

Peace IT!

Using ICTs to prevent, manage and resolve crises • 2/2007



ICT4Peace

An International Process for Crisis Management

ICT4Peace aims to enhance the performance of the international community in crisis management through the application of Information and Communications Technology (ICT) - technologies that can facilitate effective and sustained communication between peoples, communities and stakeholders involved in crisis management, humanitarian aid and peacebuilding. [Read more on page 2.](#)

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Editorial

This third edition of PeaceIT! highlights some of the main findings of the OCHA Global Symposium +5 'Information for Humanitarian Action' in Geneva in October. For me personally, a key message was in Sir John Holmes, the UN Emergency Relief Coordinator, words "... information itself is very directly about saving lives. If we take the wrong decisions, make the wrong choices about where we put our money and our effort because our knowledge is poor, we are condemning some of the most deserving to death or destitution, and helping the relatively less needy when they do not require our relief so desperately." This is one of the fundamental reasons for why we have to share information and analysis in conflict environments. They are essentially common to us all, what binds us together despite our differences.

A major flaw in the International Community's approach to date has been to leave ICT issues to IT departments without proper guidance on what we want to achieve. It should be the leaders and the victims who decide what data and information we need. IT specialists need to facilitate these information and knowledge flows and not act as gatekeepers. The problem is not in technology per se but in organisation, leadership and resources. Senior management need to be more involved in ICT and information-related issues, both at headquarters and in country offices. Current levels of disengagement reflect the low value attached to information - it is seen as a cost, rather than an investment.

This edition of PeaceIT! features articles on the topic of information management and sharing in the field. There are articles about SHIFT and iMMAP, projects which both are aiming at enhanced information sharing. The story about Exercise Khichadi provides a field based view on the use of ICT in a reasonably challenging environment. Finally there is also an article about Humanitarian-Free and Open Source Software (H-FOSS).

This edition also presents articles on other subjects of concern to policy-makers and practitioners; the main findings of the OCHA Global Symposium +5 'Information for Humanitarian Action' and the launch of an International Process for Crisis Management.



Kristiina Rintakoski
Programme Director, Crisis Management
Crisis Management Initiative

ICT4Peace:

An International Process for Crisis Management

A meeting was held on 15th November 2007 at the United Nations in New York on ICT4Peace. It was for the ICT4Peace Foundation, based in Geneva, Switzerland, the official launch of a dialogue and process of action that it was facilitating to strengthen an understanding and application of Information and Communication Technologies (ICTs) in, inter alia, conflict management, peacebuilding and humanitarian response.

The essential challenges facing the ICT4Peace process are in part technical and in part the manner in which the international community organises itself and works towards shared goals of stability, conflict resolution and emergency response. There is an increasing recognition amongst the international community, including governments, non-governmental organizations and the United Nations agencies that the timely collection and exchange of accurate and impartial information during humanitarian crises requires mayor improvements. Such improvements could contribute to save thousands of lives and requires the sustained commitment of the international community to effective management of information and knowledge, by using appropriate technologies, including Information and Communications Technologies (ICTs). Used appropriately, ICTs can support all aspects and sectors of humanitarian work. While initiatives have been launched to mainstream ICTs in humanitarian aid and peacebuilding, none have been able to gain traction at the United Nations, intergovernmental and interagency level.

What the ICT4Peace process proposes is precisely that - by harvesting existing best practices, recognizing and nurturing innovation and facilitating an international recognition of the important links between effective humanitarian response and the use of ICTs. Crisis management is defined, for the purposes of this process, as civilian and/or military intervention in a crisis that may be a violent or non-violent with the intention of preventing a further escalation of the crisis and facilitating its resolution. This definition covers peace mediation and peace-keeping activities of the international community. In order to

bridge the fragmentation between various organizations and actors during different phases of crises, ICT4Peace promotes holistic, cohesive and collaborative mechanisms directly in line with Paragraph 36 of the WSIS Tunis Commitment:

“36. We value the potential of ICTs to promote peace and to prevent conflict which, inter alia, negatively affects achieving development goals. ICTs can be used for identifying conflict situations through early-warning systems preventing conflicts, promoting their peaceful resolution, supporting humanitarian action, including protection of civilians in armed conflicts, facilitating peacekeeping missions, and assisting post conflict peace-building and reconstruction.”

ICT4Peace raises awareness about the Tunis Commitment and promotes its practical realization in all stages of crisis management. The ICT4Peace process and the stakeholders involved in it are guided by the following questions.

- How has the use of ICT helped in promoting peace?
How has misuse of ICT hampered crises management?
- How can we enable a greater degree of cohesion, transparency and accountability to processes of conflict transformation? Can ICT augment existing stakeholder interventions and enable marginalized actors to participate more fully in crisis management?
- Establishing computers and Internet connections is insufficient if the technology is not used effectively, if people are discouraged from using it or if local economies and patterns of access cannot sustain long-term application. How do we make sure that a strong political





will supports these transformations? How do we make sure that technology is used effectively (how do we train and educate people in the use of ICT)? How do we assure that the financial resources needed to sustain long-term use of ICT are assured?

- How do ICT contribute to enhance inter-agency interoperability and collaboration within the international community (UN system, EU/EC efforts etc) in order to improve peace-keeping, conflict prevention and crisis management?
- How do we promote information-sharing in places of conflict and/or crises?

Meaningful and sustainable answers to these question asks of the international community to shore up the political will to change for the better its systems of collaboration and disaster response. There is much that is acknowledged as wrong today. Information systems that are extremely comprehensive and work for a particular agency are closed off to those outside. Civil society and NGOs themselves rarely collaborate, much less coordinate. Participants at the ICT4Peace launch meeting at the UN recognized that challenges were rarely at the level of technology but rather of information management. Focusing attention on implementation and action, participants outlined the need to exchange best practices and eventually to develop tools and a set of common standards agreed by different agencies and organisations, both within and beyond the UN, to aid knowledge sharing, communication and interoperability. In doing so, sustained cooperation between decision makers, users and IT specialists was of crucial importance. One significant obstacle was thought to be data security and the unwillingness to share information. Sanjana Hattotuwa, Special Advisor to the ICT4Peace Foundation speaking at the event brought out examples of how the failure to communicate, coordinate and collaboration in a meaningful way had impacted in a very real way the delivery of aid to communities affected by disasters in particular, and emergency response in general. To this end, the importance of creating a multi-stakeholder collaboration

in order to enhance impact at field level - encompassing both the private sector and those who collate and utilise ICT outputs - was emphasised.

In order to achieve the forgoing, ICT4Peace intends to:

- raise awareness about the contribution and potential of ICT in crisis management
- foster exchange of best practices in the field of ICT for crisis management
- contribute to the establishment of broad principles derived from operational best practices, help integrate them into UN processes and make ICT part of UN evaluation exercises.

Participants representing a range of national governments, NGOs and international organisations pledged their support to moving forward work in this field, especially via initiatives such as the ICT4Peace Foundation. The importance of the commitment and political will of senior leadership - from both international institutions and national governments - to the principles of ICT usage was also a prominent feature of the discussion. Participants agreed that the UN itself needed to be strengthened in order to better deal with the challenging environments it was operational in, inextricably entwined with a longer term and process to change the organizational culture from within to one that reflected and strengthened information and knowledge sharing.

Summarising the discussions, H.E. Ambassador of Switzerland Peter Maurer said that the principles of best practice regarding the use of ICT in crisis management and other areas of the UN's work had been previously established, but their implementation was lacking. The obstacles to this lie in a paucity of collaboration between stakeholders, amongst other factors. Ambassador Maurer also highlighted the need to focus on how data collection and ICT tools worked on the ground, and also the need to focus on generating the necessary political will and buy in of senior leadership. Ambassador Maurer also called for the continuation of discussions between stakeholders on the use of ICT in crisis management. He said that future gatherings should consider how universal standards could be agreed on, how the private sector might best be engaged and how ICT might best be used to aid the process of UN reform.

Sanjana Hattotuwa
Special Advisor, ICT4Peace Foundation



Testing SHIFT: in search of “Shared Awareness”

In the last edition of Peace IT!, a project called Shared Information Framework and Technology (SHIFT) was introduced. The aim of the project is to create a web-based information sharing platform to be used in different crisis management settings. It would offer an open environment for crisis management actors to share and gain information using SHIFTPedia, a wikipedia type of tool, have online virtual meetings with a possibility to view and edit documents and a map-based situation picture and event management feature. Beside technology, SHIFT is also a concept seeking to replace the current practice of building on bilateral or ad hoc information exchange connections and relationships between governmental, non-governmental, private and local actors in conflict areas.

Since the last edition, SHIFT has been tested in three inter-agency exercises in Finland as well as in Multinational Experiment 5 event called “Shared Awareness”. The latest event took place on 12-16 November 2007 and was held in distributed manner having participants located in Helsinki, Finland and Ottobrunn, Germany. Altogether there were approximately 100 participants in the whole event and around 20 Subject Matter Experts (SME), which in this event represented the SHIFT Community, i.e. the community that is using SHIFT to share information with each other. Participants’ profiles

varied from representatives of governmental agencies (police, border police, civil servants) to non-governmental humanitarian NGOs (German Red Cross, Finnish Church Aid, Finnish Refugee Council, Plan Finland) and academic institutions.

The setting for the event was that a coalition member representing their knowledge development section would ask the SHIFT community to assess and analyse information on the area in Sub-Saharan Africa, more precisely area covering Guinea, Liberia and Sierra Leone. The aim was to create a shared understanding on humanitarian/refugee/IDP situation, basic services available, economy, governance and security. As the participants were in different locations, the idea was to do this collaboratively using the online virtual meeting tool in SHIFT as well as store information and related documents in the SHIFTPedia. The situation picture tool was presented in the event, but not heavily utilised.

Learning to use SHIFT

As the event was only for five days, the users needed to learn to use the technical tools quite fast. In order to achieve certain level of expertise, a specific training session was organised before the actual experiment began. It was noticed that it is

depending on individual's previous capability to use computers how fast you are able to adapt to a new system. In general, the present tools in SHIFT were found quite easy to use and after a while the participants were able not only to use the system but also give constructive feedback for further development. The participants were also able to find alternative ways of using SHIFT as the event faced some network/bandwidth problems during the week. In the real life use it is envisaged that the users would learn how to use SHIFT in "learning by doing" manner supported by online instructions and e-learning packages.

Technology at best can only be an enabler of alternative behaviour. The need and motivation to use SHIFT kind of tool has to arise from the individual organisation or user. It cannot be created from outside by somebody else. This is something that short experiments or exercises cannot test and in that sense an experiment or exercise is always a bit artificial situation. Despite the fact, general feedback from the users was that SHIFT could be developed into a platform for enhanced information sharing and collaboration. There still were many technical issues to be developed and solved in the future to make to system to be more user friendly and supportive to the requirements of the users.

One clear challenge that was faced during the week has to do with information management. A modern phenomenon of information overflow is also reality within SHIFT. During the event more than 100 different documents were created in SHIFTPedia and towards the end of the event the users were faced with difficulties in finding the most relevant ones among them. In the future development it needs to be tackled and reconsider how a wiki-type of tool could and should be used, and whether there is a need for a more sophisticated document management feature to be introduced in the SHIFT toolbox. Also already existing search options should be further developed.

One of the tenets of SHIFT concept is user moderation. In this context one of the forms of user moderation is that there would not be any organisation that would impose the right ways to use the system. However, it is seen that a dedicated organisation is needed to ensure the functioning of the system, but not managing the content. In this event a group of people played this organisation what we call the SHIFTOrg. It was observed that there was no need for strong involvement from the SHIFTOrg side, right according to the concept. The users

were able to conduct the virtual meetings, post information to SHIFTPedia and even moderate alternative working methods to overcome the technical difficulties that were faced.

In general there was a certain level of enthusiasm towards the concept and the tools in SHIFT. Many participants saw the benefits of information sharing and how technology can enhance collaboration among different entities.

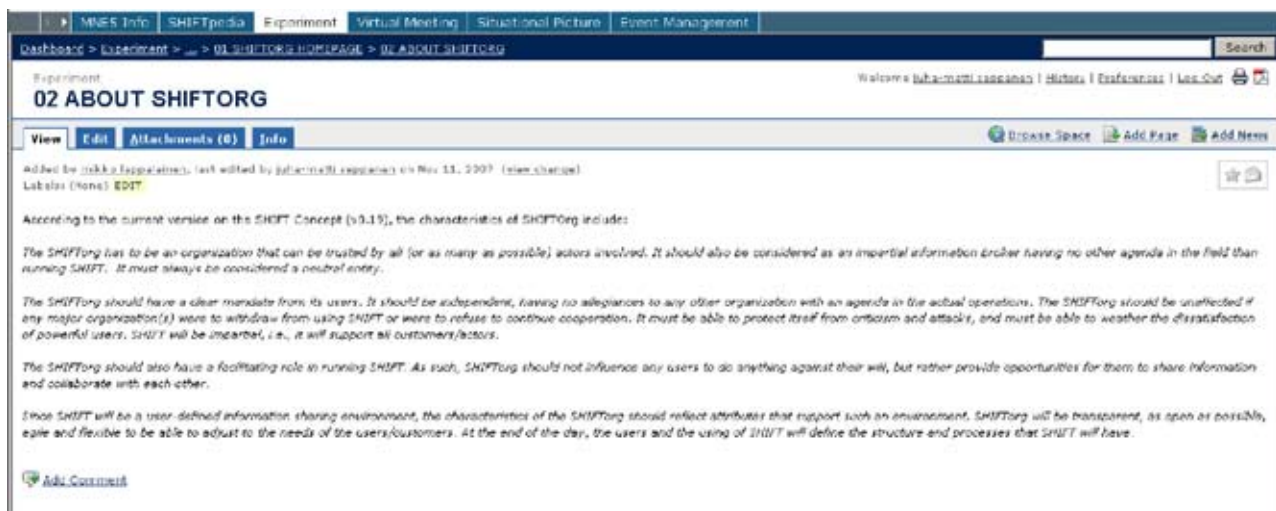
Way forward

SHIFT as a technological solution is based on the principles of Service Oriented Architecture (SOA) and Commercial-off-the-shelf (COTS) products. The current solution is basically consisting of three separate elements: wiki, virtual meeting and situation picture. It was observed during the event that there is a clear need for more comprehensive integration of the three mentioned tools. One would for example need to be able to link information from one tool to another more flexible, and have federated search covering all tools available. One feature that is built in the system but not used during the event is a messaging tool. The idea is not to replace e-mail but have a capability to send messages within the system. Also one feedback from the users was a need to have an instant messaging tool and a discussion board. The current system has a chat feature but it only can be used during the virtual meeting.

Even though this article has concentrated quite much on technology, SHIFT is not only about technology. It is also a concept trying to describe possibilities to co-operate between separate entities and chains of command using a trusted information sharing environment supported by up-to-date technological services.

The work on developing SHIFT will continue in many ways during 2008, the first event being a workshop organised in Helsinki, Finland on 28 January - 1 February 2008. In case the project attracted your interest, you are most welcomed to participate in the workshop. More information can be asked from the author.

Juha-Matti Seppänen
ITCM Project Manager
Crisis Management Initiative



Screenshot from SHIFT wiki-tool.

Information Management & Mine Action Programs (iMMAP)

“The NGO with most experience in this sector, however...is iMMAP...whose work has been instrumental in supporting both Mine Action initiatives and the [Humanitarian Information Centers] operated by [the United Nations Office for the Coordination of Humanitarian Affairs]. NGOs offer a different perspective and a different approach to GIS in the field, one that can complement that of international organisations, and it seems certain that these actors will expand their activities in coming years.”

Information and Communication Technology for Peace: The role of ICT in preventing, responding to and recovering from conflict. United Nations Information and Communications Technology Task Force, 2005

iMMAP: For nearly ten years, the Information Management & Mine Action Programs (iMMAP) has led the way in applying information management best practices in the relief and development continuum. Originally a part of Vietnam Veterans of America Foundation (VVAFA), the core iMMAP team formed in late-1998 to lead the first internationally-coordinated effort to combine information management, sociology and Geographic Information System (GIS) technology to define the scourge of landmines and Explosive Remnants of War (ERW) and change the way their impacts on people are measured.

During these early years, the iMMAP team recognized that most other relief and development sectors did not possess the same information management underpinnings that have become standard within the Humanitarian Mine Action (HMA) arena. Having identified this gap, iMMAP began exporting its tested information management methods and skills to other sectors/clusters. iMMAP has conducted many field assessments and surveys in relief and development environments, and has worked in numerous United Nations Humanitarian Information Centers (HICs), United Nations Joint Logistics Centers (UNJLCs), and Mine Action Coordination Centers

(MACCs) around the world. iMMAP is the original Humanitarian Information Management NGO, guiding international crisis responders who work to alleviate the suffering of those most in need.

In June 2007 iMMAP became a fully-independent not-for-profit organization in order to intensify its focus upon Humanitarian Information Management needs in the field. iMMAP continues to lend its expertise in landmine/ERW survey and information management practices, while responding to calls from United Nations and other partners to support UNJLCs, HICs and other field-based coordination venues. iMMAP promotes the establishment of humanitarian relief and development standards for the strategic use of information management and Geographic Information Systems (GIS) that support improved decision-making and coordination among relief and development service providers.

The iMMAP team is comprised of professionals with expertise and training in social science, survey management and implementation, statistics, GIS, information and program management, planning and decision support, technical assistance, and related training and capacity development. The team also has strong policy and field implementation experience in public health, emergency relief, public works/infrastructure, water and sanitation, disarmament and demobilization, electoral planning, peacekeeping operations, and general civil support.

iMMAP is a member organization of *InterAction*, the largest coalition of US-based international NGOs focused on the world's poor and most vulnerable people. iMMAP is a member of the *Geographic Information Support Team (GIST)*, an inter-agency initiative that promotes the use of geographic data standards and geographic information systems in support of humanitarian relief operations. Additionally, iMMAP has been a *World Food Programme (WFP) Stand-By Partner* since shortly after the tsunami struck South Asia in December 2004. This partnership has allowed iMMAP to support numerous UNJLC deployments around the world with the provision of Humanitarian Information Management technical experts.

In 2005 iMMAP was nominated for the World Bank Development Gateway Award for its response to the Indian Ocean Tsunami, and was selected as one of five finalists.



In 2006, Senator Patrick Leahy presented the 2006 Marshall Legacy Institute (MLI) NGO Award to iMMAP for its global humanitarian work and contributions in Humanitarian

Mine Action information management, training, Landmine Impact Surveys and victim assistance programs.

iMMAP and UNJLC busy at work in Beirut, August 2006



Lebanon, 2006: After collaboration between iMMAP and the United Nations Joint Logistics Centres (UNJLC) proved successful during the 2004-5 tsunami response, WFP, host agency of the UNJLC effort, asked iMMAP to become a Stand-By Partner. Since then, iMMAP has fielded technical experts to UNJLC efforts in four countries throughout the tsunami relief operation, in Pakistan, the Democratic Republic of Congo, the Horn of Africa, Sudan, and other locations.

As war threatened in southern Lebanon in July 2006, UNJLC alerted iMMAP that its expertise might be required there. When the conflict erupted, iMMAP was ready. The first iMMAP Information Management Officer arrived in the UNJLC Beirut office on 29 July 2006.

The first iMMAP output during the Lebanon mission was the creation of relief convoy route maps. These maps included lists of waypoints and coordinates that were provided by the United Nations to the Israeli Defense Forces to ensure that these convoy movements were safe from aerial bombing and able to reach their beneficiaries in southern Lebanon.

After the formal cessation of hostilities on 14 August, another set of map products was called for. The iMMAP team

brought together years of experience mapping dangerous field conditions and produced the Hazards to Movement map series. This series took an "all hazards" approach to mapping and humanitarian movement, illustrating detours, damaged/destroyed bridges, landmines and unexploded ordnance (UXO). These maps were constantly updated with new information from the Lebanese Ministries of Public Works and Transport, as well as data provided by the Mine Action Coordination Center for Southern Lebanon.

The Hazards to Movement map series were relied upon by the Logistics Cluster to compare and analyze areas of high delivery requirements against areas that suffered significant war damage, and thus facilitate gap identification and redistribution of relief goods.

The iMMAP team also developed a damaged bridge database that included location, technical specifications, type, and repair status in order to assist prioritization and tracking of all funded bridge rehabilitation projects and prevent overlap among local and international repair efforts.

Iraq, 2003-Present: Following successful collaboration with the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) HIC in Afghanistan - the Afghanistan Information Management Service (AIMS) - OCHA requested that iMMAP provide similar support as war loomed in Iraq in late-2002 and early-2003. In February 2003, iMMAP deployed Information Management Officers to five countries bordering Iraq and set about establishing the OCHA HIC presence, preparing to enter Iraq when necessary.

Since entering Iraq on 1 April 2003, and in addition to its work establishing the HIC there, iMMAP has conducted two major landmine/ERW surveys, and established the Information Management System for Mine Action (IMSMA). Throughout this continuous five-year presence in the country, the iMMAP team has learned many hard lessons. One of the most prominent is rooted in the unique safety and security concerns of NGOs.

From the beginning of iMMAP's work in Iraq, credible, verifiable security information has been very challenging to



Community Mapping Exercise in Erbil Governorate during iMMAP Landmine Impact Survey of Iraq

obtain. The attitude of those who provide security information to the NGOs, be they representatives of governments or international organizations, tends to be “we’ll tell you what you need to know”. This view ignores the reality that oft times the NGOs are much farther afield and thus more exposed than those compound-bound providers of data. Additionally, there is limited ability for humanitarians to request specific, “custom” analysis of these providers in order to support humanitarian field activities.

The frustration caused by limited access to quality safety and security information led iMMAP to develop the Operational Activity and Security Information System (OASIS) as a solution for its own needs, and those of the broader relief community.

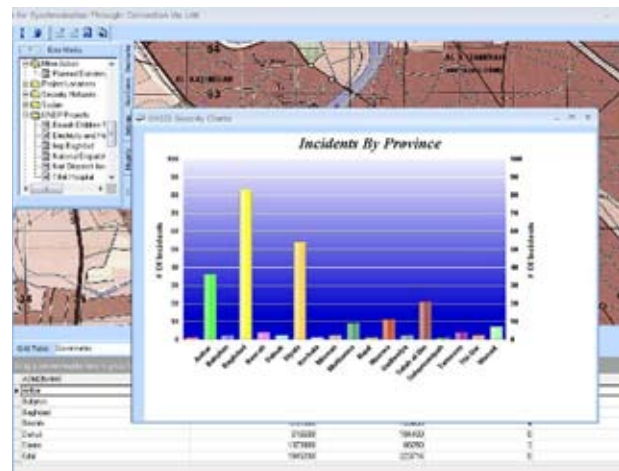
OASIS: OASIS provides secure, real-time situational awareness of the operational environment in regions or countries where it is deployed. The presentation of field activities and safety and security information on digital maps makes the data easy to use and understand. The integration of NGO field activity data with that of the safety and security environment greatly improves the ability of relief and development implementers to make informed decisions as they move about their areas of operations. High-quality, timely information allows aid workers in the field to improve their situational awareness and freedom of access for program delivery.

OASIS builds the common operating picture by bringing operations and safety and security data together in one place. This facilitates collaborative operational planning, allowing OASIS users to achieve comprehensive situational awareness. OASIS provides the user with:

- Custom mapping capabilities
- Easy-to-use analysis tools
- Standardized reporting formats;
- Shared security incident data presented on digital maps and in narrative formats;
- Evacuation planning tools
- Personnel accountability tools;
- Radio Room tools;
- Location monitoring

OASIS Works in Real Field Conditions

Most information tools, even those developed for the humanitarian community, are designed to work in favorable conditions. OASIS was designed with harsh field conditions in mind. The majority of places emergency aid is required either do not possess the advanced information technology (IT) infrastructure necessary, or such infrastructure has been damaged or destroyed by war or disaster. To address these conditions, all OASIS data entry, analysis, mapping, and reporting functions work with or without Internet connection. The OASIS system:



- Is fully functional off-line;
- Requires very low bandwidth for updates;
- Does NOT require heavy IT infrastructure

OASIS Makes Maps...

Anyone who has worked in a humanitarian emergency knows that accurate maps are among the items most demanded by responders. Often, detailed maps of the very areas most in need are unavailable to aid workers or are outdated before they are delivered. iMMAP has experienced this situation over and over again during crises, and provides an answer through OASIS. The iMMAP team assembles the critical baseline data early in the emergency response process and makes this data available to the humanitarian community through OASIS. With OASIS, users can produce custom maps of the areas they are working, illustrate the gaps and needs they are addressing, and study the security threats they are facing. Most importantly, the highly advanced mapping functionality of OASIS is user-friendly to those with even the most basic computer skills. There is no longer any need to rely upon highly-trained, costly specialists to map the way forward - with OASIS, every humanitarian organization can rapidly navigate crisis with confidence.

Conclusion: In its new, independent form, iMMAP will continue to lead the way in field information management and the development of user-friendly tools for relief and development responders. iMMAP's goal is to overcome the chaos in humanitarian crises and post-conflict environments through provision of effective, accessible humanitarian data. The iMMAP team applies process and technology to map the way toward safety, security and sustainability for the world's most vulnerable people.

Joseph M. Donahue
Chief Executive Officer,
Information Management & Mine Action Programs (iMMAP)

Practicing for the Real Thing: Exercise Khichadi and ICTs on a Mountain Ridge

The not-very-new SUV truck, loaded to maximum capacity with people and equipment, bounced slowly along a precipitous mountain road. The wheels were a half meter from the edge, which dropped off abruptly down a very steep slope. Looking from the right side window, one had a view from the ridge top into a canyon, the terraced slopes scarred by landslides old and new. The team members riding with me were quiet, fully aware that this was not a classroom or tabletop exercise.

Welcome to Nepal and Exercise Khichadi, planned and hosted by the Asia regional office of the Adventist Development and Relief Agency (ADRA Asia) in partnership with Caritas Australia, a member of Caritas Internationalis. For the next four days, the ADRA and Caritas teams would work, live, and solve problems together in an austere, challenging, and realistic environment in the rugged mountains east of Kathmandu.

Participating in the pioneering joint training and emergency field simulation exercise were experienced staff members from Australia, Bangladesh, India, Nepal, Pakistan, and Sri Lanka. Representatives of UN OCHA, the World Food Programme, the Nepalese police and army, and local government also participated in supporting roles. In the true spirit

of Nepali generosity and hospitality, local leaders and citizens of the community of Ravi Opi cheerfully cooperated to provide a real-life village setting.

The four-day exercise simulated a scenario of several continuous days of heavy rain, which resulted in a major landslide in the village of Ravi Opi in the Kavre district of Nepal, resulting in casualties and evacuation. Exercise Khichadi built upon the lessons learned during Exercise JavaLava, the first such field exercise of its type, conducted by ADRA in 2006 in Indonesia.

More disasters, greater human impact.

All participants recognized that the increasing number of large impact disasters in Asia will continue to challenge the capacity of aid organizations like ADRA and Caritas. Predicted trends indicate that increasing numbers of people are being adversely affected by natural disasters due to population growth, urbanization, climate change, poor governance and other factors.

ADRA and Caritas managers have drawn four significant conclusions from these trends:



An no-warning evacuation drill gets under way. Teams were required to bring all ICT equipment and maintain communications during the rapid evacuation on a mountain road. Villagers of Ravi Opi and community leaders also participated.

1. Training of field teams, especially for rapid response to emergencies, must be more realistic and more frequent.
2. For teams to be responsive to local contexts (culture, government, economy, and more), training should provide exposure to local realities.
3. Smooth inter-agency collaboration is vital. Teams must learn how to work together in joint field operations.
4. To improve preparedness and inter-agency collaboration, teams must have hands-on training in ICTs, in a realistic field environment.

The overall goals of Exercise Khichadi were emergency response capacity building and the strengthening of local response networks. To improve ICT preparedness, two of the key training objectives were to:

- Increase the ability of disaster response personnel to use emergency communication equipment and global positioning systems.
- Research and identify options for mapping resources relevant to disaster response.

A team-oriented approach

The planning team accomplished these objectives by rigorously integrating teams through inter-agency collaboration and by challenging the participants to work together. This cooperative team approach was emphasized during two days of pre-exercise classroom training in Kathmandu and then practiced during initial “hands on” assignments with radios, satphones, and GPS units outdoors.

The team spirit, trust, and mutual understanding generated during the joint training carried over to the field simulation, which began on November 4. During the exercise, all debriefings were held jointly with all agencies participating. A small team of monitors observed all exercise events and held in-depth debriefings in the evening.

The ICTs incorporated in the exercise scenario included:

- Satellite phones, including the new ISAT satellite phone provided by Inmarsat.
- A BGAN (broadband global area network) satellite terminal, with services donated by Inmarsat and supported by Vizada.
- VHF handheld radios for intra-team short range communications.

BGAN on a haystack in Ravi Opi



- GPS units to record latitude and longitude data for specific points, such as locations of landslides, road blockages, etc.
- GIS (geospatial information services) situational awareness tools developed by ESRI and IDV Solutions to post and display operational information on dynamic digital maps.

The ADRA and Caritas teams operated as separate units but shared ICT assets (e.g. BGAN terminal and donated bandwidth) coordinated tasks, and compared learnings throughout the day.

Findings

Five general findings on ICTs emerged during Exercise Khichadi and at the subsequent debriefing:

1. Reliable voice and data communications, regularly tested and exercised, are absolutely essential to successful field operations. While voice communications are indispensable from the beginning of the response, email and Internet capabilities (optimally from “Day One”) are tremendously valuable as relief teams begin work.
2. It was clear early in the exercise that the processes and operator capability for planning and implementation, including the use of ICTs, were vital for effective operations. Checklists, plans, and templates will be of little use if the staff have not utilized them in a reasonably realistic situation.
3. Classroom and “parking lot” training is not sufficient for relief teams and individuals to gain full proficiency. A field simulation presents compound problems to solve in a realistic and demanding environment that effectively applies and reinforces classroom training.
4. Managers need to be familiar, and in some cases proficient, with ICTs, to include current technology developments. It is no longer advisable, if it ever was, to delegate full responsibility for ICTs in the field to a technical specialist.
5. The potential of GIS for situational awareness and operational planning, employed in combination with good GPS field practices, is enormous. However, there is a long learning curve and considerable process development required before a GIS solution is operational. The umbrella issue is information management; GIS is one way to organize and deliver information in trusted networks to managers, partners, and donors. The teams learned a great deal about GIS through two excellent Web-based demo applications prepared for the exercise by ESRI and IDV Solutions.

The author (at laptop) demonstrates a GIS application to ADRA and Caritas team members



The bigger picture

In closing, I would like to emphasize that ICT training in simulations should not focus strictly on the technology, which can obscure organizational and process factors. ICT is not an end in itself but must be seen as a means to support strong and capable organizations which provide the best possible assistance to people in need.

The foundation of effective ICT employment in the field is built upon a number of process building blocks. We believe that the field simulation concept, designed and tested by the Exercise Khichadi partners, is an important first step toward a more ambitious framework, in which international and government agencies, private sector partners, and NGO participants collaborate in large-scale exercises over a week or more.

It is a credit to the design team and all participants that so much was gained over a short, intense, but exciting ten days, especially since the ADRA-Caritas partnership was a new one. The team spirit and collaborative approach will certainly carry over to future exercises and - doubtlessly soon - in actual responses throughout Asia.

Gregg Swanson

Founder and Executive Director, HumaniNet

The author wishes to thank Jenny Wells, Group Leader for Humanitarian Response at Caritas Australia; Robert Patton, Regional Coordinator for Emergency Management at ADRA Asia; and Mike Wenger of HumaniNet for their valuable contributions, thoughtful comments, and generous cooperation in drafting this article.

An expanded version of this article, as well as the team blog, photos, and exercise reports, may be found at www.humaninet.org.

¹ An expanded version of this article may be found at www.humaninet.org.

² Caritas is the aid and development agency of the Catholic church.

³ Robert Patton, Chris Olafson, and Ashok Shrestha of ADRA; Melville Fernandez and Jenny Wells of Caritas Australia; Arpana Karki of Caritas Nepal; Steve Glassey of the Emergency Management Academy of New Zealand; and Gregg Swanson of HumaniNet.

Humanitarian-Free and Open Source Software (H-FOSS)

Introduction

Free and Open Source Software represents a paradigm shift in the way software is built. The development of software is not by strict commercially or government driven hierarchies, but by global communities that structure themselves in meritocracies based on contribution. Such communities are a global melting pot of diverse professions and skills that contribute to the progression of the goals represented by the software. Such projects not only engage developers, but also the users themselves in the direction and improvements of the product. The Free and Open Source Licenses also provides certain freedoms and access to the product that become critical in the quick turnaround times required in humanitarian or disaster response. This makes the software available as an irrevocable global public good available to anyone who wishes to use it. This article explores the alignment of Free and Open Source Software to Humanitarian Response and presents the concept of H-FOSS.

What is Free and Open Source Software?

Free and Open Source Software (FOSS) in practice has existed even before the birth of the internet and it had a strong role in making the internet what it is today, however it has now been defined clearly by the Free Software Foundation [1] and the Open Source Initiative [2] with a legal foundation utilizing software copyright and licenses. The GNU Public License (GPL) [3], which is the most popular FOSS license, utilizes the principles of copyright together with liberal license terms to ensure that FOSS maintains certain freedoms for the end users. This is as opposed to the traditional practice of proprietary licenses [4] to restrict users under strict license terms. The freedoms [5,6] stipulated by FOSS licenses include:

- Freedom 0: The freedom to run the program for any purpose.
- Freedom 1: The freedom to study and modify the program.
- Freedom 2: The freedom to copy the program so you can help your neighbor.
- Freedom 3: The freedom to improve the program, and release your improvements to the public, so that the whole community benefits.

Global Community Oriented Development

Free and Open Source Software is by definition transparent as the global public has access to the source code (the blueprints), which is usually published on any of the popular repositories such as Sourceforge [7]. Around this transparent software (especially the most successful ones) there is a usually an open, all inclusive development methodology surrounded by a diverse global community represented by the users, developers, experts, practitioners and academics all providing their leadership, input and contributions to the project. This open global melting pot of skills of people who care about the product is what attracts the best to successful projects and helps deliver world class software. Not all FOSS development models are alike though, but the key principle most obey is that FOSS communities are meritocracies on contribution. More important than what your credentials are, is how much you have contributed to the project that positions you as a leader in the project hierarchy.

Humanitarian-FOSS

Humanitarian FOSS (H-FOSS) is simply the application of Free and Open Source Software to be of support in of the Humanitarian Response. In alignment with Humanitarian response aspirations, FOSS offers the following advantages:

- No Discrimination on Access: Once available under a FOSS license, the software effectively become a global public good, available for anyone from around the world to download and use freely. There is thus no inherent discrimination on the access to this software.
- Transparent and Trustworthy: As the software design and mechanism for building FOSS is transparent it becomes more trustworthy. Additionally with truly global and diverse FOSS communities, the software becomes resistant to any particular political agenda. Particularly in conflict such software can serve as a transparent mediator [8]
- Low Cost and Local Capacity: FOSS helps reduce the digital divide [9,10] as there is no additional cost for the product itself. However you still need people to maintain the software, and if this service is costly the nation has the freedom to promote local capacity development within the nation and such local capacity development is encouraged by FOSS communities.
- Shared Inter-Org Development: NGOs and Humanitarian Relief organizations all need software tools to be

effective, however not all have the need funds to disburse to purchase the needed tools. FOSS can easily provide a vehicle for inter-org development of tools in the Humanitarian domain, where each can contribute a fraction, yet benefit from the whole.

- Adaptability: No nation handles the humanitarian response the same way and there are many variances expected of software including translation for it to be usable in a nation. With FOSS as the blueprints are also available freely, anyone is able to modify the software as required to suit the problem.

H-FOSS Projects

As software does not need to be build specifically for the humanitarian domain for it to be useful for this service, there exist multitudes Free and Open Source projects that can be found in repositories like Sourceforge [7] that can be freely accessed and applied by Humanitarian practitioners. There also exist projects targeted specifically for the Humanitarian domain like the Sahana disaster management system, Dynamic COMPAS Humanitarian Project Quality Assurance, HRDAG Human Rights Database Analyser or a compilation of FOSS tools for NGOs in the NGO-in-a-box to name a few. A directory of H-FOSS project is being built by the Humanitarian-ICT community and Trinity College, US [11,12,13]. In conclusion there is much scope for the application of FOSS in the humanitarian domain in generating a wealth of global public goods in the form of freely available software.

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Global Symposium +5

- Setting Information Standards for Humanitarian Action

"We have to share information and analysis because they are essentially common to us all, what binds us together despite our differences"

UN Emergency Relief Coordinator John Holmes in the keynote speech at the Global Symposium +5

In the five years since the 2002 Global Symposium, information management principles, best practices and recommendations agreed by the Humanitarian Information Network, have been further developed through a series of regional workshops held in Bangkok, December 2003, Panama City, August 2005 and Nairobi, May 2006. Building upon one another, the recommendations from these workshops have reinforced the need for attention to the promotion of standards on user requirements, quality of information, tools, technology and strong partnerships.

The **Global Symposium +5 - Setting Information Standards for Humanitarian Action** was hosted by the United Nations Office for the Coordination of Humanitarian Affairs in Geneva, Switzerland, from the 22-26 October 2007. The purpose of the Symposium was to bring together a community of practice on humanitarian information and knowledge. The five day event brought together 250 representatives from the UN, government and non-governmental organisations, scientists, academics, the media and the private sector.

The Symposium reviewed and amended the 'Principles of Humanitarian Information Management and Exchange' that were endorsed by the 2002 Symposium to better reflect the humanitarian environment of today. The global standards, based on best practices established over the last 5 years, formed the basis of a Declaration on the centrality of information management and exchange to effective humanitarian preparedness and response. The importance of partnership and information sharing between UN and non-UN actors, governments and affected populations to ensure better humanitarian operations has been emphasised in the new statement.

In the Symposium Statement the following principles were endorsed:

- **Accessibility** was emphasised as humanitarian information and data should be made accessible to all humanitarian actors by translating information into common or local languages. Information for humanitarian purposes should be made widely available through a variety of online and offline distribution channels.
- **Inclusiveness** was another key principle. Information management and exchange should be based on a system of two way communication, partnership and sharing with a high degree of participation and ownership by multiple stakeholders.

- **Inter-operability** should ensure that all sharable data and information should be made available in formats that can be easily retrieved, shared and used by humanitarian organisations.
- Information providers should be **accountable** to their partners and stakeholders for the content they publish and disseminate.
- **Verifiability** means that the information that they provide should be accurate, consistent and validated by external sources. Users should be able to identify the source and method of collection of data in order to estimate its reliability and validity.
- The information collected should also be of **relevance**.
- Information managers should, in order to ensure **impartiality**, consult a variety of sources when collecting and analysing information.
- The aspect of **humanity** is a key principle. Information should never be used to cause harm to affected populations.
- Humanitarian information should be collected with the **timeliness** of the information in mind.
- A new principle that was adopted was the principle of **reliability**. Reliability is a prerequisite for ensuring validity and verifiability. Users must be able to evaluate the reliability and credibility of data and information by knowing its source and method of collection.
- The second new principle adopted concerned **security, privacy and confidentiality**. Sources of information linked to persons that could lead to the identification of such people and the information they provide, should not be shared with third parties without prior consent of the parties concerned.
- The third new principle adopted was **reciprocity**. Information exchange should be a beneficial two-way process between the affected communities and the humanitarian community.

Based on the Symposium recommendations, OCHA in consultation with the Inter Agency Standing Committee (IASC) and Humanitarian Information Network partners will prepare an Action Plan by March 2008 with the goal of implementing the recommendations.

More background information on the Symposium as well as documentation and presentations can be found on the Reliefweb site (www.reliefweb.int/symposium).

News, interesting blogs, upcoming events, etc.



ICT4Peace Inventorisation Wiki

<http://inventory.ict4peace.org/>

ICT for Peacebuilding (ICT4Peace)

Exploring the use of information and communications technology for conflict transformation

A blog by Sanjana Hattotuwa, Special Advisor to ICT4Peace Foundation

<http://ict4peace.wordpress.com/>



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www.iscram.org

humanitarian.info

Because information can save lives

A blog by Paul Currion

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Graphic Design

Hiekka Graphics

Publisher

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Photos and diagrams

ICT4peace Foundation, Markku Vesikko,
HumaniNet, iMMAP, Global Symposium +5

ISSN 1796-5683

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