Japan has worked for years to create a pair of glasses that will shield the wearer from discovery on facial recognition software. The first iteration of the “privacy visor” used near-infrared lights, which are visible to cameras but not humans. [1] The new rendition of the facial un-recognition glasses does not use infrared lights, but reflects overhead lights into the camera lens. [2]

Facial recognition software identifies landmarks, such as nostrils, nose and cheekbones, and “matches” them to images in an existing database. [3] The National Institute of Informatics, a Japanese government-affiliated institute, prevents recognition systems from focusing in on a human face by distorting how these facial landmarks appear in a photograph. [4] The glasses reflect light, which is caused by varying angles and patterns on the lens, tricks facial recognition systems by making the area around the eyes look brighter than it typically is. [3, 4]

“The Privacy Visor is the world’s first product with this technology,” said Isao Echizen, the institute’s professor. “We are often told not to unveil our personal information to others, but our faces are also a type of an ID. There should be a way to protect that.” [4] Japan expects to commercialize the glasses by June 2016.

In addition to the Japanese glasses designs, Amsterdam’s AVG Innovation Labs are researching ways to enhance privacy. [6] The laboratory combined infrared lights with reflective material to create “Invisibility Glasses.” AVG is also exploring using projected infra-red patterns or makeup to shield the subject’s face from the facial recognition software. [6]

While use of privacy glasses may prevent automatic identification on social media or other photographs, the technology may also impede security investigations. For years, military and intelligence agencies, have identified potential terrorists using facial recognition technology. These new privacy glasses may prevent individual identification through security cameras or connecting an image to a criminal database.

Facial recognition is not the only method of identification used to identify terrorists; the military uses many biometric modalities for identification. The Federal Bureau of Investigations and the Department of Defense recently collaborated on a Biometric Technology Center. The goal is to advance research and technology in “iris recognition, voice patterns, facial patterns and palm

---

By: HDIAC Staff

Japan’s “Privacy Visor” Thwarts Facial Recognition Technology

August 17, 2015
prints." [8]

As products with the goal to prevent detection in the digital age become more popular, researchers will need to consider their use in developing technologies and regulations will be needed.

“For example, facial recognition is used in security cameras at airports for identifying terrorists,” Echizen says. “In such places, institutional measures such as not allowing the visor to be worn will be necessary. It is important to achieve a good balance between public interest and protection of privacy.” [9]

References:


For permission and restrictions on reprinting HDIAC’s Spotlights, please contact publications@hdiac.org.