# FBI steps up to $1B next-gen ID program

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(Phys.org)—The good news is that the FBI is crawling out of the fingerprint age. They are moving up into a $1 billion project that will enable criminal searches and accurate identifications using updated technologies including a range of biometrics. The bad news, at least for privacy advocates, is one and the same. Privacy groups are asking, biometrics, at what price? How will they be used and who is to guarantee against their abuse? Nonetheless, the FBI is set to witness significant improvements to their existing fingerprint identification services, and there is an ambitious title behind their resolve, the $1 billion Next Generation Identification (NGI) program. Eventually this program is to

encompass facial recognition, iris scans, DNA analysis and voice identification.

The new undertaking will also store latent and rolled [fingerprints](#) and palm prints. The FBI has been pilot testing a [facial recognition](#) system where agents will seek to match up existing mugshots with faces in crowd photos; and in the reverse they will compare images of interest from [security cameras](#) with the repository of shots in their database. An algorithm would perform an automatic search and return a list of potential hits for an officer to sort through and use as possible leads for an investigation. Another advancement on the books is the ability to accept and search for photographs of scars, marks, and tattoos.

According to the FBI's Jerome Pender, in February 2012, the state of Michigan successfully completed an end-to-end Facial Recognition Pilot transaction and is submitting facial recognition searches to the CJIS (Criminal Justice Information Services Division). Pender said that MOUs (Memorandums of Understanding) have been executed with Hawaii and Maryland, and South Carolina, Ohio, and New Mexico are engaged in the MOU review process for Facial Recognition Pilot participation. Kansas, Arizona, Tennessee, Nebraska, and Missouri, he said, are also interested in Facial Recognition Pilot participation. Pender was making the statement before the Senate Judiciary Committee, Subcommittee on Privacy, Technology, and the Law, in Washington in July. Pender is presently executive assistant director of the FBI's Information and Technology Branch.

The facial recognition database is scheduled for rollout nationwide by 2014. A report about the FBI's initiative in *New Scientist* [notes](#) that facial recognition technology is improving all the time. Tests in 2010 already showed that the best algorithms can choose someone in a pool of 1.6 million mugshots 92 per cent of the time. The report added that algorithms developed at Carnegie Mellon can analyze features of a front

and side view set of mugshots, create a 3-D model of the face, rotate it as much as 70 degrees to match the angle of the face in the photo, and match the new 2-D image with a fairly high degree of accuracy.

Also touting the powers of facial recognition technology, Alessandro Acquisti of Carnegie Mellon has noted that under certain conditions, machine face recognition performance can be comparable or even better than humans at recognizing face.

Predictably, privacy advocates are worried about how far the FBI will go in deployment. They are concerned about legal implications of law enforcement use of facial recognition technology. The FBI has assured that the searchable photo database in the pilot studies only includes mugshots of known criminals and that each participating pilot state or agency must submit written statements detailing how they will use and protect the information from unauthorized disclosure.

In reaction to the FBI's Jerome Pender's statements to the Senate in July that the searchable photo database used in the pilot studies only includes mugshots of known criminals, attorney Jennifer Lynch of the Electronic Frontier Foundation said it was unclear from the NGI's privacy statement whether that will remain the case once the entire system is up and running or if civilian photos might be added.

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