

Information Technology as a Catalyst for Civil-Military Unity of Effort: The Kosovo Test Case

by

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Conclusions

Civil-military unity of effort has been an essential, yet frustratingly elusive, requirement for success in post-Cold War peace operations. While collaboration will always be imperfect, it can be significantly improved by exploiting the potential of information technology to support advanced planning, integrated execution, and feedback on the effectiveness of international efforts to provide relief for humanitarian disasters and to reconstruct war-torn societies. The Kosovo experience has been a fertile proving ground for the operational concepts and organizational adaptations required to institutionalize such an information-sharing regime in support of these complex contingencies.

The NATO bombing campaign over Serbia and Kosovo provided a test case for the “revolution in military affairs” that is expected to result from the exploitation of such technological advancements as precision-guided munitions and stealth technology. Also ripe with revolutionary potential is the realm of civil-military affairs, particularly peace missions and humanitarian relief operations, owing to recent innovations in computer-based information management. Geographic information systems (GIS) coupled with remote-sensing platforms, global positioning systems (GPS) and the Internet have tremendous potential that is just beginning to be harnessed to foster a more effective partnership among military and civilian organizations involved in these “complex contingencies.” The Kosovo case serves as a prototype for this transformation in civil-military affairs, and the lessons from that experience are provided below with the intent to further this beneficial process.

Technological advancements, however, are only one aspect of such a revolution, whether in the domain of military or civil-military affairs. For the promise of new technology to be realized, operational concepts must be developed to exploit it, and organizations must adapt their structures to the new methodologies.¹ This process has been unfolding in the context of international efforts to prevent the expulsion of Kosovar Albanians and subsequently to facilitate their safe return and reconstruction of their homeland. The establishment of a Humanitarian Community Information Center (HCIC) to assist the repatriation process was a major break through in an evolving information-sharing regime for complex contingencies. Full exploitation could have far-reaching implications for future civil-military operations.²

¹ James Fitzsimmons and Jan M. Van Tol, “Revolutions in Military Affairs,” *Joint Forces Quarterly*, Spring 1994, pp. 25-6.

² The counterpart for the HCIC within the military structure is the Civil-Military Cooperation Center (CIMIC), if

The Seductive Power of Geographic Information Systems (GIS)

Two requirements shared by all actors - civilian or military - involved in peace operations or in responding to major disasters are current information and maps. By integrating these two in a manner that is readily sharable across the internet, GIS can serve as the conceptual basis for information sharing, advance planning, operational coordination, and evaluation of progress toward common goals.

GIS provides a cohesive framework for collecting, organizing, and exploiting location-based information. The software provides the capability to display various data as overlays on digital maps. Terrain features (a mountain or stream), natural events (an earthquake or flood), and human activities are associated with a specific location on or near the earth's surface and can thus be portrayed in any combination desired. Thus, a GIS-based information-sharing network can combine digital base maps, imagery from remote-sensing platforms, and input from field workers to provide accurate, timely, and sharable information for responding to complex contingencies.

Perhaps the most valuable feature of GIS is the capacity to combine data sets across functional areas (e.g. humanitarian relief and economic reconstruction) to provide an integrated view of the operational environment and hence a stronger basis for collaboration. There is a strong inducement to do this because civilian organizations routinely gather and maintain a range of data of relevance to such operations while the military contingent is the most likely source for information relating to security and availability of support essential to their civilian counterparts.

Phase One: Development of a Prototype

Since October 1998 Kosovo has served as a testing ground for this concept. The foundation for use of GIS was the construction of an "electronic base map" with multiple data layers (topography, roads, place names, administrative units, etc.) by the US National Imagery and Mapping Agency (NIMA). This included the painstaking work of building an electronic gazetteer of over 1,500 place names (in both Serbo-Croatian and Albanian) along with their coordinates. This NIMA base map and gazetteer in effect created a spatial framework for collecting data about the unfolding humanitarian tragedy. One prominent GIS product was a "humanitarian planning map" distributed by USAID's Office of Foreign Disaster Assistance (OFDA) in paper form to many relief agencies working in Kosovo.

After the Holbrooke-Milosevic agreement established the OSCE-led Kosovo Verification Mission, GIS was used to enable the KVM and the UN High Commissioner for Refugees (UNHCR) to work more effectively together in that volatile environment.³ The KVM exploited GIS to portray the location of items such as reported landmines, booby traps and checkpoints, and UNHCR used it to survey housing damage and the location of

NATO has received a mandate to conduct the operation, as is the case in Kosovo. In other operations, the function is performed by Civil-Military Operations Centers (CMOCs).

³ The KVM was tasked with monitoring human rights violations, with an emphasis on limiting hostilities between Yugoslav forces and the Kosovo Liberation Army (KLA). UNHCR had responsibility for coordinating the relief activities of over 40 international and non-governmental organizations that collectively delivered food and built shelters to meet the needs of some 250,000 displaced persons.

internally displaced persons.⁴ While this prototype showed promise, escalating violence in early 1999 precluded further development.

Phase Two: The Humanitarian Community Information Center (HCIC)

After Milosevic launched his offensive against Kosovo's ethnic Albanian population in March 1999, over 600,000 refugees fled to Macedonia and Albania. This set the stage for the second phase of the Kosovo GIS project. The UNHCR established a GIS unit in Pristina that served as a precursor to the HCIC. This development had been nurtured by a multi-agency Geographic Information Support Team (GIST) comprised of key UN agencies and OFDA.⁵ Working with the NGO community, UNHCR also devised a common rapid village assessment form that was subsequently used both by civilian relief workers and KFOR to gather information about the extent of destruction.

In early June, the State Department deployed a Kosovo Repatriation Information Support (KRIS) team to Macedonia with laptops loaded with GIS software and updated foundation data from NIMA. The purpose was to continue providing support to UNHCR and begin developing data sets that would assist in planning and execution of the repatriation process. The most notable contribution was an assessment of damage to dwellings derived from U-2 imagery obtained by NATO on June 6-7. US Army Civil Affairs computer specialists joined the team to work with the UNHCR to program an interactive database to handle data derived from the rapid village assessments.

The spontaneous return of refugees took place while the KRIS database was under development, precluding its use for advanced planning but making it an even more important tool for coordination of repatriation activities. These efforts contributed to the first authoritative survey of destruction in the province within weeks after Serb withdrawal. This phase clearly demonstrated the value of GIS as a means of promoting information exchange between civil and military organizations to support humanitarian relief.

Phase Three: Toward Unity of Effort among KFOR, UN, the OSCE, and EU

As the focus in Kosovo shifted from refugee repatriation to subsequent tasks, the challenge became the transformation of the HCIC to serve the other major mission elements of UNMIK (Pillar One is humanitarian relief, with UNHCR as the lead; Pillar Two is civil administration under UN leadership; Pillar Three is institution building under the OSCE; and Pillar Four is reconstruction, which the European Union is overseeing.) The hypothetical relief-to-development continuum is being put into practice as the functions of the HCIC evolve to support reconstruction planning and budgeting by the EU. Additionally, the OSCE formed a cell within the HCIC to support election planning, with an emphasis on ensuring that data gathered during the civil registration process can also aid voter registration.⁶ GIS is well suited, moreover, to facilitate civil administration

⁴ Specialists from the Office of the Geographer and Global Issues at the State Department helped trained personnel in both organizations to develop GIS-based data sets that could be shared electronically.

⁵ Participants are the US Office of Foreign Disaster Assistance, UNHCR, UNICEF, the World Food Program, and the Office for Coordination of Humanitarian Affairs, and the Food and Agriculture Organization.

⁶ Other organizations that have well-established GIS capabilities in Kosovo are the Mine Action Center, the International Criminal Tribunal for the Former Yugoslavia, and the Multinational Specialized Unit within KFOR.

(Pillar Two) by helping to organize data related to local government functions.

The HCIC has established common standards for coding data and other protocols so that data can be shared more readily. The potential thus exists for UNMIK to build upon this foundation as it discharges its responsibilities to “ensure a coordinated and integrated approach by all the Mission’s four components.”⁷ A comprehensive information-sharing regime will also enable KFOR, and especially its Civil Affairs or “CIMIC” personnel, to collaborate more effectively with their civilian counterparts.

Phase Four: Institutionalizing an Information-sharing Regime

The process of expanding upon the HCIC concept to develop an institutionalized information-sharing regime in support of the international response to future complex contingencies has begun to gather momentum. The first priority is to ensure that the humanitarian community continues to progress toward the establishment of a capability to mobilize and deploy the HCIC in a timely manner. This has been significantly advanced by the dissemination of a draft information plan by the GIST.⁸ The second priority is to ensure that military contingents will be able to integrate effectively into this mechanism when they become involved in assisting the humanitarian community or if the humanitarian crisis evolves into a peace operation requiring the military contingent and its civilian partners to perform many additional tasks. UN officials from DPKO and the Office for the Coordination of Humanitarian Assistance (OCHA) endorsed this concept in a February 2000 meeting with the US Deputy Assistant Secretary of State for International Organizations. Additionally, OCHA was a prominent participant in an April 2000 international conference co-sponsored by the US Institute of Peace and US Army Civil Affairs dedicated to this purpose. Also participating were representatives from the European Union, the International Committee of the Red Cross, and a significant cross-section of non-governmental organizations (NGOs). The result was a solid endorsement of the HCIC as a vehicle for advance planning and field coordination. The conference also produced a set of recommendations regarding what should and should not be done to make this concept an operational reality. These concepts will subsequently be presented to a gathering of major UN agencies, key regional organizations, and NGO umbrella groups to ensure the lessons of the Kosovo test case are recognized and acted upon.

Lessons Learned from the Kosovo Test Case

Kosovo has served as a rich learning experience in the use of information technology to promote civil-military unity of effort in complex contingencies. Certain of these lessons have greater relevance for national-level policy makers, while others will be of primary concern for practitioners in the field.

⁷ “Report of the Secretary-General on the United Nations Interim Administration Mission in Kosovo,” S/1999/779, 12 July 1999, p.8.

⁸ Maxx Dilley, “Structured Humanitarian Assistance Reporting (SHARE): Description and Requirements for Georeferenced Data Collection Mapping to Support Humanitarian Assistance Operations (USAID Office of Foreign Disaster Assistance, December 23, 1999).

- **Develop an Information Plan:** Use of GIS is not tantamount to an information-sharing regime. An information plan needs to be developed involving all major participating organizations addressing issues such as the following:
 - **Data Requirements:** The information needs of both strategic planners and the disparate organizations involved in the field should be identified and addressed. The lack of city maps in Kosovo, for example, has been a significant barrier to use of GIS for urban assistance efforts. Planning should be done to meet evolving requirements. One starting point for an information-sharing regime ought to be the development of a “Who’s Doing What Where” database. This would yield immediate benefits to senior decision makers, and it could assist donors by enhancing mission transparency and budget accountability.
 - **Security Requirements:** Military and intelligence agencies are not accustomed to sharing data with international organizations and NGOs, and vice versa. Effective working relationships and mechanisms for identifying relevant data for declassification should be established in advance of the crisis phase. A multi-tiered access system may be required to address some of these concerns.
 - **Resources:** The emphasis must be on simplicity and off-the-shelf applications. Information systems must be designed to function in low-tech and chaotic field environments. Planners should assume serious problems with indigenous telecommunications, electric power, and transportation.
- **Designate an information-sharing coordinator:** To ensure common standards are used and to promote participation among the entities involved in an operation, a Chief Information Officer (CIO) should be designated by the civilian head of mission. A team of experienced GIS facilitators or liaisons should be assigned by the CIO to the various “lead agencies” that constitute the informational “centers of gravity,” especially the CIMIC Centers or CMOCs.
- **Build the Base Map:** Preparing a digital GIS “foundation map” is a major, time-consuming undertaking, and such information usually does not exist at an appropriate scale for contingency operations, especially in remote areas where these crises often erupt. This function must be performed by a qualified technical agency such as NIMA. Senior policy makers will need to anticipate future complex contingencies and the requirements that will be generated for GIS-based information. Interagency exercises conducted pursuant to Presidential Decision Directive 56 to train decision makers in political-military planning may provide a mechanism for doing this.
- **Improve Response Time:** An emergency response capability, such as that used by the Federal Emergency Management Agency, needs to be developed with the necessary GIS expertise, hardware, and communications equipment to facilitate the rapid establishment of information-sharing networks in the field.
- **Decentralized Database Management with Centralized Data-sharing Standards:** Each organization should be responsible for developing and maintaining its own database. The resulting data will only be sharable, however, if common standards and definitions are used when data are gathered and a common system is established for referencing place names, etc.

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