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The September 2001 Quadrennial Defense Review has raised the possibility of establishing a Standing Joint Task Force (SJTF) Headquarters working under each of the regional combatant commands in the near future. The military should consider it probable that creation of an SJTF will be translated into a requirement in the near future and remain unresourced.

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Abstract of

A Standing Joint Task Force
It is Time for a Virtual Solution

The September 2001 Quadrennial Defense Review has raised the possibility of establishing a Standing Joint Task Force (SJTF) Headquarters working under each of the regional combatant commands in the near future. The military should consider it probable that creation of an SJTF will be translated into a requirement in the near future and remain unresourced.

The establishment of Standing Joint Task Forces promises a more rapid response by reducing activation time and maintaining greater Joint interoperability. Each of the three methods by which this can be accomplished has its own advantages and disadvantages. Completely manning the SJTF uses too much manpower. Establishing the SJTF as an empty organizational chart is little different from the ad hoc JTFs that are created today and loses all the benefit of a standing unit. Partially manning the unit with a cadre of key individuals that can be augmented for deployment or training is the best method.

Creation of this SJTF as a shell provides a cadre of personnel that can impart long-term continuity. Establishing contact with military organizations from other countries, various U.S. Departments and outside agencies before a crisis occurs and maintaining it throughout a mission can enable better coordination. Additionally, an SJTF provides a means for each Combatant Commander to proceed with Joint experimentation. An option open to the Combatant Commander is the use of *virtual* teams in augmenting the main body of the staff. Inclusion of personnel electronically from multiple locations reflects today's reality, flexes our technological superiority, and saves deployment time and dollars, both during exercises and real-world missions.

NAVAL WAR COLLEGE
Newport, R.I.

A STANDING JOINT TASK FORCE
IT IS TIME FOR A VIRTUAL SOLUTION

by

Alan B. Clayton
MAJ, SC, U.S. ARMY

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: _____

4 February 2002

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Professor John D. Waghelstein
Professor, JMO Department

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Preface - Sometime in the future:

Assembled around the briefing room are the twelve permanent members of SJTF Eagle Claw. The CINC's Deputy Commander is speaking.

"Ok folks, welcome to exercise 'Casablanca Coyote.' I know you have all read your background briefs, but to refresh your memory: it started with some increased border hostility between Morocco and Algeria and has progressed to the point where Morocco feels that they are threatened. All of our intelligence suggests that it is Libyan-backed terrorists inciting the whole thing, but that government is denying it. The government of Morocco has asked for help.
For this exercise the JTF will be augmented as follows:

- JFAC – Aviano, Italy. Looks like for an added kink they won't let us fly combat mission from Italian soil. You have two Majors and two Captains to run your exercise. Three of them are in Aviano, one CAPT is in Ramstein, Germany.
- JFMC – CDR Lowenstein and a team of three will represent 6th Fleet. They are all in Naples, Italy.
- JFLC – Ground forces and Army components will be represented by 1st Army, Atlanta, GA and 2nd Training Support Brigade, Ft. Drum, NY.
- Marines – We have a Major in Okinawa, two Captains in 29 Palms and a Lieutenant in Hawaii. That's more people than we expected, but they sure are scattered.
- J1 – You have been augmented by five reservists. Two are here and three are in Salt Lake City, UT. The J1 (actual) will be COL Green from CINC Staff.
- J2 – CAPT Peters and MAJ Jones from CINC Staff augment you. J2 actual will be Navy CAPT Meyers, from Naval War College, Newport, RI. He has a team of five wargamers to finish filling your staff. Look sharp!
- J3 – You get the spies. We have a team of three from JFCOM on site. Plugging in to fill your needs are more students. Two from the Air War College and four from the Army War College.
- J4 – You get the better part of an Army Reserve Quartermaster Brigade commanded by COL Gilligan. He will be your boss and will be connecting to you through the Bristol, RI Army Simulations Center. Remember, this is training for them too.
- J5 – Short end of the stick, I'm afraid. You get four from the Navy War College Junior Class and three from an Army class at Ft. Leavenworth, KS.
- J6 – I have Captains and Majors from the NY and NJ National Guards. It says here that they are in Valhalla, NY. I hope that isn't an omen.
- There are representatives from JAG, PAO, Red Cross, Doctors Without Borders, and various other entities scattered around the planet from the looks of these phone numbers. There are also some genuine Department of State people. Looks like the Tunisian ambassador wants his deputy indoctrinated and provided her and one other fellow as cultural experts.

That's about it. All Points of Contact are in these folders and include email addresses and telephone numbers. Any questions? Yes, CDR Viveros."

"Will the exercise make us split into two JTFs like we had to do for real last summer?"

"I haven't read the script. But since that's part of SJTF Eagle Claw's charter, it could happen. I'm sure you'll all manage just as well as you did in the real thing."

This hasn't happened. But based on capabilities the services already have today - it could. The location of SJTF Eagle Claw could be Stuttgart, Germany or Tampa, Florida. We have the capability to operate from anywhere around the globe and in some cases we are beginning to exercise that capability using *virtual* presence rather than deployment.

A Standing Joint Task Force
It is Time for a Virtual Solution

Since the end of the Cold War, throughout each real world mission in which the United States military has been engaged, there has been one common thread - rapid response to a crisis can save lives. A Standing Joint Task Force (SJTF) will empower the Combatant Commander to apply a balanced Joint Military response to a crisis with expedience, efficiency, and less effort. Unlike a standard Joint Task Force, which is created on demand for a specific situation and needs time to establish itself, the SJTF would already be operational, have contact with non-Department of Defense (DoD) agencies, and be armed with contingency plans and knowledge of the area. Indeed, the September 2001 Quadrennial Defense Review (QDR) states that proposals are being considered for establishing SJTFs under each Combatant Commander.

Several options present themselves for fulfilling this endeavor, including: a fully manned staff, an empty organizational chart, and a small shell or cadre that would form the core of the organization. Of these alternatives, a Standing Joint Task Force consisting of a cadre of individuals ready to rapidly assemble a full-spectrum response to a crisis is the best answer. The staff shell can be augmented with personnel from both within and from outside of theater when necessary. Additionally, augmentees can be collocated, forward deployed or *virtual* using the technological tools of modern operations. Virtual collaboration may seem like a recent innovation, but in reality it is not new to the military. A parallel is currently occurring in the business world where firms and subject matter experts are being linked electronically to speed up manufacturing. Indeed, the military can benefit from lessons learned in the business world about successes and failures of virtual teams.

Advantages of a Standing Force

The introduction of a manned Standing Joint Task Force, increased automation with Network Centric Warfare (NCW), and assembly of teams that can be moved globally promises flexibility and higher OPTEMPO. This staff would initially be operating in rear areas that can be wired into the network *before* a crisis begins. Telephones, a Local Area Network,[1] and inter-connectivity would already be established. When not engaged as a JTF, personnel would be training and preparing for deployment. This includes working on J5 contingency planning and Force Protection issues for the Combatant Commander and maintaining contact with other organizations in their area of operations. The staff would essentially be already functional upon notification and would merely shift focus from training and preparation to the mission. Theater Engagement Plans, a requirement fulfilled by the CINCs, could be prepared and reviewed by the SJTF staff shell in conjunction with the CINC staff and familiarity would allow SJTF personnel to execute the mission more quickly. Thus, there are many reasons for this proposed SJTF structure. The most compelling are increased speed of response, better continuity, and greater efficiency. Additional benefits include: maintained contact with non-DoD elements and the ability to perform training and experimentation roles.

As a harbinger of the future, the Quadrennial Defense Review (QDR) shows that the concept of an SJTF is being considered.

> To strengthen joint operations, the Department will develop over the next several months proposals to establish a prototype for Standing Joint Task Force (SJTF) Headquarters. The goal is to establish a SJTF headquarters in each of the regional combatant commands. The headquarters will provide uniform, standard operating procedures, tactics, techniques, and technical

[1] The reference here is to both classified and unclassified networks as well as GCCS (Global Command and Control System).

> system requirements, with the ability to move expertise among commands…. This Standing Joint Task Force could serve as the vanguard for the transformed military of the future. It could undertake experimental exercises as new technologies become available. It would also offer immediate operational benefits.[2]

Methods of Meeting the Standing Joint Task Force Requirement

Three realistic options of establishing an SJTF are: a fully manned staff with complete functionality, an empty organizational chart – ready to add names, and a shell – something in between. While each option is viable, the shell method is best. Let's examine each alternative.

A fully staffed headquarters would theoretically have the most ability to plan, train, and operate. But what are the tradeoffs? (Figure 1) After all, this is an investment. One of the major obstacles is that the SJTF will likely need to be formed without the allocation of additional manpower resources. Where would these personnel come from? Although quality issues in assignment is beyond the scope of this paper, there is no tendency for an organization to place its best personnel in a planning section of this type.[3] In a worst-case scenario, billets would remain empty after activation because personnel are not available to augment (since the SJTF was supposedly already manned) and less suited personnel would occupy several of the slots. This is not promising.

Figure 1
Tradeoffs

• Standing JTF can react more quickly (Fully manned)	• Where does the manpower come from?
• Empty Wire Diagram that is filled in response to crisis (No manpower)	• Slow activation. No improvement over current plan
• Initial JTF personnel are a "shell" that is filled in response to crisis (less manpower)	• Augmentees must be familiarized (trained) upon arrival
• Increased connectivity in rear area allows for greater information awareness in initial stages	• Potential loss of connectivity when forward deployed (dependency?)
• Capability exists for creation of "virtual" teams spread over geographic area	• No training program exists for exploiting this arrangement

[2] Department of Defense, Quadrennial Defense Review Report. (Washington, DC: 2001) 42
[3] Each service will want their best people in a position to perform for their service when a crisis occurs, not "push paper." The value attached to a contingency SJTF will remain low unless the services can see operational benefits from having sent personnel.

Establishing the SJTF in name only by creating a wire diagram that is filled when needed might sound like the most optimum solution. However, this is not the case. This alternative offers little improvement over plans implemented today. (Figure 1) In fact, this option has several disadvantages such as time lost in activating the organization and the absence of personnel that already "know the ropes." The probable lack of office space and inability to supply adequate connectivity makes this proposal unattractive.

A Shell Solution

Creating a shell with a core of individuals provides the most workable solution for the creation of an SJTF. Indeed, Joint Pub 0-2 instructs the Joint Force Commander to create a staff "composed of the **smallest number** of qualified personnel who can get the job done."[4] If the CINCs are directed to create SJTFs, they will probably have to do so without being allocated any additional resources. Minimizing impact by having the SJTF consist of a shell is favorable in a cost-benefit analysis. This small cadre would serve as continuity for the SJTF and as a known Point of Contact for contingency operations in that theater. Similar to a fully

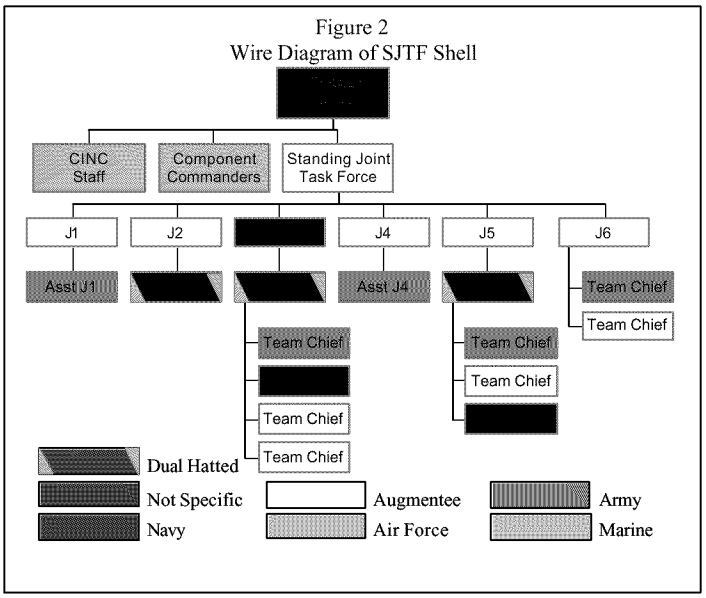


Figure 2
Wire Diagram of SJTF Shell

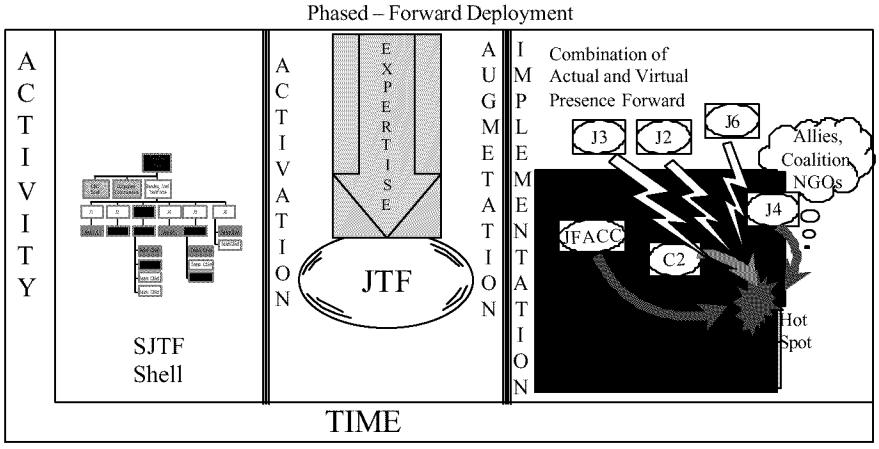
[4] U.S. Joint Chiefs of Staff, Unified Action Armed Forces (UNAAF), Joint Pub 0-2. (Washington, DC: 2001), III-1.

manned proposal, personnel would be established already, possess connectivity and familiarity with the mission, assets, and other factors unique to their theater.[5] The manpower needs would be considerably reduced, however. A small number of personnel would be initially assigned to the SJTF. Others could be dual- hatted members of the CINC's regular staff. (Figure 2) Additionally, other members would exist as a *potential* resource pool from other locations. In particular, such persons with special skills such as language, Weapons of Mass Destruction experts, and country specialists (perhaps even from outside DoD) could be shared between CINCs. These specialized individuals could be made available for their expertise as an additional duty, temporary duty, or for reassignment on a case-by-case basis.

Phased-Forward Deployment

Movement of staff personnel should be *Phased-Forward,* based on needs of the commander and the mission. During activation, expertise would be added to the shell to fill the SJTF staff. Using the technological tools available, the staff teams would continue to provide their expertise to the SJTF regardless of location. (Figure 3) The capability of the activated SJTF to operate while fragmented would be greater than that of an ad hoc JTF because it would be *designed* to operate this way. The SJTF would be able to maintain its productivity while

Figure 3
Phased – Forward Deployment



[5] It is true that the *depth* of knowledge would be less than that of a fully manned JTF, but this is an acceptable

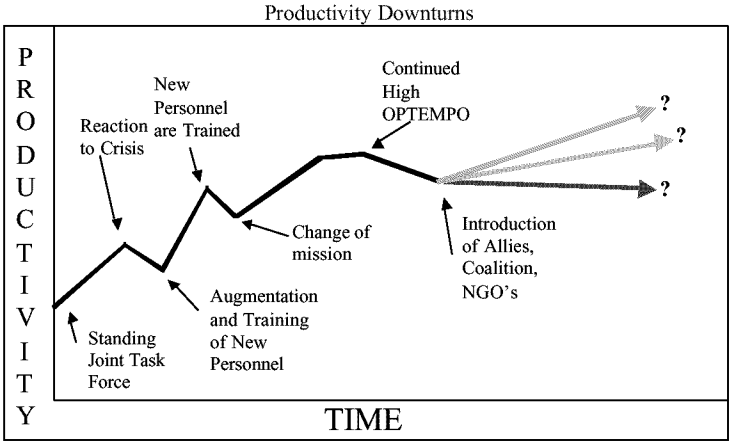
splitting and sending teams forward because of their training in virtual team operation. There will not be a need to keep everyone together, or a need to expedite the deployment for the sake of staff integrity. Eyes and ears of the staff can be a small forward package. More likely, in the context of the most recent operation in Afghanistan, there would be several small packages in several forward locations.

Some sections of the J-Staff lend themselves to fragmentation and forward deployment easily while others do not. The Intelligence section is a good example of a section that does *not* fragment or forward deploy easily. Brainstorming to determine Courses of Action is best done with all personnel together, not via VTC or email. Additionally, the intelligence community is an enormous resource user in terms of bandwidth. The data capacity will be greater and more accessible in rear areas rather than forward zones served by satellite. Conversely, the J6 section would ideally *be* split so that it could facilitate access, integration, and troubleshooting at multiple locations. Other staff sections' dispersal capacity falls between these two. The flexibility to operate in rear, partially deployed, or forward locations can be achieved with training and sound operating procedures.

Activating the SJTF – a Rapid Train-Up

Despite anticipations that this staff would be able to transfer from shell to fully operational in a very short time, for each change in the way that the SJTF conducts business, a temporary downturn

Figure 4
Productivity Downturns



trade. Other factors include, but are not limited to, co
within other organizations operating in theater.

in efficiency will be experiened. (Figure 4) Productivity should then increase and eventually the line will flatten out as the personnel reach saturation or exhaustion from high OPTEMPO. These changes must be anticipated and when possible de-conflicted by adopting courses of action that space out negative impacts and allow the staff to maintain operations. The most predictable of these downturns is the impact of augmentees. In this instance, the cadre will have their attention divided by the continuing mission and the need to train new personnel.

Minimizing Impact of Training Augmentees

There are numerous studies involving group dynamics, stages of team building, and relationship of trust, communication, and cooperation. For our purposes, it is sufficient to note that the unit SOP needs to include references for how to conduct operations, examples of basic documents that will be expected, lists of duties, timelines, and guidance on hierarchy within the staff teams.[6] The need for this reference material is immediate. Unfortunately, the initial members of the SJTF will have to develop this material *in addition to* their regular duties. Assistance from JFCOM, and feedback from several exercises would make the SOP more useful.

What is different in this Task Force and why expend this much effort on the doctrine when any issues could be settled at a staff meeting? Because I submit to you that physically being there for the staff meeting is no longer necessary, practical, or sometimes desired. The DoD has the opportunity to build the SJTF organization and base it on a combination of physical augmentation, distributed personnel augmentation, and virtual collaboration through

[6] Lessons learned in the business world indicate that lack of concise guidance and not having a clearly defined leader/mission were the most significant factors contributing to group failure. Ref: Cohen, Susan and Cristina Gibson. "Mutual Understanding, Integration and Trust: Creating Conditions for Virtual Team Effectiveness" "vtpaper.pdf" (University of Southern California: May 2000).

global connectivity from the beginning. The benefits of speed, economy, and a reduced forward presence can be achieved by this combination.

Location – Location - Location

If the CINC's object is to maintain a ready capability, then the entire staff cannot be moved forward.[7] It would leave nothing to continue planning for a possible second mission and negate the positive reasons for creating the SJTF. Additionally, all forward elements must compete for the usually scarce resources in the forward zone. Conversely, if no elements are deployed, the staff may be less efficient in supporting the tactical forces. If the staff is divided, a whole new set of factors can influence the team's effectiveness. The most significant of these challenges are related to communications and coordination/collaboration via electronic media.

The initial members of the cadre will enjoy the connectivity of NCW, if the QDR can be believed.[8] Disregarding the obstacle of providing adequate hardware, which is a logistical issue and as such outside the scope of this paper, doctrine and training will be most influential on future success or failure of these staffs. Doctrine is the reference material needed to assist problem solving and training constitutes practice. Presented with the opportunity to learn how to best utilize the tools on hand, the staff shell should become fairly adept and develop ways of dealing with the probability of partial deployment.

Virtual Teams

Carl von Clausewitz tells us that massing of forces is essential to achieving victory. While Clausewitz was referring to combat power, many attempt to apply that maxim to all

[7] This would be equivalent to committing one's entire reserve force.
[8] The debate over NCW is irrelevant in the scope of this paper. The military can execute the mission as I am presenting it with the tools of today as well as those tech-wonders proposed for the future.

aspects of the military, including higher-level staffs. This is unnecessary. Just as modern precision weaponry is enabling massed effects in lieu of massed forces, our current global communications capability allows us to mass the effect of Command and Control (C2) in forward areas without having to waste transportation resources or deploy large numbers of personnel. Eyes and ears of the commander in a forward location is certainly not a new concept. But the degree to which electronic communications has improved collaboration generates an opportunity for staffs to work on the same projects while operating in multiple locations simultaneously.

In commercial Engineering firms, *virtual* teamwork is speeding design programs by allowing corporations to harness expertise from numerous locations within their organizations as well as outsourcing for critical skill shortages.[9] A virtual team is defined as "a group of people who interact through interdependent tasks guided by common purpose and work across space, time, and organizational boundaries with links strengthened by webs of communication technologies."[10] We are already executing this type of split operation for CENTCOM's mission(s).[11] The change I am proposing is to adapt this as just one of several *standard* options rather than a reaction to necessity. This would enable the JTF to position personnel nearly anywhere and still execute control globally.

Operating with personnel spread out all over the planet is becoming commonplace despite the lack of documented strategy or lesson plans addressing how best to deal with fragmented/composite teams. In the staff shell proposal, the SJTF cadre and new members

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[9] "Large parts of organizations are now made up of ad hoc miniorganizations, projects collocated for a particular time and purpose, drawing their participants from both inside and outside of the parent organization…. They exist *not* as buildings; their only visible sign is an email address. Inside the buildings that *do* exist, so-called hot-desking is increasingly common." Department of Management Studies, University of Aberdeen <http://abdn.ac.uk/~cms010/labproc.htm> [11 December, 2001]

[10] Lipnack, J and Stamps. J, Virtual Teams: Reaching Across Space, Time, and Organizations with Technology. (New York: John Wiley, 1997) 7.

will be expected to operate in either a collocated or a split environment (or a combination) at any given time. However, organizations resist change, and developing a new operational strategy will be a difficult task. In 1998, USAF Lt. Gen. Lansford E. Trapp Jr., vice commander of Pacific Air Forces, commented:

> We all come into these darn things hidebound by the procedures and everything you've learned, and when you sit down with a group of people and say, 'Hey, look, throw all that away and figure out a better way' to do [it], there's some resistance to that, initially, because everybody comes in with these preconceived notions.[12]

The SJTF can be prepared to meet the challenge of operating in a new way by identifying issues, establishing the methods that will overcome obstacles, and preparing guidelines for employing these techniques.

Myth of Collocation, Collaboration and Productivity Linkage

While most of the experts still agree that being located together *is* better, they are attaching less importance to collocation. Additionally, what we think of as collocated may be incorrect according to the experts. Research indicates that collaboration from collocation is not very much different between members 90 feet apart and those miles apart.[13]

In Engineering firms, selecting the *best* members to assign to a team is more important than easy collaboration via collocation. The experts finally have something to agree upon. The right talent in the right team gives the greatest chance of success. With a

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[11] I am referring to CENTCOM's mission in Afghanistan.

[12] "Air Force wants to keep IT staffers stateside". GCN September 21, 1998.

[13] MIT's Tom Allen, studying engineers to see how physical proximity affected communication, found that there was a 25% chance those with offices next to each other would communicate at least once a week; this dropped below 10% when they were more than 30 feet apart; after 90 feet, the odds were the same whether they were 91 feet or several miles apart. A Bell Labs study found that people on the same corridor tend to collaborate five times as often as people merely located on the same floor; they found that collaboration nose-dives when people are located on separate floors. "Collocation and Effective Teamwork: Experts Differ on Whether Physical Proximity is Mission Critical." <http://www.managementroundtable.com/PDBPR/collocation.html,> This article originally appeared in the October 1996 issue of PDBPR [11 December, 2001]

virtual connection, talent from any location can be included.[14] This has dramatic implications for the military in that *expertise* can be borrowed for a problem from any warfighting command, training institution, or time zone. This includes augmentation by vital Reserve and National Guard Forces. As an added bonus, response time would be reduced in some cases by eliminating transit time.[15] The expert analysis required could sometimes be contributed via email.

For the personnel that have been selected for this duty, it can become primary or secondary based on the anticipated duration of need. If the duration is short, then the individual may only need input from the SJTF to his commander for adding a comment to his/her evaluation. "Although initial physical meetings of project participants are valuable to establish relationships, virtual co-location through electronic media can largely supplant the need for and benefits of extended physical proximity."[16] Now that the team has been chosen, they need to be given the tools that will make them most productive.

Technology is an *enabler*. Learning how to best utilize it is a *necessity*.

The current focus of transformation of the military is *technical* innovation. While not nearly as exciting, some time must be spent on examining the need for *social* innovation to accompany the transformation. In a paper published by the Department of Management Studies at the University of Aberdeen, the writers concluded that the "introduction of computer-mediated communications is generally dominated by political…concerns and

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[14] Admittedly, this does not work with ALL expertise. In the military there will be times when there is no substitute for "boots on the ground."
[15] Personnel need not in all cases be reassigned or sent TDY/TAD. Examples of this range from doctors guiding others via radio and emailed pictures of items asking for explanation or translation.
[16] Farshad Rafii< http://www.managementroundtable.com/PDBPR/collocation.html.> Babson College operations management [11 December, 2001]

generally ignores the social consequences of change."[17] The military, like most large organizations, has ingrained procedures and behaviors. It is not possible to magically alter these characteristics instantaneously by introducing new technology. These social behaviors must be modified on both the individual as well as the organizational level. Training exercises and experimentation can assist in this transformation.

Exercises and Experimentation

During the height of the Cold War, REFORGER[18] exercises were common practice. It was believed that repeated use of the means by which troops and equipment would be returned to the European Theater would generate familiarity with the mission. REFORGER exercises conducted in later years included less material, instead concentrating on leadership, logistics, and command and control training at higher echelons. The focus changed from Tactical to Operational, thereby saving money, but still achieving the goal of readiness.

Training of the SJTF can follow lines comparable to those later REFORGER exercises. To flex the planning of the SJTF, computers can simulate events. Utilizing the improved connectivity, the staff can be augmented by other team members (perhaps JFCOM, the National Guard, and the Reserves) without the expenditure of vast amounts of TDY dollars. Additionally, the staff can be *virtually* connected with other units' exercises, either in an advisory capacity or as the controlling element. Many exercises in the Joint Readiness Training Center and National Training Center have the elements of higher Headquarters simulated.[19] Adding the SJTF to these exercises would be low cost, relatively easy to accomplish and a realistic approximation of the C2 experienced by forces entering an

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[17] Department of Management Studies, University of Aberdeen, Scotland <http://abdn.ac.uk/~cms010/labproc.htm.> [11 December, 2001]
[18] Return of Forces to Germany
[19] The Joint Readiness Training Center is in Ft. Polk, LA and the National Training Center is in Ft. Irwin, CA.

unimproved area. The possibility that all of the connectivity will *not* work without hardware and software problems is very real; there needs to be room for this learning process. In 1998, Air Force Maj. Gen. Timothy A. Peppe was head of the joint experimentation directorate of U.S. Joint Forces Command. Peppe opined:

> We're measured by success. I think what we all have to come to grips with is, if you're really going to experiment with some stuff, you're going to fail every now and then. And maybe you fail more often than you succeed. But if you go back and look at some of the previous stuff that was done in the interwar years, we're going to have to learn to accept some failures and not as much progress.[20]

For the men and women that temporarily augment these training exercises there is an incentive. What they contribute to the SJTF will be that little something extra, above and beyond what their peers did in their regular job. When the time comes for evaluations, all personnel want to be able to look competitive. The extra recognition is a small payback that does not involve several years of commitment outside of their specialty.[21] Or, the headquarters tasked to support the two-week, 24-hour/day exercises may decide to fill the position with rotating personnel rather than a single team. Since this can sometimes mimic reality, the possible repercussions like loss of continuity and ability to overcome shift/personnel changes are worth observing. Because of the number of variables it could introduce, restrictions on hot swapping are likely.

Non-DoD Partners

During most modern operations, JTFs inevitably have the pleasure of establishing working relationships with outside elements such as the Press, Voluntary Private Organizations (VPO), Nongovernmental Organizations (NGO), State Department officials,

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[20] "Air Force wants to keep IT staffers stateside." GCN September 21, 1998.

[21] There are some personnel that feel that a Joint assignment removes them from their specialty for too long, thus eliminating them from competitive promotion.

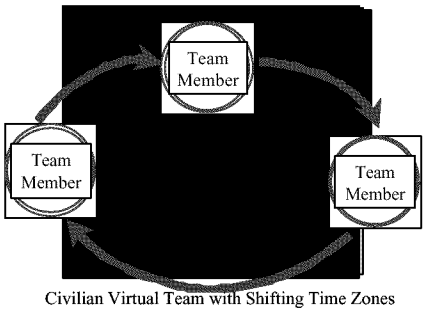
consulates and allied or coalition partners. Establishment of a civil-military operations center after the JTF is operational is Joint doctrine.[22] However, a Standing Joint Task Force can maintain continuous contact with some of these organizations and since they often precede the military into an area that later becomes the location of a peacekeeping mission, this contact can be invaluable. To ensure friendly, cooperative relations, regular contact by the cadre with many of these entities should be SOP.

Off-The-Shelf Lessons Learned from Business

Speed to Market and Speed of Response

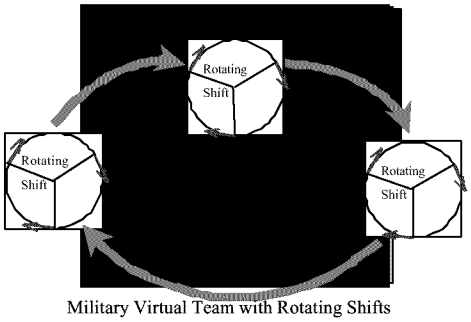
Time is a resource that is crucial to the success of any mission. Once lost, it cannot be recovered. Time management has always been important, but with a distributed staff it can be even more critical because of the potential lag time between locations. The payoff for businesses is a shorter time between product conceptualization and marketing. The business model usually consists of teams or members spaced out so that the sum of their efforts constitute continuous design collaboration, 24-hours a day. (Figure 5) This method does not apply directly to the military model because the SJTF would have 24-hour operations at each location (Figure 6); however, the applicable related principle is *speed of response* or *decreased deployment time.*

Figure 5
Business Model Global Virtual Team



Civilian Virtual Team with Shifting Time Zones

Figure 6
Military Global Virtual Team



Military Virtual Team with Rotating Shifts

[22] U.S. Joint Chiefs of Staff Joint Warfare of the Armed Forces of the United States, Joint Pub 1. (Washington, DC: 2000) VI-6

The Air Force has been experimenting with reducing its deployment size and the time required to execute. One method employed by the Air Force has been to reduce the number of C2 assets forward deployed and keep the rest connected, but from the rear.

> During Operation Desert Storm, it took 10 to 15 days and enough C2 equipment to fill 25 C-17 air lifters to create a support system for nearly 2,000 people. Using electronic links to the Rear Operations Support Center, the same operation would take perhaps a day or so for two C-17 loads to support 125 deployed personnel.[23]

Proponents of this method have called it a virtual presence. Others have called it actual absence. Regardless, a 92% reduction in required lift assets is significant enough to warrant attention. An extension of this experiment has been the creation of a *virtual JFACC* exerting control globally from stateside locations and transition of that JFACC to an *airborne/mobile JFACC*.[24]

Flexibility of Virtual Teams

[A]necdotal evidence indicates that virtual teams have the potential to transform quickly according to changing task requirements and responsibilities. Thus[,] they may be more capable of addressing the evolving mission that characterizes organizations today.[25] The flexibility described here can be true of military teams as well. Conceptually, adaptation to mission particulars can be faster if the *expertise* on the team can be added rather than requiring the team to develop it internally.

Use of Email

"Email has not traditionally been viewed as a very 'rich' means of communication. [U]nspoken signals such as gesture, tone of voice, posture and surroundings provide a large

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[23] "Air Force wants to keep IT staffers stateside." GCN September 21, 1998.
[24] "Joint Experiment in Expeditionary Force", Air Force Magazine, January 2000, Vol 83, No. 01
[25] Armstrong & Cole. Mutual Understanding, Integration and Trust: Creating Conditions for Virtual Team Effectiveness (1995) 15

amount of information to the participants of a meeting."[26] This may be true, but the usefulness of email is well worth the trade-off. Email is the simplest means of communication between virtual team members. In some instances, it is easier to use than telephones. Email's format can be read and re-read to ensure understanding. It can be forwarded without inducing a re-transmission error like what can occur when people attempt to relay a message verbally. For some individuals, email allows easier organizing of thoughts. This may sound trivial, but for those allies, coalition partners, or VPO/NGO members whose primary language is not English, the ability to *see* the message can be critical. The drawbacks are mostly due to the asynchronous method of communication. There can be a lag between sending and receipt. Additionally, there is no immediate feedback even when the message does go through. "Because computer-mediated communication entails greater uncertainty than face-to-face communication, there tends to be an 'intense need for response'."[27] A short reply acknowledging receipt is all that is usually required. For the military, these are not showstoppers because there will seldom be a time when email is the only means of communication.

Impact of Culture and Commonness of Technology on Virtual Teams

It is significant that business models found little evidence of cultural effects. There exists, finally, something that decreases difficulties in communicating with allies, coalition partners, VPOs and NGOs that do not share the English language. As mentioned above, this can be attributed to the written nature of email and the ability to *see* the message. The need for common technology was important in these studies, however. This has implications on

[26] Department of Management Studies, University of Aberdeen, Scotland <http://abdn.ac.uk/~cms010/labproc.htm.> [11 December, 2001]
[27] Jarvenpaa. Sirkka L. "Communication and Trust in Global Virtual Teams." <http://www.ascusc.org/jcmc/vol3/issue4/jarvenpaa.html> [14 January, 2002]

the need to truly standardize our hardware interfaces. A standard cannot be designed in a total vacuum, and should at least *consider* the allies, coalition partners, and possibly VPO and NGO contacts.

Success in a Virtual Future

The establishment of Standing Joint Task Forces promises a more rapid response by reducing activation time and maintaining greater Joint interoperability. Creation of an SJTF as a shell that can be augmented when needed minimizes manning requirements while still providing a cadre of personnel that can impart long-term continuity. An SJTF also provides a means for each Combatant Commander to proceed with Joint experimentation. Better coordination with outside agencies can be achieved by having contact *before* a crisis occurs. An option open to the Combatant Commander is the use of *virtual* teams to increase the capability of the staff. Inclusion of personnel electronically from multiple locations reflects today's reality, flexes our technological superiority, and saves deployment time and dollars, both during exercises and real-world missions.

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