

For robots they created a sensor that is looking for apples by vibrations

Scientists from the Institute of Robotics University of Carnegie-Mellona have developed a Sonicboom device, which finds fruits, for example apples, vibrations when touching. In the future, the technology will be able to help robots in gardens - from trimming branches to searching for ripe fruits hidden behind foliage.

Unlike people who can by touch find the fetus among the leaves, robots usually rely on cameras. But in thick crowns it does not work well. Sonicboom solves the problem using contact microphones that catch fluctuations through contact with the object, and not through air, like ordinary microphones.

In the prototype, six such microphones are installed inside the segment of the plastic pipe. When the branch is touched, they fix vibrations, and the system by the difference in signals determines the exact place of contact with an accuracy of several millimeters. The pipe protects microphones from damage.

The model was trained on data from 18,000 touches of a wooden rod. Now Sonicboom best defines hard objects, but the setting will allow you to find soft fruits or vegetables.