Facial recognition is being quietly deployed

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To support French manufacturers, the government wants to facilitate the deployment of facial recognition. To the great displeasure of the CNIL and freedom defense associations.

Technically, facial recognition allows you to recognize a person without their knowledge. PHOTO: Getty Images

By Justin Delépine

Is our digital identity taking on a new face? Facial recognition techniques are developing rapidly and many projects are being rolled out. The debate on the supervision of these technologies, however, has barely begun. While the National Commission for Information Technology and Civil Liberties (CNIL) points out that this technology is not harmless and requires great care, the government is pushing for further experimentation, particularly to enable French manufacturers in the sector to progress on the world stage.

Already at work

The time for experimentation is no longer entirely ripe, since several facial recognition solutions are already in use: whether at border controls for travelers who wish to do so, when unlocking a smartphone, or even to open an online account, as proposed by Société Générale.

The government is expected to accelerate this trend with the launch in the coming months of the Alicem service, for Certified Online Authentication on Mobile. After scanning their face, this system will allow anyone to authenticate themselves from their smartphone

(Android only) to connect to a whole bunch of government services: taxes, health insurance, local authority services, postal services, etc. This project has raised a lot of criticism, particularly because it is seen as one of the first building blocks of a digital identity whose key would be facial recognition.

Local or centralized storage

Several facial recognition solutions already exist: at border controls, when unlocking a smartphone, or to open an online account.

However, the questions raised by this technology are numerous. This is why the CNIL is calling for a *"debate that is worthy of the issues at stake* ". To understand them, we must first understand what facial recognition is used for. There are two possible uses. On the one hand, the authentication of a person to verify that they are who they claim to be. The system thus compares the face presented to it with the one it has recorded. And, on the other hand, identification to find a person within a group of individuals.
This time the system will compare all the faces it captures to a database to see if any of the people are known to the database.

Thus, to function, these systems first require data collection to establish a facial template for each individual user. But this data must then be stored. There are two ways to store these facial templates: locally at the user's premises, such as in a smart card, or centrally at the service operator's premises. The CNIL advocates localized storage to minimize the risks of hacking or use for a purpose other than that initially intended.

Furthermore, unlike other biometric data, such as fingerprints, the face is data that is abundantly available, whether through the quantity of images on social networks or through various video surveillance devices. In addition, this technology can act without contact with the user, without the latter seeing the machine in short. Thus, *"technically, facial recognition makes it possible* to recognize *a person who has not taken any particular action ,"* indicates the CNIL.

A “probabilistic” technology

Another issue, and not the least, is that facial recognition is a "probabilistic" technology, meaning that it only indicates a probability that the face presented is indeed the same as the stored template. In other words, it is fallible. Current results are rather good in controlled conditions, such as in an airport airlock, but much less so elsewhere, particularly outside in public spaces, where some experiments have yielded significant error rates.

"Facial recognition will work less well on types of populations on which it has been less well trained," Jean-Luc Dugelay

This technology is not as effective depending on the category of individuals. *"Facial recognition will work less well on types of populations on which it has been less well trained ,"* says Jean-Luc Dugelay, professor of image processing at Eurecom. This is a problem specific to all so-called artificial intelligence devices, which are developed largely by men and white people. Thus, very concretely, an American study by the National Institute of Standards and Technology (NIST) showed that the French company Idemia, which specializes in this technology, displayed an error rate ten times higher for black people than for white people.

Controversial

In summary, facial recognition presents significant risks that could undermine certain fundamental freedoms. Faced with what represents an attack on anonymity online or in public spaces, the association for the defense of freedoms La quadrature du Net therefore advocates for its prohibition. Moreover, as the CNIL points out, the current regulations have as a principle the prohibition of facial recognition. The latter can only be implemented *"by exception"* and *"in certain specific cases* ".

Within the government majority, the reasoning is the opposite, it is about regulating to facilitate experiments and deployments. The logic is as follows: to allow French manufacturers, such as Thales or Idemia, to position themselves internationally to offer "ethical facial recognition" and not to depend in the future on foreign technologies designed according to other criteria. *"The Chinese and the Americans are ahead today, the former because they are more permissive in data collection, the latter thanks to data from the digital giants, the Gafam",* explains Jean-Luc Dugelay. Indeed, who has more images of faces than a player like Facebook? If the debate is not yet settled, manufacturers are moving forward and investing.

Video: watch From Facebook to face-recognition: The business of biometrics

https://www.ted.com/talks/madhumita_murgia_from_facebook_to_face_recognition_the_business_of_biometrics