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IMSMA® Version 4: A Collaborative Approach

Daniele Ressler
Center for International Stabilization and Recovery at JMU (CISR)

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The EOD IS-SURVEY, engineered by SWEDEC, is a wireless handheld computer (using a Microsoft product) that allows users to create and alter data-collection tools (e.g., forms and surveys), reports and elements. Version 4 provides some default forms with most of the elements that were in the v3 forms, but v4 now allows these to be changed.

Additionally, new forms can be completely designed locally and from scratch. Also, v4 users can add their own forms and elements to IMSMA, allowing them to choose preferred “user-defined data fields” that already exist in the system. This allows users to customize the data collection process using locally produced forms and systems-access permissions.

The EOD IS-SURVEY allows users to:
- Download IMSMA forms and data to the wireless handheld computer unit
- Enter data into forms while in the field during surveying (with location information from the GPS and the laser binoculars connected directly to the wireless handheld unit)
- Attach and save photos to other files (e.g., maps, gazetteers, dataset information) to or from the wireless unit
- Transfer all data back to the main IMSMA database

With the technical assistance of FGM, Inc., the IMSMA v4 developers, the mine-action (eXtensible Mark-up Language was programmed into IMSMA v4 to allow for the transmission of standardized data between different information systems: maxML is the schema that links the metadata specifications and therefore the information between IMSMA (in Java) and the EOD IS-SURVEY (using a Microsoft product) by creating a common language. Unlike the handheld data-collection implementation used with v3, IMSMA v4 allows for the direct translation of data between the handheld tool and IMSMA program, making it easier to transfer information between the two.

The EOD IS-SURVEY has been field-tested in a number of locations and the team from the University of Kansas has also produced a formal report documenting these evaluations.

EOD IS-SURVEY Demonstration and Country Presentations

Two highlights of the conference were a hands-on demonstration of the new EOD IS-SURVEY handheld unit as the field survey and reporting tool for IMSMA v4 and presentations about the results of IMSMA v4 pilot testing in five countries.

Version 4 of IMSMA is flexible and has expanded language options, allowing users to create and alter forms and reports in order to collect and manage the data in the ways they prefer.

For the final EOD IS-SURVEY demonstration, participants spent the day outside and practiced using laser binoculars to plot a perimeter and transmit the coordinates into the handheld computer unit. The handheld unit allowed forms fields to be filled out and saved or changed as needed. Coordinates appeared on the screen over a map of the field, providing the ability to accurately plot any physical locations deemed important.

by Daniele Ressler [Mine Action Information Center]
After captured field data was saved and questions about the exhibition answered, participants returned to the conference room and observed the recently collected data being directly transferred from the EOD IS-SURVEY into the IMISMA v4 program and then organized for reports and analysis.

The potential applications of some of the new v4 developments were discussed during country presentations, which described the results of pilot tests that began in the fall of 2005. In Burundi, data from various non-governmental organizations was entered into v4 to be organized and compiled for prioritization activities. Colombia reported that v4 provided the necessary decentralization of information management by allowing the program and forms to be specialized and changed for each region’s needs; it was also said to be able to electronically transmit data between regional centers and organizations rather than traveling through conflict zones. Jordan discussed using v4 as a tool for improved quality management and organizational coordination activities.

In the case of the Falkland Islands, the use of v4 will allow Argentina and the United Kingdom to coordinate and share data for clearance efforts. Uganda’s future goals for v4 highlighted the potential for IMISMA to not only operate within its own national mine-action center but also expand beyond mine action, with plans for the integration of health, refugee and development data to collect and manage disaster-management/early-recovery planning. In all five cases, the expanded language options were noted as important and useful.

Conclusions
Some of the changes in v4 offer potential improvements in mine-action information management by allowing flexibility, creativity and linkage of different systems in IMISMA. The integration of a fully functional GIS into the system allows users to navigate the database using the map rather than working directly in the database itself. Combined with the direct transfer of field data to IMISMA from the EOD IS-SURVEY, users will find that IMISMA v4 can significantly reduce data-collection errors, speeds up the integration of new data from the field and makes it easier to visualize the threat situation in a country or region. The updated v4 allows for new languages, the freedom to create and modify forms and reports, and the ability to combine and link data in additional ways. The pilot test results from five countries reinforced the potential that v4 has to address a variety of different mine-action situations with its new multimedia, customizable and innovative features. The GICHD distributes IMISMA software at no charge and provides on-site training for its use. GICHD staff can transfer all data from earlier versions of IMISMA to v4. New or updated equipment is not required for v4 and users do not need to purchase GIS software or licenses in order to use the mapping features. The GICHD, in collaboration with FGM, Inc., the University of Kansas and the Swiss Explosives Ordnance Disposal and Demining Centre have applied their efforts to create not just an updated version of IMISMA, but a different and innovative one.

Danielle Ressler works as a Researcher, Writer and Assistant Editor for the Journal of Mine Action. She holds a Master of Science in violence, conflict and development studies from the University of London’s School of Oriental and African Studies. She has studied in Switzerland as well, earning a Certificate for Applied Studies in peacekeeping. Danielle previously worked in Washington, D.C., and Seattle, Washington, in the field of conflict management, and has also lived in India, Kenya.

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Geneva Diary: Report from the GICHD
The Geneva International Centre for Humanitarian Demining provides operational assistance to mine-action programmes and operators, and creates and disseminates knowledge, works to improve quality management and standards, and provides support to instruments of international law.

by Ian Mansfield | Geneva International Centre for Humanitarian Demining

Following the theme of quality for the Feature section in this edition of the JMA, the GICHD continues to work in all areas of the quality-management cycle. The more obvious is the development of the International Mine Action Standards, which are produced on behalf of the United Nations Mine Action Service. The process involves writing new standards, reviewing existing standards, conducting training and hosting the IMAS Review Board. In addition, the GICHD is able to help countries adopt the IMAS to their own national standards by providing expert staff to guide national authorities through the process. This capability has recently been enhanced by the creation of a staff post, the National Mine Action Standards Officer, within the Centre of National Mine Action Standards.

New Guidebooks
In collaboration with UNICEF, the GICHD has recently completed a series of IMAS mine-risk education best-practice guidebooks.1 These guidebooks address a wide range of issues, including coordinating MRE, disseminating public information, implementing projects, establishing community mine-action liaisons, and conducting MRE in emergencies. The primary aim of the booklets is to provide advice, tools and guidance to undertake MRE programmes compliant with the IMAS. They are also intended to provide a framework for a more predictable, systematic and integrated approach to mine-risk education. They will be useful to anyone engaged in planning, managing, funding or evaluating MRE programmes and projects.

New Studies
The GICHD is undertaking a major study, “Land Release and Risk Management Approaches,” which aims to examine the various processes used to release land (other than by full clearance) and advise on ways in which a risk-management approach can be applied to speed up this process. Several countries are being used as case studies to review current best practices and demonstrate methodologies applicable to the wider mine-action community. These studies include work with Cambodia on its recently introduced “Ava Radiation Policy,” a risk-management model for unexploded ordinance in Laos and the development of a risk-matrix-based system for the opening of suspected mined roads in Sudan. The overall aim is to develop a system allowing national authorities and operators to operate effectively, yet methodically, reduce mine-suspected areas, leaving an audit trail that allows decisions that can be justified.

Finally, in cooperation with the Yemen Executive Mine Action Centre, the GICHD is undertaking a “Triage” study of communities in mine-affected areas that have been cleared. The survey will use a carefully balanced set of qualitative and quantitative survey tools (e.g., village profiles, focus-group discussions, timelines, wealth ranking, participatory mapping, cause-and-effect diagramming, livelihood kits, household-level interviews, etc.) to build a picture of the economic, social, infrastructural, natural and human impacts of demining within the specific and dynamic local setting of the community in question. While it will be possible to quantify the costs and benefits of some impacts (e.g., improved access to grazing land), others—such as improved cohesion within the village, or greater confidence in future prospects—are subjective and complex judgments that are difficult to quantify.

See Endnotes, page 111

by Ian Mansfield | Geneva International Centre for Humanitarian Demining

1 Note from the field | Journal of mine action | Winter 2006 | 10.2
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