The Pentagon successfully developed a laser that identifies the object through the heartbeat

This object identification system is called 'Jetson', using a laser to measure a person's heart rate, collect differences and from there can determine almost exactly the appearance of one or more people. in environment.

With the rapid development of science and technology today, there are many ways to identify the appearance of people in a certain space, and there are many ways to clearly identify the identity of people. there. Recently, Pentagon experts (the US Department of Defense) have added to the list of technology that identifies an even more advanced new invention, helping to identify remote objects with degrees of Exactly higher than other methods.

This object identification system is called 'Jetson', uses a laser to measure a person's heart rate, collect differences, compare it with the database and can determine it almost exactly the appearance of one or more people in the environment, as well as the specific identity of one (or group) of that person. This is also basically an identification method based on biometric indicators / characteristics, similar to fingerprints, iris or face . but with complexity and ability to make ends More accurate results.

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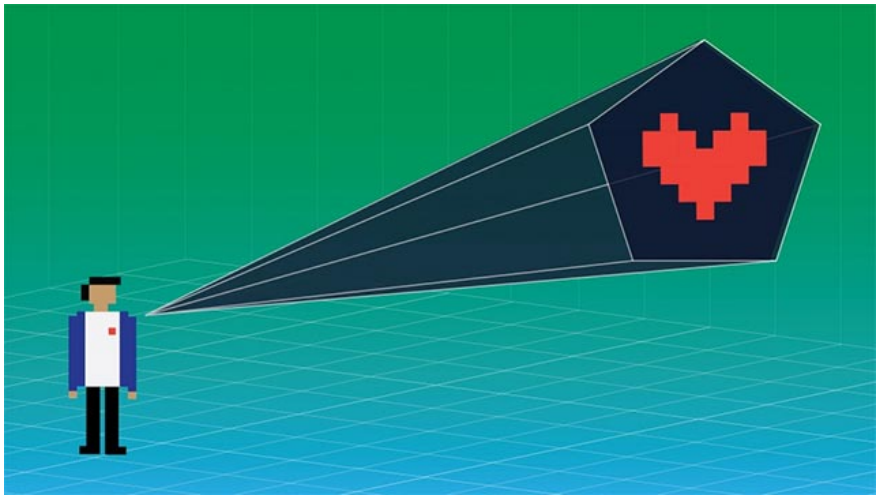

Heart rate is also a biometric indicator

The Jetson project development plan began after the US Special Forces asked the government to develop a new way of identifying remote targets, especially in combat operations at complex area. Currently the US military is using a number of targeting tools such as analyzing gait and face recognition. Such methods give a high degree of accuracy, but the weakness is that the subject can use many simple ways to bypass this form of identification.

For example, for a gait analysis method, this method will be completely useless if the subject is standing still or sitting, lying down. Similar to face recognition, the goal is only to cover face, mask, or disguise and can easily bypass the most advanced machine systems. However, with this new method of heart rate detection, it is very difficult to bypass because you simply cannot tell your heart to stop beating, or control your heart to work as you wish. At the same time, the application of lasers to monitor heart rate and object identification is also a completely new technology, unprecedented.

1. Young people demand Apple compensation of $ 1 billion for being caught because the face recognition software got it wrong

Jetson will be used in military missions

In fact, infrared sensors have been used for a long time to monitor heart rhythms without physical contact. Basically, this process is deployed by detecting the slightest changes that occur in the level of signal reflection caused by blood flow. This method helps doctors gain fairly detailed information about heart rate. However, the Jetson project improved in that scientists used a technology called laser vibrometry, which is expected to yield more accurate results.

In essence, when projected on the surface of the object, the laser beam can monitor the characteristics and movements of the object in an extremely detailed way. From this point of view, Pentagon scientists have come up with the idea of ??projecting a laser onto a person's chest and can monitor heart activity with high accuracy.

According to information from the Pentagon's Counterterrorism Technical Assistance Office (CTTSO), Jetson can effectively deliver up to 95% accuracy in identifying an object's specific identity, and at the same time having Stable operation from range up to 200m away. More importantly, the developers found that Jetson's range of activities could be significantly improved when using stronger laser beams.

1. The researchers successfully developed capacitive image sensors with high resolution and sensitivity

Currently, scientists are using a basic laser available, mainly to test the level of dangerous vibration of wind turbines in large wind farms. The Pentagon has added a custom gimbal (anti-vibration device) that can keep the laser point invisible and not deviate from the target.

Currently, Jetson still has some shortcomings that need to be overcome and will not be able to completely replace the currently used techniques such as face and fingerprint recognition. The first is the speed problem, Jetson takes about 30 seconds to get enough information about the object to compare with the available heart rate

database, so long, especially in the situation. Realistic military case. Second, you will also need to have a database of heart characteristics. Due to the long analysis time, Jetson currently only works best when the goal is still or sitting. In addition, lasers can collect signals through a shirt, but if the subject wears multiple coats, or thicker types such as coats, the laser signal will be blocked.

1. AI technology and face recognition are used to build shelters for stray cats

Jetson still has some shortcomings that need to be overcome

In all likelihood, US forces will adopt Jetson in conjunction with established technology such as analyzing gait and face recognition so they complement each other instead of being used separately. If the biometric identification methods are used properly, the subject will be nearly inevitable.