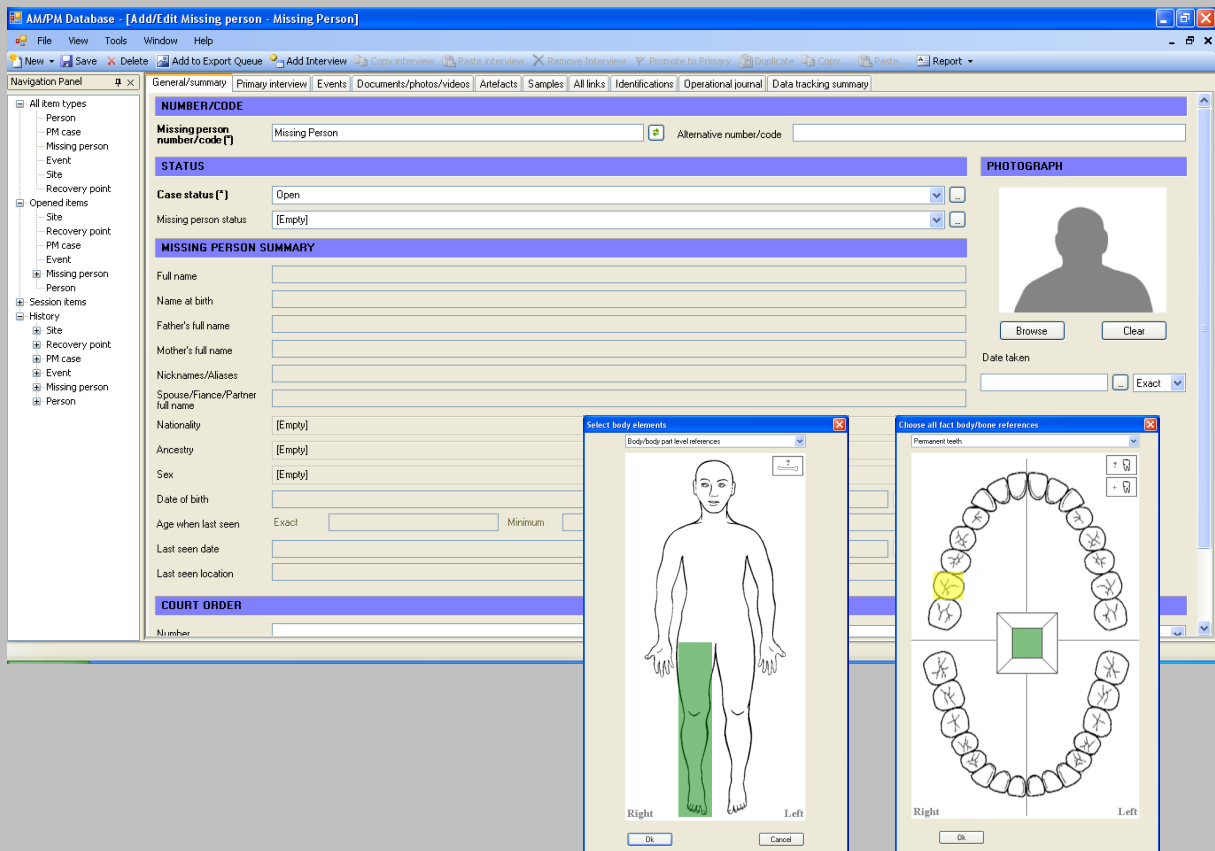


THE ANTE-MORTEM / POST-MORTEM DATABASE

AN INFORMATION MANAGEMENT APPLICATION FOR

MISSING PERSONS / FORENSIC DATA



INTRODUCTION

The International Committee of the Red Cross (ICRC) is a neutral, impartial and independent humanitarian institution, which provides protection and assistance to victims of armed conflicts and situations of internal violence, pursuant to the mandate given to it by the community of nations, acting under the authority of the Geneva Conventions and their Additional Protocols.

In war, following disasters, or as a result of migration or situations of internal violence, people may go missing and the identity of human remains may be unknown. The management of information plays a crucial role in bringing these two complementary lines of investigation together in order to identify remains and resolve missing persons cases. Standardization, centralization and easy exchange of large quantities of data among numerous actors are key to an effective data management strategy, and electronic tools can greatly contribute to a thorough and efficient data management and analysis process.

The ICRC was tasked with constructing a forensic information management tool (database) for use by other actors to effectively compile, manage, centralize and process files on missing persons and unidentified remains. Development of the Ante-Mortem/Post-Mortem (AMPM) Database by the ICRC began in 2005, in consultation with numerous organizations and experts worldwide. The AMPM Database was made available for use in 2008.

OBJECTIVE OF THE DATABASE

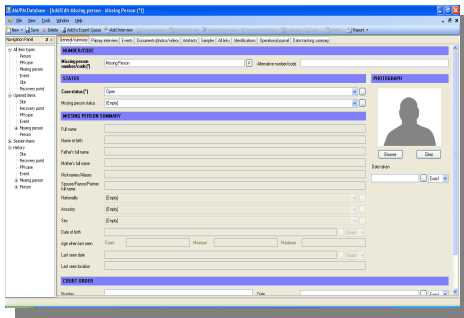
The AMPM Database is an electronic tool for the management of information on missing person and human remains. It manages information about missing persons and the events related to their disappearances, as well as recovered bodies (or body parts) and the sites where they were found. The AMPM Database is highly configurable for use in a large variety of contexts. It is delivered in English but is fully translatable. The AMPM Database can be used in single- or multi-user, server-based environments.

The AMPM Database supports the archiving, standardization, reporting, searching, and analysis of forensic data, as well as the automated basic matching of AM and PM data in order to facilitate the identification process. It also implicitly provides and promotes guidelines for good standards of data collection and use of appropriate methods.

The AMPM Database was designed for use by investigators and institutions involved in the search for persons reported missing and the forensic identification of human remains. No data is delivered with the AMPM Database. Approximately 50 institutions currently use the AMPM Database. Users include medico-legal institutes, governmental structures mandated with resolving cases of missing persons (including National Information Bureaus), non-governmental organizations and other actors. The AMPM Database is provided free of charge by the ICRC.¹

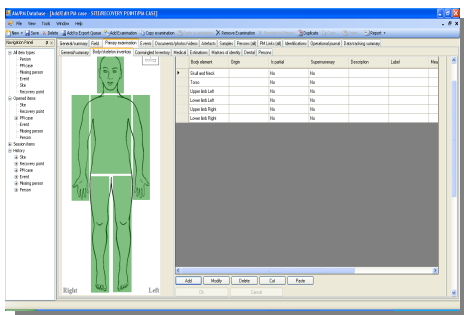
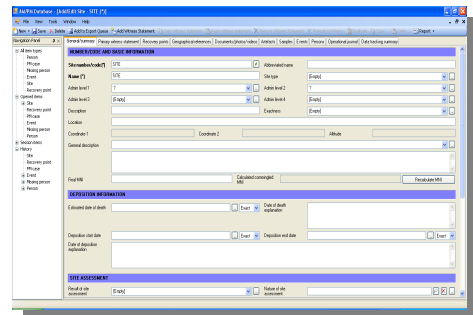
¹ For further information on acquisition procedures for the AMPM Database, contact gva_op_assist_forensic@icrc.org or your nearest ICRC office.

MODULES

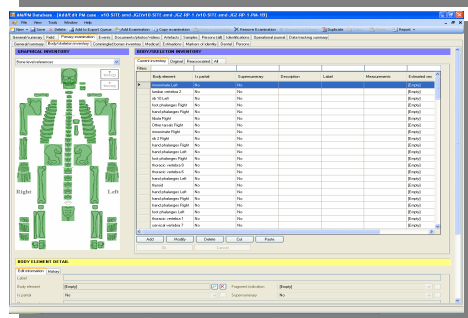


Missing Persons (Ante-mortem Data) includes all information on missing persons, such as personal, physical, medical and dental information, as well as information on the circumstances of the disappearance of the person. Detailed DNA profile data for Missing Persons and Persons (family members) can be manually entered or electronically imported. Multiple ante-mortem data interviews can be entered per missing person and consolidated.

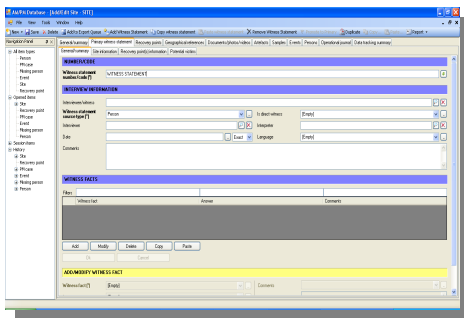
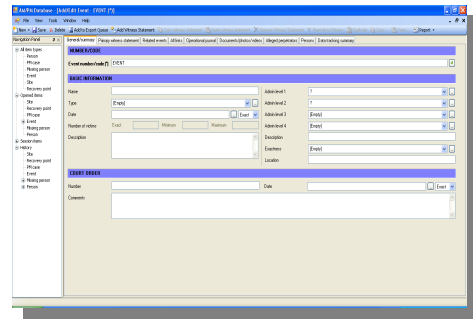
Sites, Recovery Points and Deposits include all field data related to location and recovery of remains. These modules serve for gravesite registry, documentation of site assessment data, and all exhumation / recovery / grave information. Detailed geographical reference data can be manually entered or electronically imported.



Post-mortem Cases (Human remains) include all information obtained during post-mortem examination, including detailed pathology, anthropology and odontology data, and information related to cause of death. Detailed DNA profile data for Post-mortem Cases can be manually entered or electronically imported. Commingled elements can be re-associated to other cases once positive associations are determined. Estimation of minimum number of individuals (MNI) for commingled elements is provided. Anthropological methods and formulae for age, sex and stature are pre-loaded with the AMPM Database. All field data related to Post-mortem Cases are linked directly to relevant Sites, Recovery Points and Deposits. Multiple examinations can be entered per Post-mortem case and consolidated.

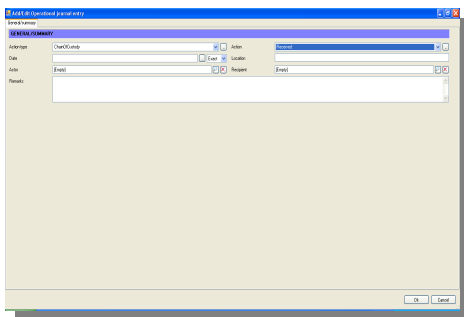
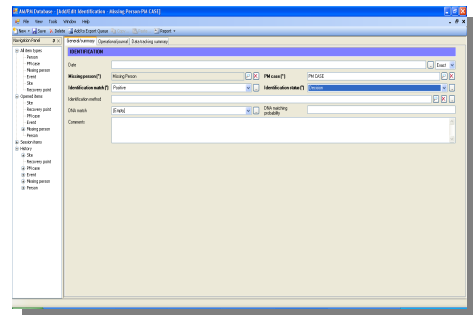


Events include information on any event related to the group of missing persons and unidentified remains being searched, such as military battles in which soldiers went missing, mass burial events, or natural or man-made disasters. The Event module allows linking between multiple events and between events and main entities, such as Missing Persons, Sites or Post-mortem Cases.



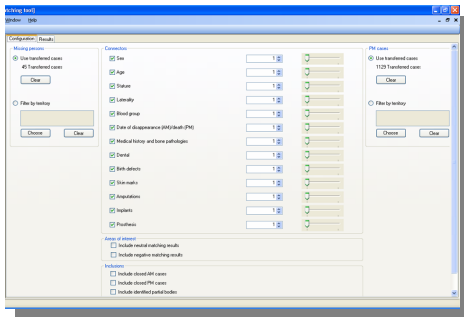
Information obtained through **Witness Statements** can be recorded for Events and Sites. Information about associated Missing Persons, Post-mortem Cases and other actors can be documented. Witness Statements include interviews with individuals, as well as any other information source, such as media articles or investigative documents. Multiple Witness Statements can be entered per event or site and consolidated.

The **Identification** module allows the tracking of hypotheses and confirmations of identity or exclusions, as may be determined through the matching of AM and PM data.



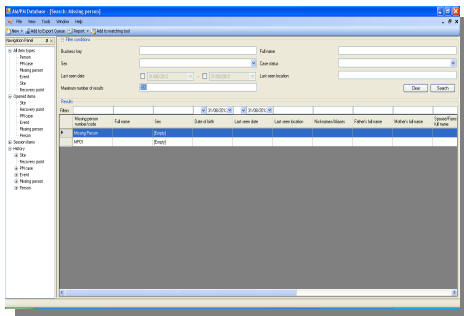
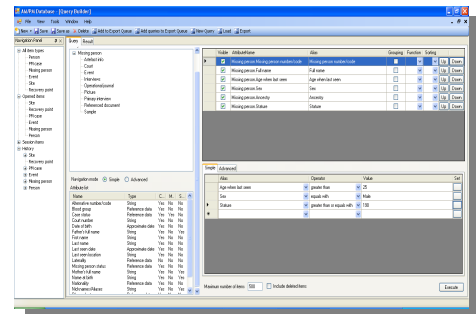
An **Operational Journal** allows the tracking of all actions taken in a certain case, as well as all **chain of custody** movements. Operational Journal entries are manually entered.

FUNCTIONALITIES / TOOLS



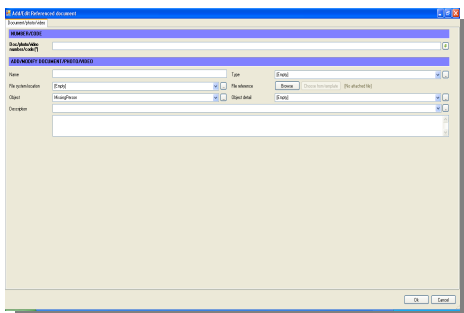
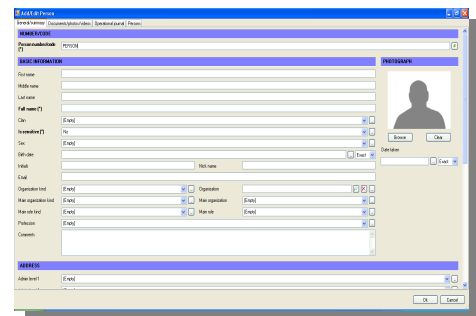
The **Matching Tool** allows for automated matching of AM and PM data for all or selected cases, based on pre-defined matching criteria. Results of potential matches are displayed so that users may individually compare potential matches to form hypotheses of identity or exclusions, with a direct link to the Identification module.

A **Query Builder** allows for the detailed search and cross-referencing of all information entered into the AMPM Database, based on user-defined criteria. Query results can be exported to Microsoft Excel and other formats for statistical analysis or display in GIS.



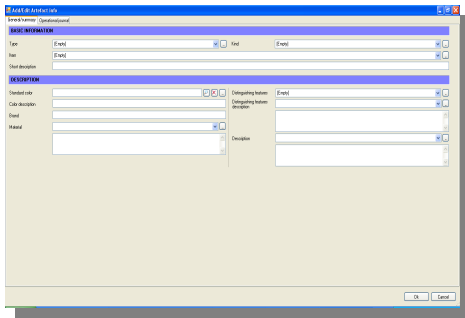
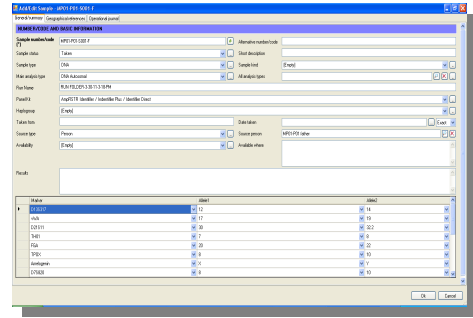
All main entities can be **Searched**, and searches can be filtered.

Contacts and Persons Management allow archiving and cross-referencing of data of all persons entered into the AMPM Database, such as family members and contacts of Missing Persons, investigators associated with entered cases, or AMPM Database data entry staff.



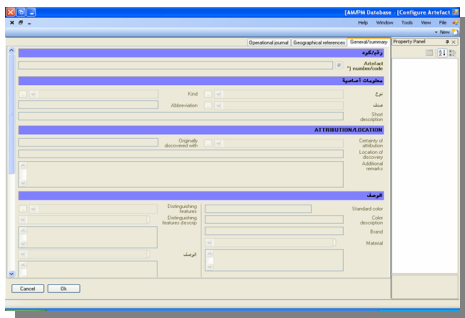
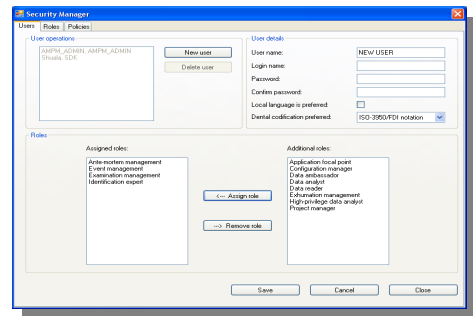
Document Management allows for the archiving and management of documents, photos, videos or any other files associated with entities entered into the AMPM Database. Documents are stored external from the database itself to limit the database size but are easily accessible through hyperlinks.

Sample Management allows for the documentation of all samples associated with all entity types, such as soil, floral and faunal samples collected during recovery, or detailed information on biological samples, including DNA profile information of Missing Persons, Persons and Post-mortem Cases.



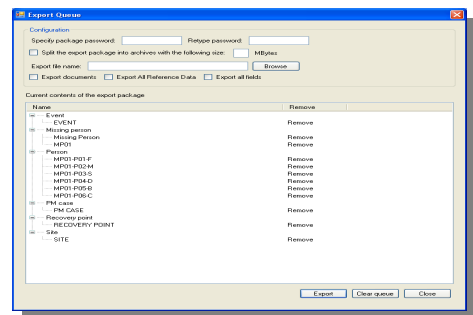
Artefact Management allows for documentation of all artefacts and other evidence associated with all entity types, such as clothing and personal effects of Missing Persons and Post-mortem Cases, evidentiary items such as bullets, blindfolds and ligatures, or medical items such as eyeglasses, hearing aides and orthotics.

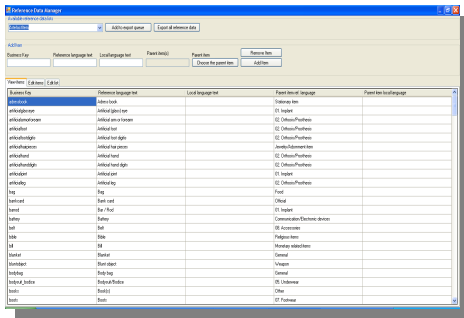
Security Roles Management allows the creation of AMPM Database users with multiple security role options to manage access rights of groups as well as individual users. Individuals with restricted access will not be able to make modifications to the data (read-only) or have access to sensitive personal data.



In the **Mission Configuration**, language preferences can be set, along with date formatting, preferred dental coding system, and the anthropological formulae to be used in the AMPM Database.

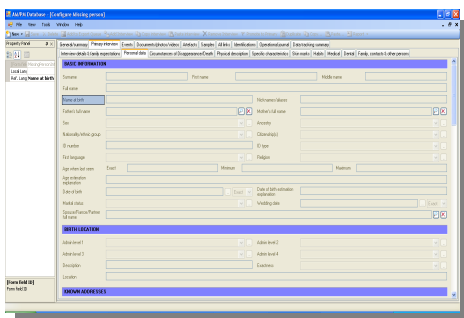
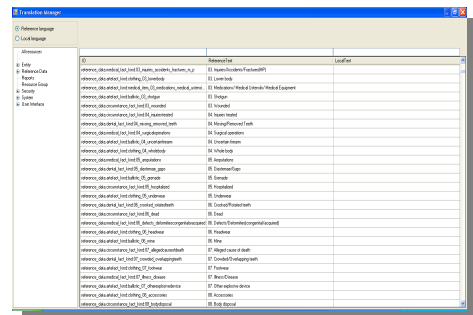
Data Import and Export functions allow the sharing of data with other users of the AMPM Database. A password can be implemented for added security. Cases for sharing can be individually selected. All cases can also be exported into a single file for backup purposes.





The **Reference Data Manager** allows modification or additions to pre-delivered standard lists of reference data available in look-up tables to enhance standardization.

The **Translation Manager** allows access to all text within the AMPM Database for easy translation into any two languages.



The AMPM Database can be contextualized through **Configure Forms**, in which fields can be added, hidden or changed to suit the needs of the user. This also allows contextualized access of the various components of the database for easier translation.

Pre-formatted **Reports** are available for Missing Persons in both languages in which the database operates. User-defined report templates can be created with report-building software or constructed using the mail merge function in Microsoft Word based on query results. Future versions of the database will include a pre-defined format for Post-mortem Case reports, as well as the ability to develop unlimited user-formatted reports for all entities and query results for easy presentation of cross-entity data.

Interview number: _____

1. INTERVIEW DETAILS

1.1. INTERVIEW

Place of interview: _____ Date: ____/____/____

Interview language: _____

Collector: Name: _____ Organization: _____

Interviewer: Name: _____ Organization: _____

MISSING PERSONS*

| Name | Relationship to† death interviewee | Missing person number† |
|------|---------------------------------------|------------------------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

1.2. MAIN INTERVIEWEE AND PRIMARY CONTACT

Main interviewee full name: _____

Sex: male female Date of birth: ____/____/____ * ____ days / months / years

Father's full name: _____

Contact details: _____

Additional information: _____

Comments: _____

PRIMARY CONTACT? Yes No

Primary contact full name: _____

Sex: male female Date of birth: ____/____/____ * ____ days / months / years

Father's full name: _____

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OTHER FEATURES

- **Family links** – Links between family members (Persons or Missing Persons) can be set for easy tracking of all established and potential links between individuals and DNA samples.
- **PM Links** – Potential links between Post-mortem Cases can be recorded.
- **Import DNA Data** – DNA profile data can be imported electronically for easy entry of DNA data and automated creation of associated Samples within Missing Persons and Post-mortem Cases.
- **Import from Total Station** – Total station data can be imported electronically for easy entry of field data and automated creation of associated Sites, Recovery Points, Deposits and Post-mortem Cases.
- **Import Methods** – Additional anthropological methods and formulae can be developed by the user and easily imported for use into the AMPM Database.
- **Data Migration Tool** – A separate tool is provided with the AMPM Database installation package to allow users to format data from other database software for import into the AMPM Database.
- **Backup and Restore Tool** – A separate tool is provided with the AMPM Database installation package for easy backup and restore of the SQL database.
- **Sensitive Data Management** – Sensitivity of Persons and Missing Persons data can be set by the database administrator and defined per security role.
- **Application Configuration** – Separate mission databases can be accessed through a single user interface.
- **Synchronization** – The AMPM Database will function in a stand-alone or client/server environment. In a client/server environment, workstations can be de-synchronized from the server and re-synchronized following data entry.
- **Business Key Templates** – Case numbers/codes can be set to follow a user-defined format.
- **Delete Business Data** – All entered cases can be easily deleted without deleting a configured installation of the AMPM Database.
- **Undeletion Manager** – An Undeletion Manager allows for easy correction of accidentally deleted cases.

FUTURE ENHANCEMENTS

The incorporation of a **DNA Matching Tool** is planned for 2013 to assist users in forming hypotheses of identity based on DNA profile data.

An **Audit Function** is planned for 2013-2014 to assist database administrators in better tracking changes to entered cases made by data entry staff.

TECHNICAL SPECIFICATIONS

- RECOMMENDED MINIMUM SYSTEM REQUIREMENTS:
 - Windows XP SP2, Vista or Windows 7
For installation on a Mac, a virtual machine is required. The AMPM Database is not available on Linux.
 - RAM for 32-bit systems: 1 GB
 - RAM for 64-bit systems: 2 GB
 - Available disk space: 1 GB
Linked files in the document repository are external to the AMPM Database and will require additional disk space.
 - Processor speed: 1.6 GHz (Slower processors may result in slower response time of the AMPM Database.)
- .NET
- Packaging:
 - MS SQL Server Express (1-5 simultaneous users, FREE)
 - MS SQL Server (6+ simultaneous users, MS license required)
- Crystal Reports / Microsoft Reporting Services
- Query Export: SQL View, Excel, flat file
- Anthropological Method Definition: xml

SUPPORT

Technical support in English, French, Arabic and Spanish are available online and over the phone.

For more information on the AMPM Database, contact the Forensic Services of the ICRC at gva_op_assist_forensic@icrc.org or your nearest ICRC office.