Holostream: High-Accuracy, High-Speed 3D Range Video Encoding and Streaming

This novel technology enables high accuracy and resolution 3D video communications using specialized hardware, new compression and decompression methods, and a phone application for efficient 3D streaming and visualization over standard wireless networks.

Telecommunications has changed vastly over the years with improvements in our technology as our understanding of the subject grows. From the early days of the telegraph to the modern times of cellular phones and video calling, the advancements enhance the users experience by improving interactions. What all of these technologies fail to do, is to immerse the user in the 3D world which we live in. Recent technologies have started making it possible for 3D video communication with specialized hardware, but it's expensive, inflexible systems, and required highly powerful computers.

Researchers at Purdue University have developed a novel technology allowing for high accuracy and resolution 3D video communications. This technology is possible through the use specialized 3D capture sensing hardware system in conjunction with new methods for 3D video compression and decompression along with a phone application for 3D video visualization. The compression and decompression methods allow for reduced data transfer, and less stress on the device while the application allows for 3D streaming and visualization. Additionally, this product will be available across any standard wireless networks.

To view a video related to this technology, click on this link: https://www.youtube.com/watch?v=NhSbWqEcmQg

Advantages:

-Designed for modern cell phones

-Higher accuracy and resolution

-Novel compression and decompression methods

Technology ID

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Category

Artificial Intelligence & Machine Learning/3D Optical Imaging & Industrial Metrology

Robotics & Automation/3D Perception & Modeling for Automation

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Potential Applications:

-3D digital communications through mobile networks

-3D visualization application for phones

TRL: 8

Intellectual Property:

Provisional-Patent, 2018-04-02, United States

Utility Patent, 2019-03-25, United States

Keywords: 3D video communication, high accuracy 3D video, high resolution 3D video, 3D video compression, 3D video decompression, mobile 3D video, 3D streaming application, Purdue University technology, 3D visualization mobile, standard wireless 3D communication, 3D Imaging, Computer Technology, Digital Communications, Mechanical Engineering