F27   A New Odontologic Computer Program to Aid in the Rapid Identification of Mass Disaster Victims

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The goal of this presentation is to familiarize the attendee with a new odontologic computer program to be used in conjunction with Dr. James McGivney's WinID© dental identification program. The attendees will be introduced to the increased functionality of the "addon" program and understand its usefulness in a "megadisaster" such as the September 11th attack of the World Trade Center.

This presentation will impact the forensic community and/or humanity by introducing the computer program which will help expedite the identification of victims of a mass disaster or bioterrorist attack by odontologic means. Since the risk of such attacks remains high, its usefulness in the field of forensics and its impact on humanity is general is incalculable.

Dr. James McGivney's WinID© dental identification program has been the gold standard used by forensic odontologists for many years. It usefulness in mass disasters have been well documented and the program has been continually modified, updated and improved. During the World Trade Center terrorist attack it proved invaluable in identifying over 600 dental fragments. At the time, certain suggestions made by both DMORT as well as local forensic dentists working at the medical examiners office suggested that an "add-on" program would be useful in certain types "megadisasters."

The strength of WinID© lies in its ability to discover matches based on restorations present. Dr McGivney's algorithms take into account that dental changes may have occurred between the time of the last antemortem radiograph (or record) and the postmortem charting of the victim. This flexibility allows for grading of every antemortem fragment against a single postmortem. Unfortunately, in a "megadisaster," where the number of antemortem records can number in the thousands, the amount of time involved in sifting through these radiographs can be enormous.

Filters, which in computer jargon are referred to as queries, are designed to reduce the number of possible matches by eliminating "impossible combinations." For instance, if a specific tooth (such as a wisdom tooth) is present in a mass disaster victim we can immediate eliminate all antemortem -individuals where the tooth was extracted. The purpose of Query Analyzer for WinID© (QA For WinID©) is to selectively reduce the amount of victims based on the use of Standard Query Language (SQL) filters and the current information of a specific postmortem victim. It attempts to improve on WinID© not only allowing you to "include" characteristics (which WinID© does) but also to "exclude" characteristics which WinID© can only do on an extremely limited basis. This filtering is done automatically by QA For WinID©. However, a powerful interface is included to allow manual modification to further refine the filtering. It does not require any knowledge of the SQ Language.

QA For WinID© is designed to directly interface with WinID© thereby eliminating the need to reenter the antemortem and postmortem data. In addition, numerous improvements to the interface have been included to further aid the forensic specialist. Designed to work on a network the program also includes a setup utility that allows each workstation to be set up by a team leader and therefore requires little adjustment by users. QA For WinID© also includes limited image modification tools for contrast and brightness adjustment. The program can be set up to directly interfaces with Adobe® Photoshop® and thereby allow for the editing of images. Enhancements to the viewing module, such as a local image magnification tool, and to the odontogram module are also included.

Following this presentation the attendee will be thoroughly familiar with the concept of SQL filters and how they can be used to narrow the number of possible matches for a forensic odontologic identification. The attendee will understand how QA For WinID© automates this task and will become familiar with the enhancements of the program in order to speed up the .identification process.

Computer Program, Odontology, Mass Disaster