

# SPECIAL REPORT

## Managing Communications: Lessons from Interventions in Africa

A conference jointly sponsored by the United States Institute of Peace and the National Defense University • June 20, 1996 • Fort McNair, Washington, D.C.

**Executive Summary** 

On June 20, 1996, foreign affairs practitioners and representatives from the U.S. and UN militaries, U.S. government emergency agencies, and international and nongovernmental organizations met at the National Defense University, Fort McNair, Washington, D.C., for a one-day conference entitled "Managing Communications: Lessons from Interventions in Africa." The conference was jointly sponsored by the United States Institute of Peace and the National Defense University.

The conference examined the effectiveness of communications and information-sharing practices (including organizational structures and technologies) among humanitarian and peacekeeping organizations in recent complex emergency operations in Somalia, Rwanda, and Liberia.

The overall premise of the conference was that well-planned information-sharing and communications systems linking humanitarian and military actors can enhance operational efficiency, thereby saving lives and resources and, arguably, laying the groundwork for faster regional recuperation and reconstruction. The conference drew lessons from past complex emergency operations, examined current "field" communications practices, considered how new technologies could improve practices, and discussed what agreements need to be in place for improved practices to be routinely integrated into deployment preparedness, and explored how to prepare nationals for assuming communications practices.

Conference sessions featured principal actors from recent operations in Africa. Speakers represented the U.S. and UN peacekeeping forces, international and indigenous non-governmental organizations, and UN humanitarian agencies. Each speaker presented a synopsis of lessons learned, drawing from specific operations and field experiences, and reflected on what went right and what went wrong and why. At the conclusion of the sessions—the military perspective was presented in the morning and the humanitarian perspective in the afternoon—conference attendees divided into assigned breakout groups to discuss the significance of the day's lessons and to propose next steps for improving information-sharing and communications practices among groups operating in complex emergency operations.

March 1997

## TABLE OF CONTENTS AND AGENDA

WELCOME AND INTRODUCTIONS	3
Lt. Gen. Ervin Rokke, President, National Defense University	3
Amb. Richard H. Solomon, President, United States Institute of Peace	3
SETTING THE SCENE	6
Organization of these proceedings	
Lt. Gen. Anthony Zinni, Commanding General, 1st Marine Expeditionary Force	
Randolph Kent, United Nations Department of Humanitarian Affairs	
SECURING THE THEATER OF OPERATIONS: PEACEKEEPING	
Communications	12
Moderator's Overview, Amb. Robert Oakley	-
Unified Task Force (Somalia), Lt. Gen. Robert Johnston	
Operation United Shield (Somalia), Lt. Gen. Anthony Zinni	
United Nations Assistance Mission for Rwanda, Maj. Gen. Romeo Dallaire	
United Nations Observer Mission in Liberia, Col. Carlos Frachelle	
Luncheon Presentations	
Observations on Peacekeeping Operations in Africa, Sen. Paul Simon	
ing Forces, Mark Stiffler	еер- . 28
Improving Humanitarian Assistance Through Enhanced	
Communication	31
Moderator's Overview, H. Roy Williams	
Joint Military/NGO Info. Center (Somalia-Unified Task Force), Robert McPherson	
UN Assistance Mission for Rwanda-NGO Coordination, Charles Petrie	
Q & A on Hate Radio, Charles Petrie	
U.S. Military Transport and Communications (Rwanda), Thomas Frey	. 37
Displaced Persons/Humanitarian Relief (Rwanda), Simon Gorman	
Humanitarian Relief (Liberia), Elizabeth Mulbah	
CONFERENCE SUMMARY	44
Breakout Sessions	
Overview	47
Common Themes	•
Forging a Culture of Information Sharing	
Structuring the Dissemination of Information	
Technical Standards for Information and Communication Systems	
Conclusions	
Next steps	
Appendix	
Background Report	
Lessons	

The United States Institute of Peace is an independent, nonpartisan federal institution established by Congress to promote research, education, and training on the peaceful resolution of international conflict.

#### Lt. Gen. Ervin Rokke, President National Defense University

We are considering how to improve communications systems and procedures between military and civilian participants in joint humanitarian and peacekeeping operations. This conference demonstrates that good communication between civilian and military participants is possible.

The collapse of the Soviet Union had the positive effect of reducing the threat of nuclear holocaust, but the end of the Cold War has also introduced an era of global instability, increasing the need for U.S. involvement in humanitarian and peacekeeping operations.

These operations involve the U.S. defense establishments, civilian agencies of our government, and nongovernmental organizations. They also require U.S. cooperation and coordination with other governments and their militaries, with regional organizations, and with international organizations.

The military and civilian personnel participating in these joint operations are highly dedicated to achieving common goals, but they come from different cultures. Lack of familiarity with each other's methods and imperfect communications in the field can lead to misunderstanding, thus hindering the operations.

We will consider how communications systems and procedures used in interventions can be improved by examining three recent interventions in Africa. I cannot think of a more timely and challenging contribution to the success of future humanitarian and peacekeeping operations.

#### Amb. Richard H. Solomon, President United States Institute of Peace

The US Institute of Peace has highly valued the cooperation of the National Defense University in organizing this conference. Let me describe the intellectual perspective the Institute brings to this enterprise and to other activities.

The American West grew along the telegraph lines and the railroad tracks; the superhighway system that was built in this country during the 1950s was crucial in transforming the structure of our regional integration, expanding our economy, and transforming our cities (some would say hollowing out our cities). Thus, communication and transportation technologies have had a powerful effect on the way society has developed. We are now asking how international society will be transformed along the complex electronic pathways of the information superhighway, the World Wide Web, the Internet. This is the broader perspective the Institute is looking at: the impact of the information revolution on averting or managing complex emergencies and conflicts.

It normally takes about twenty years for a new technology to mature, that is, for scientific innovations to be adapted to commercially and socially useful applications. In just the last decade, we have seen the powerful effect of new communications technologies.

When I was director of policy planning at the State Department, then-Secretary of State George Shultz was working with people in the banking industry who could see that electronic communications had globalized the movement of capital around the world, downgrading the financial centers in

# WELCOME AND INTRODUCTIONS

London, New York, and Tokyo. Since that time—and especially in the last two or three years—the explosive impact of the World Wide Web has revealed the potential for new forms of communication that we are only beginning to recognize.

The Institute is concerned with these issues because patterns of communication among people and people's working relationships are central to issues of conflict and conflict resolution. The breakdown of communications is one sure sign that people are headed for overt conflict.

Similarly, if a conflict has been overt and violent, one of the major tasks in peacemaking is to reestablish communications. This is difficult, requiring third-party mediators to bridge the gap of broken communications. Thus, the issue of communications is central to our own purposes of understanding and developing mechanisms for managing conflict.

Furthermore, at the macro level, organizational patterns of communication are essential to social and governmental processes. Regular, reliable communications facilitate coordinated action. The end of the Cold War has revealed that the organizational structures—the patterns of communication that were essential to our deterrent posture toward the Soviet Union—are challenged by the new international conflicts we are trying to address.

There is a mismatch between the problems and the organizations, and this mismatch is our concern today. The new communications technologies have the potential of quickly establishing more efficient, cost-effective ways of enabling collaboration among the new participants in the international challenges we face. In particular, communications technologies can bring together the work of the U.S. government, our military organizations, and the humanitarian assistance organizations in the private sector, all of which are responding to today's humanitarian crises.

This conference reflects a basic commitment of the Institute to explore the impact and the possible benefits of these communications technologies, that is, the impact of the information age on preventing, managing, and promoting reconciliation of international conflict.

Today's effort—"Managing Communications: Lessons from Interventions in Africa"—builds upon discussions begun at the conference held in late 1994, "Managing Global Chaos," and a project we call "Virtual Diplomacy."

At the conference, analysts of international affairs discussed how chaotic the world seemed to have become with the end of the Cold War and with the end of the bipolar confrontation. Some questioned whether the world really was in a state of "global chaos." Nonetheless, this national debate examined whether the United States should get involved in Haiti and what role the United States should assume in Bosnia, particularly in the wake of the Somali intervention. These two situations (Haiti and Bosnia) are examples of violence that may not be a direct challenge to our own security, but that may—in ways less clear than during the Cold War—challenge other, less central national interests.

The 1994 conference recognized an emerging relationship between humanitarian assistance organizations and the work of the government. For the first time people who had never been in the same room with each other were brought together at a policy level to summarize their experiences in these humanitarian interventions. Today's conference will build on some of the lessons from "Managing Global Chaos."

We want to explore in some detail how global telecommunications can improve the effectiveness of our working relationships, both within this country and with other international partners in humanitarian assistance organizations. Communications linkages are essential to this process, and today they run the gamut from smoke signals to satellites, from hand held radios and cellular phones to satellite connections and the Internet. How can we integrate these new technologies to make our humanitarian assistance operations more effective?

We hope to see consensus emerge in three areas. The first area is information sharing. The various organizations involved in interventions or in conflict management should share information for their mutual benefit. That sounds obvious, but as we have pursued our work, we have discovered tremendous resistance among organizations to cooperating and sharing information. Humanitarian assistance organizations compete for funding from both private and government agencies, so there is a tendency for the organizations to safeguard their turf, their area of operations; this obviously works against the effectiveness that would come with greater collaboration. Those problems are being addressed, and the issue of sharing information effectively is the first area where we hope to see consensus emerge.

A second area is common planning and training in precrisis environments, making responses to the crisis situation more effective. We need to develop protocols for training, and common standards for communications in working operations. The Institute, through its various training programs, can provide a bridge between the work of the private sector and that of various government agencies. The third area is interoperability of the communications technologies as well as of the working procedures of these various institutions, just as there is interoperability with our military allies abroad. This step requires standardizing equipment and ways of using equipment as well as developing practical communications procedures to enable everyone to talk with everyone else in the field, to share information, and to make their interactions more synergistic.

We will prepare an issues paper based on the work of the breakout sessions, and we will distribute the paper using the technologies of electronic information sharing: We will put it on the Web, allowing all of you to respond through e-mail or through more conventional communications. We will then refine our report and publish a more polished summary of the challenges of managing communications in humanitarian assistance operations.

#### SETTING THE SCENE

## Organization of these proceedings

Each of the following sets of remarks contains a footnote with a brief biographical sketch of the speaker (addressing principally how the speaker's experience relates to the day's event) and a summary of the main points of the speaker's remarks. Where necessary, the Institute has made minor editorial changes to make the reading easier for a broader audience that may not be well versed in these terms and issues.

#### Guidance for the speakers

Prior to the conference, the speakers were given a set of questions to use as guidance in preparing their presentations. The following guidelines were adapted from Antonia Handler Chayes and George T. Raach (*Peace Operations: Developing an American Strategy*, Washington, D.C.: National Defense University Press, 1995).

- As peacekeepers or humanitarian assistance providers, what was your communications system in the field (both technical and organizational)? How did you communicate with others in the field or at headquarters?
- What were the advantages and disadvantages of your communications system?
- What information regarding field operations did you prepare and transmit to, or receive from, others in the field or at headquarters on a regular basis?
- What mechanisms existed for communications between peacekeepers and humanitarian relief providers? With local authorities, institutions, and organizations?
- What information was shared? With whom? By what means? Describe the impact information sharing (or lack thereof) have on your operations? What problems existed in the exchange of information?
- Did you have sufficient communications resources available for your operations? How were they provided and funded?
- Was there a local technical or organizational infrastructure for communications, and how did it affect information flow and sharing?
- What past experiences were relevant to the establishment of your communications systems?
- What improvements in communications management would you recommend?

# Lt. Gen. Anthony Zinni, Commanding General 1st Marine Expeditionary Force

I will offer some observations I hope will serve as a framework for thinking about managing communications in complex humanitarian interventions.

First, we must remember that every humanitarian intervention or operation is different; therefore, it is hard to create a formula or a prescriptive way for establishing coordination and communication. The degree of complexity, the nature of the missions that each participant might be required to undertake, the problems on the ground, the locations, the degree to which the local government is functioning or to which there are responsible agencies—all these factors are going to drive the requirements for coordination and communication.

We must also remember that we bring together the military and civilians to deal with these problems. There is a true clash of cultures, which has nothing to do with the culture you're involved with on the ground. The cultures of the soldier, the diplomat, and the relief worker could not be more diverse or more disparate. Creating cooperation requires creating a relationship and a means of communicating among groups that have different views on how that cooperation should take place.

If you say "C-2," for example, a military officer thinks "command and control." A relief worker or diplomat would bristle at those terms, maybe preferring "cooperate and coordinate." From the start, you must appreciate the approach of the different participants; you must also identify an appropriate degree of communication as well as an appropriate degree of authority over that communication and who should have that authority.

When we think in terms of communication, we need to break any intervention down into phases. Of course, we military guys like to do that, to break things down into analyzable parts. The most critical phase is before the crisis erupts into violence. This phase involves organizations that know they will be committed to these interventions. I know, for example, that two of my commanders in chief (CINCs) require me to be prepared to conduct humanitarian and peace-keeping operations. Therefore I must be fully prepared to understand and to know if there is a requirement in their areas of operation.

Understanding and preparing for an intervention requires a lot of pre-crisis, day-to-day coordination and communication with nongovernmental organizations (NGOs), with the State Department, with the Office of Foreign Disaster Assistance (OFDA), with all those agencies we will find alongside us in these crises. Our training must be formidable, and in that training we must establish formal relationships and understand the technical parts of the communication. Thus, when we enter a situation, we will have an initial framework to adapt to the mission and to the uniqueness of the situation. It is too late to begin this once the assignments have been made, once the crisis has begun, once we are all beginning to deploy in our various spheres.

The next phase is the planning phase. This is when we come together to decide how we are going to enter this fray and how we are going to parcel out the missions, tasks, assignments, and locations. This phase may range from very short, immediate responses to a crisis to long-term planning opportunities.

In Somalia, during the United Shield operation, we were able to look at the situation over the course of a few months before we actually had to deploy. This

#### SUMMARY

Every operation is different, making it difficult to create a standardized formula for establishing coordination and communication. Creating cooperation requires creating a relationship and a means of communicating among groups with different cultures and with different views on how that cooperation should take place. The military has learned from experience the key lesson of involving all actors during the planning phase, prior to deployment. Following a crisis, it is essential that all players collaborate on performance evaluation. Although communications tend to be evaluated in terms of technology, Lt. Gen. Anthony Zinni maintains that the right personality is many times more valuable than the right system and mechanical or technological capability. He feels that liaison and personal contact are the best means of communication and are, in some cultures, the only real means of communication.

#### **BIOGRAPHY**

During early 1995, General Zinni served as commander of the combined task force for Operation United Shield protecting UN forces during withdrawal from Somalia. During 1992–93, he served as the director for operations for the unified task force Somalia for Operation Restore Hope. Also in 1993, he served as the assistant to the U.S. Special Envoy to Somalia during Operation Continue Hope.

offered us a tremendous advantage in that we were able to plan effectively and to cooperate with all the other groups with which we were going to be involved.

I have also been involved in operations where we planned in a stovepipe manner, that is, we did the military planning very effectively, but we neglected to tie that in to the humanitarian side, to the political side, and to the recovery efforts that would go on beyond our stay. We neglected to understand things like transition and how the transition would occur. These must be planned from the beginning. This is a key lesson the military has learned: Involve everyone at the planning stage and look at the long term.

The first to enter into the situation is usually the assessment teams. In the past, everyone has made assessments; therefore everyone has come back with a different view of the requirements. Disaster-assistance response teams from OFDA go in immediately. CINCs send in assessment teams; the joint task force may send in assessment teams. Relief workers engage in initial assessments. Other nations that may be involved in the various dimensions—humanitarian, political, military—are also making assessments.

Each of these assessments then stovepipes back. Judgments and decisions are made and tasks are assigned, and when we all arrive, we are in immediate conflict. Therefore, communications and coordination must take place among those who are making the initial evaluation on the ground, because those decisions and recommendations are going to drive the operation.

Obviously, once we are on the ground and are engaged, there must be coordination and communication among all the involved groups. At some point groups will leave. The military likes to go in and do its business when required and then, as the requirement for its services passes, transition out. Any transition—whether incremental or sudden—needs to be planned. Communication and coordination must involve those who follow, those who are going to take on the long-term recovery effort, and the communication and coordination must be undertaken from the beginning.

The military tends to treat the immediate problem with actions that sometimes have long-term adverse effects. We must understand that what we do for the emergency treatment of the patient has to be beneficial in the long-term recovery, and that isn't always the case.

This is another key lesson that the military has learned and, unfortunately in many cases, is still learning. We tend to come in very large, we tend to come in very suddenly, we tend to want to resolve the problem in the short term—even if it is not a short-term problem—and then we tend to do things that could be disruptive for those who have been

there before and will be there long after in the recovery stage.

When operations conclude—and this may be the greatest requirement, one we fail to do—it is time to communicate in doing the assessments, to look back, to share the lessons learned. We wait too long to do that. Right after an operation has been completed or after the military or an agency has left, it is important to work with others to assess your performance, our performance. Continuing communication and evaluation are valuable.

Somalia was a good example of a place for learning lessons because it was such a complex operation. Each of us—whether in the military, the humanitarian, or the political arenas—had so much involvement that it was worth figuring out what went right and what went wrong. I am always pleased when conferences like this review that particular operation. It was the most complex we have ever dealt with—more so than Bosnia, Haiti, or any others. It would serve us well to master the lessons of Somalia and identify which paths worked and which led to dead ends.

We establish coordination mechanisms when we go in. I think we must ensure that those mechanisms are designed to play the right roles and that they are not overburdened with too many tasks. For example, when we were in the hills of northern Iraq with the Kurds, we adapted a military agency called the Civil Military Operation Center (CMOC) to provide coordination with the UN agencies and the NGOs working in the area. The CMOC is a civil affairs operation center; it was designed as a means for our civil affairs workers in the military to help the traumatized civilian population, both during and after a conflict.

CMOC was meant to be an operations center, as its name states, that operated in coordination with our combat operations center. It fit nicely in that situation; its organization, its membership from the military side, its capabilities in terms of communications and the skills of the members all formed a nice interface with the NGOs. Although it worked fairly well, it unfortunately was seen as a panacea for resolving all communications and coordination problems.

By the time we ended up in Somalia many operations later, everything was dumped into the CMOC, with the result that the CMOC was attempting to make policy and to coordinate a humanitarian relief convoy from Point A to Point B and was attempting to determine how much security was necessary and how many trucks were needed to supply relief. But you cannot lump strategic policy concerns in with simple tactical and coordination requirements. We have learned that you need to separate these at one level,

perhaps the senior leadership level in the area of concern. An executive steering group should address policy issues, with the participation of the senior military, the senior diplomats in the area, and senior representatives of the NGOs and relief agencies involved. With the policy issues being addressed by an executive steering group, the CMOC can focus on the operational functions, coordinating the tasks the military takes on, complementing and supporting NGO efforts, understanding both the NGO and the political dimensions, and ensuring that we agree on the mechanics of the ground operation.

On the civil—military operation team level, we need connection in the local sectors. A small military unit in a given sector should be in direct contact with the NGOs addressing particular problems in that area, such as medicine, shelter, and food.

In the military, we like to think in terms of three levels: the strategic or high operational level, the operational level on the ground, and the tactical level. That structure should have a parallel coordination mechanism so that we do not try to load too many things onto agencies that are not equipped to handle them.

We should remember that the mission drives relationships. There is no single role for the military in every operation. Consider the military missions and tasks in Bosnia, Haiti, Somalia, and northern Iraq. Each time, the military had a different mission. Thus, a general expectation may not be fulfilled if we fail to study the missions and responsibilities.

I have also been involved in operations where the military has provided humanitarian relief. This is not always a good thing. It may be required in emergency situations, but the military often does not understand the requirements or how to handle those requirements as well as do NGOs. I can airdrop tons of meals ready-to-eat (MREs) on top of desperate refugees, and they will probably become more desperate as a result.

I have also been involved in operations where the military did not perform any humanitarian relief tasks. The military was present simply to provide security or to promote and support the relief effort that was being conducted by other agencies (governmental or nongovernmental). Each time, we must study the mission and task to decide how to set up the coordination and communications mechanisms.

This is not just a communications problem between the military and the humanitarian side. We also have a problem in communicating with one another in the military. In Somalia, twenty-six nations provided military forces; these

ranged from Third World military organizations to NATO countries. They spanned a broad spectrum, creating problems for us in interoperability.

We have to make sure that we are culturally compatible, that we are politically compatible in our purposes on the ground and also compatible in terms of technology, procedures, and doctrine. We have a tremendous internal communications problem. We had almost forty-four nations participating in Somalia when the Unified Task Force (UNITAF) ended. Imagine coordinating a military operation where the membership involved forces from forty-four nations—twenty-six was bad enough. And each of these operations brings together that kind of disparate grouping.

We must also interface with the political element, the humanitarian side, and the local officials in the region. We have to understand how to build that system as well. The worldwide connectivity made possible by today's technologies both enables—and requires—the ability to create and tap into a "virtual staff" to support you on the ground. In the event that we ever perform these operations again, my organization has made a connection with the Foreign Service Institute in Arlington, Virginia, to provide that virtual support staff on the ground.

I want somebody who understands the culture, who can give me advice, who can help me evaluate what is happening, who can predict what sort of reaction I might get from a particular action I might take. Appreciating a different culture is very important. How do I connect to it? I don't have the built-in cultural cell on my staff that I need; where can I get one? With today's technology, I can reach someone (on my staff, at the Foreign Service Institute, or at a university) who specializes in cultural studies, who is an expert in the particular area of the world I happen to be in.

There are many other examples of creative uses of communications technology. We are going to talk about information, about information sharing, and about information management, which is of interest because we have a problem in the way we are perceived in the media.

The military has run newspapers as well as radio stations and television stations. We drop leaflets, we have loudspeaker broadcasts; at times, we become the sole provider of information. How do we coordinate all this and ensure that we live up to the responsibility that comes with providing the sole source of information in an environment?

The last point I would like to make is the value of personalities. We think in terms of technology, but the right personality is ten times more valuable than the right system and ten tons of mechanical or technological capability. Liaison and personal contact become the best means of com-

munication—in some cultures, they are the only real means of communication—and we should not become so fixated on technology as an answer.

Let me summarize six points we should remember:

- We must be adaptable; we cannot be rigid or prescriptive. We should set up the communications required by the situation, by the mission dictates, and by the environment.
- The military side must be prepared to provide the means and structure for communication. We bring more resources than any other organization. We cannot expect others to provide the same kind of capability or to match it.
  - We provide people to operate CMOCs and other agencies and to do some of the administrative and other support tasks because NGOs and governmental agencies may not have that kind of structure or the wherewithal to support it. The military should expect to assume these roles when it is involved.
- We must understand that we have an obligation to share information. We have run into certain problems about sharing intelligence, but we need to find ways to ensure that information is shared and that the mechanism for doing so is established. I could never in good conscience

- withhold information in a situation where I know about something that presents a danger or a problem, about something that may hinder or help an operation.
- We must find a means of ensuring that we understand we are all in this together and we are helping one another resolve a situation. The military has made great strides in getting to that point, in not making it more difficult, in breaking down some barriers, and in taking care of its own internal needs for security while still managing to share the information that is required.
- The military must understand that its role is to complement, support, and coordinate the operation, not to control and command it. There is no single authority on the ground when all the dimensions come together. However, that is not the way we are structured. We have to take a long-term view of the operation. What went on before we got there? What will go on after we have arrived? How do we complement that and support it?
- Finally, when the military leaves a situation, we have to be sure that what we leave behind is usable. If we extract all the military capability, if we have not provided the kind of capability that is maintainable and sustainable by those who come after us, then our presence will be more disruptive in the long run.

#### Randolph Kent United Nations Department of Humanitarian Affairs

This conference highlights the critical issue that communications does indeed play a fundamental role in the humanitarian assistance response. Based on my own experience in Africa and elsewhere, I will cover two themes and suggest solutions or recommendations.

The first theme, the communication—implementation gap issue, is very simple. Over the past two years, much attention has been paid to the whole question of early-warning systems—a fundamental communications issue—and far less attention has been paid to early implementation. In a sense the bottom line is that we really do know what is going on; we do have early-warning systems that work, but we fail time after time to realize that what we know needs to be implemented in a timely, effective, and committed way.

The situation we now face in Burundi is a very good example. Does anybody need more early warning? Don't we know there is a crisis looming there? But where is the early implementation? Where is the sense of cost-effectiveness? Did we forget that, with all the signals we had received about Rwanda in 1994, we should have been able to intervene in a timely fashion and to save millions of lives and billions of dollars? We had the early-warning system, but we utterly failed in terms of early implementation.

Let me suggest some basic recommendations for closing the gap between communications and implementation.

First, the implementation gap forces us to examine communications at a different level. It is vital that we learn how to communicate with political leaders who can make the decisions that are needed for us to intervene in a timely way.

Second, as an international community, we have to think more effectively about the intervention tools we have at hand. For example, in Burundi, there is a particular group of peoples who really did control the fate of the country as a whole. Many of these forty or fifty people, called the sans *échec*, have children who are going to school in developed countries. Many of these people have bank accounts outside Bujumbura. Many of these people undertake actions that violate basic human rights standards, but we tolerate it. We allow their children to take advantage of schools outside their own country. We allow these bank accounts to continue. Why? We knew what to do 18 months ago, but now, the obvious solution has perhaps bypassed us.

The second theme is that of perceptual pitfalls in the relationship between what might be called the peacekeepers and the humanitarian community.

We have a perceptual problem in the way the peacekeepers regard the non-governmental organization (NGO) community. We have to learn to work far more effectively and closely in the field with NGOs. We must remember that we are working with professionals in the NGO community who have a valuable role to play.

We need the NGOs to follow the codes of practice that have been established through major NGO consortia, the International Federation of the Red Cross, and the International Committee of the Red Cross and to practice self-regulation. It did not help to have 150 NGOs in Rwanda in 1994. We need the NGOs to self-regulate, to follow the codes of practice, and to give us their professional expertise.

#### **SUMMARY**

According to Randolph Kent, the communications problem can be traced to two issues: the communication-implementation gap and the perceptual pitfalls in the relationship between peacekeepers and the humanitarian community.

On the communication side of the communication—implementation gap, there is a good "early warning detection" system. However, there is failure on the implementation side. Policymakers generally fail to implement decisions in a timely, effective, and committed way. The perceptual pitfalls issue has to do with how little peacekeepers know about the humanitarian agencies—not only about what they do, but also about how they operate and about their strengths and weaknesses.

Kent makes the case for beginning any discussion of a humanitarian crisis with the needs of those being assisted—the people in conflict-affected countries. He maintains that if their needs and coping mechanisms are not taken into account, then all the military and nongovernmental organization personnel will have done is to satisfy their own institutional needs, at the expense of the people who are really in need.

#### **B**IOGRAPHY

From October 1994 to December 1995, Kent was UN humanitarian coordinator for Rwanda. He has also served as coordinator of the Inter-Agency Support Unit of the Inter-Agency Standing Committee since its inception in 1992. The United Nations is here to help the NGOs, and vice versa, but we cannot regulate the NGOs. Donor governments have the means of regulating the NGOs if they fail to regulate themselves. I urge donor governments to work more closely with the NGO community so that we do not have the chaos, the siege, of NGOs hitting the beaches every time there is a humanitarian crisis.

The last point I would like to make regarding perceptual pitfalls concerns our relationship with and the way we view the disaster-affected, the vulnerable, those in need. This constant-reference to the "hapless victims" is a problem of perception that affects our communication. We must understand that those in need are human beings who understand how to deal with their own problems. All too often, we fail to listen to them. We must learn to listen to those in need so that we will be able to communicate more effectively.

In terms of addressing fundamental misperceptions, we have made progress (certainly from the point of view of the United Nations) in closing the gap between the peacekeepers and the humanitarian assistance personnel. The United Nations now has something called the "Framework," in which the Department of Humanitarian Affairs, the Department of Peacekeeping Operations, and the Department of Political Affairs all exchange information. It is difficult to get organizations to share information, but there is growing momentum to do so, and the Framework provides one way in which information is shared. It was a difficult, painful process at first, but the increasing exchange of information will affect the way we look at assessments jointly and the way we operate jointly.

One thing that struck me in Rwanda is how little the peacekeepers knew about the humanitarian agencies—not

only about what they did, but also about how they operated and about their strengths and weaknesses. There was no single manual at a senior level containing this information, and the troops certainly had no such knowledge. In Rwanda, a card was published to give some explanation, but indoctrination is essential; in-field training, with an emphasis on what the troops need to know is essential.

Another point concerning the perception issue is that UN Security Council mandates or proposals should explicitly state that the humanitarian community and the peace-keepers must work together. The humanitarian community must have access to the same assessed contributions as the peacekeepers. That access would emphasize that the peacekeepers are there to support the humanitarian function and not the other way around.

The multilateral agencies, the UN specialized agencies, are not merely protecting turf but are trying to ensure continuing resources. The different mandates of each of these agencies creates a certain protectiveness within each. We must look far more carefully at ways to integrate our operations.

Finally, I have a personal and a far more subjective and emotional plea: When we talk about humanitarian crises, let us begin with the needs of those whom we are trying to help—the people in conflict-affected countries. We must learn to listen to and understand these people. Ultimately, these people are why we are there. If we fail to listen to them, if we fail to understand their coping mechanisms, all we will do is satisfy our own communications needs and our own institutional needs at the expense of the people who are really in need.

#### **Moderator's Overview**

## Amb. Robert Oakley, Former Special Representative to Somalia

Some people would say that I got us into trouble in Somalia, then I had to come back and get us out. But I happen to agree with Lt. Gen. Anthony Zinni. I think that it was a very rich learning experience and that there were a lot of very positive achievements, some of which have been lost in the shuffle.

Maj. Gen. Romeo Dallaire is the commander of the Canadian land forces. He has had a number of distinguished assignments during his career, but most recently he came to everyone's attention when he took command of the UN Observer Mission in Uganda and Rwanda and of the UN Assistance Mission for Rwanda. Although he provided plenty of early warning in what he was telling everyone, he was hampered by mandate, by resources, by political will, and by a lack of response. Sometimes it is easy to talk about early implementation, but you have to figure out what it is you are going to implement, and people have to agree to do that.

In any event, we also have Col. Carlos Frachelle, who worked with the UN Observer Mission in Liberia from 1993 to 1995. That was a different type of mission, but one that will be equally useful in terms of lessons about where we want to go.

Lt. Gen. Robert Johnston, recently retired, was the commander of the Unified Task Force (UNITAF) in his capacity as commander of the United States Marine Corps forces in the Atlantic and also the Marine Expeditionary Force. He has had a number of assignments. After he left Somalia he served as the deputy chief of Manpower and Reserve Affairs in the headquarters of the Marine Corps.

One thing that I would encourage you to do in the course of the discussions and in the questions is to bring in some of the experiences that are outside of Africa. It is not always the military that has the corner on the best communications or the best organization.

As far as I am concerned, communications means three things. It is the technology, it is the organizations, and it is the people. I think that Dr. Solomon's idea of smoke signals is a very good one. You can see the smoke in the air, but that does not necessarily mean that you understand the signal, unless you have some cultural background.

# SECURING THE THEATER OF OPERATIONS: PEACEKEEPING COMMUNICATIONS

#### **SUMMARY**

This session addresses the following issues:

- How communications are established and maintained with civilian effort; how the military adjusts and adapts to the preexisting information architecture.
- How peacekeeping forces gather, process, and disseminate data about events on the ground to make good decisions that result in the restoration of civilian security.
- Whether there are cases where either more structured communications procedures or more open communications channels would have improved the ability of peacekeeping forces to coordinate with and protect other groups and military forces in the theater of operations.

#### **BIOGRAPHY**

In December 1992, Ambassador Robert Oakley was named by then-President Bush as special envoy for Somalia, serving there with Operation Restore Hope until March 1993. He was again named special envoy for Somalia by President Clinton and served in that capacity from October 1993 until March 1994.

#### SUMMARY

The most important aspect is the people involved, including relations with the antagonists. Lt. Gen. Robert Johnston explains that he would never undertake another peacekeeping operation without psychological operations. Through a massive drop of leaflets, the U.S. military explained to the Somali people its mission and the proscriptions against carrying weapons.

Lt. Gen. Johnston also discusses the need for a deployable communications package among the nongovernmental organizations, a package that would be suitable for use when the military withdraws from a crisis situation.

#### BIOGRAPHY

Prior to assuming command of Operation Restore Hope, Gen. Johnston served in Vietnam, Desert Shield and Desert Storm, and Operation Restore Hope.

# **Unified Task Force (Somalia)**

Lt. Gen. Robert Johnston (Ret.), U. S. Marine Corps

The Somali experience was a good example of inadequate pre-crisis planning. First, the mission statement that we received from CINCOM required that we establish a secure environment. We took a conventional force of 27,000 troops, mostly Marines, some Army. But it was clear from the mission statement that our mission was to support humanitarian operations.

We configured our military forces accordingly, giving them tactical areas of operation built around the requirements of the nongovernmental organizations (NGOs). In other words, the NGOs were located in different humanitarian relief sectors (HRS), and we built our brigade force around them. Rather than doing what might have been tactically appropriate to compete with Aidid and Ali Mahdi's troops, we tried to support the NGOs.

As you would expect with a conventional force, we took the most robust communications system one could imagine. However, the geography of Somalia put many of our humanitarian relief sectors as much as 400 or 500 kilometers (250–300 miles) apart, challenging even our communications system.

I'd like to talk about the mechanisms for communication and coordination. When the operation started, we had hoped to have seven coalition countries: four of the major European allies and perhaps three of the African countries. We ended up with twenty-six; we almost had forty-four. A tactical communications network that needed to incorporate twenty-six different coalition countries created an impossible communications situation. We were trying to coordinate 7,000 frequencies for every nation and all the NGOs.

When we talk about the issue of communications in terms of technology and hardware, it is important to recognize that the people involved are the most important component. On the day we landed, we immediately set up the Civil Military Operation Center (CMOC), and it eventually took on more of a charter than we had planned. We selected two of our very best colonels, Col. Kevin Kennedy, who now works for the United Nations, and Col. Robert MacPherson, who will address us later today.

It was important to assign people who could coordinate with the NGO community, who had the kind of personality and the relationships with the NGOs that would make that operation a success. Although much of the NGO coordination was centralized at the CMOC, we expected that most of the coordination would be done at the HRS level, where the commanders and the local NGOs were operating in relief sectors that varied dramatically in character. All the relief sectors were unique. They had different levels of violence. Some had perhaps two clans involved, some had as many as fourteen clans or subclans. With no way we could orchestrate the entire humanitarian operation from CMOC, we relied heavily on the decentralized HRS levels.

Also important was communication with the Somalis. We always believed that although we could impose a military solution with respect to security, ultimate success in Somalia required that the Somalis be a part of the solution. Amb. Robert Oakley established the Combined Security Committee, which dealt with the leaders in Mogadishu as well as with General Aidid and Ali Mahdi. Now you may not like whom you are dealing with, but it was clear that these two persons could create circumstances that would make our mission fail. The

United Nations failed to continue this dialogue with Ali Mahdi and Aidid when we left.

Ambassador Oakley and Lt. Gen. Anthony Zinni met daily with the two key faction leaders to resolve issues and to create a communications connection. These meetings successfully identified the ground rules.

On one occasion there were violations of a controlment agreement. We told Aidid that we were going to destroy his compound if his forces didn't stop sniping and shooting at our troops. They didn't stop, and we destroyed the compound. At the next day's meeting, General Zinni and Ambassador Oakley and the combined committee asked Aidid's lieutenants, "Well, are we at war?" The answer was no. There was no retaliation. The daily meetings were an absolutely vital part of our whole communications effort in Somalia.

This was my first peacekeeping operation, and I learned that I would never do another peacekeeping operation without psychological operations. By psychological operations, I don't mean the kind of psychological operations that manipulate people's thinking. Rather, I am talking about the 4th PsyOp group, which was incredibly successful in Desert Storm and again in Operation Restore Hope. Seven million leaflets were dropped in Mogadishu and the outlying areas. These leaflets explained to the local people why the troops were there and described the proscriptions against carrying weapons.

The effort was done systematically and included some 28,000 newspapers that were generated by the rahjo, which means hope. It was perhaps the best vehicle for communicating with the Somali people. It was also a vehicle for the NGOs and the CMOC to communicate with the people. Quite frankly, the papers became hot sellers. As they were dropped off, the kids would grab them and sell them to the Somalis. The papers represented the first real communication the Somalis had had for two to four years.

We involved Somalis in the newspaper production and on the radio. They wrote poetry and described incidents. For example, if there was a firefight, Radio Aidid's explanation of what had happened was always rather ridiculous rhetoric, always anti-United Nations and anti-United States. We were able to broadcast twice a day for forty-five minutes, with Somalis who would offer Somali poetry and Somali stories in addition to countering Aidid's radio reports.

Radio Aidid was 'Aidid's way of communicating with the Somalis, and there was enormous pressure from Washington to take down the radio station. We resisted absolutely, believing it was important to know what the other side was saying and to be able to counter it with our own radio broad-

casts. Having access to their communications system was very valuable. The Pakistanis took down Radio Aidid after we left, and I think that was a strategic error. Their communications system is an important part of our communications system.

We are fairly good at organizing information. Our daily situation reports were distributed all over the world, so we made an effort to try to communicate with as many of the players as possible, even though we were challenged by having so many players with different missions, including the media. There were 700 reporters in Somalia, and with a coalition of twenty-six countries, they were not all from the Cable News Network and the Associated Press.

Although we faced both language and cultural challenges in working with the media, it was very important for us to communicate with them because the media's mission is to tell a story, not to deliver humanitarian aid. The media would much rather go to a gunfight than see a feeding center. I believe the media in Somalia did a wonderful job. They did some very thoughtful reporting that was helpful to us militarily and that helped the NGO community as well.

Let me talk briefly about some of the challenges of communications. The first challenge we faced in Somalia was coordinating approximately 7,000 radio frequencies. Although it is important not to get too rigid in developing an inflexible communications system when going into a humanitarian operation, we do need to formalize the protocols.

Also, somebody has to be in charge. Clearly, in our case it should have been the Joint Task Force commander. We had the most robust communications capability. Initially, the NGOs were reluctant to give us their radio frequencies, highlighting the issue of the different cultures meeting for the first time. We had to develop an attitude of interaction, of consciously trying to communicate with one another, despite having different missions and different cultures.

We finally bridged that gap—not by coercion, but by gaining the confidence of the NGOs through the CMOC and through the actions of General Zinni, Ambassador Oakley, and even myself. We had to talk to the NGOs to convince them that their mission was our mission and that we were there to support them.

This is the first crisis action operation I had gone into that had no local infrastructure. If there was any communications network in Somalia, it was probably MARSAT. But there was no host nation communications system. Even in the early stages of Desert Storm and in Beirut in the 1980s, we had a communications system that allowed us to

communicate with our civilian counterparts and the NGOs. It was absent here.

Thus, more concrete protocol for communications needs to be taught in our military schools as part of the program instruction. The military has had problems with interoperability. In Desert Storm, for example, we did not have good interoperability between the Marine Corps and the Navy—our own services.

We have taken giant steps in the last five years. The United Nations and the NGO community need to do to the same thing. There needs to be a deployable package, not unlike what the military will get from the Joint Communications Support Element. This package is deployable within twenty-four hours; it can jump into a location, with jump-qualified communicators.

I'm not suggesting that the NGOs need a jump-qualified communications system. However, they must have something to build on, because when the military withdraws, we take our communications equipment with us. The United Nations does not have its own deployable communications system, although it took a fairly expensive communications module into Rwanda, which worked very well for the NGO community. However, they were unable to remove the system because the host nation decided it was theirs.

We need to take a step forward and create something that is deployable, whether it comes under the Office of Foreign Disaster Assistance (OFDA) or the United Nations. Furthermore, it must be something we are prepared to leave behind, and it must be adaptable for the level of expertise

of the people who will operate it when the military pulls out.

We received an alert order from the Joint Chiefs of Staff on December 2. It was only a draft, not an execute. On December 4, Andrew Nastios and the NGO Coordinating Committee went to CINCOM to begin early coordination. It was too late. We already had troops on the way to Mogadishu, and my headquarters was about ready to leave town. That coordinating committee should probably have come to us.

In addition to formalizing communications capability, we need to formalize the coordination requirements for a crisis operation. Just as commanders from the other services report to my command post, I also need to hear from OFDA and the NGO community. That did not happen in Operation Restore Hope, and it has to happen in future operations.

There is good news. When we talk about different cultures, we are creating a new generation of young officers and NGO staff who now have experience in humanitarian operations. They are learning from their experiences. Some of the expertise that General Zinni gained in Provide Comfort helped us greatly in Somalia.

We are not starting from scratch. We have learned a lot. The attitude of interaction is being built into our military training, and our officers and staff understand what DART [Disaster Assistance Response Team] means and what OFDA stands for. Five years ago, if you had asked a Marine officer what OFDA was, he would have told you, "I have no idea."

## **Operation United Shield (Somalia)**

Lt. Gen. Anthony Zinni, Commanding General, 1st Marine Expeditionary Force It is hard for me to isolate Operation United Shield from UNOSOM1 (United Nations Operation in Somalia), UNOSOM2, and Restore Hope, because Somal1ia is one big blur for me, and the operations are all connected. Therefore, I will make a few points regarding Somalia and the subject at hand.

First, when we went back for United Shield to close out the operation and to cover the withdrawal, we were able to exit with no casualties and with minimal conflict—although we had to fight our way off the beach in the end. The keys to our success were the relationships and communications built up through the course of Restore Hope, which are directly attributable to the work of Amb. Robert Oakley.

When we first got into Restore Hope, Ambassador Oakley insisted that we establish formal contacts with the factions. This contact began with the Combined Security Committee. This made sense to me, because in Provide Comfort, we had established a military coordination center with a formal connection with the Iraqi army and with the Kurdish Peshmurga guerrilla force. We saw the value in having daily communications with anybody who owned a gun.

This contact had several positive consequences. First, there was a forum for us to defuse potential confrontations or problems, to coordinate with one another, and to ensure that we had no accidental clashes or collisions. The committee was a place where issues and concerns could be raised and rules of behavior could be established. All the participants felt they had an alternative to violence—the ability to raise an issue of concern.

Because of that forum, I got to know and make personal contact with the other generals, including General Aidid, General Elmi (who was Aidid's principal supervisor of security), and Ossman Otto, who was Aidid's chief financier and first lieutenant at the time. In the end, those contacts allowed us to be sure that the organized militias presented no problems for us during United Shield. We immediately reestablished those contacts, thereby preventing security problems and clashes at the highest level.

In addition to the security committee, Ambassador Oakley also established the political committee, the judiciary committee, the police committee—committee after committee. We were providing representatives from the military side, and I was attending most of these meetings. In the beginning, I was overwhelmed. But one day, Ambassador Oakley told me, "When they're talking, they're not shooting."

Somalis love to talk. It is a way of preventing violence, whether it goes anywhere or not. Whether or not the talks are fruitful, the idea is to buy time. While other things are happening, things in the street are getting better. You are buying time and preventing violence, and they feel that you are treating them with due respect and bringing them into the process. Ambassador Oakley was absolutely right.

Thus, direct contact is a key element of coordination. But it is not enough. Neither the military nor anyone else on the ground can assume that once communication has been established with the locals, everything will work out. The other key ingredients are understanding the culture and having negotiation skills.

We had a number of people who understood the culture, not the least of whom was Ambassador Oakley. We also had skilled negotiators with us all the time,

#### SUMMARY

In Lt. Gen. Anthony Zinni's view, the philosophy of Restore Hope could be termed "centralized planning, decentralized execution." He discusses the importance of communication among all the actors in the field as a significant factor in building a successful operation. Given the military's general lack of familiarity with these "new" missions, good communications becomes increasingly important. One means of achieving this is through the regular exchange of information among all groups involved, which also builds a reliable situational awareness and a common understanding of each player's part in the mission. According to General Zinni, good communications begins at home, prior to deployment.

Finally, direct dealings with the media allowed the military to convey positive images that countered popular misconceptions—both in the US and in Somalia.

and we learned from them. It is not enough to establish formal communications; the skills to use the communications must also be mustered.

Restore Hope was a success because we had set up communication. UNOSOM2 had problems because the system we had established broke down; misunderstandings led to conflicts, clashes, violence, and other problems.

We had created our own sources of information, and these sources of information—our radio station, our newspaper—were in conflict with those provided by the faction leaders, particularly General Aidid. We engaged in a form of information warfare, but that warfare over the radio waves prevented violent clashes in the streets.

During Restore Hope some people tried to talk us into destroying General Aidid's radio. That would have been a mistake. I contend that UNOSOM2's misunderstandings and clashes resulted from the Pakistani removal of the radio stations on June 5. That action led to a certain kind of talk, to fear on the part of the Somalis, which precipitated the initial conflicts and the ultimate downfall there.

We resisted taking out General Aidid's radio station for several reasons. First, if you are trying to sell a certain set of values, if you are representing the United States, you do not take out another voice just because you dislike what it is saying. If that voice is encouraging violence, if it is coordinating violence, that may be a different matter. However, I do not think General Aidid ever crossed that line while we were there. He may have come close, but he never crossed that line. He was expressing a view, however wrong, however distasteful. We had the perfect response: our own station.

I was summoned to General Aidid's house one day, and he chewed me out. There is a Somali word that is close to the word rahjo (hope), but which means something else (I will not say what). That is the word General Aidid used to describe our radio station. He was incensed at what we were saying. I said, "General Aidid, if your rhetoric toned down, our rhetoric could tone down. We are only reacting to you." He turned to one of his lieutenants and said, "Okay, let's tone our rhetoric down." So we aired more poetry and less of our version of the way things were going.

We were engaging in a form of information warfare that prevented violent warfare. We were sending a message to the Somalis that there could be multiple voices. Those who encouraged us to take out the Somali radio failed to understand that such an action would result in another form of clash, one that would be much more unacceptable. So the second reason for leaving General Aidid's radio station in place was to allow spleens to vent and views to be given, but

in a nonviolent forum. That is an important lesson that I come out of Somalia.

When United Shield forces arrived on the beach, I h messages to convey—messages to the faction leaders, mesages to the Somali people. I could communicate to the faction leaders through the mechanisms and relationships tablished before. To reach the people, our primary meawas the media. But I had a problem: People back inside the Beltway (in Washington, DC) did not understand how handle my obligation and my need to communicate to the media on the ground.

There was concern about how the media formed public opinion in the United States and how it affected decision made in Washington. But there was also a lack of appreciation of how much I needed to interact with the Somali media, with the international media, with the media brough along by our coalition partners from six other nations are with the UN media and its public affairs division.

Fourteen newspapers were being published in Mogadishu. The primary means of communication is the political cartoon, and I knew that we could convey certain messages the right way if I could deal directly with the midia. We were required to remain passive for a long period of time; I was not allowed to engage the media. At least was told not to engage the media. I engaged the media any way.

Let me give you some examples of the positive image that appeared. One had a picture of me coming out of the water, shaking my fist, with twenty ships behind me. I Somali, it had a bubble that basically said, "Don't mess with us. We're not here to hurt anyone but we will not toleral interference with the United Shield Force when we come ashore." The message also went on to say, "We are he temporarily to cover the withdrawal, with no intention of staying beyond our mission requirements." That is a different message from the one General Aidid was putting out but at least I was able to express our view.

Another message had to do with the nonlethal capabil ties we brought with us. I immediately wanted to establis the fact that we had these capabilities. Again, I don't this people in Washington, D.C., appreciated the importance that. I wanted to send that message for several reasons. First I wanted to show that while we were not there to hurt any one or to seek revenge, we could escalate through a whole series of capabilities—nonlethal to lethal—in a very seam less way. I wanted not only to show that our intent washumanitarian, but also to send a message to the faction leaders who orchestrated demonstrations. I wanted them to know that attempts to provoke lethal response from the series of the faction of the series who orchestrated demonstrations.

would be handled appropriately, that they would not necessarily drive us to extreme measures.

I am convinced that the images that showed us coming ashore with new technologies—that Uncle Sam had developed special capabilities in a lab and had passed them on to Marines coming ashore—sent a message that we were not trying to hurt anyone. It also sent the message to the faction leaders that we could now respond to something that had previously been a successful tactic. The orchestrated demonstrations—the provocation by women and children—would not be successful at provoking a lethal response.

My last point has to do with communications with the United Nations. This operation was not the ideal situation in terms of having a single military command chain. The United Nations had an operation ashore at the time that our United Shield operation was coming in. General Labu and I had to work out the details of who was responsible for what, when, and how. We also had to determine how we would pass incremental control of forces to each other.

I thought this was done exceptionally well. I attribute this to the fact that early planners were sent into Mogadishu and up to UN headquarters in New York. By the time we were in Mogadishu, the details of how this transfer would occur were already worked out. I was quickly able to set up a liaison. I was able to meet with General Labu, and we were able to prepare a memorandum of understanding describing what would follow.

There was a period when I was responsible for providing fire support for the emergency evacuation of the forces, but General Labu still commanded them. There was another period when he passed operational control to me. This was done in a very structured way; otherwise, we could have had real problems.

It can get pretty tricky when you are trying to pass through lines in the middle of the night under fire, when there are Pakistani and Bangladeshi troops coming through U.S. and Italian lines. Which language are we going to use? Which points are we going to cross? How is the coordination going to happen if we come under fire at given points? Again, the keys to success were early and direct communication, personal contacts, the exchange of liaison officers, and the direct involvement of the commanders.

Our philosophy in Operation Restore Hope was "centralized planning, decentralized execution." You need a coherent, consistent, broad plan, but you must also give latitude to the commanders in their sectors, because the sectors are remarkably different. When you travel short distances in some countries, conditions can change drastically, including religious beliefs, cultural identity, and the degree of authority that may be present. There has to be leeway and latitude for a communication structure, giving the local commander the ability to make certain decisions to adapt to the environment. The whole structure that we put in place was designed to do that; even the Civil Military Operation Center teams had their own unique coordination and communications at the local level.

#### SUMMARY

According to Maj. Gen. Romeo Dallaire, complex humanitarian operations call for complex mandates and complex solutions. He expects that the mandate to provide humanitarian support and assistance while ensuring a security atmosphere will become the normal situation.

General Dallaire examines how separate communications systems linking the UN Assistance Mission for Rwanda headquarters to Brussels and to the United Nations exacerbated the difficulties of an already complicated situation. On the ground, nonintegrated systems caused confusion and complications.

Finally, General Dallaire calls the human dimension the key to resolving problems in the technical realm of communications.

#### BIOGRAPHY

General Dallaire commanded the United Nations Observer Mission-Uganda and Rwanda and the United Nations Assistance Mission for Rwanda.

# **United Nations Assistance Mission for Rwanda**

Maj. Gen. Romeo Dallaire, Canadian Land Forces Command

The humanitarian operation in Rwanda was completely different from in Somalia. There was no lead nation in Rwanda, there was no lead struct and there was no coalition of peacekeeping forces. It was a UN mission go into a nation where the belligerents wanted us to come in; a peace prowas to be implemented by the presence of neutral, international forces capabilities in order to end a civil war and bring a democratic process fruition. However, there were a lot of ad hoc efforts, and that is the elem we should work to eliminate.

I contend that the four-month civil war in Rwanda in 1994 resulted in gre destruction than the four year war in the former Yugoslavia. In that kind of nario, if you do not have the will to make resources available, you will fail Rwanda, we failed from the initial implementation right through the war genocide, and we are still failing today.

Rwanda is an ideal case to study and analyze. The belligerent parties signed a peace agreement. Some of them may have signed under duress, but it was still a will for peace. The agreement degenerated through security si tions and political impasses that ultimately led to war between two armies genocide, to a unilateral cease-fire, to an army in the periphery of the cour involved, and then to a continuum, aided and abetted indirectly by the hum tarian effort, in which we are just waiting for the next phase to commence, whis the return of the RGF into the country.

Where there was once a peace agreement in one country, there is now in bility in an entire region. Burundi is only one facet of the Rwanda problem. I border with Zaire and Uganda, Rwanda itself, and the western part of Tanzare all involved now because we were ineffective on the ground. Communition, of course, was one of the critical elements.

There is no longer any such thing as a simple mandate—a clear and premandate—because there is no such thing as a simple problem. Complex manitarian problems call for complex mandates and complex solutions. We he failed because we have been unable to maneuver within those mandates develop innovative and integrated tactical solutions and the right tools to period those solutions.

I expect that the mandate that I had—to provide humanitarian supports assistance and to ensure a secure environment—will characterize humanitan interventions from now on. We can no longer separate the humanitan problem from the security problem. We will have a humanitarian catastropfor which there is an inherent security problem that will require an integrat of the military, CIVPOL, and humanitarian efforts, or we will have the reverse a security situation that creates a humanitarian catastrophe. We saw both of the in Rwanda at different times.

There is no way to separate these aspects, and the leadership is neither manitarian nor military; it is political. Unless we develop interoperability and humanitarian capabilities, military capabilities, and political capabilities—whitogether can create the solution—we will continue to fail. One of the mareasons we are unable to bring these three elements together is that we can communicate effectively.

There have been bright spots in Rwanda and elsewhere. Ultimately, however, these missions are costly in terms of human lives, dollars, and time. Are we really succeeding, or are we simply stymieing the problem for a while, waiting for it to regenerate? How are we talking with one another? How are we communicating?

I am honored to be in a forum in which we are trying to define and examine our communications, because that means we have already identified the problem. We need to talk to one another. That is not an obvious conclusion.

There is still, in the humanitarian milieu, a stigma of having military assistance in the humanitarian effort. There is still, in the military milieu, a problem of operating with civilians—with the good-hearted "mom and pop" organization that has lots of heart but no capability or with the expensive, large agencies that have lots of capability but sometimes not as much heart. How are we integrating these two milieus, and what is the political structure to ensure that we all go down the road toward a solution?

How do we talk? There are two dimensions—the human and the technical. Human attitudes among ourselves are doctrinal procedures; our risk assessments, our analysis methodologies, and our expertise have got to be integrated, not kept in closed loops that may integrate only at the highest level of leadership. The higher leadership is swamped with information, and the local leaders—humanitarian, political, and military—are crippled in their ability to implement innovative solutions.

When I talk about leaders, I mean not only leaders in a sector, a camp, or a camp area and not only leaders in the field headquarters. I also mean leaders at headquarters back home—in Europe or North America. Those different levels of military operations are not integrated, are not interoperable.

Home headquarters are producing orientation programs, developing doctrines, and devising solutions; if they do not come together strategically, then we in the field headquarters end up attempting to marry those different processes, to smooth out the friction that emerges as home headquarters analyzes what is happening on the ground.

The necessary tools are the different commissions on the ground, the communications with the different parties, and the meetings between the different organizations. With these tools, we can coordinate our efforts and put the resources in the right places.

Organizations are divided into two fundamentally different sets of communications: the combat net radio gang and the Motorola gang. How do you integrate those two in order to be effective locally? In humanitarian missions that do

not have a lead nation, the different participants generally improvise their communications.

Rwanda was not a priority for many governments and was to be handled on the cheap. The initial orders were for no military communications capability whatsoever, even though there was significant military responsibility and demobilization and even though there was already a significant humanitarian effort on the ground. There were many displaced people, and we also faced the consequences of the refugee problem of the 1959–62 revolution.

We used a Motorola-based, nonsecure, civilian United Nations structure: HF. It took us eight months to build that capability in Rwanda, which is a mountainous country only 200 kilometers (125 miles) by 250 kilometers (160 miles). It had a good telephone system and only two radio stations (three if we include the rebel station in Nurzal). There was no other infrastructure. It took us eight months, which was six months into the mandate.

The system was still not effective when the civil war started. The day after the war started, all but four persons in the UN security team packed up and left. They left the mission on the ground with no communications except for the nonsecure Motorolas.

There were no secure communications within the UN mission, and there was no secure communication back to New York except by code cable. However, given the distribution plans, the only way you felt comfortable in communicating with New York was by telephone. Code cables sent to a UN individual have a built-in distribution list, and they quite readily appear in the New York Times, making it rather difficult to maintain sensitive communications.

Consider the atmosphere in which you are trying both to build up a peacekeeping mission and to integrate the humanitarian effort with the military effort, the security effort, and the political effort. If you are not given the resources, you will improvise. Improvisation creates enormous friction, and the only solution to that friction is based on the available human resources on the ground. Steps include considering the previous training, the previous thrust, the previous planning, and the previous experiences and then building on the will to communicate.

Only when we have resolved the human dimension can we arrive at technical decisions regarding what types of radio systems, what volume of systems, what scaling, and what capabilities should remain. If these requirements cannot be defined because they are arising from different capabilities—security, humanitarian, and political—how effective and how cost-effective will any solutions be?

We must conduct multidisciplinary training and education; we must create a course for higher-level political, military, and humanitarian officials; we must produce a list of force commanders, a list of special representatives of the UN Secretary General (SRSGs), a list of humanitarian coordinators; we must conduct command post exercises, contingency planning exercises; we must educate one another in formal discipline structure; and we must write research papers together to solve these problems.

Only when these tasks have been achieved will we be able to clearly define the communications tools needed in the field. The military can solve its problems by bringing in extensive and expensive systems. The humanitarian participants can bring in ad hoc solutions. However, when ev-

erything is combined, there is a swamp through which is impossible to communicate.

Finally, how do you get the nongovernmental organize tions to talk to the belligerents or ex-belligerents? Who launching these initiatives? At times, the humanitarian fort dominated the work in Rwanda, with the security a political aspects in support. At other times, security domated, and the humanitarian and political aspects were support. At still other times, the political aspect should had dominated, but did not.

In such circumstances, you must be adaptable, you must be able to integrate the human and technical dimension.

That is the essence of the problem.

# **United Nations Observer Mission in Liberia**

## Col. Carlos Frachelle, Uruguayan Army

In 1989, a civil war brought water, electricity, communication, and transportation services to a complete halt in Liberia. Stores, supermarkets, banks, and service firms were looted and paralyzed. People starved; they were killed, mentally tortured, turned into living skeletons just struggling to survive. There were over 200,000 casualties; about 80 percent of the population was displaced, and the infrastructure was completely destroyed.

Since 1993, the international community has restored many services and infrastructures to viable conditions. However, the present situation is still terrible. In this context, let me describe the beginning of the United Nations Observer Mission in Liberia (UNOMIL) in September 1993. UNOMIL was the United Nations' first experience of cooperating with another peacekeeping force—a multinational African force called ECOMOG.

ECOMOG has the main responsibility for assisting the parties in implementing the provisions of the agreement; UNOMIL is responsible for monitoring the process.

So far this has not been a problem, but these two groups obey two different channels of command and control. The field commander reports directly to the chairman of the Economic Community of West African States (ECOWAS), and the chief military observer of the United Nations reports through the Special Representative of the Secretary-General (SRSG) on all matters concerning the functioning of the military personnel of UNOMIL.

Two roles and two channels mean that there are two priorities and, subsequently, two different sets of goals. Difficulties have emerged from the different assessments of the situation, the different plans, and the lack of coordination. There is also hostility between warlords inclined to retain control over certain areas to exploit abundant natural resources in Liberia. Arms and information flow easily through the open, unprotected borders of neighboring countries, and the unrestricted communications creates serious difficulties for humanitarian and peacekeeping organizations.

To date, Liberians have seen more than thirty peace agreements, all of which have been systematically violated. In this setting, humanitarian relief organizations, local and international nongovernmental organizations (NGOs), and UN agencies are trying to alleviate the ever increasing human suffering. How effective are communications between and among these humanitarian and peace-keeping organizations?

As the chief of operations, I convened weekly meetings with NGOs and UN agencies at the United Nations Development Program building, exchanging information and ideas and coordinating security. Other meetings for the same purpose were held at the UNOMIL building. We also carried out several security assessments of Liberia. We explained the purpose of the assessments and shared that information. However, organizations have depended on and worked on establishing their own channels of information, rather than participating in a coordinated effort. One result was that formal accords were signed between NGOs and factions with no known consultation with UNOMIL. We have a better chance at success if we present a common, united front than if we present ourselves individually.

#### SUMMARY

The United Nations Observer Mission in Liberia (UNOMIL) was the first experience of cooperating with another peacekeeping force. While the multinational African force (ECOMOG) had the main responsibility for assisting the parties in implementing the provisions of the agreement, UNOMIL was responsible for monitoring the process. Differing roles and chains of command (Economic Community of West African States and the United Nations) meant that coordination of communications and information sharing was difficult. Ultimately, different goals worked to inhibit effective solutions so that, for instance, formal accords were signed between nongovernmental organizations (NGOs) and factions, but not between NGOs and UNOMIL.

#### BIOGRAPHY

From 1993 to 1995 Colonel Frachelle was commander and chief of operations for the UN Observer Mission in Liberia. The radio communication system in Liberia was not reliable because of the terrain conditions, which interfered at times with field operations. The UNOMIL system (provided by the United Nations) consisted of communication between mission headquarters and New York through portable satellite telephones, fax machines, and data transfer lines. Communication in the field and at headquarters occurred through BHFNHF.

It is remarkable that UNOMIL had no dedicated se rity frequency on any band. However, we later decided in case of an emergency, UN personnel should switch special channel on their sets. But this arrangement wor for only a short period because of a lack of commitmed Including all actors, the system consisted of radio channel for UNOMIL, radio channels for UN agencies, radio channels for NGOs, and radio channels for ECOWAS.

# Observations on Peacekeeping Operations in Africa

Sen. Paul Simon

My first piece of advice to you is this: When there is a problem, act. Bosnia is a good illustration, if I can digress from Africa temporarily. On the 500th day of the siege of Sarajevo, NATO and the United Nations said, "Stop the shelling or we will use air power against you." That should have been said the second day or the fifth day, not the 500th day.

I am pleased that the ambassador from Rwanda is here, as well as Maj. Gen. Romeo Dallaire, whom I have never met but for whom I have developed a high regard through our telephone conversations. When the situation in Rwanda started to deteriorate, I called Sen. Jim Jeffords, who was the ranking Republican on the subcommittee at that point. I then got through to Kigali and talked to General Dallaire, who was in charge of the small contingent of UN troops in Rwanda. I asked him, "What should we be doing?" I immediately sensed that I was talking to someone who was on top of things, who could make a decision, who is the kind of take-charge person you want in his position. He said, "If we can get 5,000–8,000 troops quickly, we can stabilize the situation."

This was in May. Jim Jeffords and I had a note hand-delivered to the White House and the State Department urging that we move quickly. In October, the UN Security Council passed a resolution, and because the United States had not listened to General Dallaire, tragedy upon tragedy occurred in Rwanda. Again, the lesson is "Act quickly."

The situation in Somalia was somewhat more complicated. Amb. Robert Oakley is much more of an expert on Somalia than I am. However, right after the election in November 1992, Sen. Howard Metzenbaum and I went to Somalia. I have seen a lot of grim scenes in a lot of places, but I had never seen anything like that. I hope I never see anything like that again.

We returned on a Sunday night. The following Monday morning, the UN Security Council authorized sending 3,500 troops into Somalia; there were already 500 Pakistani troops holed up at the airport at Mogadishu. I called Boutros Boutros-Ghali and said, "You have to get those other 3,000 troops there fast," and then, pulling a figure out of the air, I added, "and another 10,000 troops as well."

He responded, "We're going to send the other 3,000 troops by ship."

"By ship?" I asked. "Thousands of people are going to die while they're moving."

"Well," he said, "Your country charges us too much for use of air transport."

I asked whether we could count it against our UN dues if we used the air transport. He said yes.

I then called Larry Eagleberger, who was then secretary of state, and asked him to call Mr. Boutros-Ghali. I described the situation in Somalia to Mr. Eagleberger and asked him to contact the president, who was in Connecticut for his mother's funeral, and describe the situation. The next morning President Bush asked Mr. Eagleberger to fly to New York to talk to Mr. Boutros-Ghali.

To his great credit, President Bush started moving. A few days later, we had a meeting in the White House: four members of Congress, the president, the vice president, the secretary of defense, the secretary of state, Gen. Colin Powell,

# LUNCHEON PRESENTATIONS

and a few others. President Bush decided that we had to move. Ten days later our troops were landing in Somalia.

In editorials, people talk about the Somalia disaster. But we saved hundreds of thousands of lives with what we did. However, we were not as sensitive to the political equations in Somalia as we should have been, and nineteen American service personnel were killed. One was dragged through the streets, and we all saw it on television; an abysmal scene was on our television sets.

There was an immediate call in Congress to get our troops out of Somalia. At that point we had a new president, whose background in foreign affairs was limited. President Bill Clinton called a meeting of fifteen or twenty of us, and we met for about two hours with the people in his administration, and a compromise was worked out for our troops to leave in March.

(Incidentally, the number of American service personnel killed in Somalia was fewer than the number of cab drivers killed in New York City that year. I do not want to see American service personnel killed, and I do not want to see cab drivers killed, but we cannot let a few terrorists determine U.S. policy in terms of where we go and what we do.)

I did not like the March compromise, but it was better than pulling out immediately. Shortly after the announcement from that meeting, Egypt's President Hosni Mubarak (who at that time was the president of the Organization for African Unity) visited Washington. I went to Blair House to meet him. Just prior to our meeting, the White House called to request that I ask President Mubarak if he would keep his troops in Somalia after March. President Mubarak was very unimpressed that the powerful, wealthy United States of America was going to pull its troops out while asking other nations to keep their troops in. I had some sympathy for his views.

We cannot let terrorists dictate what we do anywhere. If some drug dealers kill a Chicago police officer, the mayor of Chicago does not announce that the police will withdraw from that area of the city. You do not let drug dealers determine what you do in the city of Chicago, and you do not let terrorists determine what you do internationally. I recognize that some of you present are not Americans, and I hope you will forgive me for directing my remarks to my fellow Americans.

Professor Mendlebaum from Johns Hopkins University recently wrote that "France acts like a great power but doesn't have the resources. The United States has the resources but doesn't act like a great power." There is, unfortunately, some truth to that assessment. I think we have to stand more firmly, sound a clearer trumpet, work with

the community of nations on problems. Then we will ways to resolve situations.

I remember my first trip to Liberia. I met with A Sawyer, who was at that time the country's preside asked him what he would do if the rebel leader Charalylor won the upcoming election. He said, "I'll let him over the presidency of the country." I said, "Have you told him that?" He responded, "He knows that." I then through twelve checkpoints (literally!) to meet with Charalylor. I told him about my conversation with Presidence, and he said, "Did he really say that?" Taylor on not believe it.

Because Charles Taylor had great respect for H Cohen of the State Department, who was the assistant retary for African Affairs, I cabled Hank Cohen the morning, telling him he could help resolve the situation had a meeting in the Ivory Coast that resulted in one of many agreements for peace in Liberia that, unfortunat have not had lasting results. Liberia is going to continufester until the community of nations (and that has to more than ECOMOG, whose forces deserve our suppagrees to work together to stabilize this situation. Teny ago, the nuclear threat was probably the world's greathreat. The great threat today is instability among the tions, an instability that can spread. We must address situation.

I would like to make three other quick points. First working with the community of nations, we ought to paying our UN dues. We now are \$1.4 billion in arream UN dues. The UN budget is, I believe, \$1.2 billion, excling peacekeeping. That's \$500 million less than the but of the New York City police department. We are failing do our share, failing to support peacekeeping fully. Whe say "fully," I mean that we have to be willing to put at a small number of troops in where they are needed as of a peacekeeping effort.

Second, there was a story in the Washington Post repling that in the area of offering foreign economic assistate United States falls behind Japan, France, and Germin absolute dollars. France has 60 million people, compute our 250 million. We have five and a half times the greconomic product of France, but we are providing less sistance. If you look at the numbers as a percentage of come, we fall behind every European country and beh Australia, New Zealand, and Japan as well.

That makes no sense. It makes sense only in terms of etion politics, because foreign aid is not popular untilly explain it. Every political opponent I have ever had has tacked me on foreign aid. Please forgive my immodesty,

in the last election, I won the biggest plurality of any Senate candidate of either political party (where there was a contest). The American people are willing to do the right thing, but we have to stand up and explain this. To diminish our role in providing stability through foreign economic assistance makes no sense at all.

Finally, there is one issue that we barely talk about today. Water is going to become very significant in the near future. The World Bank says that within twenty years, thirty-five nations will face severe water problems. Depending on whose projections you believe, the world's population is going to double in the next forty-five to sixty years, but our water supply is constant. We're going to have to do something about that. One thing we ought to be doing is pushing research to find less expensive ways of converting salt water to fresh water.

Sixty percent of the world's population lives within fifty miles of the ocean. Ninety-seven percent of the world's water is salt water. It is inexpensive enough today for drinking water, but almost 90 percent of the water we use is for agricultural and industrial purposes. This topic is not in the headlines today, but it will surely be in the headlines in the near future if we fail to prepare for what is coming down the road.

Let me close by telling you a story about a distinguished Republican senator some of you may have known—Senator Jacob Javits from New York. Shortly after he was defeated, it was discovered he had Lou Gehrig's disease. Jake Javits was a very vigorous man—he used to swim every morning—but you could just see him gradually shrinking in front of you. About eight weeks before he died, he was wheeled into my office wearing a device on his chest to keep him breathing. He started lobbying me on a bill that interested him. When he finished, I said to him, "Jake, you're an inspiration." I'll never forget his response: "Paul, you have to have a mission in life."

I think he's right. And I think part of our mission—I am saying this to my fellow Americans(is to lead so that we can build a world of peace and stability and opportunity for people everywhere.

# Report from the Field: Information Sharing Needs of Humanitarian Assistance Organizations and Peacekeeping Forces

Mark Stiffler, Defense Information Systems Agency

The Department of Peacekeeping Operations (DPKO) at the United Nations asked me to look at their database support for their worldwide peacekeeping operations, and I refused. I felt that the scope was too narrow, and I was reeducated. We did broaden the scope to look at all aspects of the DPKO information and communications needs, which were extensive. When we presented the report in early 1995, there were over 85,000 staff out in the field, in seventeen countries worldwide, expending \$3.1 billion a year—roughly 61 percent of the available cash resources of the United Nations. Any improvement we could make in that area would result in substantially lower costs to the United Nations and, therefore, to the United States.

It was the win-win proposition of a substantial benefit to both the United States and the United Nations that led Assistant Secretary of Defense Holmes to fund the study. When the study was delivered, the United Nations committed itself to attempting to implement its recommendations through its normal processes, while making efforts to raise money. The recommendations have now been 40 percent implemented.

Working from this study—which was based on extensive interviews and on observations in the field—we have developed a system that is deployable and scaleable and is based on appropriate technologies. We used the interoperability precepts that were already in place within the government and the defense establishment of the United States, which were mandated by the Department of Defense and were accepted by NATO as well as by Japan, Singapore, Australia, and New Zealand.

The technical elements come under the collective heading of the common operating environment and are the central precepts of the global command and control system. The NATO command and control system, NACCIS, the Federal Emergency Management Administration, DAHMS, and other agencies in the US government are following those same lines.

If the United Nations continues its implementation at the DPKO level, it will be data interoperable and communications interoperable with the United States. It will also have superior deployability, because some of its gear is newer than ours. The United Nations has already acquired roll-on/roll-off equipment, with 4.6-meter seatband satellite antennas with built-in PBXs at about a third of the cost of what we spend for ours. They have, of course, adhered to our data collection standards. The data have to be collected once at the lowest level of any organization; they are then made available all the way up and down the decision chain and are acted upon appropriately, without decision makers going back to the originator of the data and asking for clarification or assistance.

Our companion study, which is much larger in scope, is ongoing work for the UN High Commissioner for Refugees (UNHCR), for the Department of Humanitarian Affairs, and for the World Food Program. That study is 80 percent complete and will be finished in July. We have commitments for implementation from those organizations. We showed how these systems fit together in a recent progress review. We have proposals for joining the Internet with certain other communications elements, as well as for database structures and equipment needs

These systems are essentially interoperable with DPKO as well as with the existing and emerging systems of the major troop-contributing nations that support the missions of the United Nations. They are also interoperable with the systems from some of the in-kind or cash contributing nations such as Japan.

Interoperability is critical for success. This conference has recognized the problems. You must leave here and, with your collective opinions and impetus, accelerate the process, accentuating the need for that process. Help us find ways to ensure that the process continues.

What does this cost? If they had bought it all off the shelf, DPKO implementation would have cost about \$42 million. That cost would have included the ability to handle five simultaneous operations while replenishing from normal stocks and acquisition processes. They scaled that back to three operations, which might be too large now, considering the current tempo of operations. The same procedures are mandated for the UNHCR, the Department of Humanitarian Affairs, and the World Food Program.

Why should our precious resources be spent helping the United Nations and the humanitarian organizations? Because doing so helps us. I have already mentioned the reduction in direct costs. It is also a more efficient use of scarce resources that we contribute all the time in-kind: heavy-lift resources, food resources, medical resources, osmotic water systems, you name it. A more efficient use of resources means that each contribution goes further.

This investment also leads to effective extraction and protection. We engage in various forms of extraction and protection all the time. Wouldn't it be nice for planners to know where the feeding stations are, where the warehouses are, where the Doctors without Borders care stations are, where the nongovernmental organizations (NGOs) are, and where the lines of communication are? Wouldn't it have been nice during the extraction of Americans from Liberia to know that there were three World Food Program ships capable of taking people out of Monrovia?

We did know that, but only by accident. Systems like the ones we have designed will identify those resources and make them available to planners, to operators, and to the people on the front line, the humanitarians.

Technology can be a trap for anybody. DPKO gets 1,500 faxes a day, which have to be transcribed, filed, and copied. Is it any wonder that 52 percent of their personnel structure is administrative? That administrative cost, that information management cost, is huge and results in a lot of downstream complications, as you can imagine.

The technological solutions that we proposed for DPKO and that we are proposing for UNHCR—the software, the training, the doctrine, etc.—all have to rest on something fundamental that the United Nations is missing. Senior military officers will see it right away; business leaders will see it right away. But it's not apparent to the public. They have a mission, but there is no direct connection from that mission to doctrine, from doctrine to policy, from policy to procedure, and from procedure to measures of effectiveness.

We interviewed over 400 people at all levels, asking them to define their measures of success. How do you know that you are a successful protection officer, that you are a successful logistics officer, that you are a successful emergency preparedness officer? They did not know. There are no measurements for success, no logical reasons for choosing one person over another except for direct observation of the person's expertise, and there is no way to quantify the efficacy of any particular policy or procedure.

You have this connection in the military, and the exercise system validates it time and time again. When it fails to validate it, we change our procedures. When we change our policy or mission, the rest of the system follows suit. Some of our recommendations as engineers are not technically oriented; they are more fundamental. They are so fundamental, in fact, that no technological solution, no matter how well funded and how well established, can survive without that integrated review of the mission, policies, and procedures, the measures of effectiveness and exercises to detect them, and the means for correcting the system.

The people who are working in the United Nations and for the NGOs are very capable. Most of us had never had any dealings with the United Nations before, and we did not know what to expect. About all that we knew was that we were not paying our dues.

We found highly motivated people—people capable of repairing things onsite but lacking any materials to do the repairs. We watched radios being repaired with parts from a razor. We traveled to parts of the world where young people in their twenties and thirties are trying to work with different organizations, with no back-up training, no support, and very little physical security. They are hungry for knowledge, hungry for that little bit of technological help that will take the drudgery out of what they have to do in terms of reporting, that will provide them with a common information system to help them capture the expertise and have access to it. This is simple stuff—from checklists of databases to global e-mail access.

The natural implication of installing this equipment, along with the policies and procedures, is to free the UN system from locality. Geneva has to be the most expensive place I have ever visited. Geneva has a thousand people at UNHCR headquarters. They know that is too big, and they want to scale down.

As you get into a more distributed database system, a commodities-based system for information processing, you have more freedom from location. You can put a few people in Geneva who need to be there and move the rest to a place that is really inexpensive, like Muncie, Indiana.

DPKO is already establishing a forward base in Italy exactly that purpose. Much of the traveling support DPKO's communications operates out of Italy, not out New York. These people have not missed the lessons. To do, however, have a terrible political structure, which slothem down.

They are not facing anything we have not faced. But a help, our enthusiasm, and your intellectual approach whelp break that logjam. Your advocacy will help them reather conclusions they know they have to reach and will he endorse the ideas that one or two people can block.

#### **Moderator's Overview**

# H. Roy Williams, International Rescue Committee

Much of what is now going to be described under the heading of Humanitarian Assistance has been foreshadowed by some of the remarks that have been made by the speakers this morning. I interpret this to mean that there's a logic to the exercise we're going through today and that there is going to be a meaningful and useful confluence. The people on this panel have been very involved and have played a significant role in humanitarian assistance activities.

# IMPROVING HUMANITARIAN ASSISTANCE THROUGH ENHANCED COMMUNICATION

#### SUMMARY

This session addresses the following issues:

- Which information and communications technologies are useful to nongovernmental, private voluntary, and international organizations in the delivery of humanitarian assistance in complex emergency operations.
- Which technologies are critical for organizations in gathering and communicating information about local conditions, in addressing human needs, and in implementing specific missions.
- What factors affect the use of such technologies.
- Whether interactions with peacekeeping forces, media, local groups, and national governments in the field of operations can be facilitated by the technologies

#### SUMMARY

In Somalia, the Civil Military Operations Center (CMOC) worked at three levels: tactical (day-to-day functions, such as getting trucks); operational (involving longer-range planning between the nongovernmental organizations, the different humanitarian relief organizations, and the UN agencies); and strategic planning. It is this third level where the structure broke down because the CMOC overshadowed the Humanitarian Operations Center.

According to Robert MacPherson, education is the key to successful communications. As other presenters explained, communications and coordination are built on individuals.

#### BIOGRAPHY

During Operation Restore Hope, Robert MacPherson was the deputy director of the Civil Military Operations Center.

## Joint Military/Nongovernmental Information Center (Somalia-Unified Task Force)

Robert MacPherson, CUBIC Applications, Inc.

In Somalia, we attempted to provide an organized pattern of committions among all the humanitarian and military parties that were involved it eration Restore Hope. Every intervention is unique, but I have begun to ize that communications assets are key to how either the Civil Mi Operations Center (CMOC) or another amorphous planning and opera center evolves.

In Bosnia (the former Yugoslavia) it was all there: e-mail, telephones, fast chines. When I went to look for a CMOC in the United Nations Protection F (UNPROFOR), it wasn't there. Obviously, one reason for not having a CN in Bosnia was that the ability to communicate between the different elem of the humanitarian relief effort was already in place.

It is interesting to read the assessments of the CMOC in Somalia, which already been analyzed and evaluated in detail. Only a very few of us had a been involved in a situation like Somalia. The Somalia experience was too new to us. It was like going into a house that was on fire; the house was fall down, the inhabitants were burning and, frankly, so were a lot of the firefight

Furthermore, most of us had never experienced some of the horrific scenthat we encountered there. You cannot quantify the tremendous impact that on how the CMOC operated, but it was a tremendously personal expense. The organization of the CMOC is interesting, in part because of its elution. I want to detail some keys to our success in the area of communication however, at the CMOC level, those were generally of an interpersonal natural

The Humanitarian Operation Center (HOC) in Somalia was part of the Operation in Somalia (UNOSOM); the CMOC was part of this UNOSOMH manitarian Operations Center. The leadership of the HOC came from a na governmental organization (NGO); the director was Phil Johnston, form president and chief executive officer of CARE. There were two deputy directors: one was military, the second was from the Disaster Assistance Resport Team (DART). Lt. Gen. Robert Johnston gave the CMOC more latitude the anybody in this room can imagine. I think that was because of the house-buring scenario. There were no books—we went out there, and we had to find way to make this operation work.

A factor central to our success in Bosnia was that we had an eight o'clomeeting every morning, seven days a week, to exchange information. We start out with a discussion on security, then moved to coordination among the Unit Nations, the NGOs, the Red Cross, and the military. I looked for that in Son lia, and that should have happened, but it didn't.

There is a lot of discussion about how to integrate these two dissimilar so eties—the NGO community and the military community. In retrospect, t reason it worked in Somalia was the inclusion of the DART from the Office Foreign Disaster Assistance. The DART team provided a balancing force intearly days. Everyone was comfortable with them; that comfort was essenti We started out as partners because we had to be partners. However, as t CMOC developed, we became partners because we wanted to be partners. T

DART drew us into relationships with the local NGOs. This had a subtle but profound impact. Our embracing of the local NGOs sent a message to the Somalis that we were trying to balance this situation.

We worked at three levels in the CMOC. The first level was tactical, the day-to-day functions. We performed very well at that level. For example, we were very good at getting trucks. The NGOs came to us because they needed trucks, helicopters, bulldozers, and security. The second level was operational, and that involved longer-range planning between the NGOs, the different humanitarian relief organizations, and the UN agencies.

The third level is where we got out of the loop, when we became an element in strategic planning. This happened for several reasons. First, we had the assets. We had everything anybody needed, and people tended to come to us. Second, we were removed from the Unified Task Force (UNITAF). That was the longest mile and a half in the history of the world—from UNOSOM headquarters to UNITAF headquarters, to the market and everything else.

The CMOC almost overshadowed the entire HOC, and we became the answer to a lot of problems. Tremendous expectations were placed on us. Although we could not live up to all of them, we did live up to a lot of them because we had the backing of both UNITAF and the United Nations and also because we became personally involved with the NGO community.

The function of the CMOC also changed in Somalia. The CMOC in Mogadishu functioned as the national CMOC, handling the CMOCs in the humanitarian relief sections,

but we also took the humanitarian relief sector in Mogadishu. We should not have done that; we should have separated. We were asking too much of ourselves, and we became too focused on Mogadishu.

There has been a lot of discussion about where to put the HOC. I am a strong advocate of locating the HOC and the CMOC together. That co-location should be the focus of both its formal and informal strength. I define strength as the ability to communicate and the ability to organize. In Somalia, strength was with the UNITAF; the UNITAF was the largest coordinating agency out there. However, if you bring the HOC into the military environment, the military must take a step in the direction of crossing the cultural gap to embrace the NGOs a little better.

Let me offer you a vignette. If I go to the Ipur gates in Tuzla and I pull out my International Rescue Committee or my UNHCR card, I am treated politely, but firmly. To go to a meeting, I must go through a net that almost makes it more trouble than it is worth to get in there. On the other hand, if I walk up to that same gate with my US Marine Corps (Retired) card, I am through that gate in a heartbeat.

In closing, let me state that education is the key. That may be self-evident, but in 1992 I did not know what NGO stood for, and I was a colonel in the Marine Corps. Also, remember that communication and coordination are built on individuals. All the participants must be willing to talk, to coordinate, and to give up a little of their egos, because the effort out there is unbelievable. I tell you that my worst day in Bosnia was ten times better than the scenes that I witnessed in Somalia. And that is what it is all about.

#### **SUMMARY**

In this evaluation of the early days of UNREO and his work with Maj. Gen. Romeo Dallaire and the UN Assistance Mission for Rwanda, Charles Petrie discusses how personnel who came to Rwanda from Somalia emphasized "transparency," a free interaction that minimizes the extent to which misunderstandings can develop between the military and the nongovernmental organization community. Petrie emphasizes the importance of interaction between groups on the strategic and planning level. He also calls for the institutionalization of such activities as the multiorganizational situational assessments that were conducted in Rwanda.

He makes the case for facilitating communications—for creating an environment where people can interact freely and develop a common plan of action. He proposes a "humanitarian coordination center," which can serve as an integrated regional information network.

#### **BIOGRAPHY**

Charles Petrie served as deputy UN humanitarian coordinator in Rwanda and Burundi. He was the senior humanitarian advisor to the United Nations humanitarian coordinator, UNOSOM, Somalia, from 1992 to 1994.

#### United Nations Assistance Mission for Rwanda-Nongovernmental Organization Coordination

Charles Petrie, Special Assistant to the Commissioner General, United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)

I am far happier to talk about Rwanda than I am about Somalia because the Rwanda mission came after Somalia, and I think we learned lessons in Somalia that we applied in Rwanda. I would like to share those lessons with you.

One could argue that to a certain extent, the Rwanda mission was a success. But how much success can you have in an operation like Rwanda? There were successes in Rwanda and there were successes in Somalia, but both left us with heavy legacies, especially for those of us in the human rights and the humanitarian community.

The legacy of Somalia is the knowledge that there is no international intention to establish a new world order (whatever that is), to defend principles (whatever they are), or even to discuss them. We also saw that in Rwanda. The legacy of Rwanda is the knowledge that the convention on genocide is meaningless.

Those of us who have worked in other countries, who have seen people massacred—the Nubians in Sudan, for example—have seen other forms of genocide, but we were never allowed to use the word. To see the word used so freely and so easily now is very difficult, because it points to the erosion of the values that those of us working in the field of humanitarian aid and human rights hold so dear.

We are seeing a slow erosion of the principles that we live for and that some of us have died for. I think the military can understand this better than most, because they fight and die for honor and country, which are esoteric, metaphysical. We in the humanitarian community also live for intangibles.

I want to talk about a specific period in Rwanda—the period from April through July 1993 when the genocide and Operation Turquoise took place.

Under Operation Turquoise, there was a jumble of UN agencies, military structures, and nongovernmental organizations (NGOs). But we had a golden opportunity for those few months, and I would like to describe the institutional lessons we learned when our barriers were down.

We focused on two things to facilitate the operations. The first was communicating information. The second was establishing an environment where communication could exist. Rwanda was unique in a positive way, because so many key NGO workers had just come out of Somalia; we all knew what obstacles had to be overcome.

We understood the battle of culture between the military and the humanitarian missions; we had lived through Somalia, which was basically an establishment of force. We had a humanitarian force and a military force and an absence of communication. Those of us who had been in Somalia and then came to Rwanda emphasized transparency. We were extremely lucky to have Maj. Gen. Romeo Dallaire in charge of the military forces, because his approach was exactly the same.

How did we share information with one another? How did we respond to one another? We were all involved in daily or periodic interactions; during the height of the battle, there was always a representative of either the United Nations or an NGO at General Dallaire's press briefings. This was a unique advantage for the humanitarian community, because we had an opportunity to present our perspective on what was happening to the key commanders of the UN Assistance Mission for Rwanda.

It also allowed us to dispel any misunderstandings that might arise. If the military did not understand something we were doing, we could explain the rationale and importance of the activity. Sometimes the military claimed that an NGO was undertaking something that was provoking a particular response and that the NGO had bypassed the military. Even though the briefings were very professional and were tightly run, we had the opportunity to clarify our intentions and to eliminate those initial misunderstandings.

Similarly, the military was present at all of our briefings, which we first held daily, then twice weekly, then weekly. They gave their security assessment of the situation. Then the NGOs and the UN agencies also gave their security assessments. This level of interaction continued and was amplified during Operation Turquoise.

When the Civil Military Operation Center (CMOC) was established, that integration continued. Our presence at the press briefings was unique; we had not participated in briefings in Somalia. Having a civilian in the center of the press briefings gave the humanitarian community the impression that the military considered their work important. We were able to facilitate the interaction between the military and the NGO community.

There was also interaction on the strategy and planning level. The press had a strategic policy; if issues came up that had to be discussed afterward, General Dallaire would invite us to sit down with him to review some of the fundamental points.

It would be good to institutionalize some of our activities. For example, we started multiorganizational situation assessments. We would go into an area like the new French zone or Turquoise zone with a group of NGOs. A Disaster Assistance Response Team representative, a representative from the Department of Humanitarian Affairs, and representatives of the UN agencies would spend a week traveling through the area doing the assessment. These trips became weeklong brainstorming sessions, during which we were looking at the same problem and evaluating the same problem, but were coming from different angles. Generally, by the end of the week, we had a plan of action that we were able to sell to our different constituencies.

However, even more important than having a common plan of action was having a common understanding of the problem. For a short period after the end of an assessment, we all understood the different actions that various actors might undertake.

The whole idea of facilitating, of creating an environment where people can interact, is crucial. That environment was the CMOC or the On-Site Operations Coordination Center, the Swedish-funded communication center that became a core around which we could develop a humanitarian space. People came to us because we had something to offer, and there was a good bit of interaction. Facilitating communications means transparency, ensuring that there is free interaction and that misunderstandings are not allowed to develop.

We actually wanted to move out and create a "humanitarian" house just outside the Omoro Hotel with the agencies and the NGOs. We were not going to call it the UN Coordination Center, but the Humanitarian Coordination Center, sharing it with UN agencies. Unfortunately, somebody mined the building, so that did not happen.

We also established an integrated regional information network, a structure for transmitting and coordinating data, that ultimately became an information clearinghouse.

# Q & A on Hate Radio—Charles Petrie

When we talk about transparency in communications, we generally mean transparency in communications among ourselves. But there are two other forms of transparency. There is the transparency that is needed very early in the mission: What are we trying to do? Why are we trying to do it? We try to get these messages out to the local population. There is also the reverse—linking with local communities and local groups, letting them tell us what we should be doing. That includes the hate radios.

Hadul Milicaline—which was the FTLM, Television de Milicaline, Leave of the Milicaline—was one of the key fueling elements of the Rwandan genocide, naming individuals who were alive. It was telling people that the graves were only half full and they should fill the rest. "Such-and-such a barricade has killed so many people, and that is fantastic. What about the other barricades, what are they doing?" It was a very strong element in the genocide.

In Kigali in late May or early June, I met with Maj. Gen. Romeo Dallaire and a woman from the British Foreign Office. General Dallaire commented that hate radio was a big problem and that we needed communication to counter it, to come out with another truth. The British Foreign Office representative asked how much it would cost. We figured around \$70,000. She said, "That's nothing. I can get it to you tomorrow." Well, we never got it; we couldn't raise \$70,000 to come up with a radio that could have saved countless lives. It would have told people that they were being misled, that the world did not believe in the environment that was developing in that country. We lacked the means—just \$70,000—to be able to bring up a radio transmitter so that we could give people the truth about the hate radio.

Another option for countering the hate radio might have been to broadcast a different perspective of what was going on, but even so, we had no transmitter. Another option would have been buoys; however, I understand that trying to interfere supposedly goes against the First Amendment, so we could not do that either.

# U.S. Military Transport and Communications (Rwanda)

## Thomas Frey, Office of Foreign Disaster Assistance

I am going to approach this discussion from a slightly different perspective—from the perspective of the Office of Foreign Disaster Assistance (OFDA), which is a part of the U.S. Agency for International Development (USAID) and its Bureau for Humanitarian Response. In Rwanda, I was also a member of the Disaster Assistance Response Team (DART).

DART is a group of specialized people we try to put on the ground as quickly as possible in humanitarian crises to assess the needs and the overall situation. The DART team then makes recommendations to Washington regarding efforts the U.S. government should undertake, realizing that we cannot do everything ourselves, that we will need help, and that we should choose those activities for which we can take responsibility.

In Rwanda, the Joint Task Force (JTF) out of the U.S.-European Command was set up rather quickly. In agreement with the military, the JTF sends a representative with every mission to be a liaison between the task force and the rest of the U.S. government's response to that particular effort. When the JTF was sent to Entebbe, Uganda, I went as a liaison officer with DART. The Civil Military Operation Center (CMOC), which was initially set up by JTF at Entebbe, was my initial point of contact with the military. I wanted to be where the interaction between the civil and military groups would take place.

I saw my mission as having four or five aspects. What does a liaison really do? For me, it was an opportunity to apply some of the experiences I had had in some other disasters and in working with the military. I used my experiences to help educate, translate, validate, and sometimes mediate between the military and the nongovernmental organizations (NGOs) as well as between the military and the UN agencies.

JTF was strictly a humanitarian assistance operation, set up to support the UN High Commissioner for Refugees (UNHCR) and their representatives at Entebbe. Again, my role there was mediation, validation, and education. This is what I call "soft communication." It is not about the hardware component, but rather about how to make the organizational structures work. It is wonderful to have excellent telecommunications equipment, but unless you have an organizational structure that can use the equipment, the mission will not be very successful.

I was in Rwanda about six or seven weeks, traveling with the JTF commander, General Shroeder, from Entebbe to Goma and Kigali. That gave me an opportunity to see what was happening on the ground and to talk personally with the workers. In one sense, we had separate chains of command for reporting. I was a DART member, and my chain of command and my communications links were through Nairobi, Kenya, where the DART headquarters was set up. General Shroeder believed that the DART headquarters should have been co-located with JTF at Entebbe, thinking that it would have been a better way to communicate at the same site. But the mission of our DART was separate from the mission of the task force.

When I got to Entebbe, the military had a very sophisticated system set up, but it was mainly classified and secured communications. A joint special opera-

#### SUMMARY

Regarding communications between the U.S. military and members of the Disaster Assistance Response Team, Thomas Frey is concerned with "soft communication," which deals with how to make organizational structures work together. His role as liaison was to educate, translate, validate, and mediate between the military and the nongovernmental organizations and between the military and UN agencies in Rwanda.

Frey argues for the importance of making common systems simpler and more user-friendly. Communications systems are only as useful as the organizational structures and procedures that are in place to collect, analyze, and distribute information.

## BIOGRAPHY

Thomas Frey is a disaster management specialist with the U.S. Forest Service who has been seconded to the U.S. Agency for International Development's Office of Foreign Disaster Assistance (OFDA) for the past seven and a half years. His recent operational activities with the military have included Operation Provide Relief (Somalia 1992), Operation Support Hope (Rwanda 1994), and the planning stages of NATO Operation Joint Endeavor (Bosnia 1995).

tions task force had been set up, and they did not even want me to walk in the room with that equipment. Eventually, we got a nonsecure communications system, but that was used mainly by the military.

As the situation progressed, DART got increased access and interoperability with the military at Entebbe. The military shared their capabilities—for example, we used their nonsecure fax operation to send our situation reports back to Nairobi. After about two weeks, OFDA realized that we needed better communications and better reporting. Three communicators were sent to set up a better system for us so we would have voice, fax, and data capability at our sites. Within a few weeks, I was connected to Washington through a satellite system, and I had e-mail to OFDA. Without that, I would not have been able to communicate with either Washington or Nairobi.

My initial decision not to take more equipment in Rwanda—I think I carried only a laptop with me—was probably wrong. There was a constant demand for information and feedback for which I was not prepared. We used the local phone system at the Entebbe airport as a fallback, and that was absolutely horrible. There was so much static you couldn't hear anything. OFDA is now trying to have a communications system ready to go when we deploy. We will take a communications officer and the appropriate equipment so that we have immediate capability when we hit the ground.

We had daily meetings at the CMOC, and the intelligence groups from the J2 collected data from the NGOs at those meetings. That was important, but it was equally important for the J2 to give the NGOs as much unclassified information as possible. Because it was a two-way informa-

tion exchange, better communications were opened un a comfortable feeling between the two groups was crea I applauded their efforts to share information. Someting however, when there was a constant demand to report formation, the tendency was to look around to find so thing to report. As people started to report the same in mation, we developed not only a loop of information. h duplication of information. If fifteen metric tons of re commodities were moved on a given day, it was sometime reported as thirty tons. We had to identify the source information to avoid misinformation. We had good com nications with the NGOs in Entebbe, because they con come in and work with the CMOC and the UNHCR rectly. We knew what they wanted and needed. It was all more difficult to get that information from the NGO Kigali and Goma.

I will close with a few personal observations. The comunications systems improved during my tenure Entebbe, but these systems were only as useful as the on nizational structures and procedures that were in place collect, analyze, collate, and distribute that basic information. With so many organizations gathering, analyzing, a reporting the same information, there is the danger off formation overload, which leads to duplication of efforts a duplication of information, as well as to some misinterpartation of information. The on-site operations coordination center was a very effective tool, but it was only as effective as the support given to it. Support means money and commitment.

Finally, I urge you to make your communications system as simple and as user-friendly as possible so that they are be truly useful tools. More bells and whistles do not necessarily lead to a better information product.

## Displaced Persons/Humanitarian Relief (Rwanda)

## Simon Gorman, International Rescue Committee

I am one of those people who has had to rely on the military to help out with medivacs, with evacuations. I have had to scrounge bulldozers off them to help out with sanitation programs. Anything that improves that line of communications is going to be beneficial in the next emergency where we are working together.

When I arrived in Rwanda in August 1994, the On Site Operations Coordination Center had already been set. It is very important in any emergency situation to establish the communications base or focal point as early as possible.

Quite frankly, as a humanitarian worker trying to bring aid and trying to run a feeding program and a medical program, I really do not want to know all the ins and outs of the security operation. I do, however, want to know how it interacts and how it can help me do my job. Where our responsibilities overlap, we need to work as efficiently as possible.

In terms of technology, many nongovernmental organizations (NGOs) used the VHF, an open network that is very effective because it is mobile. All our people had radios, and we were able to communicate back to a central point. That overlapping circle was facilitated by the coordination unit, which monitored the radio full time. If we failed to contact our own people, then we could reach the coordination unit and get them to notify our staff by some other means. The HF net operated concurrently, under the same principle.

One complication was that so many frequencies were being used. We were able to tap into the UN High Commissioner for Refugees' net very quickly. One reason the NGOs did not share frequencies is that many of them had no idea what frequencies they were using, and they had no idea how to program their own radios. Thus, planning is necessary, so that you know what frequencies are available in a country before you begin an operation and know what frequencies various agencies will use. You run into trouble because you find frequencies being used by somebody else, and there is a period when you are off the air trying to find a frequency you can use.

Satellite telecommunications were invaluable as we set up the operation, allowing us to contact our head offices. Anything that makes that process cheaper or more readily available is better. Some of the units cost as much as \$20,000—\$30,000 each, and they have enormous operating costs as well. The military units are much more expensive, but if we could tap into the military system, individual agencies would not have to buy those units.

One year into the mission, e-mail capability within Rwanda became functional. That was critical for sending written transcripts and press releases back to the United States. It was important for us to identify the American perception of the situation and whether that perception was accurate. It is true that you knew a lot more about what was going on than we did.

We need to ensure that shared information is relevant, that it is verified, and that it is cross-referenced. I saw a lot of information go up the information highway that was totally wrong or was only partial in its presentation. For example, a radio call came into a central command center saying, "There is no water in this camp. People are in real trouble. Get somebody out here." A huge effort

### SUMMARY

Simon Gorman contends that any communications system has to be careful not to provide too much information: It must pick out the salient points.

Gorman discusses the need to focusamidst all the talk about high-tech matters—on the information being shared. The information must be selective, relevant, verified, and cross-referenced. He also calls for a means of tapping into the local informal networks prevalent in so many crisis areas. What is needed is a central command module, possibly a role for the military or the UN, to ensure that technology is compatible between groups. Finally, Gorman calls for all technology to be examined in light of the overall common goal and in light of the needs of the beneficiary. The people being provided assistance must also be involved in communications efforts.

## BIOGRAPHY

Simon Gorman coordinated the emergency programs of the International Rescue Committee in response to the Rwandan crisis, working directly with state ministries to tailor an appropriate response.

was expended to get people out there, and, true, there was no water in that camp, but there was water within 100 meters (110 yards). Information has to be verified. I am not sure how to do that, but this problem plagues us all the time.

We also have to work on the efficiency of our communications systems. In Somalia, "Radio Dukka" literally means "bush radio" or the "communication of the old man." The guy down the street who knew somebody in Badero, which than we did. We need to learn how to tap into that information system.

Furthermore, any information system has to include all the players. The integrated operation standard in Rwanda recognized that there was one major player who was totally out of the loop, because that player had no no means of accessing resources. I am speak about the government of Rwanda. It had a communications capability at a humanitarian linto a similar situation, we have to look at the p we are trying to help, and we have to ensure tha munications needs are met or are at least tapped we can help each other do our iobs.

Finally, a central command module is required people who are committed right from the start the military, the UN agencies, and the NGOs place. All technology should be examined in light common overall goal and in light of the beneficing method of communication should remove us or alignment of the process.

## Humanitarian Relief (Liberia)

## Elizabeth Mulbah, Christian Health Association of Liberia

Effective communications and coordination are sure to improve humanitarian assistance efforts, especially during a national or international crisis. This, however, poses a much greater challenge when the crisis situation is as complex as our Liberian situation has been since the onset of war in December 1989.

Advancing technologies have provided no tailor-made solutions to meeting the needs or costs during emergencies, which are, by definition, very difficult to plan for. This is further complicated by the players, the country involved, and the nature of the emergency (either a natural disaster or one wrought by humans).

The Liberian situation is very complex for many reasons. The most obvious reason is that we Liberians are not fighting a common enemy. We are fighting one another in one of the most devastating wars in human history. Our biggest problem is loss of confidence, and our biggest need is reconciliation. Only reconciled people can build together. One of the most vital tools required in national and international reconciliation is effective communications.

An intense humanitarian process such as exists in Liberia has been made more difficult by the lack of adequate communications among the various actors. I will briefly review the four issues that seem to influence and determine the quality of communications in Liberia.

First, there is a large multinational presence in a hostile environment. Liberia has become a place of multinational groups since the outset of the war, including the UN agencies, ECOMOG and international relief organizations (even one from Latvia). This multinational complexity was bound to hamper communications and humanitarian efforts.

Second, there are diverse institutional missions. There are organizations providing security and transportation, delivering humanitarian relief, and monitoring human rights abuses, disarmament, demobilization, rehabilitation, and reconstruction. Although the different institutions are making efforts to coordinate services, there is still room for improvement.

Third, we see more competition than collaboration. Some parts of the country have many services while others are left with few or none. Security risks can partly be blamed for this imbalance, but improved coordination will remedy this situation to some extent.

Fourth, diverse organizational structures and cultures have also had a role in our area. A conscious system of communication is effective but is very time-consuming; therefore, it may not be appropriate or effective during crises.

Hopefully, diverse communications will find common platforms, protocols, and content. This is especially critical in Liberia because there are many different attitudes and many differences in policies and protocols of operation.

Until April 6, we at the Christian Health Association (CHA) had a radio in three offices. One was in the Ivory Coast and two were in Liberia (one in the city and one in a rural area). We have seven handsets, five vehicles (including one truck with radio), and telephone service with local and international lines. We also have newsletters, fax machines, meetings, workshops, and the local media. Communications in the field and with headquarters takes place by radio and written reports.

#### SUMMARY

One of the most vital tools required in national and international reconciliation is effective communications. In the case of Liberia, a large multinational presence in a hostile environment hampered communications and humanitarian efforts. This was exacerbated by the diverse institutional missions of the players, that is, organizations providing security and transportation, delivering humanitarian relief, and monitoring human rights abuses, disarmament, demobilization, rehabilitation, and reconstruction. Competition between agencies and differences in policies and protocols also made effective communications difficult.

The most useful system of communication for peacekeepers, local authorities, institutions, and organizations was a series of regularly scheduled meetings at which vital information and experiences were shared. Elizabeth Mulbah discusses a series of lessons learned from the Liberian experience, the most important of which was the principle that communications networks must be open. Only when "transparency" is established can collaboration be made possible.

#### BIOGRAPHY

Elizabeth Mulbah has worked with the Christian Health Association of Liberia since 1987, most recently as its executive director. Her offices in Monrovia were ransacked and looted eighteen days before she received the invitation to participate in the Managing Communications Conference.

When the communications system worked, it was wonderful. We maintained contact between those in the offices and those in the field, with UN agencies, and with other nongovernmental organizations (NGOs). Certain information—such as information on security risks, needs assessments, resource availability, population of a given area, status of ongoing projects, and project evaluations—was easily shared.

However, most of the time one or more parts of the sysem did not work. Frequent breakdowns and interference vere common. Even when the system was fully operational, information sharing needed improvement in content and iming; we had poor attendance at meetings, worked with is sufficient communication systems, and faced frequent arassment from factions.

The most useful system of communications for peaceeepers, local authorities, institutions, and organizations inudes regularly scheduled meetings at which vital informaon and experiences are shared. We did not have sufficient
mmunications resources. Only seven of our thirty-three
aff had handsets. We had two telephone lines, which did
at function most of the time. Not everyone had radios. Our
stem was funded by the Inter-Church Cooperative Ornization of Europe (ICCOE).

Local organizational infrastructures for communications proved the flow and sharing of information. Although the organization or UN agency had its own radio net, we used some frequencies according to service areas. There re UN emergency nets, help nets, and the UN commutations net. In most instances, the radio operators of the ious institutions received the information and passed it to appropriate users. We established our communicates system based on the need to communicate with memunits, staff, and sister agencies. With assistance, we were to rescue staff in emergencies, refill supplies, or postetrips when it was not thought safe to travel.

other member institutions assist one another in times curity risks. On one occasion, some of our program staff puntered trouble over 200 miles away from the capital. It days prior to their scheduled return, fighting broke They found that it was not safe for them to travel. In ultation with the UN Security Officer, we kept in touch our staff until it was safe for them to return.

e participated in UN-ICCOE relief convoys. The UN erver Mission in Liberia (UNOMIL) made the greatest ibution to the humanitarian community, providing sment reports, supplies, and helicopters for field trips. also worked with relevant institutions in planning for

disarmament, demobilization, and committee centralization.

The Liberian experience has taught us several lessons about managing communications in a humanitarian crisis:

- Communications in a humanitarian crisis poses one of the greatest challenges. In the Liberian experience, the system did not work half the time, or it was intercepted and interrupted.
- The very poor communications system in the country was worsened by the war. Communication was mostly through letters, often hand-carried, or through verbal messages that got distorted from one person to another. It was expensive to establish and maintain communications systems during the war.
- Standardizing communications systems is critical for the key players. Transparency is required.
- Field operation reports must be circulated. Field-generated reports that circulate among institutions, peace-keepers, and policymakers are a great asset.
- Regular meetings at various levels are both useful and meaningful.
- The media and its role need improvement.
- In crisis situations, there is a tremendous drain of talent from the country.

I can make several recommendations for improving the communications system:

- Establish transparency. When you have so many factions in the country, each one suspicious of all the others, it is very important that your communications networks be open. In a situation such as ours, one should only say what one can defend. In spite of all the efforts, this openness still eludes us.
- The language should be carefully chosen, especially when there are different factions that have different language backgrounds. If you speak in a language that others do not understand, you will become suspect.
- Public awareness of the communications system—its purpose and rationale—is critical. Anyone can operate a handset; if there is no public education about the purpose of these handsets, then you could easily be accused of spying.
- Timely information sharing is essential. The United Nations or UNOMIL have occasionally failed to communicate important information.
- All the actors must collaborate more closely. International organizations should empower their local branches

- with direct support of qualified efforts. At one time, we received grants directly; since the war, we have had to go through international agencies.
- Ensure even distribution of humanitarian relief. Too many people are hurting in one part of the country while those in other parts of the country are not being cared for.
- Make constructive use of the local media.

■ Use different modes of communication. We have done a lot of work in this area, sending messages through such media as stories, traditional dramas, songs, posters, and T-shirts.

Finally, our best is not good enough until we have achieved our desired goal. We must reevaluate where we have come from and where we are in order to arrive at where we want to be. We must have a workable system that will bring lasting peace to the trouble spots of the country.

## CONFERENCE SUMMARY

## Stanley Roth, United States Institute of Peace

As two of the opening speakers warned, communications and technology alone do not represent a magic fix. That is, these two ingredients do not in and of themselves guarantee the successful management of humanitarian crises. Rather, communications should be viewed as a tool being put to use in very complex situations. After "communications," the one word that was heard repeatedly during the conference was "complex." All of the conference participants understood that there are many dimensions to the problem and that communications and technology are only one aspect of a complicated issue.

Furthermore, because communications is a tool that has to be adapted to the specific dimensions of each crisis, there is no single uniform package. During the conference, participants were able to identify other key components in managing humanitarian crises successfully. For example, the issue of political will featured prominently in most discussions. That is, players frequently do not act on the basis of the information at hand. This is not purely a problem of communications. It is also a problem of groups lacking the political will to stay invested and involved for the duration of a crisis.

Another dimension of the day's discussion was the issue of resources. For instance, participants heard about the dilemma of a greater role for UN and other multilateral activities. At the same time, they heard from Senator Paul Simon and others about decreasing support, at least within the United States, for financing UN and multilateral activities.

There was also considerable discussion about the importance of individual players. Although most observers would accept the assumption that "personalities matter," it is nonetheless a difficult matter to build this notion into a mature, operational concept.

During the day, participants identified a number of useful concepts:

- It is a given that there are many different levels of communication and that an attempt must be made to dissect the problem. As technology facilitates and increases access to information and communication for an increasing number of people, it becomes harder to hide information than it was in the past. The Internet is one of the most obvious sources of information, making it easier for people to communicate. No longer is it necessary to have the backing of a single large institution.
- One of the results of technology is a tremendous increase in the volume of information, which has both benefits and drawbacks. Although the phrase "garbage in, garbage out" was not used, there was an acknowledgment that there is a lot of garbage out there along with the vital information. This problem must be addressed as technology improves.

In addition to these concepts, six levels or forms of communication were identified:

■ Communication within organizations. It is interesting that different organizations all highlighted the same problem. The military in the field has to speak to military headquarters, which has to speak to the bosses back in Washington. They have to talk in both directions.

The same was true of the nongovernmental organizations (NGOs). The NGO worker in the field has to report to a middleman, who then reports back to headquarters; information headed in the other direction has go through a

middleman as well. The NGO representatives all pointed to problems of ensuring that accurate information was reported, avoiding such problems as double-counting.

The United Nations reported similar difficulties in coordinating activities between the various departments with overlapping responsibilities.

Communication among organizations. Once again, "complexity" was the dominant description. This was not simply about relations between the military and NGOs; for example, twenty-six militaries were active in Somalia, and there have been numerous operations involving large numbers of NGOs. Two different relief cases cited involved more than 100 NGOs.

Communications among organizations can involve different militaries, large numbers of NGOs (not necessarily organized around a central, unifying theme), multiple UN components and specialized agencies, and U.S. government agencies other than the military. The U.S. agencies that received particular attention included the Office of Foreign Disaster Assistance (OFDA), the Agency for International Development (USAID), and the Disaster Assistance Response Team (DART), but other agencies are involved. In talking about the United Nations, the Department of Humanitarian Affairs (DHA) and the UN High Commissioner for Refugees were emphasized; however, there are other offices to consider. Clearly, communications between these myriad organizations is vital and must be improved.

- Communication with local leaders—the "Aidid Factor."

  Although to some extent local leaders may be part of the problem, they may also be part of the solution. It is crucial to talk to these local leaders, not only to know what they are thinking, but also to manage and avert future conflicts that could impede the humanitarian operations.
- Communications for decision makers. In the pre-crisis phase, there is preventive diplomacy. That was not the focus of this conference per se, but it is the focus of a tremendous amount of work in the Institute and in the Carnegie Commission as well as in academic institutions around the world. How is support mobilized? How can intervention be made before crises happen, when some of the horrible costs in both lives and resources can be saved?

The second phase of communications with decision makers is *during* a crisis, which relates to the issue of crisis management. How can information be distributed in

a timely fashion and decisions returned in a timely fashion? Later, there is communication with decision makers after the crisis. What lessons can be learned from the experience? What can be done to ensure that the next operation goes more smoothly?

by a participant "information warfare," defined as the struggle to provide accurate information and to counter inaccurate information. Another issue that attracted attention was how to deal with hate radio: Should technology be used to try to shut hate radio down or to try to counter its messages? This becomes a question of whether the intervenors—the international community—should manage the media in a crisis situation.

The media were also discussed as a means of influencing opinionmakers back home. The media help determine policy; they capture the public's attention, focusing attention on issues; they are powerful tools. Again, participants discussed the complexity of the issue and were reminded that it concerns not just the American media because there is more out there than just the Cable News Network.

■ Communication among the parties in the conflict itself. Ultimately, the humanitarian operation deals with only a symptom of a particular crisis. If the crisis is unresolved, it may have to be entered all over again. Thus, communication is the key to real, lasting reconciliation.

During the plenary-session discussions of lessons learned from specific interventions, conference attendees discovered that operations did improve from Somalia to Rwanda, even if they were still less than perfect. Several presenters expressed their support for the Civil-Military Operation Center (CMOC) and for the idea of building in coordination between the U.S. military and all the other players.

Participants also heard praise for the role of OFDA and DART in serving as bridges between the NGOs and the military; even more praise was given for the On-Site Operations Coordination Center established by the DHA in Rwanda. The satellite uplink provided by the Swedes proved invaluable, as did the general notion of having communications outside the country. The Rwanda information center set up by the United Nations was felt by presenters to be much better than the system in Somalia for disseminating information, both classified information to policymakers and unclassified information to the public.

In terms of technology, the consensus among presenters and participants was that standardization of equipment, protocols, and platforms is crucial. Interoperability and a

common operating environment must be promoted and developed. It was astonishing to find out, for example, that there were literally thousands of frequencies used in Somalia. During his presentation, one member of the military suggested putting DHA in charge of frequencies; still others suggested an NGO consortium. It became clear that someone needs to address that particular part of the problem.

The need for rapidly deployable communications was also discussed. This would be a communications system that could be put in place at the start of an operation so that communications did not have to be reinvented during every operation. More resources, probably UN-centered, are

needed for a deployable communications package.

In conclusion, the day's discussions ranged from broad concepts to nuts and bolts. In every area that was addressed, many good suggestions for future work were put forth—in theory, in structure, and in implementation. In the same way that there was a great deal of emphasis on the need for joint training and joint assessments—bringing multiple groups together to try to identify the lessons from various exercises—the Institute welcomes ongoing comments about this event. It is very much the beginning of the process, not the end of it. Much work remains to be done. Discussions will continue during the April 1–2, 1997, conference on Virtual Diplomacy in Washington, D.C.

# Managing Communications: Lessons from Interventions in Africa

#### Overview

At the conclusion of the sessions—the military perspective was presented in the morning and the humanitarian perspective in the afternoon—conference attendees divided into assigned breakout sessions to discuss the significance of the day's lessons and to propose next steps in improving information-sharing and communications practices among groups responding to complex emergencies.

Breakout discussions were divided into three categories:

- 1. Conceptual approaches to information sharing: Is information sharing beneficial to the operation?
- 2. Examination of the structures for information sharing: Are the organizational structures adequate as they now exist? Are they interchangeable and sufficiently inclusive?
- 3. Developing useful communication systems: Should equipment be interoperable? Should emergency groups share standards and protocols?

Report from the Breakout Sessions Including Background Report and Lessons Learned

### **Common Themes**

First, and most important, all the breakout sessions emphasized that every organization engaged in a humanitarian operation must acknowledge the humanitarian intent of the operation—the care and protection of the local population—as the primary mission. As a corollary, participants emphasized that operational organizations should work to provide means for local populations to aid in solving their crisis. Without the local population's participation, attendees said, the lasting effectiveness of the operation was precluded.

All breakout sessions agreed that information sharing between operational actors in the field helped to save lives, reduce risk, and cut the costs involved in complex humanitarian operations. Although it is not a panacea for bad management of personnel and resources, participants posited that improved information transparency and dissemination could enhance field activities and employ personnel and financial resources more efficiently.

Participants noted that high costs, erratic reliability, and complexity of operations impeded the effectiveness of high-tech communications solutions when the local infrastructure was destroyed or undeveloped. Moreover, they argued, if high-tech communications undercut personal relationships among field staff and between them and local populations, access to information "with a face" was jeopardized.

In spite of these qualifications, participants recognized that using faster, broader, and more consistent information-gathering and -disseminating methods and tools enhanced the overall goal of the operation—saving lives.

The report that follows is a synthesis of the participants' observations and recommendations based on the three focuses of the breakout sessions. Although statements are sometimes identified by session, more often common views have been merged into broader recommendations. As such, the report reflects the interests and the emphases that participants infused into the discussion. (In some cases, illustrations have been provided to clarify points made by the participants in their discussions.) The varied experience of the audience accounts for the breadth of issues and the incisive perspectives contained herein; however, time constraints worked against an even and in-depth treatment of a number of issues critical to managing communications in complex humanitarian interventions.

## Forging a Culture of Information Sharing

### Recognizing a common mission

All the breakout sessions agreed that the overall objective—the common mission—of a complex humanitarian operation must be securing the safety of local populations. If the primary mission were explicitly acknowledged by all actors on the ground and in headquarters, participants argued that a common mission objective would drive the process of information sharing and focus the content of information being shared. Once mission priorities are clearly stated and accepted, participants proposed that communications would flow in all directions simultaneously. Top-down, bottom-up, and lateral information sharing would reinforce the participation of all organizations in the mission—from international policy development to local oversight of human rights.

### Obstacles to a common mission: Institutional diversity

The most cited difficulty for actors in complex emergency operations was a lack of understanding about how their respective roles contribute to a common, overarching mission and about how that mission could respect institutional autonomy, yet compel unified, coordinated participation. Each organization defines its particular role in reducing suffering and stopping the loss of lives in a complex humanitarian emergency, but each may remain uncertain, confused, and even hostile toward other agencies with which it finds itself working in the field.

Confusion about what others are doing in the field can translate into mutual suspicion. In such cases, only reluctant communications and accidental coordination among the many organizations rushing to and operating in the emergency can be expected. Communication and coordination among diverse humanitarian organizations tends to occur (1) when working together means the survival of participating organizations for the duration of immediate danger, (2) when an organization is dependent on other organizations' resources for continued activity in the field, (3) when a significant proportion of the organizations by force of necessity recognize a common purpose and agree to cooperate.

Some participants argued that because NGOs must appeal to their constituents and international and civil funding agencies (donors) for financial support for specific projects on the basis of their unique capacities (missions), cooperation among them to the extent needed to develop routine communications and information sharing was unlikely. Proprietary tensions about operational resources and reporting requirements and autonomous work styles foster a climate of mistrust and institutional secrecy.

Participants insisted that however difficult the task of consolidating the missions of these disparate groups, cooperation in critical activities would strengthen each organization's performance in ameliorating the humanitarian crisis. One of those activities, they agreed, is establishing reliable communications among them for the purpose of sharing critical information about the population at risk and the events that endanger them.

## Improving interorganizational understanding

To dispel interorganizational suspicions, breakout participants proposed a systematic inquiry into the respective institutional features that caused misunderstandings among them. One fundamental area of misunderstanding is the role the military plays in complex emergency operations: By virtue of strength and know-how, does it, should it, lead the operation? Or should the military assume a support role to safeguard and facilitate the humanitarian effort? Several participants pointed to a fundamental contradiction on the part of the humanitarian organizations in their attitudes toward the military: On the one hand, humanitarian groups expect the military to play a minimal role in operations; on the other hand, they expect it to provide immediate and absolute security when they are threatened.

Participants agreed that the predominant or subordinate positions of organizations in the field—military, international organizations (IOs), NGOs—depend on the different needs of each operation, noting that no one organization is always in the lead. Participants wondered whether the military and humanitarian organizations could construct an overarching strategy and plan that would result in a coordinated use of military, political, and humanitarian resources.

All breakout participants voiced unambiguous support for NGOs, IOs, and the military developing joint communications structures and training and for their practicing together in predeployment exercises. They believe the independence of NGOs and the security focus of military organizations could complement each other in crisis management, maintaining and allowing the different treatment of classified and open-source information. Moreover, most participants concluded that a formal division of labor between military and humanitarian organizations would maximize scarce resources and clarify operational roles.

The consensus among participants was that in the field, humanitarian and military actors must operate as a single team, from personal relationships to shared high-tech capacities. No single organization or method of communication provides a sole solution to effective coordination or information sharing; each actor and communications system should complement and reinforce the others employed throughout the field.

## Improving intraorganizational and interorganizational communications policy

Complex emergencies exacerbate problems related to the lack of intraorganizational communication planning or policy development. Participants familiar with information management practices observed that if agencies developed explicit internal communications policies, they would be better off than they are now. Organizations could efficiently direct, manage, and disseminate critical message traffic between the field, agency headquarters, and other agents such as logistics or relief suppliers. An open, cooperative and forward-looking communications policy can thereby ensure a well-informed mechanism for intraorganizational decision making and action.

Interorganizational information sharing is more problematic because of characteristic autonomy and institutional differences among organizational cultures. Organizations may be thought to have too flexible a structure, relying on word of mouth and faxes, with no verification of common terms. Conversely, the may be thought to treat routine information as proprietary or classified, "stovepiping" it to a select few.

## Completing the loop: Field to headquarters, operation to policy, and back again

However imperfect information sharing is in the field, "stovepiping" information begins at home, in government and other donor agencies and in organizational headquarters. Participants voiced a strong need for officials of international, governmental, and nongovernmental organizations at higher levels to meet together regularly prior to, during, and after operations to share information.

Because of the exposed role of their personnel, military and NGO headquarters tend to respond more decisively and with greater clarity about the situation in complex emergencies than their governmental counterparts. Better information sharing among the military, NGOs, government agencies, and IOs would go a long way toward familiarizing policymakers with credible, experienced-based approaches to the complexities involved in a humanitarian emergency.

Because humanitarian operations would not occur without funding from donor nations and agencies, participants argued that donors were accountable for the conduct of the mission and ultimately for the mission's success. Accordingly, donors need to insist on specific requirements regarding the organization of the mission and the management and use of resources to support it.

In summary, participants acknowledged that a common "information culture" during complex emergencies is critical to the overall success of an operation. Such a culture promotes an evenness of purpose, greater familiarity, trust, and flexibility among organizationally disparate actors. Participants agreed that good communications practices produce efficient coordination. And, during a complex emergency, time and money are wasted if there is no coordination.

## Structuring the Dissemination of Information

In breakout sessions on communications structures, participants with operational experience described an effective (commonly relied on) communications system as one that provides transparent, accurate, and consistent information about the field (country, culture), and the actors (who's there, with what). It also provides up-to-date information about the locale, security, and assessments of needs.

## Current reporting structures

Participants acknowledged that among all operational organizations—militaries, NGOs, international and regional organizations—the lack of donor and management encouragement accounts for much of the organizational inertia in recognizing and acting on a fundamental need for an "information culture."

Participants observed that in a complex emergency, communication—not necessarily information sharing—typically occurs on two levels: intraorganizationally, extending from the field to headquarters and personto-person, dealing with local information for local purposes. Some noted, however, that even so, information in the field is difficult to obtain and verify, and it constantly changes. Participants recognized these as conditions to be overcome or accommodated but not as sufficient rationale to cease pushing for better communications practices and networks.

With regard to most intraorganizational reporting, because communications and information management practices are usually based on database models, reports are highly structured, offering little flexibility in formats. Within their own organizations, information managers responsible for building intraorganizational "pipelines" between the field and headquarters should conduct an information-needs assessment in order to determine appropriate formats and reporting standards to reflect needs and behavior at all levels from field to headquarters.

## Assessing the needs: Developing common reporting structures

Participants recommended that organizations independently and collectively evaluate and determine what information should be gathered, and when it should be gathered, who should pay for its collection, and who is entitled to receive it. Participants proposed that information managers work together to develop a common mission statement or common mission principles to inform and shape internal information and communications system strategic plans. From this statement, each organization would form its own set of communications and information policies to ensure that its internal policies reflected external practice.

A common policy goal would help information managers establish communications discipline among users by standardizing data dictionaries<sup>1</sup>, operating, application, and communications system platforms,<sup>2</sup> data formats.<sup>3</sup> and data exchange protocols,<sup>4</sup> thus transforming the data glut into transparent, accurate, and consistent information. The means of identifying donor obligations and of responding to specific policy requirements would be integrated into a common information management structure so that all agencies participating in a complex emergency would be able to use the same system.

However inflexible or proprietary intraorganizational and interorganizational communications is, participants were adamant that customary field communications, person-to-person, is the least reliable: It is erratic and not well integrated or disseminated. Infrequent and ad hoc organizational meetings, resource constraints, and, most important, constant personnel turnover typically impede the reliability of this method. To address the need for better communications between field representatives, participants suggested that humanitarian organizations designate and press each other for routine meetings to report and share information and to make group decisions.

### Possible communications modules: From field to headquarters to suppliers

Participants described an effective communications system, which maintains and disseminates information at all levels, as supportable (with resources and personnel), reliable, appropriate for the needs and conditions of the situation (locale and crisis), open at all levels, and userfriendly. An effective communications system should also offer a variety of interfaces and structures to meet user needs and means, ranging from personal liaisons, indigenous groupings or organizations (clans), and formal organizations (Civilian Military Operations Center) to high-tech networks.

Participants observed that an increasingly wide range of high-tech communications options for use in emergencies is available. They emphasized the utility of on-line bulletin boards and other means of reporting and distributing information to outlying regions in the operation.

Whether by group meetings or, where practicable, by electronic or cellular networks, operational organizations need a means of sharing vital information, especially as it pertains to making corporate, coordinated decisions and to monitoring compliance. In this regard, practitioners offered an example and a warning. International agreements, they observed, are uniformly violated when humanitarian-relief actors do not marshal a common front for ensuring compliance. The inevitable result is the unimpeded killing of civilians and the violation of human rights.

Field staff described the important role information centers play in the complex emergencies in Somalia and in Rwanda. From these two operations, four possible communications modules emerged. These modules are discussed below.

One module is the HOC/CMOC in Somalia, the Humanitarian Operations Center/Civilian Military Opera-

tions Center (HOC/CMOC), the information center in Mogadishu, offered and avenue where all newcomers could receive information and recommendations about where and which relief projects were needed in the region. Since it was located in the UN headquarters, under the coordinator for the Department of Humanitarian Affairs, humanitarian groups found the location easily accessible. There were similar focal points in each of the eight other humanitarian relief sectors. The Disaster Assistance Relief Team (DART), which is the U.S. Agency for International Development (USAID) crisis response team, and the U.S. military jointly provided computers, some communications, and an organizational structure for information sharing to international organizations and NGOs; established a single location for daily information exchange and coordination of humanitarian and military operations; and coordinated specific distribution operations with available military support (security, logistics, engineering, medical, etc.). Open sources of information deriving from long-time resident NGOs provided the military with useful situational data for carrying out a peacekeeping mission.

The inherent weakness in the CMOC structure as it existed in Somalia was that information was conveyed person to person, rather than being written. Information was therefore subject to the restraints inherent in individual participants and was restricted to the field—not headquarters or suppliers. Indigenous NGOs had limited participation and local authorities had none.

A second module is UNREO. In Rwanda, the UN Rwanda Emergency Office (UNREO), the humanitarian information and coordination center in Kigali, jumpstarted relief efforts by offering humanitarian relief organizations the use of a satellite link to their headquarters on a pay-as-you-go basis. UNREO thereby facilitated field communication of critical information between humanitarian groups and their respective headquarters and suppliers. UNREO also expanded countrywide linkages by creating field offices that extended vital information sharing among operational groups working in outlying regions with displaced persons and refugee camps. Timely and reliable communications between humanitarian field workers and their headquarters ensured tighter decision making and better relief delivery in Rwanda than in Somalia.

Despite the well-known value of information from indigenous sources, communication with individuals at the grassroots level is often poor. Local familiarity with political and socioeconomic conditions and governance, formal and informal, can guide military and international humanitarian organizations in discerning cultural subtleties and in conducting relations with local authorities. Participants proposed that liaison arrangements between organizations and local authorities should be the starting point rather than an afterthought for good operational communications. Indigenous NGOs, where present, and local civilians should be routinely incorporated into HOC/CMOC structures.

In Rwanda, the establishment of the Integrated Operations Center (IOC)—a third possible communications module—demonstrates how internationals and locals can work together to good effect. The IOC-made up of the Rwandan government, UNAMIR, and humanitarian groups-planned, guided, and tracked movements of displaced populations to their homes by means of a shared, accurate mapping program, based on a continual flow of information from the field. Field representatives from each sector updated diskettes with new information and returned them to the IOC. IOC received, compiled, and redistributed information by diskette, thereby maintaining an information currency among all sectors of the field. Locating the IOC in the Rwandan government's Ministry of Rehabilitation strengthened the government's capacity to carry on the duties related to displaced persons and refugees.

The UN High Commissioner for Refugees (UNHCR) assumed and expanded IOC functions in the region after the immediate humanitarian crisis dissipated and UNREO radio was dismantled. This fourth communications module—UNHCR VHF regional radio network—demonstrates how one system of communication can bolster and build on another system. UNHCR established a VHF handheld radio network to link the refugee camps in Zaire with its offices in Rwanda and with other camps and offices in Burundi and Tanzania. Because the NGOs (mainly UNHCR implementing partners) had no access to the UNREO radio network, they were incorporated into the UNHCR system. With the reduction of UN

Department of Humanitarian Affairs' (UNDHA) presence in Rwanda, the UNREO radio network was dismantled, and some of its users were absorbed into the UNHCR system. To date 1,300 users benefit from this regional VHF network of whom UNHCR staff constitute only 360. The remaining users are NGOs, the liaison group in Zaire, and some governmental services. The network was further expanded with HF Pactor, Inmarsat terminals, and VSAT links through rural telephone and PABX.

### An independent "information manager"

Finally, participants expressed a need for a central clearinghouse of vital information, linking all groups in the field with headquarters and donor agencies. In response to the institutional reluctance to share information, participants proposed that a standing body (twelve to twenty major humanitarian organizations) or a single independent entity act as a neutral clearinghouse for accurate, current, and useful information. This entity would acquire, validate, and maintain operational and mission-related information for all operational humanitarian organizations and would integrate unclassified data from military and intelligence organizations. Participants referred to this information activity as "fusion" and to the agent as a "fuser."

Information management activity carried out by this entity would build links between institutions and communities and establish a culture in which information sharing was routine. The entity would be responsible for transforming "data" into "information" and communicating the information through appropriate systems for prospective users.

In summary, most participants agreed that institutionalizing a modular communications system plan, a methodology, and requisite personnel training would strengthen human effectiveness in operations and would offset inefficiencies.

# Technical Standards for Information and Communication Systems

To accelerate emergency response and to avoid inefficiencies, a number of issue areas need policy attention by information specialists, individual organizations, donors, governments, and the International Telecommunications Union (ITU). These issues can be broken down into three broad technical categories and two primarily policy-oriented categories:

- Creating and expanding channels of communication. Participants explored the question of which medium is best for information sharing and is available, affordable, and easy to use. Do field staff have access to the phone lines and wireless frequencies they need to communicate with one another and their headquarters? What technical or procedural mechanisms can help guarantee access to communications bandwidth? How can guaranteed bandwidth be reconciled with state-controlled channels of communications (wireless spectrum management, public telephone and telegraph providers)? How should the global disparity in communications channel allocation be addressed? Should they be addressed by market forces, or should one actor be responsible for supplying the necessary, shared bandwidth?
- Making the channels accessible to all actors. Participants considered bandwidth allocation authority, CCCITT/IEEE compliance, and traffic management as bottleneck issues in need of urgent attention. They questioned whether the media most useful in an emergency—land-line telephone; shortwave; VHF; packet radio; cellular, Inmarsat, and VSAT technologies; Internet gateways—were affordable, operable, and accessible to key operational staff in the field. They raised questions regarding communications licensing and tariff regulations and their impact on affordable telecommunications access in the field and for humanitarian organizations in general.
- Ensuring that potential actors have the capacity to plug their systems into the channels. Participants stressed the need for actors to move toward broader adoption of TCP/IP as a communications protocol. They considered a move toward an "open system" solution as a means of resolving compatibility and affordability issues between information and communications systems. Furthermore, they proposed the use of a standard "Internet tool kit" to overcome barriers posed by proprietary and "legacy" systems. Participants were adamant that organizations should invest in the requisite technologies and skill sets to effectively employ emerging media and to prepare for CCCITT/IEEE-compliant technologies.
- Ensuring that sovereign and intellectual property rights are both respected and balanced with the need to maintain a certain degree of communications security. Participants had numerous questions regarding significant peripheral ramifications of practicing information sharing. These included such questions as how sovereign rights, cultural sensitivities, and intellectual property would be handled; who owns and has access to the information and how are these rights and sensitivities would be balanced against competing needs for communications security.
- Ensuring that communications systems fulfill both local communications needs among field operators as well as "logistical" communications needs between field operators and their headquarters or donors. Systems that are useful in the field may be inadequate for communications beyond the field, and vice versa. System designers should take both sets of end users into account when they plan communications systems for future emergency interventions.

### Conclusions

The following objectives for managing communications in emergency interventions emerged from breakout session recommendations:

- Create a culture of "information sharing." Convert organizational mindsets from proprietary "information holding" to "information sharing" and to organizational transparency by proposing activities that build mutual trust and mission focus. Joint training and joint assessments build familiarity, respect, and ultimately trust among cultures. Each organization must consider information as part of a continuum, linking its particular organizational mission with the operation's common mission. Information must be obtained and shared because of its inherent value to the common mission and, ultimately, to the mission of each organization.
- Identify standard information-sharing structures that practitioners can adapt to meet the needs of particular crises. Design or designate standard information modules that can be adapted to meet the needs of particular crises. Those mentioned in the conference and in the breakout sessions were the CMOC in Somalia and the UNREO (the UN information center), Integrated Operation Center (IOC), and the UNHCR regional radio network in Rwanda.

Information managers should construct information systems that allow users to obtain and disseminate information expeditiously and conveniently. Preparing operational personnel prior to deployment to establish and operate these systems offers joint training opportunities. Training should include learning a standard communications process, the forms of transmission (a common language for information management systems that operates in multilingual environments), and patterns for the dissemination of information.

- Agree to a common communications mission statement. Create a common mission statement to guide information mangers in designing systems (communications structures and processes) to support organizational and operational mission needs and objectives in the field and headquarters during the operation. By requiring the use of standard formats and protocols, a communications mission statement should aid in enforcing communications discipline among users, and in turning a data glut into useful information.
- Identify a standing body that will fuse and disseminate information for the good of all. Designate an information "fuser" to act as a neutral clearing-house for accurate, current, and useful information. This entity would transform "data" into "information" and would communicate the information through appropriate systems for prospective users. Information management activity carried out by this entity would build links between organizations, institutions, and communities and would establish a culture in which information sharing was routine.
- Urge donors to take an active role in enforcing an "information culture." To support and fund implementation of these objectives, participants proposed that major donors and relief organizations establish informationsharing and communication systems guidelines for operational organizations. Guidelines, based on an information management policy and on

mission statements proposed in the second objective, would set equipment standards for hardware, platforms, and applications, ensuring interoperable equipment and programs for field communications. Interorganizational and intraorganizational information management systems would be implemented to collect and to share logistical and operational data, and conventions regulating information processing and

management (forms, distribution routes, validation, and frequency of information dissemination) in the field would be established. Donors should earmark resources to support adherence to these guidelines, specifically for equipment acquisition, maintenance, and training in the information-sharing and communications management activities.

## **Next steps**

In support of the adoption or promotion of an information culture that is "people-centric" )a culture that supports the humanitarian focus of the emergency intervention), participants recommended the following immediate next steps:

- Urge operational NGOs, IOs, and governments to collect and share information about the field and actors and to collect and share current information about the locale, security, material, and personnel needs.
- Develop general mission objectives that information management designers can easily translate into systems responsive to the information needs of each operation's mission.
- Plan for predeployment assessment of field information requirements, including inventories of each participating organization's information assets and requirements.
- Apply "lessons learned" from past operations to improve communications in emerging crises.
- Conduct routine joint training programs with the military and representatives from civilian NGOs.
- Continue organizing conferences that stimulate interorganizational brainstorming and mutual education.

## **Appendix**

The communications systems modules proposed in the report are described in more detail in the background synopsis that follows. In preparing for the "Managing Communications" conference, practitioners from the interventions in Somalia, Rwanda, and Liberia pooled information and experiences to help create this background document as a resource for conference organizers and speakers.

The degree to which the described communications modules build on one another is evident. What is just as typical, however, is that lessons learned from one intervention may be lost to another. Turnover or reduction in personnel (the primary means by which operational efficiencies is conveyed, and the lack of "after-action" analysis result in lost opportunities to capture and institutionalize effective coordination and communications models.

Documentation of "lessons learned" in doctrine, in joint training manuals, or in policy guidelines supported and required by donor agencies would repair this experience gap. Requiring standardized information reporting and dissemination could result in efficient communications and coordination. The following background report on "lessons learned" compares favorably with the recommendations and next steps in the report from the breakout sessions.

### **Background Report**

Lessons from peacekeeping and humanitarian assistance operations in Somalia, Rwanda, and Liberia suggest an adaptable information systems model to use for planning training and operations in complex emergency operations. The models involved at least three parallel, lateral networks: field actors, head-quarters, and a clearinghouse of information for the public.

### Somalia—Unified Task Force (UNITAF)

The Humanitarian Operations Center Civilian Military Operations Center (HOC/CMOC) management structure, under UN auspices, greatly improved communications among humanitarian organizations and between them and the military.

The HOC/CMOC, the central information point in Mogadishu, served as a location for all newcomers to receive information and recommendations about where and which relief projects were needed in the region. Since it was located in the UN headquarters, under the coordinator for the Department of Humanitarian Affairs, humanitarian groups found the office easily accessible. The Disaster Assistance Relief Team (DART), which is the U.S. Agency for International Development (USAID) crisis response team, and the U.S. military jointly provided computers, communications, and organizational structure for international organizations and nongovernmental organizations (NGOs); established a single location for daily information exchange and coordination of humanitarian and military operations; and coordinated specific distribution operations with available military support (security, logistics, engineering, medical, etc.). The Office of Foreign Disaster Assistance (OFDA), the U.S. funding agency for international crisis relief, received daily reports from the on-site DART team. The reports were based on information received from deployed military and operational humanitarian relief groups. Open sources of information deriving from long-time resident NGOs provided the military with useful situational awareness for carrying out a peacekeeping mission. Coordinated humanitarian, military, and political planning and operations accelerated humanitarian activities and helped stem the likelihood of new violence among Somali factions or civilians.

The learning curve presented by the Somalia experience began with a lack of both coordinated planning and operations on the part of intervening military and civilian organizations during UN Operations in Somalia (UNOSOM I) and early UNITAF activities. Poor situational awareness and the lack of coordination caused serious difficulties in the delivery of relief supplies and in relations with the Somali factions. Communications structures established during UNITAF reverted to a stovepipe separation of humanitarian, military, and political communications systems under UNOSOM II.

## UN Rwanda Emergency Office (UNREO)

In Rwanda, the UN Rwanda Emergency Office (UNREO) served as a communications center, as the CMOC did in Somalia. The UN Department of Humanitarian Affairs (UNDHA) set up the On-Site Operations Coordination Center (OSOCC) in the Kigali office. There, among other technical support, a Swedish technical communications unit established a satellite uplink providing the communication infrastructure needed to begin emergency

coordination. Later, to augment and to assume the communication support that UNREO had begun in the immediate crisis, the UN High Commissioner for Refugees (UNHCR) mounted a VHF handheld radio network that linked the refugee camps in Zaire with its offices in Rwanda and with other camps and offices in Burundi and Tanzania. The UNHCR system still serves regional refugee camps and NGOs working in the area.

During the second peak of the crisis, the Integrated Operations Center (IOC) used computers and a mapping program to facilitate military, humanitarian, and security measures to return large numbers of displaced people to their home commune.

Meanwhile, in Washington, D.C., USAID's Rwanda Information Center (RIC) brought critical classified and unclassified information from the DART and the OSOCC in the field to U.S. government officials and provided an on-line public information resource of unclassified news from the region.

OSOCC was a subcomponent of UNREO. Established to support the humanitarian operation OSOCC, UNREO quickly on extended services to the humanitarian community in order to jump-start relief efforts. The central command at UNREO, staffed by a team of experts, later expanded to countrywide linkages through UNREO field offices. Humanitarian relief organizations could use the satellite link on a pay-as-you-go basis. This service resulted in closer communications between UN agencies and NGOs because of the latter's lack of necessary equipment. OSOCC enhanced NGO security by maintaining a twenty-four-hour security network that operated closely with the UN Assistance Mission for Rwanda (UNAMIR). UNDHA thereby facilitated field communication of critical information between humanitarian groups and their respective headquarters and suppliers and, in the meantime, contributed to vital information sharing among the groups in Rwanda. The timely and reliable communications between humanitarian field workers in Rwanda and their headquarters ensured tighter decision making and better relief delivery than in Somalia.

The UNHCR assumed and expanded IOC functions to the region after the immediate humanitarian crisis dissipated and UNREO radio was dismantled. UNHCR established a VHF, handheld radio network to link the refugee camps in Zaire with its offices in Rwanda and with other camps and offices in Burundi and Tanzania. Because the NGOs (mainly UNHCR implementing partners) had no access to the UNREO radio network, they were incorporated into the UNHCR system. With the reduction of

UNDHA presence in Rwanda, the UNREO radio network was dismantled, and some of its users were absorbed into the UNHCR system. To date 1,300 users benefit from this regional VHF network, of whom UNHCR staff constitute only 360. The remaining users are NGOs, the liaison group in Zaire, and some governmental services. The network was further expanded with HF Pactor, Inmarsat terminals, and VSAT links through rural telephone and PABX.

Although specific to the Rwandan crisis, the IOC expanded emergency communications systems by employing computers and a mapping program loaded into field workers' computers to expedite Operation Retour, an effort to return massive displaced populations camped in southwest Rwanda to their homes. The IOC-made up of the Rwandan government, UNAMIR, and humanitarian groups—by means of a shared, accurate mapping program, planned, guided, and tracked movements of these populations by means of a continual flow of information from the field. Field representatives from each sector updated diskette with new information and returned them to the IOC. IOC received, compiled, and redistributed information by diskettes, thereby maintaining an information currency among all sectors of the field. Locating the IOC in the Ministry of Rehabilitation strengthened government capacity to carry on the duties related to displaced persons and refugees.

Although organizations were adept at intraorganizational communications procedures, interorganizational communications dragged because of dissimilar communications equipment, platforms, frequencies, and protocols. The lack of interoperable hardware and peripherals, common standards, and protocols was the main obstacle to looped communications and to reliable and broad-based security in the field.

In Washington, D.C., USAID's Rwanda Information Center (RIC) prepared two field-generated reports. One included classified and unclassified material and was circulated among U.S. government officials (USAID, State, Defense, and other appropriate agencies or individuals). The other compiled unclassified material and public information for U.S.-based NGOs and was available on the Internet. Because of managed information through the RIC, policymakers could evaluate reports and make timely policy decisions about how to stem the crisis. The RIC's value as a public information center cannot be overemphasized. Out of that specific experience, the UNDHA, in cooperation with U.S. government, other UN agencies, and NGOs, has developed an Internet-based

information clearinghouse for news updates, maps, and reports on emerging and ongoing crises, known as ReliefWeb.

### What changed between Somalia and Rwanda?

U.S. and UN intervention policies changed because of the perceived "failure" in Somalia and because of the different natures of the crises. In Rwanda the role of the U.S. military was very limited; the role of the UN was restrained during UNAMIR 1 and expanded during UNAMIR 2. Moreover, the local conditions required different kinds of responses. In Somalia, the interaction between military and humanitarian groups was based on security and humanitarian needs; in Rwanda, they interacted to coordinate the transport of relief in the refugee operation in Zaire (U.S. Air Force) and to help in the movement of massive displaced and refugee populations (UNAMIR). Also, communications technologies and procedures had matured since Somalia to the extent that their effective employment in Rwanda demonstrated (sometimes only in theory) how they could facilitate operations in future interventions. The Rwanda experience was the first complex emergency operation that used computerbased platforms to exchange current operational information in the field, to plan and track relief deliveries between field and headquarters, to coordinate population movements by NGOs, IOs, the UN, and indigenous governments; to circulate current information among U.S. agencies, and to disseminate news to the public. Even so, different platforms, protocols, frequencies, and standards continue to impede effective communications among humanitarian groups as well as within single organizations.

Rwanda illustrated the advantage of having a single organization or structure (UNREO/OSOCC or IOC) co-

ordinating information sharing among the myriad players. If one entity manages information as it focuses on urgent operational issues, that entity can spot gaps in relief delivery, refugee monitoring, and other areas of need. Meanwhile players can begin to recognize their respective gains by sharing pooled information. The costs of sharing information (costs associated with programmers, data entry, analysts, equipment, media replication systems) also became apparent as a separate budget item for funders and operational organizations. Wholesale adoption of information systems and requisite training continue to make this a problematic consideration for organizations with budget constraints and familiar work routines.

## Liberia reinforces the lessons of Somalia

An experience of information sharing between NGOs and peacekeepers through routine meetings helped coordinate delivery of humanitarian relief during periods of the crisis. A difference of attitudes within these communities, however, impeded the amount and quality of the information shared. This seems applicable to regional peacekeepers who are thrust into new relationships with humanitarian organizations in complex emergency operations, which require a reevaluation of traditional military roles (doctrines, attitudes, etc.). Communications systems are often disrupted by the intensification of the crisis and there may be no reliable backup system to maintain connectivity among the organizations. Events in Liberia illustrate the need to understand the behavior of irregular forces and how comprehensive contextual information should also be collected and shared in order to formulate an effective conflict-resolution policy. Lack of funding for communications systems will further exacerbate this situation.

#### Lessons

■ Although the technology exists to enable comprehensive information sharing in practice, information sharing is driven by the political will and financial resources available to establish, maintain, and use communications systems in the field by military and humanitarian organizations, between field representatives and headquarters, headquarters and the donor, the donor and government, government and militaries. Although lateral communications in the field seems imperative, the lack of interoperability continues to impede communications whether by radios or computers. Each nationality has its own preferred equipment, software, and mode of usage, as do the various militaries and international and private organizations. Umbrella organizations, such as UNDHA, UNHCR, and International Telecommunications Union (ITU), should continue their efforts to standardize these differences.

To systematically develop reporting among organizations, donors should insist that grantees discharge their fiduciary responsibilities by adhering to standardized reporting mechanisms and structures operating in real-time. Reports could include project and resource locations, plotted on regional maps for easy and accurate reference by all field operations. Donors should underwrite grantee investments in the requisite technologies and training to maintain this kind of system.

- Parts of the construct seem to be generally accepted (for example, the HOC structure), other parts have not been commonly accepted (OSOCC's satellite link), and still others have recently become operational (ReliefWeb or ResponseNet as information clearinghouses). Each part, however, can be modified to manage local conditions or to serve special clients, and together they can serve as a model to help organizations plan and train personnel—prior to deployment—how to establish and maintain effective and reliable communications in complex emergency operations.
  - a) Predeployment planning: Better cultural and logistical awareness about the region and its inhabitants (situational awareness) could be more effectively integrated into planning deployments, operations, and exit strategies if a central information resource were commonly available on-line.
  - b) Operational communications structure: An HOC-like structure can serve effectively as a focal point for operational information sharing, dually chaired by domestic or foreign government agencies or civilian agencies and the leading military organization.
  - c) Communication from the crisis to external entities: A designated humanitarian coordinator should identify, *inter alia*, an organizing structure (HOC or IOC) to maintain and provide on-line information to fulfill five functions:
    - 1. Inform policymakers and the public about official decisions and actions by posting treaty texts, declarations, statements of resource commitments, and press releases.
    - 2. Collect and disseminate "structured" information on the situation (organizational contact information, resources committed to the region, situation reports).

- 3. Disseminate information of special interest to agencies involved in humanitarian relief, conflict resolution, and reconstruction (resource locations; regions of stability and instability or locations of particular concern such as refugee camps, assessment of infrastructure destruction).
- 4. Exchange anecdotal information to enhance the value of the practical information.
- d) Interorganizational and international or governmental electronic network: One coordinating entity should accept responsibility for encouraging participation in the clearinghouse and for generating useful, current, and multisourced information available in a variety of forms. This role involves "marketing" the idea, coordinating operational participants,
- creating incentives for their participation, training and programming, and preparing organizations to make a hand-off to indigenous and other organizations engaged in long-term development. The agency or agencies will not necessarily be the same in every situation. In some instances, it will be a government organization, the UN, an NGO, the military, or even a commercial organization. Regardless of who delivers the service, the product should serve the same function.
- e) Operational authority: The designated entity must be in a position to negotiate specific agreements with indigenous, often "erstwhile" governments for the benefit of the operation. Both information and communications technologies are properties of the operation, and are negotiable factors for the public good.

<sup>&</sup>lt;sup>1</sup> Tables that explain the label, content, and function of a particular data variable.

<sup>&</sup>lt;sup>2</sup> Requirements for hardware and software capabilities for operators in the field. For example, a personal computer capable of (1) simultaneously operating a spreadsheet, operating a word processor, and establishing a connection to the Internet, (2) storing and retrieving a variety of file formats, and (3) rendering maps and graphics in GIF, JPEG, EPSF, and BMP formats, an attached modem of 14.4 or better, and an attached CD-ROM 2X or better.

<sup>&</sup>lt;sup>3</sup> For example, for wordprocessing: .rtf, .doc, and .wp; for spreadsheet: .wks, tab-delimited, and comma-delimited; for graphics: .gif, .jpg, .eps, and .pic; for database: fixed-field, tab/comma-delimited, and .dbf; and for multimedia — .wav, and .aiff

<sup>&</sup>lt;sup>4</sup> For example, UUCP, SMTP, TTY, MIME, UUENCODE, BINHEX, ZIP, ARC, STUFFIT

Who has the authority to assign channels in an emergency? This is most applicable in terms of wireless communications, but it is also applicable when a finite number of telephone lines must serve a rapidly expanding service sector.

<sup>6</sup> Once standards are set, do users have equipment capable of enabling them to adhere to those standards?

What happens when communications works and everyone wants to talk at once?