

## Defense AT&L interviews

# Army Lt. Gen. Claude V. “Chris” Christianson, Deputy Chief of Staff for Logistics, G-4 Headquarters, Department of the Army

**A** rmy Lt. Gen. “Chris” Christianson served as the principal Operation Iraqi Freedom (OIF) logistics operator for the Coalition Forces Land Component Command headquartered in Kuwait, August 2002 through July 2003.

In March 2004, Christianson testified on the logistics readiness of the U.S. Army before the House Armed Services Committee Subcommittees on Readiness. The logistics achievement of OIF was, in Christianson’s words, “especially spectacular in light of the fact that we supported a 21st century battlefield with a mid-20th century logistics structure.”

In May, Randy Fowler, DAU director for logistics and sustainment, talked with Christianson for *Defense AT&L* about his experiences in OIF and the initiatives he is driving to enable logistics operations to keep pace with the rapid combat operations of the 21st century theaters in meeting the needs of the warfighter.

**Q** Thank you for taking time to talk to *Defense AT&L Magazine* today. In your testimony before Congress earlier this year, you said, “Today’s battlefield is dispersed and consists of islands of operation that are connected by a fragile spider web of support.” You went on to say, “The force must be flexible to respond to rapidly changing environments.” How do you see the Army changing its logistics structure in support of these flexible demands on the future battlefield?

**A** The battlefield I talked about is best described as non-contiguous. Relatively secure islands are connected by lines of communication—air, ground, or sea, but in the case of Iraq, primarily ground and air—that we don’t own. You read about RPG [rocket-propelled grenade] attacks along the routes, explosive devices that have been placed in the roads or in buildings alongside the roads, and here’s the situation: you can drive down the road ten days in a row and it’s safe, and then all of a sudden, on the 11th day, a bomb’s been placed in there, so the route’s not secure. That is, I think, the way the battlefield of the future is going to be. In order for us to live on the new battlefield, our system has to change from a layered system

that’s based on piles of supplies and internal lines of communication to a distribution-based system that allows us to be connected in ways that we haven’t been connected before. We’ve got to be able to respond through a flexible distribution network that’s world class. It’s got to be 21st century and much like we see in the commercial world.

**Q** Follow-on question to that. In the future, how do you see the Army providing combat service support to an expeditionary and a joint force?

**A** Well, we have to do it in a way that, first of all, responds very rapidly. Upon initial entry into operations anywhere in the world, small sustainment elements have to go in to provide command and control [C2] from the very beginning. And that command and control then remains continuous as operations expand, or if it’s over very fast, then we pull out. There’s no gap in the command and control of support structure, so today we end up putting in layers. We put in a force, and then another force comes behind



Soldiers from the 319th Airborne Field Artillery Regiment rapidly deploy from their vehicle during a training exercise at Bashur Airfield in Northern Iraq.  
DoD photograph by Army Pfc. Brandon Aird

them. Every time a new force comes in, we pass back the command responsibility for support. We tend to get it fragmented from the very beginning. In order to support very rapidly moving, rapidly changing expeditionary operations, our support structure's got to get in quickly, remain consistent, have the flexibility to grow or to shrink as a theater requires, all under single command and control. That's really the key—to be able to respond rapidly.

**Q** *I'm going to jump into an acquisition question. I would guess that there are certain capabilities and technologies that you and other operational leaders wish we had on the ground in Operation Iraqi Freedom [OIF] to provide better logistics support to the combatants. We hear that the warfighter is often frustrated with the inability of our acquisition process to get the right stuff into the battlespace fast enough. In fact, Congress criticized DoD recently for not getting up-armored HMMWVs [high mobility multi-purpose wheeled vehicles] gun trucks there fast enough. Could you talk about the logistics initiatives we're pursuing in the CSS [combat service support] community, maybe via spiral development strategies, to speed up the process?*

**A** Well, the most important capability we'd like to have had was the ability to communicate requirements—logistics requirements—all across the battlefield. In the current construct, we require forces to be in place for a while before you can get all the communications architecture in because it depends on a structure that's pretty rigid and relatively complex. Our plan was to go in and try to provide non-line-of-sight satellite-based communications to



Army Lt. Gen. (then Maj. Gen.) "Chris" Christianson (left) and Army Lt. Col. Willie Williams at the 26th Forward Support Battalion, 3rd Infantry Division operating location at Baghdad International Airport, May 2003.

**"Our logistics professionals' achievements in OIF were especially spectacular in light of the fact that we support a 21st century battlefield with a mid-20th century logistics structure."**

**Christianson  
Congressional Testimony**

our forward logistics elements to enable them to provide their requirements to the supporting base in real time, without having to depend on a very, very large and cumbersome infrastructure. We didn't have that when we first started, but the ability to go out rapidly, identify the requirement, put together a package, test it to make sure it worked, and get into the theater, allowed us to get it there within a month of crossing the LD [line of demarcation]. So once organizations like the 101st [Airborne Division (Air Assault), Fort Campbell, Ky.] or the 4ID [4th Infantry Division (Mechanized), Fort Hood, Texas] got there, we were able to pick up this satellite-based communications capability and we're now able to pass the requirements off the battlefield.

Since that time, we've equipped everybody in Iraq with that capability, and we're equipping the entire Army as we modularize. The process of acquiring that required us to first of all establish a network and get it certified by the communications guys and cleared by security folks. That's to make sure that the information we pass gets where it needs to go, that it's not going to get in the way of anything else, and that we've got some security on it. It takes a little bit of time to get all that stuff vetted and approved. Other areas like up-arming our HMMWVs—putting the add-on kits on them—really are pretty remarkable when you think about the time line. One of the issues we have with this particular case of protecting our soldiers, is the requirements' being identified at one level and rapidly escalating. You can play Monday-morning quarterback and say, "Why didn't we start this last April or May?" Well last April or May, the combatant commander requirements were at one level—relatively low.

In the case of up-armored HMMWVs, for instance, the first requirement was around 600 up-armored HMMWVs in a forward area. That number is now around 4,500. In addition, we have a requirement for over 8,000 HMMWVs to be armored—to put armor plating on the outside of them—plus the larger trucks that we’re trying to armor up as well. So we’re going from a requirement where we had a small percentage of the force with that kind of protection to now nearly all of the force having that same level of protection. Acquiring it and getting it out there for the soldiers takes a little more time than we’d all like. The armor kits were there, but they hadn’t all been tested, so we RAM [reliability, availability, maintainability]-tested with the Army Research Labs, and as soon as they were verified to protect up to a 7.62 millimeter round and a



Christianson (second from left) and unidentified soldiers and officers in Iraq, June 2003.

**What you want to have is exactly what the enterprise will bring us: single data entry, single point of entry, enterprise-wide visibility, and a shared partnership [with industry] and ownership in supporting the warfighter.**

certain level of explosive, then we okayed them, and we sent them over. So right now, I think we’ve got a couple of thousand of the 8,400 add-on kits over there, and about 75 percent have already been put on. We’ve got almost 50 percent of the 4,500 up-armored HMMWVs over there, and the production line, which was cranking along at a pretty low rate before this started, has now been raised and will be at almost 300 a month this summer. So the response of the industrial base and the response of the DoD itself in validating the requirements—it all takes longer than we would like.

In some cases, we’ve had wonderful success in responding very rapidly. When he came on board, the chief of staff

[Army Gen. Peter J. Schoomaker] quickly diverted some of the Army’s monies into a rapid fielding initiative to provide the individual soldier critical items like the newest helmet, communication devices, better weapon systems, uniform items that allow them to fight better. Those we’ve been able to field very rapidly. We got them to some soldiers before they left for Iraq, and we’ve also gone into the theater and actually fielded those individual items on-site to soldiers over there. While I think we would all agree we’d like to have it happen overnight, that’s just not possible, and I’m very comfortable that the Army has responded rapidly within its capabilities.

Gun trucks is another issue where the requirements don’t always get to the source rapidly. They’ve been building gun trucks over there since I left last July [2003] and the capacity to build those things back here was difficult—figuring out what the design is when you’re not actually there. We wait for the combatant commanders to tell us what’s needed. How do they want it to look? What do they want it to do? What capacities do they want? I think we responded pretty rapidly to that.



*This is an editorial comment: it sounds to me that given the complexity of operational changes and requirements generation, and given the need to test and energize the acquisition process and the industrial base, it’s a complex process, and the process has responded pretty well.*



Even so, there’s absolutely no question we’d like to do it faster. In some cases, more money will allow us to do that; in other cases more money won’t help in the near term. No matter how much money we spend, we can only make



Members of the 407 Expeditionary Communications Squadron put together a Flyaway KU Band Earth Terminal (FKET) Satellite System. The 407 ECS is deployed to Tallil Air Base, Iraq. U.S. Air Force photo by Airman 1st Class Desiree N. Palacios

so many up-armored HMMWVs a day until we either build another line, or increase the capacity of the factory, or find another producer. Those are the issues that we struggle with in every one of our areas, from individual soldier equipment, to armored protection for our vehicles, to new vehicles, to types and quantities of ammunition we buy. We're trying to break down some of those walls.

We're a little bit a victim of the last 10 or 12 years because since the end of Desert Storm and the fall of the Berlin Wall, we've been able to live, you might say, off the fat of the land. We haven't kept up industrial capacity in some of these areas. We've taken economic savings by reducing production in many areas, and now we have to turn some of this industrial capacity back on. We see it in everything from up-armored HMMWVs—for which we had a very small requirement, but now we have a very large requirement—to some repair parts. Before, we were able to turn around the repair parts and rebuild them; now the requirements are so large that the base we own doesn't have the capacity, and we have to go out to industry manufacturers, Sikorsky and Boeing and people like that. They haven't been making these parts for 10 or 12 years, and now we want them to make hundreds of them. In some cases we have lead times that stretch out to 12, 14, 18 months from the time we give money to a vendor or a civilian partner until they can turn on a line to actually produce the part.

**Q** *Is there an Army combat service support spiral development plan, and if so, what kinds of technology insertions are in the pipeline as a result of this plan?*

**A**

Well there is one that's been formalized. We try to do this through our cycling program, particularly in aviation as we do product improvements with our aviation fleets. For example, you'll see aviation fleets that have come in and a Chinook helicopter that's coming out as a D model [CH-47D] with a lot of technology insertions. We're trying to formalize that now in our tactical wheeled vehicle fleet. We talked earlier about a distribution-based concept of support. That should tell us that the truck will be much more important tomorrow than it is today because we're increasingly reliant on that line of communication [LOC]. In the past, you could get away with piling layers of things into a forward area if the transportation system didn't work very well. You knew you had a big pile of stuff, so you could relax for a few days. Today, with this distribution-based system and the types of LOCs and how far apart these little islands are, the truck becomes critical.

So we've restructured our truck program, and we're putting together a tactical wheeled vehicle strategy specifying that in some kind of a cycle—say every 10 or 12 years—every vehicle will go through a refreshment program. It will be refurbished, at which time, we will inject into it technologies that will give us more capabilities than we had before. We have an Advanced Concept Technology Demonstration [ACTD] that will start next fiscal year, and we intend to bring all the players in industry who want to compete into what we'll call a "rodeo" with our current truck fleet. We'll take our vehicles, the HMMWVs, and our five-ton cargoes, and our PLS [palletized load system], and HEMMTs [heavy expanded mobility tactical trucks], and then we'll try to improve them in four specific areas: crew protection; network communications capability; lower, better maintainability; and lower consumption rates for fuel and so forth. For example, maybe there's an engine somewhere out there that would give a current truck more power, use less fuel, and be easier to maintain.

We want industry to bring technologies and capabilities to the table, and then our team will analyze them in light of those four major performance objectives and make decisions—we'll take this, this, and this, and put them into such-and-such truck. So then starting in FY06, when those trucks come through our reset and refurbishment program, they'll have the new capabilities. This is very, very important because the trucks we have today will be supporting the Army 20 to 25 years from now. The last thing you want 20 years down the road is a battlefield that's got network capability and a truck driving around that's not in the network. We can't afford to do that.

**Q**

*I'm going to shift gears now to joint logistics as advocated in JV [Joint Vision] 2010, JV 2020 and focused logistics. For several years, all the logistics transformation strategies that came out of the Pentagon put a huge emphasis*

**The two most important things we have to do right now—get connectivity and create a distribution system that can respond rapidly.**



*on joint logistics and what you call “joint interdependencies.” What are some of these key joint logistics interdependencies for the Army or for the joint warfighter?*

**A**

Many of the interdependencies are unclear in most people’s minds. I think that it’s important to understand the operational framework in which we provide logistics support to a force. You really have three types of functions that are going on simultaneously in an operational area: independent, interoperable, and interdependent.

Let me give you an example to help define those three terms that are sometimes thrown around without a lot of thought. To replenish a combatant ship at sea while it’s under way is an independent process, a Navy-specific task and function. But the function of replenishing that ship with food, for example, relies on some interoperabilities and some interdependencies. The Navy depends on the Defense Logistics Agency to procure the food, just like the Army depends on DLA to procure its operational rations. The Army orders its rations through the Army system. The Navy orders its rations through the Navy system. DLA can’t have two different systems to order food. They have to be interoperable with the Services, which they are. In this particular, very simple function, you’ve got all three. You’ve got the independent Navy task of replenishing its ship, the interoperability with all the Services ordering the same stuff from DLA with Service-specific systems, and then the interdependency of all the Services on DLA to get the food. Now in this operational environment, they’re all existing and they’re all operating at the same time. So the questions are, what is “joint,” what are the joint logistics tasks that have to be performed, and how do you execute them?

My view is that the first and most important thing is to come to an agreement across the joint community on what are the joint processes. I’ll use medical as an example. Providing healthcare support to our servicemembers is probably—as most people would agree—a joint

Marines from 5th Marines mount TOW (tube-launched optically-tracked wire-guided) missile launchers on their HMMWVs as Delta Company 1st Light Armored Reconnaissance Battalion (part of the 1st Marine Division, Camp Pendleton, Calif.) drives to Northern Iraq during a sandstorm. DoD photograph by Marine Lance Cpl. Andrew P. Roufs

function. Now if you’re down in an Army combat battalion at the forward edge of the battle, and you’re doing resuscitative surgery with a forward surgical team, that’s an Army task and an Army function. You don’t see a lot of Air Force and Navy guys wandering around. But this whole process from end to end, from the time a person is injured—whether it be a soldier, airman, sailor, or Marine—to where the warfighter is finally well again and either home or back in the theater, that’s joint. Though it may be an Army helicopter that takes a soldier or a Marine off a battlefield into an aerial port in Kuwait or wherever, it’s an Air Force airplane that takes the warfighter to the hospital in Germany or all the way home. That whole process of providing healthcare and medical support is a joint process.

If we agree how the joint community works, we can then get into the process of making it work better. So that’s the secret: agree on what the joint processes are, understand how they work, know the players and what their responsibilities are—because each Service and agency has roles and responsibilities that are hand-off points. Once that’s done, we can work together to make it better. Then we can get to the ultimate point which is when someone says, “Well if you’re going to do this task, I don’t need to do it. I don’t need to have force structure and resources behind it.” But the thing to remember is that you are going to do it for the DoD, not just for your Service. Interdependency means you do it all the time for everybody.



A soldier of the 101st Airborne Division (Air Assault) looks through the sights of a TOW (tube-launched optically-tracked wire-guided) missile launcher in Mosul, Iraq.

DoD photograph by Army Staff Sgt. William Armstrong



*You've answered my follow-up question, which was, what does joint logistics look like? I think you described that very well with the first example of resupplying a ship—what's tactical, what's operational, versus what's joint. Can you give us some information on the Deployment and Distribution Operations Center [DDOC] that's currently employed by CENTCOM [Central Command]. Is that the model for the future?*



First of all, the Deployment and Distribution Operations Center that's in Kuwait is autonomous. It was an initiative started by Air Force Gen. [John W.] Handy [commander, U.S. Transportation Command, and commander, Air Mobility Command, Scott Air Force Base, Ill.] in his role as the distribution process owner for the Office of the Secretary of Defense. That organization was put there very specifically because it's at the interface between the strategic distribution system and the tactical/operational distribution system. It's the interface point where air and sea nodes hand things off from the strategic base into the operational area, and it's at that point of interface that we have a significant challenge.

The challenge is that our distribution systems weren't designed as a single system. You have lots of players—TRANSCOM, Air Mobility Command, Military Sealift Command, the Surface Distribution Deployment Command—plus you have all the organizations in the theater. You have the air components running the aerial port operations, and you have someone else running seaport operations. Then because of the large land operation, you have

primarily the Army doing land distribution operations in the theater. All those players are part of the distribution process, but we never designed it as a holistic system from end to end.

This focal point of the distribution process in Kuwait is a critical point to concentrate effort in that they're there because of the criticality of the mission. So they come in with the skills and the tools to be able to reach back and see and control the distribution process from the strategic end and say, for instance, "No, I don't want that ship to leave at this time," or "I don't want that airplane to leave at that time," or "I want this load to go on that airplane." They must also reach down in and see what's going on in the operational area and then be able to take that information and coordinate and synchronize so that you have harmony between the two and avoid problems like having stuff pile up and not being able to get it forward, or having stuff back at the strategic base with no rearward movement coming out of there. So that's why they're there. It's the first step, really, in trying to build a joint logistics structure that really is an integrated process from the very end back here at the strategic base, all the way down to the foxhole, the airfield, the fighting platform in the operational area.



*This appears to be ad hoc in CENTCOM as set up by Gen. Handy as the distribution process owner. Is there intention to institutionalize something like this in future theaters?*



It was sent in as a pilot program. It does replace an organization that currently exists in doctrine called the Joint Movement Center or JMC. The JMC would go away if this organization becomes formalized—and it will become formalized. The issue that we'll struggle with is that you don't need to have a 50- or 60-person organization in every combatant command because you don't have an operation going on in all of them. There's a thought that there would be a small planning cell with each combatant command. Then there would be a module that would come out of the strategic base if something happened in Korea, for example. This module would slide into Korea and provide those capabilities forward while the small cell would continue day to day to do the planning and preparation. That's what we're working through right now—what should the cell look like if we formalize it, how is it manned, and who provides the resources across the Services?



*We've made progress under OSD sponsorship for the joint distribution process owner. Where do we go next, either organizationally or operationally, with the joint supply chain process owner, who's even bigger than the distribution process owner?*

**A**

First of all, I think OSD views Gen. Handy really as a supply chain owner, the process owner. OSD's definition of distribution is much more comprehensive than the dictionary definition, so they include the network of warehouses and distribution points and all that. Let me try and answer the question of where we go from here. If we go back to the earlier point I made about the processes, the issue is which processes we're concerned about. Every process should have an owner. If I use the medical health service—providing health service support to the joint force—as a process example, then who owns that process? My view is that we would decide on what processes support the joint force, designate an owner for each process, then map each process out to get everyone across the joint force to agree to how it works. Then we assign responsibilities to all the Services to do their part in the process and hold everybody accountable for performance. That's the way we have to approach it. After that's all done, we're going to find we need some kind of a control mechanism over the process or processes as they come together in theaters. And we'd end up with some kind of an overarching C2 structure that would allow us to operate effectively.

**Q**

*The ugly question is always, do you end up with a joint logistics command?*

**A**

But see, it's an ugly question because it's the *wrong* question. That needs to be the result of your work, not of your process. Not the driver. You see the problem is when you ask the question now, nobody will want to answer it. If you answer it, 60 percent of the people in the room will want to agree with you. The *right* question is this: what are the processes that our country needs in place to support the joint force? If we can't even get an agreement on the process and how it works, I don't care what kind of a command you put out there, the challenges are going to be the same tomorrow as they are today.

**Q**

*I'd like to move into the area of C2 now, going back to focused logistics and all of the logistics strategic planning documents that have come out in recent years. Certainly, logistics situational awareness has been one area that we tried to improve, trying to catch up or parallel what's going on in operational situational awareness as we become effectively more net-centric on the battlefield. What are the latest thoughts or plans on movement to a joint C2 environment—progress either from an Army standpoint or a joint standpoint?*

**A**

Well, first and most important is resourcing the Army over the next couple of years to be able to provide network



Supplies are sling loaded under a CH-47 "Chinook" helicopter. U.S. Army photograph by Spc. Patrick Thorpe

connectivity to our logisticians—primarily the folks at supply nodes, the folks at hospitals, and the folks at our distribution centers—so that they're not dependent on anybody else to meet their requirements and to pass their data into the enterprise. We're doing that using commercial satellite technologies. All of that has been approved through the CIO [chief information officer] of the Army, and it's compatible with all the joint systems. Now the problem is that in the joint environment, there is no such vision for connecting logisticians—although I believe that when Gen. Handy maps his distribution processes, he's going to put an information architecture on top of it that's going to require a network connectivity. It will be based pretty much on what I'm talking about here, some kind of a commercial satellite network that we can use. So what we're really talking about isn't an operational network where you command and control forces for operations. It's a business process or a sustainment network that we can use to pass sustainment data around the enterprise and control the things that are critical to supporting the forces as they conduct operations. That's what we're doing, and we're doing it in concert with the Army as it modularizes over the next few years. We're going to use that same construct and will carry it into the joint community as we define these processes.

The Air Force already has that kind of capability. When they go forward in the air fields using their expeditionary operations concept, they bring non-line-of-sight satellite-based communications with them, both classified and unclassified. The Marines tactically don't have any of that at all, so we're trying to share what we're doing with the Marine units in Iraq so we can get the same kind of capabilities across the battlefield. The key is to build this



Aerial view, including runway, terminal, hangar, and tent city, looking south of Kandahar Airfield, Afghanistan. Photograph by Marshall W. Woods

sustainment process network so that the requirements can get out on the battlefield in real time.

The situational awareness that you mentioned is really our ability to sense what's going on in real time on the battlefield. In the past, our approach was to say, "Every five days we're going to give you this box of stuff. We don't know if you're using everything in the box we gave you five days ago, but we're going to give it to you anyway *because* we don't know what you're using." The ability to sense and then respond to the requirements is the key. If you don't know what they need, no matter how good your system is, you're only guessing. We do very well with water and food and fuel because those are pretty finite. Take fuel. If you can do the math and you've got the number of trucks right and you know how far they're going to be driving, you'll be 85 to 90 percent on the money with the fuel requirements. So every three days, you send three days' worth of fuel. Doesn't work that way for repair parts. Doesn't work that way for ammunition consumption. Those requirements we have to be able to see in real time so we can respond.

**Q** Now this is kind of a continuation about seeing requirements and seeing assets, and it deals with RFID [radio frequency identification data]. I was surprised to read in a publication last week that RFID's expected to be a \$20 billion dollar business with Wal-Mart and DoD leading the way. How did the RFID applications perform in OIF?

**A** Very well, for the most part. The problems we had with RFID in total asset visibility go back to what we've talked

about several times, and that is the process. RFID is not a process. AIT [automated identification technology] is only a technology. Everyone needs to be asking, "Who owns this? What process is it enabling? What value-added does it have compared to what I have to do?"

Therein lies the crux of our problem because we had good luck with RFID applied here at places like the Defense Distribution Center in Susquehanna [Pa.], where we containerized and consolidated our cargo and prepared it for movement overseas. They had it as one of their performance metrics to put RFID on all of their containers and their pallets. For the most part, that was at 95 percent level of resolution. It came in. You could see it coming into the theater. Once it gets into the theater, you're trying to put it up into a tactical battlespace. The question is, who's got RFID up there? Whose job is it to instrument this battlespace? We instrumented it, but we instrumented from the CFLCC [coalition forces land component commander] level. It wasn't part of anyone down in the force saying, "That's my job, so when I get to this place I'll put up an antenna so I can see everything that goes by here."

That hasn't been done yet because the process hasn't been clearly identified. For example, if RFID is the technology that's going to be used to provide in-transit visibility [ITV] across the OSD and the joint force distribution system process, then Gen. Handy's folks—when they describe this process—have to instrument the process. Say I want to know what's going on at a particular place on the ground. Well who owns that place? If it's a Navy place, then the Navy needs to have the responsibility to resource it. Right now you won't find that. You won't find anyone who understands it's a case of "If I do this task in the distribution process, I am responsible to Gen. Handy or to the joint community to send them this data. I have performance standards I'm supposed to adhere to. If I don't meet them, it's going to come up on the screen and say, 'Hey, you're not doing your job.'" Right now none of that is in place. The technology is world class. What we haven't figured out yet is exactly what are we using it to enable.

**Q** New technology almost always produces growing pains. I heard an Army general briefing on RFID, and he passed along this anecdote: as soon as a lot of containers got into theater, the first thing that the soldiers did was rip the transmitters off and throw them in trashcans because they didn't know what they were. They thought it could have been some kind of enemy sensor or other threat. Another story the general told was that as the convoys were actually moving north there, because of the things that operationally happened in the combat zone, they were being diverted from where the interrogators are that pick up the signals for the real in-transit visibility going into battlespace. Are there continuing operational challenges in effectively implementing

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**L**t. Gen. Christianson, a distinguished military graduate of the Army ROTC program at North Dakota State University, was commissioned as an ordnance officer in 1971. From 1971 to 1974, Christianson was assigned to the 1st Infantry Division, Fort Riley, Kan., first as weapons platoon leader, then executive officer in the 1st Battalion, 18th Infantry, and later as a shop officer and the S2/3 (operations officer) in the 701st Maintenance Battalion. He was assigned to Thailand in 1974 for two years, where he served as the chief of shop operations with the United States Army Support Group in Samae San and later as a customs officer with the JUSMAG-THAI in Bangkok.

From 1977 to 1979, Christianson was assigned to the 9th Infantry Division, Fort Lewis, Wash., as the commander of a forward support maintenance company in the 709th Maintenance Battalion and later as the operations officer in the Division Support Command.

From 1979 to 1982, Christianson was an assistant professor of military science at Colorado State University. From 1983 to 1986 he served as the Army Guard maintenance programs and policy officer with the National Guard Bureau, Washington, D.C. In 1986, he was assigned to the Southern European Task Force in Vicenza, Italy, where he served three years as the director of logistics for the 22nd Area Support Group. From 1989 to 1991, Christianson commanded the 725th Main Support Battalion, 25th Infantry Division (Light), Schofield Barracks, Hawaii. In 1992, after completion of the Army War College, he returned to Hawaii as the assistant chief of staff G4, 25th Infantry Division (Light).

In 1993, Christianson was assigned as the chief of the office of defense cooperation (ODC) at the American

Embassy, Rome, Italy, where he served for nearly two years. From 1995 to 1997, he commanded the 3rd, and later the 1st Infantry Division Support Commands in Kitzingen, Germany. After command, he was assigned as the G4 for the U.S. V Corps in Heidelberg, Germany. After his selection to brigadier general, Christianson was assigned as the deputy commanding general for the 21st Theater Support Command in Kaiserslautern, Germany, where he served from 1998 to 2000.

From 2000 to 2002, Christianson served as the assistant chief of staff, C4/J4/G4 United Nations Command/Combined Forces Command/United States Forces Korea/deputy commanding general (support), Eight United States Army, Republic of Korea. From August 2002 to July 2003 he assumed the duties of assistant deputy chief of staff, G-4, Headquarters Department of the Army with duty as chief, Logistics, Coalition Forces Land Component Command, Camp Arifjan, Kuwait in support of Operation Iraqi Freedom.

Christianson has a bachelor's degree in industrial engineering from North Dakota State University. His military education includes the Infantry Officer's Basic Course, Ordnance Officer's Advanced Course, the Armed Forces Staff College, and the Army War College. His awards include the Defense Superior Service Medal, Legion of Merit with Oak Leaf Cluster, Bronze Star Medal, Meritorious Service Medal with Silver Oak Leaf, Ranger Tab, Expert Infantryman's Badge, Parachutist Badge, Air Assault Badge, and Army General Staff Identification Badge.

*RFID, or are those just part of the processes that have to be better figured out as application?*

**A** Well both are the result of what I said before: nobody owns the processes, and they're not understood. People who are involved don't have clear responsibilities. Take the first example—people are taking the tags off and throwing them away. I don't know who those people are, but if the guy taking the tags off was a supply person, he didn't understand and had not been trained to carry out those tasks. That's exactly my point. If you're a supply guy and you're at the end of the distribution chain, you are the Wal-Mart store, and I expect you to report. That

means that you should have an antenna so when things come into your area, it automatically sends a signal. You don't have anything to do with it. You would have been trained to know that because when you send things backwards, like unserviceable components to be repaired, they should also have a RFID tag on them.

This is what I was telling you about. We put a technology in, but we did not enable a process. There's a big difference. If all I do is tell people to put RFID tags on everything and send it over, what value-added is it to the process if no one in the theater understands because no one has defined the process? Then the idea of things getting diverted around the battlefield—I mean that's going to hap-

pen all the time. The issue is, where do we want to see these things? Antennas, for example. Early on, we set up the first antennas just north of the border, up around Tallil airfield because that place was supposed to be a cargo transfer area. Those antennas, which were not expressly designed for 135- to 140-degree heat and blowing sand, had a hard time staying operational. When they were operational, we could see anything that was tagged. Of course, everything wasn't tagged. You know, some things you see, some things you don't. What you heard in the briefing were symptoms of a problem. You didn't hear what the problem was and what was going to be done to solve it. I'm telling you that the problem is the result of not enabling a process with this technology, but just saying, "Here, go use our RFID."



*That was the Army general's ultimate point too. He got our attention with the anecdotes.*

*Let's turn to another important technology: ERP [enterprise resource planning] systems. All the Services agree that it's going to take enterprise systems in order to connect not just our information technology systems, but our processes and people and everything together—for an integrated sustainment network of the future. What is the Army doing to ensure that your ERP systems can interoperate with the Army and jointly?*



The enterprise solution for the Army is being designed with an interface layer called product life cycle manage-

ment plus [PLM + ] that's going to be the master data manager for all of the Army data. It's going to provide all the interfaces for outside the enterprise, either somebody outside the enterprise who needs our information, or somebody who wants to give us information from outside. That layer will then be the filter, if you will, in the interface mechanism for everything on the outside and it will be compatible. It also serves to link our tactical ERP with our strategic ERP. Why don't we do just one? The reason we have two is because of the tactical level. We have some unique requirements to be able to operate in areas where SAP® ERP software and the business processes and the commercial world can't operate. They're not designed to unplug, go operate and fight a battle, come back, and plug in—kind of like a submarine being under for 30 days and then coming up in a matter of a few seconds, downloading all of this information, and going back under again. If you equate a tactical unit, particularly Marine and Army ground units, they have to have the capability to do that kind of an operation. At the tactical level, this PLM + will serve to interface with our GCSS [global combat support system] Army program that's linked to the logistics modernization program as well as interface out. It's really like the master data repository and the manager for everybody. **[Editor's note: SAP, referenced above, is a German company and a leader in providing collaborative business solutions. SAP has developed a Defense & Security solution that delivers information throughout the value chain (factory to foxhole) thus allowing maximum flexibility for changes in operational conditions and enabling use of the software in a tactical environment.]**



*I want to continue talking about supply chain management. How close do you think the Army is getting to an enterprise view of its supply chain that really can hook everything from vendors and national-level providers on the front end to the users on the back end?*



Well, you know, that's a good question because there are many people that will tell you that you can't do that until you have the ideal enterprise software solution, until you've reached nirvana out there. My view is you can do it today. We *are* doing it today. We are entering into partnerships with industry to give them visibility of what we're selling at our "Wal-Mart stores." If industry can see what we're selling every day all across the Army, they can get involved as partners with us in determining how we should stock, when we should be manufacturing. Their business tools are much more powerful than ours. Let them be a part of this process instead of waiting for us and our management guys to figure out that we need to order a bunch of stuff from them. We're experimenting with this right now. I don't want to wait for nirvana because I'll be long retired. We can start to do it now with the tools we have.



United States Army Vessel (USAV) Theatre Support Vessel (TSV-1X) Spearhead. The 98-meter USAV, with an average speed of 40+ knots, will transport troops and cargo. U.S. Navy photograph by Photographer's Mate 1st Class Brien Aho

**The truck will be much more important tomorrow than it is today because we're increasingly reliant on that line of communication. The trucks we have today will be supporting the Army 20 to 25 years from now.**

Now it's not easy because part of the enterprise concept is that it's single data entry. The data never have to be manipulated through the enterprise. Once the information goes in, it populates everything that needs particular data elements, everybody can see it, and you don't have to play with it anymore. For example, we just sold a tank engine over in Iraq, and when our tank engine manufacturer back here in the strategic base sees that, he knows that he needs to send another one. He also knows that based on all the other tank engines we've sold, our demands are 30 percent higher than we anticipated. He can then turn around and start increasing his production without the Army even getting involved except to be a partner in knowing what's going on. We can do that today. The challenge for us is that he can't see those data today. We have to give them to him in a way he can use in his business systems. That means work for us. How do we do that? That's what we're working through now. We have the information. The requisitions in Iraq are reaching here in less than a day. So we just need to take that data file, and if you're a manufacturer for me and you produce 122 stock numbers, I should be able to dump that data to you in usable form.

That raises another question. If you're a big manufacturer, why should I go to you? If you're subcontracting to a guy who's rebuilding all these components, why don't I go directly to him? Now this gets to be a sensitive issue, but if you really believe in that, then maybe we should do it. There are advantages to letting the larger guys do that because they have the ability to do some things that the small guys can't do. You don't want the small guys to be involved in all this worldwide distribution stuff because normally they don't have the kind of tools to do it. So



Marines with Weapons Company, 3rd Battalion, 8th Marine Air Contingency Marine Air Ground Task Force, Camp Lejeune, N.C., participate in an exercise in preparation for deployment to Iraq.  
U.S. Marine Corps photograph by Cpl. Daniel Yarnall

we'll pay a little more to get that kind of strategic level management and ability to flex. We're experimenting with several of our big guys—guys like Oshkosh, AM General, Stewart & Stevenson, United Defense, Sikorsky, Boeing, and so on—as well as working with DLA and even AAFES [Army, Air Force Exchange System], the PX [Post Exchange] system and the military clothing sales store. DLA can see what's being sold out of our stores. They can be a partner in replenishing the stocks instead of having to go through the AAFES system of ordering. In the long term, what you want to have is exactly what the enterprise will bring us: single data entry, single point of entry, enterprise-wide visibility, and a shared partnership and ownership in supporting the warfighter.



*This is my favorite quote from your congressional testimony: "Our logistics professionals' achievements in OIF were especially spectacular in light of the fact that we support a 21st century battlefield with a mid-20th century logistics structure." The issue is what's needed in the logistics domain so that we can catch up with the 21st century operational domain. I think we've talked about a lot of it already.*



We have, and I'll try to summarize it again because I think you look at lessons learned from an operation like OIF or Desert Storm, and you see pages and pages and pages of logistics things that have to be fixed. There's a tendency in our business to put a little bit of water on each

of those fires. Some of them go out and get fixed, but most of them don't. They're still burning. If you were to read the lessons learned in Desert Storm and read the lessons emerging out of OIF, you'd see a lot of similarities. The question is, why? My view is that it happens because we aren't able to focus our efforts. What we are trying to do is focus our energy on four very simple objectives. We've talked about almost all of them today.

First, we've got to have a sustainment network across the battlefield that allows the requirements to get off the battlefield in real time so we don't have to guess or try to figure out what the forces need at any given time because we'll know. We'll know that a tank engine went out this morning.

Second, if we know that information, we have to be able to respond to it rapidly. We have to get the tank engine to where it needs to be right now. That requires us to have a theater distribution system that's world class, flexible, that responds rapidly, and is very precise. If the unit moves while the engine is en route, network connectivity can tell the truck to re-route. Those are probably the two most important things we have to do right now—get connectivity and create a distribution system that can respond rapidly.

Third, mostly in support of expeditionary operations, we have to change the way we view going into a theater. We have to be able to open theaters rapidly and receive forces very quickly and put them through to the operational area. Right now in the Army, we're working very hard to design an organization that's mission-focused on doing that, versus the way we do today—building the organization on the fly depending on the mission that we have. And fourth—we talked a lot about this—we've got to integrate the supply chain end to end. And we don't have to wait for the enterprise-wide solution to come on board with all the fancy software. We can do it now, and we have to do it. People like DLA and AMC and our industry partners have to see what we're selling. They've got to be partners, and when I say "partners," I mean that they have to have a sense of responsibility, and I believe they all do. If they know we depend on that, they're going to perform.

**Q** My last question is in a lighter vein. Do you think it's true that amateurs talk about tactics and professionals talk about logistics?

**A** I think that all tacticians become logisticians when they get up to a certain rank!

**Q** Good answer. General Christianson, thank you.

## Marine Corps Commandant Releases 2004 Version of Concepts & Programs



**M**arine Corps Commandant, General Michael W. Hagee has released the 2004 version of Concepts & Programs, which describes major programs of the U.S. Marine Corps and how they support the ideas and concepts that are significantly enhancing the ability of the nation's naval expeditionary forces to project sustainable combat power in the 21st century. Concepts & Programs, available for downloading at <<http://hqinet001.hqmc.usmc.mil/p&r/concepts/2004/TOC1.HTM>>, also contains data that provide a snapshot of the Marine Corps organization, personnel, and resources. This information, Hagee said in a message published in the frontispiece of Concepts & Programs, "provides an important reminder of what it takes—along with an unwavering warrior ethos and devotion to duty—to create and maintain a successful fighting force."