Overcoming the Tyranny of Distance

In 1789, it took George Washington eight days to travel from his home in Mount Vernon, Va., to his Presidential inauguration in New York City. The fact that it took George Washington eight days may seem incredible to us today, but what is more amazing is that it would have taken roughly the same amount of time throughout the previous 2,000 years to cover that distance. No real progress was made in over 20 centuries! Moses, Aristotle or Julius Caesar could have traveled those same 200 miles about as quickly as our first President did.

Why was that? Lack of talented engineers? Complacency? Did the distance barrier seem insurmountable?

Admiral Walter F. Doran
Commander, U. S. Pacific Fleet

In today's terms, I think we have an abundance of talented engineers. As for complacency, the race to set new standards and reap its rewards usually eliminates that issue. And from a military and force protection standpoint, September 11 reminds us of the consequences of complacency. I would also say that no barrier is insurmountable, however, it is logical that we will continue to encounter new barriers as we overcome others, especially in the information arena.

I'd like to talk about some of the ways we are overcoming the barriers we are faced with and then discuss a few future initiatives that will help us continue breaking down all the distance barriers we encounter. As you know, the Pacific region is both vast and diverse; it covers over half of the earth's surface and ensures that we are constantly challenged by what we call the "tyranny of distance." We've dealt with this tyranny many ways in the past — often with help from you.

When I joined the Navy, we overcame the distance barrier through sheer numbers. At the height of the Cold War we were deploying a nearly 600-ship fleet and pushing them forward in waves and spreading them across the oceans. Those days have passed, and for good reason — our technology pushed forward. With the advent of link technology, we transformed from a force needing to transit in close quarters — to Carrier Strike Groups able to spread their ships out over hundreds of miles.

Today with satellite communications, advanced communication systems like EHF, and now satellite links and chat rooms, a Strike Group leaving San Diego for the Arabian Gulf can achieve situational awareness by tapping into critical, real-time information even before they leave homeport. Once they have gotten underway, ship technicians overcome the distance barrier through reachback maintenance support. They are able to gain assistance in diagnosing and repairing casualties through existing technology like the Internet, chat or VTC, keeping ships on station and minimizing downtime for critical equipment.

The impact of information technology addressing the distance barrier isn't limited to deployment operations. It has also enabled us to leap forward in the way we train our forces. The Fleet Combat Training Command Pacific is currently using the Battle Force Tactical Training system during inport exercises to improve the training of Strike Group command and control elements from simple reporting procedures to the correct application of rules of engagement in a realistic environment. With this improved technology, our Strike Groups can practice and evaluate their tactics, techniques and procedures inport — before getting underway.

These training exercises have traditionally been designed to train a single Strike Group on each coast separately. But this February, we will conduct our first "Multi-Strike Group Inport Exercise" and break that distance barrier. Three Carrier Strike Groups separated by thousands of miles (Stennis Strike Group in San Diego, Vinson in the Pacific Northwest and the Truman Strike Group in Norfolk) will train simultaneously, utilizing a collaborative training scenario. Everyone on the ships from the petty officers on the consoles to the admirals and their staffs will train through the same simulated combat scenario.

And the technology just keeps getting better, as is the case with the Navigation, Seamanship and Shiphandling (NSS) Trainers being implemented throughout the Pacific Fleet this fiscal year. Our fleet concentration areas will be outfitted with "bridge mock-up" simulators for complete navigation team training, and our ships will be equipped with a version that includes virtual reality hoods designed to train individual watchstanders, enabling Sailors to see precisely what they would see from the bridge of their ship. Soon a ship heading into a port they haven't been to before will be able to practice by plugging into an onboard simulator. The use of advanced simulation has much potential in every aspect of our business and will allow us to sharpen our skills and more effectively train our force for the real-world operations we'll face.

As you know, today we are fighting a new kind of war — a global war where we need every advantage we can get — and technology is giving us an edge. Our adversary is now spread throughout the theater; hiding, making our task more challenging, but we will ultimately defeat this asymmetric enemy by capitalizing on our asymmetric advantage. That asymmetric advantage is in the brilliant minds of America's technical community and our brave men and women in uniform working toward the same goal of winning the Global War on Terrorism.

Information Technology enables transformation. An example of this is our approach in the Pacific to developing a Standing Joint Task Force, known as JTF-519. This task force, under the command of the Pacific Fleet Commander represents every Service and is spread throughout the Pacific region — from Japan to Alaska — with elements as far east as Fort Bragg, N.C., and Fort Meade, Md.

Clearly, the distribution of our team creates quite a distance barrier, but we have overcome that challenge by applying the technology

you've provided. While geographically separated, Task Force members stay connected by training and planning via the Internet and tailored Web sites. I bring the staff together twice a year to test our planning and nurture the relationships we've established from afar. The results have been outstanding and the staff is an important warfighting resource for the Combatant Commander.

That's one example of how technological efficiencies are breaking distance barriers, and enabling your military to carry out our nation's mission. Many more examples are on the horizon. Another way to conquer distance is to have faster ships. That sounds rather simple, but the current technology that has emerged in the form of high-speed surface vessels, which we call HSVs, is anything but simple. These HSVs have already proven their worth as transports, and with their shallow drafts, as Special Forces insertion platforms. HSV technology can also help enable the development of our Littoral Combat Ship — a ship that can go 40 or 50 knots, outfitted with tailored combat mission modules and unmanned vehicles, to influence their area of operations.

Another important initiative, still in its formative stages in the Pacific, is the Regional Maritime Security Program (RMSP). First and foremost, this program depends upon the establishment of enhanced Maritime Domain Awareness — essentially knowing what is traveling on our waterways. There are capabilities and systems already in place, and others in development that can help us improve our situational awareness of the high seas.

One example is the Commercial Satellite Communications System, which comprises the various commercial communication systems that routinely operate over water including Inmarsat, the Argos system and Iridium communications satellite systems among others. These systems either currently have or could be easily modified to develop position reports from GPS and transmit reports containing time and position. Communications ground stations could receive these messages from mobile units and generate identification, position reporting and tracking data at user-determined intervals. As the CNO, Adm. Vern Clark has said, we need to network Navy assets with the Coast Guard and other intelligence agencies to identify, track and intercept threats long before they threaten this nation.

Another very promising example of progress in interoperability is the CENTRIX (Coalition Enterprise Regional Information Exchange) system, which continues to evolve and improve coalition interoperability. Currently CENTRIXS allows us to share with our allies, time-critical, tactical information at the SECRET releasable level through e-mail, chat and Replicated Web Site capabilities, with Common Operational Picture Tools in development. CENTRIXS-J, which we tested with the Japan Maritime Self-Defense Force during ANNUALEX in November 2003, has a built-in language translator — helping us overcome not only the distance barrier, but also the language barrier, which can often be every bit as challenging.

The Asia-Pacific Area Network (APAN) has already been tested to help share information with other responsible navies on simulated motor vessels suspected of trafficking terrorists or weapons of mass destruction. With systems like CENTRIXS and APAN, we're on the verge of realizing real Maritime Security. I know that you will help get us there — and FORCEnet may be the piece that brings all of this together. At my Commander's Training Symposium last month [October 2003], Vice Adm. Dick Mayo shared his vision of FORCEnet bringing us complete battlespace awareness, space access to all satellite data at the unit level and dynamic real-time intelligence on critical areas of interest. Knowing the location of all ships, planes and submarines (friendly, neutral or otherwise) is the ideal vision sought by FORCEnet.

Joint interoperable information sharing will be commonplace as well as mission analysis and information exchange with our coalition partners. We will be a fully networked, combat capable, joint fighting force. The realization of this vision will depend on the technical community and your ability to develop these enabling technologies. The result could go a long way to enabling our forces to achieve victory in the Global War on Terrorism. We have made incredible progress over the years developing transformational capabilities, but we need to keep pushing.

Barriers often exist only because we don't believe improvement is possible. As World War II drew to a close, there was much debate as to whether a fixed-wing aircraft could fly faster than sound or if a human pilot could survive the experience. Conventional wisdom held that this invisible threshold would forever serve as an impediment to aircraft development and contemporary aircraft structures. But the innovative minds of the men and women at Reaction Motors Inc. built their rocket-propelled engine anyway, and engineers Robert Woods and Larry Bell designed the X-1 aircraft — and then, on October 14, 1947, a brave Air Force officer, Captain Chuck Yeager climbed aboard and became the first man to fly faster than the speed of sound. Today, what was once thought impossible is a routine occurrence.

The application of advanced technology and innovative processes has time and again delivered results once considered unachievable. We've experienced similar record-breaking performance through the application of advanced technology and innovative processes. During the first Gulf War, TLAM strike planning took on average, four days and extensive coordination between all operating units. During Operation Iraqi Freedom, strike planning was generally accomplished in less than four hours while sharing a Single Integrated Operations Picture nearly simultaneously with all participating units.

These are but a few examples of advancements made in recent years. Innovative minds and determined spirits find ways to overcome the insurmountable distance barriers — and change the world in the process.

There is a story about Ronald Reagan that his wife Nancy liked to tell. He was speaking at the University of California, and a student got up to say that it was impossible for people of Ronald Reagan's generation to understand the next generation of young people.

"You grew up in a different world," the student said. "Today we have television, jet planes, space travel, nuclear energy, computers..."

When the student paused for breath, President Reagan said: "You're right. We didn't have those things when we were young. We invented them."

Editor's Note: Adm. Doran's article has been edited from his remarks at TechNet Asia-Pacific, November 5, 2003.