Horizon Scan Vision

Szonyi, Balazs (School: TSZC Benki Donat - Pech Antal High Schools)

The essence of the project is to reduce the computing capacity requirement of scanning processes to 1/10 by increasing the resolution and accuracy by the software, so that a mobile can even replace a dental scanner. Thanks to the earth-sized coordinate system, we get a “hair” accuracy map of the world around us. With this, the video game has become and can become an important basis for the development of driving and virtual reality. The calculation methods of the existing scanners will be replaced by a system consisting of vectors. The device on which you start the software is placed in a nationwide coordinate system in which the other devices are positioned to the nearest mm (even if the software is not running on them) relative to the nearby device. The devices on which the software runs appear in the coordinate system as the starting point of a vector, to which the software connects points from different cameras and sensors, measured by infrared or other methods, as vector endpoints during scanning. Vector endpoints can be stacked by the software using AI, so we can achieve very high accuracy and resolution on the dot cloud even with very low resolution scanners. Thanks to the vectors, the position of the endpoints does not need to be recalculated after a single measurement, only the values containing the position of the vector start points change. Because the devices know exactly where they are in relation to each other and see each other's vector endpoints, they can scan the entire world at once, complementing each other. Differences between different scans are analyzed by an artificial intelligence and can adjust the point cloud either chronologically or according to current reality.