



## **Disaster Victim Identification - A Canadian Perspective**

by Tony McCulloch

*A veteran Mountie “forensics expert” deployed to Hilversum in the Netherlands to assist a multi-national effort to identify all the victims of the Malaysian Airlines Flight MH17 that crashed in the Ukraine. Dutch authorities established a massive operation to conduct an International Criminal Police Organization (INTERPOL)-based “DVI” or Disaster Victim Identification, to process the human remains methodically, positively identify each victim, and repatriate them to their loved ones. Given the magnitude of the operation and the fact other nationalities were among the victims, with the invitation from the Netherlands to provide assistance with the grim tasks, several other countries deployed subject matter experts to help. Canada was among them.*

Disaster and emergency situations can take place at any time, in different environments and under exceptional circumstances. These conditions can significantly increase the complexity of recovery efforts, including disaster victim identification, which is a daunting and detail-oriented task. Being ready to respond effectively to an aircraft, train or other large scale disaster involving the identification of multiple fatalities requires an integrated response and means having the necessary policies, equipment, network, and training in place before an incident occurs.

### **Role of INTERPOL**

In 1980, the global law enforcement community associated to International Criminal Police Organization (INTERPOL) passed a resolution to establish the Disaster Victim Identification (DVI) Standing Committee. From that evolved the DVI Steering Group, which is comprised of twelve member countries all having a well-developed understanding of DVI principles and compliance with best practices of the day. The Steering Group, with the support of the Standing Committee and the INTERPOL General Secretariat, developed and adopted protocols and principles that have become the gold standard for any DVI response. The protocols are explicit and support a global law enforcement commitment to manage the victims of disasters efficiently and with the utmost of care and compassion for the earliest possible repatriation.

The standards clearly set out that positive identification must be established based on tangible evidence, such as one of the three primary identifiers: fingerprints, dental, or DNA. From there secondary identifiers, such as tattoos, marks, scars, surgical implants and physical features, corroborate the identity. The previously relied upon “visual” identification is strongly discouraged due to the many inherent flaws and proven fallibility leading to error, embarrassment and of course adding insult to injury for the families.

The Royal Canadian Mounted Police (RCMP), along with representatives of the Canadian forensic odontology (dental) community, became involved with the INTERPOL DVI Steering Group from the onset. Since its inception, Canada has had a designated member of the RCMP’s Forensic

Identification Services sitting as a member of the group, helping to develop policies, protocols, best practices, and contributing to the global DVI community of practice.

From the time of the Swiss Air Flight 111 disaster off the coast of Nova Scotia in September, 1998, the RCMP recognized a need for expertise in the management of mass fatalities. At that time, much of the support came from the Forensic Identification Services of the RCMP due to the fact that there was a need for a systematic and reliable process to manage the human remains, properly identify the victims, and repatriate them with their families. Members of Forensic Identification Services provided support to the Chief Medical Examiner of the day, ensuring protocols were established and followed to reduce error and ensure integrity of the investigation.

In 2004, the Thailand tsunami became one of the major proving grounds for the INTERPOL DVI community. The incident brought together several countries, working in a unified command structure, and ultimately served to substantiate the value of an organized and competent response to mass disasters. Subsequent disasters in Haiti, the Philippines, New Zealand and the Ukraine/Netherlands, along with many others, have confirmed the soundness of a global approach. Pulling together such a DVI response has allowed for a more adept and proficient approach in managing the grizzly tasks inherent in mass fatality incidents.

### **Mobilizing a DVI response**

As major disasters occur around the world, INTERPOL monitors the event, offering support and if appropriate a unified DVI Incident Response Team. At the same time, the country where the disaster occurred either launches a DVI response, provided they have the capacity to do so, or they reach out to the global DVI community for support. Many developed countries have well developed DVI capabilities, however, they will still invite or request other member countries to assist in some capacity, particularly if that country has victims among the dead. Such was the case with the Malaysian Airlines Flight MH17 disaster. The Netherlands, having the majority of nationals among the dead, led the DVI response while Germany, Australia, United Kingdom, Belgium, Indonesia, Malaysia and Canada, among others, each provided DVI support in some capacity.

INTERPOL has National Central Bureaus (NCB) situated in each of the member countries. and these NCB become the focal point of communications, intelligence sharing and networking. These NCB are well known to local governments and resident Liaison Officers, diplomats and other law enforcement personnel so that any global DVI response or request for assistance is typically initiated through the NCB network.

Internationally, when a disaster or crisis occurs, the Government of Canada, typically through the Department of Foreign Affairs, Trade and Development (DFATD) (now Global Affairs Canada), quickly determines if there is a possibility of any Canadian victims, missing persons and/or “Canadian interests” involved in the incident. In such circumstances, various resources may be deployed to support recovery, aid the impacted nation, and provide humanitarian support, and potentially may include DVI subject matter experts dispatched to contribute to any developing or ongoing DVI operations. This was the case with Super Typhoon Yolanda in the Philippines in 2014. Although there were no Canadian victims lost, the Government of Canada provided various support efforts, including RCMP DVI assistance to INTERPOL, for humanitarian reasons.

DFATD, in conjunction with Canadian diplomats and RCMP Liaison Officers in foreign locations, most often becomes the point of information and intelligence. These “on the ground” resources often have a limited understanding of local DVI capacity or what will likely be required for an appropriate DVI operation. In some cases, DFATD may decide to monitor the incident remotely and rely

upon a DVI member country already on-site for timely information and DVI support as needed, as was the case with the Nepal earthquake when Canada relied on the German DVI team. This surrogate type of DVI support is made possible through the already well-established relations arising from the INTERPOL DVI Steering Group.

For those unfamiliar with DVI operations, it is important to clarify that DVI experts cannot be dispatched from a country to the site of a disaster with the narrow focus of identifying or collecting information only on their nationals. Not only is it virtually impossible to do because of rapid decomposition and comingling of human remains, but INTERPOL DVI protocols prohibit “data mining” or efforts to focus on any one particular country over another. This is not only for practical purposes but more importantly it is out of respect and dignity for all victims and their families. No one victim is seen as more or less important as any other. The approved INTERPOL DVI process starts with “Victim 1” and continues in sequential order until all human remains are appropriately processed.

### **Global best practices**

In somewhat of a contrast to Canada’s current DVI response model, Australia and New Zealand, the United Kingdom, Germany, France, Spain, the Nordic countries and several others have well established DVI capacities, some with dedicated full time resources. All have existing training regimes and full support from the highest levels of authority to be prepared for and capable of responding to any DVI operation. Many of these countries deploy DVI experts to the scene in the very early stages of a disaster to offer the impacted country support and to provide direct intelligence and guidance to their diplomats and respective authorities already on site. In terms of DVI preparation and readiness, these countries all have existing training courses, equipment/logistics and established mandates such that their respective DVI roles and responsibilities are clearly understood, exercised and maintained to an appropriate level of preparedness.

Admittedly these countries all have a somewhat easier time with such a structured response to DVI operations given that most have a smaller physical size, different federal authority structures and rather unfortunately they have had more experience. Canada enjoys excellent relations with these countries from our participation in the INTERPOL DVI Steering Group, which in turn affords us access to their already existing training materials, their assistance and at times their operational support.

### **Canadian perspective**

DVI in Canada is unique in some ways and the process is managed somewhat differently. When a disaster occurs on Canadian soil, the police of jurisdiction have primary authority and are typically the first to respond. The appropriate police agency provides support to the Coroner or Medical Examiner of jurisdiction, who are responsible for determining the cause and manner of death along with official identification, death certification and repatriation. As with any disaster, law enforcement must quickly determine if the event arose from natural causes or a deliberate human act thus requiring a criminal investigation. Managing the incident as a criminal investigation potentially raises new challenges whereby factors such as the integrity of the crime scene, continuity of the evidence and support of prosecution become the primary focus in conjunction with DVI operations.

In short, any initial response to a disaster of any magnitude is seen first as a domestic response by local authorities in Canada. If at some point, and quite possibly early on, the local authorities realize their capacity is insufficient, they will often reach out to neighboring agencies with whom they ideally have an existing agreement through emergency planning, and/or to the federal government through Public Safety Canada (PS Canada) and/or the national RCMP. In the event foreign nationals are believed to be

among the victims, DFATD and INTERPOL would similarly become involved as support, liaison and communications.

A major challenge in Canada is that DVI, as a police issue, tends to be managed more often through a tactical response than a strategic one. Police, including the RCMP, are highly proficient and skilled at launching a response to any emerging situation but dedicated DVI preparedness requires dedicated resources. Subsequently formal DVI programs in Canada tend to be reactive in comparison to other countries. More exposure and awareness is necessary throughout the domestic law enforcement community in Canada to correct that.

There is a need to streamline and formalize policies, procedures, training and deployment preparation in Canada, which is currently established in varying degrees by forensic identification units because they are the ones most often exposed to the “identification of persons”, including deceased. As a result, “Mass Fatality Management,” including DVI, can be misaligned with various emergency policy planners and/or forensic identification units who by default come to “own” this responsibility. In actual fact, DVI or Mass Fatality Management is far more than just forensics and planning. It involves Major Crime units, Missing Persons units, and Commanders, communications personnel, media liaisons and various civilian agencies, all having key roles in any effective disaster response. Attrition and rotation of personnel also compound challenges with the retention of knowledge, skills and the ever-present planning and training requirements to remain proficient.

The well-defined phases of any DVI operation include:

1. Scene security, triage and rescue efforts
2. Scene search, recording, recovery and personal property collection
3. Family assistance (Ante Mortem data collection)
4. Morgue and autopsy operations (Post Mortem data collection)
5. Reconciliation (data searching, matching and record keeping)
6. Identification Board (death certification and identity)
7. Repatriation of victims with family and country

Forensics indeed has a vital role in some of these phases but it is not responsible for the entire DVI process. Like other program areas, forensic units must work with available resources to first address their primary forensic roles in support of criminal investigations. This includes all post mortem processes.

An optimal DVI response is equipped with a skilled, unified command structure along with support personnel having already established skill sets needed for other phases of DVI. This unified command concept already exists for most major events and major emergency incidents, which is why police are generally very effective in managing these high pressure, challenging environments. However, it is the unique demands of a mass fatality incident that put even more pressure on existing structures, quickly bringing forward unique demands and requirements that benefit from advanced planning, training and contributions from subject matter experts. Fortunately Canada has not experienced any significant mass fatality incidents that have exceeded the local capacity of the agencies of jurisdiction, but in some regard this is also unfortunate in that more awareness is needed. Advanced preparations for ensuring a capacity to mobilize a major DVI operation in Canada remains a potential risk that is being vigorously addressed.

To this end, the RCMP is working closely with DFATD and PS Canada to evolve mutual guidelines and standard operating procedures, and to revise policies that will ideally create a more rapid interaction with DVI experts. This will also focus on increasing awareness and understanding of how a DVI response is mustered and deployed to impacted countries. Training in DVI skill sets is ongoing and

efforts continue to engage other police agencies to augment the Canadian capacity to respond internationally and to sustain a DVI operation globally.

In its commitment to enhancing a DVI response in Canada, the RCMP has procured an ongoing license and maintenance contract to set up a DVI database application program. Danish IT company Plass Data designed *DVI Systems International*, a proprietary database program specifically intended for the input and collation of both ante mortem (AM) and post mortem (PM) data. It supports the ability to search and potentially match AM and PM files and can also be used to manage “missing person” files.

The *DVI Systems International* program was endorsed by INTERPOL as the international standard for DVI operations and subsequently has been adopted by the majority of DVI developed countries. It uses the official INTERPOL approved AM and PM forms as the template for data input and subsequent relational comparisons in the matching process. This in turn facilitates critical interoperability between INTERPOL countries, expedites the exchange of AM and PM data, reduces errors and surpasses any language barriers. It continues to evolve in its ability to manage fingerprint, dental and DNA data; in fact it became the basis for the “FASTID” concept commissioned by INTERPOL and financially supported by the European Commission.

Incidental to acquiring the *DVI Systems International* license, the RCMP is authorized to redistribute the program to any other partner agency in Canada deemed appropriate once they have signed an agreement not to distribute it further. The program works on any standalone computer but it can also be networked for greater access and use, in accordance with privacy laws and proper management of personal information. The RCMP created a robust “server” dedicated to the program, capable of being deployed to remote locations or connected to an Internet line, as required.

The RCMP, in conjunction with the Canadian Police College (CPC), has also developed a training course to create a complement of skilled users. Further efforts are underway to modify the original CPC “Post Disaster Course” and to elaborate on existing training courses available from other member countries to train and increase our national and international DVI response capacity.

## **Moving Forward**

Efforts continue with DFATD and PS Canada to improve awareness and understanding of DVI in Canada and to facilitate a greater response capacity to both domestic and international crises. The federal arm of the RCMP, responsible for international policing and national security is also beginning to align with Forensic Identification Services to create a better prepared response and reliable capacity to respond efficiently to DVI needs globally. As always, there remains work to be done, but it is continuing to evolve as Canada advances our excellent relations and mutual respect within the global DVI community.

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