Face Forensics
Disaster Victim & Mass Fatality Identification (DVI)

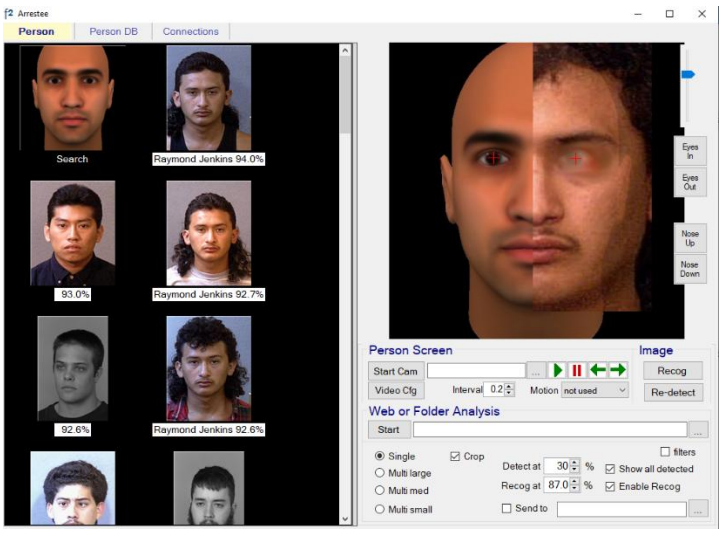
In the event of a major disaster such as an earthquake, tsunami, terrorist event, etc, many bodies will be damaged and difficult or impossible to recognize. To address this f2 DVI combines capabilities developed for a range of real-world identification challenges.

What it Does

f2 DVI incorporates several biometric capabilities, many unique, which can be used individually or in combination to help identify damaged bodies. These include:

- Full face recognition
- Partial face recognition
- Full & partial tattoo recognition (including scars and marks where practical)
- Corpse identification, i.e. with both eyes closed
- Drowning victim identification

What it Looks Like



Partial face with remaining eye closed, positioned on a generic template. Top matches against a 5000-face database are on the left.

This screenshot shows a face which has been heavily damaged on one side, leaving the good side to be cropped out and positioned over a generic facial template, and then adjusted to fit. The missing eye position is then marked in relation to the good eye, the face area weightings are automatically adjusted, the encode array generated, and the search initiated. The top matches in the database are displayed as thumbnail images on the left together with the associated name and Match%. Any match can be magnified for visual confirmation.

Example of f2 DVI in Use

f2 DVI was originally developed for the International Committee of the Red Cross (ICRC) to help identify the bodies of migrants who had drowned in the Mediterranean trying to get to Europe, where faces may have been damaged by other boats, marine life, bloating, etc. It uniquely enables an undamaged area to be selected and eye locations (which are the critical anchor points for face recognition) to be determined, enabling a partial face to be identified.

Training on Capturing Quality Images

This is particularly important with shots of partial and dead faces, where less information is available to be used compared with full faces. f2 DVI offers online training sessions provided by a team of US & European forensic facial identification experts with experience in forensic photography to explain standard victim body positions, lighting, camera angles, etc. to maximise matching performance. Camera/GPS cost can be minimised by providing recycled cellphones to first responder team leaders.

Matching Database

All biometrics require a database to match against. Where an individual is missing following a disaster, relatives can submit photos to the first responder authority, who will add them to a missing persons database. Photos of unidentified victims can be processed by f2 DVI's partial face algorithms and matched against this. Relatives are not required to view damaged faces to confirm a match.

Background & System Requirements

The Face Forensics team has over 20 years' experience in developing advanced full and partial biometric technologies and implementing them in conjunction with partners around the world.

f2 DVI is available as a stand-alone/networked application, as a .Net SDK and as a web service. It runs under Windows 10/11 on SQL Server databases. The application download includes a copy of Microsoft SQL Server Express and a small demonstration database where the demo records can later be deleted and your own records added.

f2 DVI is straightforward to install and test and can be downloaded for evaluation for 30 days at no charge. To be ready for a disaster an annual licence is available for up to 10,000 images, including 10 client licences. This can be used for testing and training and will be ready for operational use before a disaster occurs. When a disaster strikes involving a larger number of victims additional capacity can be ordered as required and sent without delay. There's no limit to the number of victim images that can be held in the database being searched.

To request an evaluation copy, or simply more information, email Contact@SketchCop.com