A MONUSCO UNARMED AERIAL VEHICLE (UAV) IS TAXIING ON GOMA AIRPORT DURING OFFICIAL LAUNCH CEREMONY WITH HERVE LADSOUS, THE 3RD OF DECEMBER 2013. © MONUSCO/SYLVAIN LIECHTI

NEW TOOLS FOR BLUE HELMETS

by John Karlsrud

WHILE THE UNITED STATES IS BY FAR THE LARGEST DONOR TO PEACEKEEPING OPERATIONS, PAYING FOR 28 PERCENT OF THE BUDGET, IT RANKS 74TH ON THE LIST OF TROOP-CONTRIBUTORS, WITH JUST 82 MILITARY AND POLICE OFFICERS SECONDED TO PEACEKEEPING OPERATIONS.

The United Nations had entered the 21st century", Under-Secretary-General for Peacekeeping Hervé Ladsous told troops at a **2013 ceremony** for the first deployment of observation drones in the Democratic Republic of the Congo. In 2014, Secretary-General Ban Ki-moon launched an **expert panel review of technology and innovation in peacekeeping**. When it delivered its **report** in February 2015,it advised that missions could "**benefit from ongoing technological innovations in a systematic and integrated manner in the longer term**." The momentum to give peacekeeping some new tools is set to continue with the release of the report from the **UN high-level panel of peace operations**.

Better use of technology can improve peacekeeping at every level of operations. But it is the use of drones and other information-gathering tools that grabs the headlines. Peace operations, including **MONUSCO** in the DRC, have been embarrassed as armed groups have committed atrocities near their compounds. UN contingents need to better know what is going on around them and be able to share that with field commanders and headquarters officials. New technologies have the potential to help protect civilians and deter threats as well as contribute to peace and stability in the longer term.

In the complex political environment of peace operations, these new tools are potential double-edged swords that can exacerbate tensions between northern and southern member states over the direction of UN peacekeeping. Some richer countries have them, while many poorer nations do not. There is a fear that deploying drones will involve spying on host countries. Understandably, local populations are often mistrustful of the UN gathering data and information on their day-to-day lives, especially if they do not know how it is used.

If the UN is to add to its toolkit, there needs to be a more compelling internal and external explanation as to how new technologies benefit mission objectives. There also needs to be clear guidelines for their operational use, along with protocols for protecting the information they gather. The political aspect of their adoption needs to be addressed as much as the tactical innovation of how they will be deployed.

OPPORTUNITIES

Experiences from a decade of network-centric warfare in Iraq and Afghanistan are also slowly permeating into UN peacekeeping. In the network-centric paradigm, information flows rapidly to individuals on the battlefield. Western countries active in these theatres that contribute to blue helmet missions rotate staff with battlefield experience through permanent missions and UN headquarters in New York. This approach offers radical new potential to plan and execute peace operations, with the aim of enabling the right type and amount of force to be employed at the right level, at the right place and time.

Technology can help to improve situational awareness and better protect at-risk civilians and peacekeeping forces alike. It allows tracking of movement of personnel and capabilities on all levels in real time, providing the precise location of each soldier, vehicle and unit. While it may be impractical to track individual soldiers, the **UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA)** has experimented with **Ushahidi software** to map security incidents in real time.

Visual presentation of information is more intuitive and is often a better tool for decision-makers at tactical, operational and strategic levels than long written reports where patterns are easily missed. Information can be layered according to type and classification, with access to sensitive layers being password protected. UN peace operations have available to them a wide range of sources, including personnel on the ground, local partners and open source material.

Commercial satellite imagery can provide up-to-date images at low cost, enabling missions to monitor evolving situations on the ground. In Darfur, for example, the Satellite Sentinel and Enough projects purchased imagery from DigitalGlobe, whose experts analyzed data in conjunction with volunteer technology communities (VTCs). They **showed** that satellite images could be used to monitor violence on the ground, document human rights violations and provide early warning of impending attacks.

The UN system gathers vast amounts of data on a daily basis and is currently investigating how it can improve data collection for sustainable development. The Secretary-General set up the **Independent Expert Advisory Group on a Data Revolution for Sustainable Development (IEAG)** in 2014. IEAG has since **advised** how the UN can better make global use of new technologies and the data deluge.

UN peace operations could also engage with the volunteer technologists that habitually support NGOs during disasters and in conflict situations such as Libya. Since 2010, thousands of these volunteers have responded to earthquakes in Haiti and Chile and flooding in Pakistan. They have processed large volumes of data and created valuable information by plotting it on maps.

Volunteer networks such as **Crisismappers** are a new class of actors with their own set of advantages and challenges. They can bring a significant mass of intellectual power to bear in a crisis. In **Haiti during the 2010 earthquake**, they were able to fill the information void and turn the country into one of the most accurately mapped places in the world in a matter of hours. As volunteers, they can act much faster than multilateral organizations. But while their intentions are good, they do not always adhere to accepted standards. Umbrella groups coordinating them are seeking to professionalize their activities by establishing **codes of conduct** and **guidelines** to ensure that any unintended negative consequences of their involvement can be avoided.

In the DRC, peacekeepers have handed out mobile phones to the local population as part of an effort to create Community Alert Networks (CANs). These are intended to alert MONUSCO when a potential conflict situation is emerging. The networks can also be used for simple perception surveys, improving the mission's ability to capture, understand and integrate local observations into daily decision-making. The hope is that this can also enhance its ability to protect civilians. Elva, a similar network set up by **Saferworld** and the **Caucasus Research Resource Center** in Georgia, incorporates a **tool to map security incidents** and infrastructure issues, and to request assistance in emergency situations.

For peace operations, social media offers yet another channel to improve engagement with local populations, especially when viewed as a tool of discussion rather than just information. Social media outlets can be invaluable ways to communicate mission objectives, receive feedback on performance, answer queries and address misinformation.

CHALLENGES

These technologies accentuate the need to update the doctrinal framework guiding UN peace operations to better reflect a changing operational environment. The UN has developed guidelines to better understand local perceptions. **There now follows a critical need for mission leadership to "take full advantage of opportunities to collect systematically and effectively analyse, information on local perceptions to enhance missions' situational awareness, inform confidence building, and support inclusive post-conflict governance."** While this is a good first step, the UN secretariat needs to ensure that these principles are also reflected in the planning and funding of future missions.

The UN is also deploying new systems for gathering information. In Mali, Dutch troops taking part in **MINUSMA** have started making use of signals intelligence (also known as electronic eavesdropping), listening in on telephone conversations of armed groups. Observation drones – or unmanned aerial systems (UAS) in UN parlance – in the DRC have received much attention since their deployment in December 2013. They have found use in operations of the Force Intervention Brigade and the *Forces*

Armées de la République Démocratique du Congo (FARDC) against the M23 and *Forces démocratiques de libération du Rwanda (FDLR)*. They also identified a sinking boat on Lake Kivu and aided the UN mission in rescuing a number of civilians. The **UN's airborne surveillance program** is a first for the organization. It is currently finalizing general and country-specific guidelines for the program's implementation."

Such tools can enable the UN to radically improve its situational awareness. Aerial observation allows large areas to be surveyed for troop and population movements, including at night and in forested terrain. Conflict-affected areas in the DRC are otherwise inaccessible due to the dense jungle and poor infrastructure. UAVs may also improve the security and safety of UN troops and local civilians by ensuring forces are deployed in the right place in situations of emerging violence. Drones could aid in the pursuit of belligerent groups and avoidance of ambushes. **With the right adaptions, they could even scan roads for IEDs**."

The UN considers the deployment of drones in the DRC a success. The capability was being sought for missions in CAR, Mali, and South Sudan and the Central African Republic. In **Mali**, the UN aims to include longer-range UAVs, drawing upon their experience from the DRC."

But not every host country wants UN missions to have aerial surveillance capability, particularly not when a government is engaged in an ongoing conflict. **South Sudan rejected the proposal outright**." After the OSCE deployed two short-range drones to eastern Ukraine, combatants attempted to thwart their use with electronic countermeasures and shoot them down. **Under such conditions, the effective use of drones is limited**."

The use of drones also raises a number of difficult questions: how long should data be stored and who can require access post facto? Can the ICC request the UN to share the data at a later date? Going forward, the UN must address these questions and develop an institutional framework not only at the mission level, but also at the global level."

SURF, NOT TURF

Adding these new capabilities to UN peace operations risks creating a data deluge. The challenge will be sifting through rapid data streams, analyzing them and producing actionable information in real-time. Managing this without overload will require new ways of decision-making at all levels, and the ability to overcome intra-organizational turf wars. New technology and tools will shift the relationship between the field and UN Headquarters in New York as well as between mission headquarters and staff at the tactical level." (Bandwidth here refers to the amount of data that can be transferred to and from UN peace operations) One good recent example was the establishment of the **UN Operations and Crisis Centre (UNOCC)** in New York.(UNOCC includes the Secretariat organizations as well as the UN High Commissioner for Refugees and the UN Development Programme. Unfortunately the UN Children's Fund (UNICEF) chose to remain outside the structure)

Most UN peace operations rely on satellite links to connect the field and headquarters. Access to high-speed optical fibre networks or using local providers is rarely an option. Increased data flows require more bandwidth. If a host country's telecommunications infrastructure is inadequate, the deployment of these tools will require the UN itself to pay for upgraded data transmission capabilities for its own missions.

These new systems require highly qualified technicians to run them. The **Expert Panel on Technology and Innovation in UN Peacekeeping** suggested member states could provide network engineers to set up efficient and secure communication at an early phase of mission deployment. The panel proposed establishing of a mechanism to furnish the UN with technological expertise as Civilian Contributing Countries (CCCs) and Technological expertise contributing countries (TechCCs). This new measure, a practical follow-up to the civilian capacities reform initiative rolled out in **2009**, would parallel existing arrangements for police and troop contributing countries (**PCCs and TCCs**).

Inter-organizational cooperation also needs further strengthening. The integration of operations and crisis centers at the UN in the UNOCC is matched by similar initiatives at the global level. The European Union has taken the initiative by encouraging collaboration between the crisis rooms of, among others, the UN, NATO and OSCE, as well as regional organizations such as the African Union and the **League of Arab States**. But closer cooperation is needed. Organizations must ensure inter-operability and enable real-time exchange of data to make this collaboration useful to decision-makers. However, concerns about sharing sensitive information remain. The UN is perceived by others to have severe difficulties safeguarding confidential data.

THE U.N. HAS INCREASINGLY BEEN PREPARED TO USE FORCE TO DEFEND CIVILIANS; IN 2013, THE SECURITY COUNCIL BROKE WITH A TRADITION OF IMPARTIAL PEACEKEEPING BY AUTHORIZING AN "INTERVENTION BRIGADE" TO FIGHT REBELS IN EASTERN DEMOCRATIC REPUBLIC OF THE CONGO WHO HAD BEEN MASSACRING VILLAGERS

Increasing convergence between information platforms raises another difficult question: how should UN peace operations cooperate with humanitarian actors? In the humanitarian field, common operational datasets (**CODs**) were developed by NGOs and the UN agencies under the leadership of **OCHA**. CODs ensure that common standards are followed during the collection and storage of information, and enable easy exchange of information between organizations in the **UN system**. UN peace operations have access to this information, and increasing convergence between data platforms allows real-time information sharing and swift decision-making. But humanitarians insist on their neutrality and are wary about sharing more sensitive information with peace operations, especially those with robust mandates. Humanitarian partners are also reluctant to use information gathered by observation drones and other **new technologies**. While OCHA has developed guidance for **humanitarian workers** regarding **drones, UN peace operations** are still lagging behind.

Cooperation with the private sector is increasing, but more can be done. Leaders in information technology, such as Google and Microsoft, can and do help the UN increase its effectiveness in sorting through the vast piles of data it gathers. Military components, Civil Affairs, Human Rights officers and other civilians in the field send written reports up the chain of command each day. How can this information be formatted, quantified, presented and analyzed for longer-term trends? The UN expert panel suggested more military, police and civilian peacekeepers should be equipped with smart phones and tablets to enable real-time and **geo-tagged reporting**.

Data provided by local populations through social media, twitter messages and other forms of communication must be crosschecked in real-time with other sources to ensure validity as well as relevance and possible actionability for decision-makers.

Digital 'exhaust' can be useful to detect macro trends. For example, group geo-tagging of mobile phones can detect population movement, while sudden spikes in remittance transfers can help detect geographical locations where **tension is looming**. Discussions should take place with banking, telecom and remittance industries to determine how they might be able to share their data without compromising business secrets or personal details.

BEWARE OF TECHNO-HUBRIS

While new technology opens up many possibilities, its use does have skeptics. More information does not automatically lead to better actions to protect civilians or troops. Observation drones and other tools can have a potential deterrent effect on would-be perpetrators by making it clear that they are under surveillance, hopefully raising the bar for committing atrocities.

However, the use of drones in particular must be accompanied by strong public information campaigns. Host populations need to know the rationale for their deployment, and understand the limits of what drones can and cannot do. UN drones are only used for observation, for example. They are not intended to carry offensive weapons. In eastern DRC, the local population has dubbed the drones "**loud mosquitos**" as if they were an unwanted annoyance, rather seeing them as the eyes of a mission sent to protect them.

With collection of personal data and information comes concern about balancing the right to privacy. To increase the accountability and effectiveness of aid, vulnerable and affected populations must often share personal information before receiving support. In the wrong hands, this data could be used against the very people its collection was intended to help.

Satellites can provide detailed images of private property. Tapping phone calls infringes on private conversations. Such information needs to be gathered for a clear purpose, in a regulated and legal way, and stored in a secure manner. Management systems need to be developed with checks and balances to ensure UN peace operations gather this information in a responsible and respectful way. Populations in host countries should not be treated as second-class citizens simply because the legal frameworks protecting their privacy may not be as well developed as in more advanced countries.

After data is gathered, new questions arise concerning where it will be stored, whether it will be secure, and for how long it will be kept. There are also jurisdictional concerns about control, access and redistribution of this information. Can it be obtained by member states, the **International Criminal Court (ICC)**, or NGOs? Is it considered admissible evidence and can it be used in court? Who pays for the long-term data warehousing, archiving and management of information collected from a mission of limited duration? Will it be kept if it reveals UN inaction in the face of blatant violations of international law? The UN, moreover, is not immune from offensive cyber-attacks. The more **sensitive information** it holds, the more likely it will be the target of such intrusions.

WAY FORWARD

The exit of Western troops from Afghanistan and return to UN peacekeeping could be mutually beneficial, creating new sources of capabilities. The UN can offer Western member states theatres where troops can continue to deploy and maintain their capacities. These peace operations can be an arena for sharing of experiences between traditional and new TCCs. But suspicion persists because "new technologies" is typically thought of as a catchall euphemism for "intelligence gathering."

UN peacekeeping vitally needs new technology far beyond just observation drones. UN missions need community alert networks, partnerships with crisis mappers, and new ways of managing the relationship between the field and headquarters. A strong case must be made that these tools are not just about making missions more robust, but also better informed, more efficient and increasingly connected to the communities with whom they work.

New tools will require new capacities. More highly-trained experts, technicians and decision-makers will be required to implement and operate them, rather than the generalists often sent to missions or staffing headquarters. Mission budgets will need to spend more funds on capital-intensive equipment and satellite bandwidth to make the most out of new systems.

But the push for more technology should do no harm to the populations peace operations are sent to serve. There are legitimate concerns about privacy that will have to be addressed. Legal frameworks, management systems and internal security will need to be reviewed and adjusted to prevent negative and unintended consequences. Many of these new tools offer the promise of building bridges and opening channels of communication with local populations. SMS-messaging and social media feedback gives missions a better understanding of what local populations are thinking, while allowing them to communicate mission priorities. New technologies can help missions achieve political, not just military, objectives.

Implementation of new technological capabilities needs to be less ad hoc, and set more firmly into the doctrinal framework of the UN. These innovative tools provide opportunities for more informed decision making in military, police and civilian components. If used sensibly and sensitively, they offer an opportunity to create people-centred peacekeeping.

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