-many**: communication can occur between one or many individuals. Technology allows for communication among many individuals.

3. **Perceptual Medium**: the visual and audio media capabilities of the technology. There are four types:
   a. **Audio**: technology allows users to hear others as they communicate.
   b. **Text**: technology permits written messages.
   c. **Graphic**: technology allows transmission of static visual images such as graphics, pictures, etc.
   d. **Streaming**: technology permits transmission of streaming images such as video feeds, movies, etc.

4. **Bandwidth**: the physical limits on the amount of data that can be transmitted through a given technology. There are three categories:
   a. **Low-bandwidth**: technology allows for only limited exchange of information.
   b. **Medium-bandwidth**: technology allows for moderate amounts of data to be exchanged (e.g., 10 MB).
   c. **High-bandwidth**: technology allows for transmission of large amounts of data.

5. **OPSEC**: the level of security that is available using a given type of technology. There are three categories:
   a. **Unclassified**: technology allows for minimal/limited amount of security (e.g. password protection). Message content should be limited to unclassified material.
   b. **Secret**: technology meets U.S. Government operational standards regarding encryption of classified material. Message content can be classified as “Secret.”
   c. **Top Secret**: technology meets the highest levels of U.S. Government standards for operational security. Message content can be classified as “Top Secret.”

6. **Receipt Accountability**: the ability of the sender to verify that the communication that was sent through the technology was received and processed by the intended recipient of the message. There are three categories:
   a. **No accountability**: technology does not allow for verification that the communication was received or processed (e.g., read/listened) by the intended recipient(s).
   b. **Partial accountability**: technology allows for confirmation that the communication was received by intended recipient(s), but it does not allow for verification that communication was processed by intended recipient(s).
   c. **Full accountability**: technology allows for confirmation that the communication was both received and processed by the intended recipient(s).
Appendix C – Technology Characteristics

This table describes four current technologies using the six technology characteristics.

<table>
<thead>
<tr>
<th>Technology Characteristics</th>
<th>e-mail</th>
<th>PowerPoint</th>
<th>Command Post of the Future</th>
<th>Facebook</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synchronicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synchronous</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Asynchronous</td>
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<td></td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td><strong>Sender-Target Ratio</strong></td>
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<td></td>
</tr>
<tr>
<td>One-to-one</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>One-to-many</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Many-to-many</td>
<td>✔️</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Perceptual Medium</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Text</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Graphic</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Streaming</td>
<td></td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td><strong>Bandwidth</strong></td>
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</tr>
<tr>
<td>Low-bandwidth</td>
<td>✔️</td>
<td>✔️</td>
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</tr>
<tr>
<td>Medium-bandwidth</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>High-bandwidth</td>
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<td>✔️</td>
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<td></td>
</tr>
<tr>
<td><strong>OPSEC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unclassified</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Secret</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Top-secret</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Receipt Accountability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No accountability</td>
<td></td>
<td>✔️</td>
<td></td>
<td>✔️</td>
</tr>
<tr>
<td>Partial accountability</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full accountability</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix D – Critical Leader Functions
Conducted in TMMC

<table>
<thead>
<tr>
<th>Leader Functions</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Mission</td>
<td>Leaders define the mission in a clear, compelling, and challenging way, ensuring the unit is aligned in its purpose, goals, and tactical plans, and that these match the chain of command’s expectations, strategy, and values.</td>
</tr>
<tr>
<td>Establish Expectations &amp; Goals</td>
<td>Leader sets challenging but realistic goals for subordinates that are aligned with the unit’s overall mission, and clearly defines performance expectations for all unit members.</td>
</tr>
<tr>
<td>Structure &amp; Plan</td>
<td>Leaders set the structure and determine (or assist in determining) how work within the unit is going to be achieved in order to meet the unit’s goals. Leaders provide guidance for determining how work will be done, who will do which aspect of the work (role clarification), and when the work will be done.</td>
</tr>
<tr>
<td>Train &amp; Develop</td>
<td>Leaders identify deficiencies in unit performance and provide targeted training to the team, coaching, and/or encouraging the use of organizational resources. In addition, leaders may encourage cross-training and peer coaching to broaden distribution of skills and knowledge throughout the unit.</td>
</tr>
<tr>
<td>Situational Awareness</td>
<td>Leaders identify essential environmental events, interpreting these events as they impact the unit, and communicate meaning to the unit. This, in turn, facilitates an understanding of current events by all team members, and facilitates effective adjustment to events.</td>
</tr>
<tr>
<td>Provide Feedback</td>
<td>Leaders help unit members to effectively assess their past and current performance and then to adapt as needed to ensure future success.</td>
</tr>
<tr>
<td>Monitor Team</td>
<td>Leaders monitor and evaluate their unit’s processes, performance, and the external environment to ensure that the unit is progressing toward its goals, and that needed resources are available to the unit.</td>
</tr>
<tr>
<td>Solve Problems</td>
<td>Leaders engage directly in or support subordinates in problem assessment, solution development, and implementation of effective solutions.</td>
</tr>
<tr>
<td>Provide Resources</td>
<td>Leaders take action to ensure the unit obtains the necessary informational, financial, material, and personnel resources necessary to accomplish its goals.</td>
</tr>
<tr>
<td>Support Unit Climate &amp; Trust</td>
<td>Leaders address interpersonal issues within the unit that may interfere with their performance, manage emotions in the unit and ensure these do not interfere with effective unit functioning, and build trust among team members.</td>
</tr>
</tbody>
</table>
Appendix E – Cross-Walk Example

Example of Mapping Technology Characteristics to Leadership Functions: The table below provides one example of how a leader can match technology with leader functions. In this example, the leader would like to conduct training and development and has identified the needed technology characteristics. The leader then considers which technologies would be able to provide that profile in their given setting. In the example in this table, the leader is considering using Adobe Connect to provide training in garrison.

<table>
<thead>
<tr>
<th>Technology Characteristics</th>
<th>Leadership Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synchronicity</td>
<td>Define Mission</td>
</tr>
<tr>
<td></td>
<td>Establish Expectations &amp; Goals</td>
</tr>
<tr>
<td></td>
<td>Structure &amp; Plan</td>
</tr>
<tr>
<td></td>
<td>Train &amp; Develop</td>
</tr>
<tr>
<td></td>
<td>Situational Awareness</td>
</tr>
<tr>
<td></td>
<td>Provide Feedback</td>
</tr>
<tr>
<td></td>
<td>Monitor Team</td>
</tr>
<tr>
<td></td>
<td>Solve Problems</td>
</tr>
<tr>
<td></td>
<td>Provide Resources</td>
</tr>
<tr>
<td></td>
<td>Support Social Climate &amp; Trust</td>
</tr>
<tr>
<td>Synchronous</td>
<td>X</td>
</tr>
<tr>
<td>Asynchronous</td>
<td></td>
</tr>
<tr>
<td>Sender-Target Ratio</td>
<td>X</td>
</tr>
<tr>
<td>One-to-one</td>
<td></td>
</tr>
<tr>
<td>One-to-many</td>
<td></td>
</tr>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Graphic</td>
</tr>
<tr>
<td></td>
<td>Streaming</td>
</tr>
<tr>
<td>X</td>
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</tr>
<tr>
<td>Bandwidth</td>
<td>Low Bandwidth</td>
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<td>Medium Bandwidth</td>
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<td>High Bandwidth</td>
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<tr>
<td>OPSEC</td>
<td>Unclassified</td>
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<td>Secret</td>
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<td></td>
<td>Top-Secret</td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Receipt Accountability</td>
<td>No accountability</td>
</tr>
<tr>
<td></td>
<td>Partial accountability</td>
</tr>
<tr>
<td></td>
<td>Full accountability</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Crosswalk: Available technologies that fit these requirements</td>
<td>Adobe Connect</td>
</tr>
</tbody>
</table>

Under what context am I operating?  
X Garrison  ___ Training  ____ Deployed
**ABSTRACT**

This handbook contains best practices and lessons learned regarding effective and ineffective ways to lead through technology. These were compiled through extensive interviews with Army leaders at multiple levels, and were supplemented by findings from scientific literature. The best practices and lessons learned are presented in the first portion of the handbook as themes. The purpose of these themes is to help Army Soldiers become more effective leaders by presenting key considerations for leading through technology mediated means of communication (TMMC). The themes, in conjunction with other portions of the handbook, will also help leaders plan for positions that may require distributed leadership. In addition to best practices, this handbook attempts to outline a strategy to systematically identify and organize the vast TMMC choices available to military leaders and their usefulness for different leadership functions. Leaders will be introduced to a method for considering factors such as the capabilities of the technology, the technological requirements for various leader functions, and the match between available technology and leader needs.

**SUBJECT TERMS**

Army leadership, eleadership, leading through technology, leader best practices, technology mediated communication