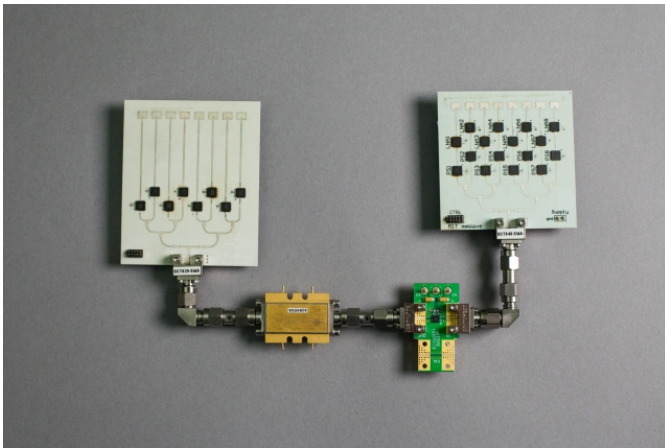


## MIT Sets to Cut VR's Cable Problem

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Researchers at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL) claim to have a solution for the cables holding VR headset users down-- MoVR, a system using high-frequency radio signals to turn any headset wireless.



But how can wireless technology replace the HDMI cables streaming data to VR headsets? After all, VR platforms work in real-time, meaning one cannot use compression to allow for lower data rates. According to MIT the key lies in "millimeter waves" (mmWaves), high-frequency signals many experts believe will be behind the super-fast 5G connectivity of the near future. Such signals handle the 6Gbps data rates required by VR visuals.

However mmWaves come with a hitch, as they are affected by obstacles and reflections-- even briefly moving a hand between a transmitter and receiver blocks the signal-- and require constant line of sight. This is where the MoVR system comes in. A programmable "mirror" detects the direction of the incoming mmWave signal and reflects it towards the receiver on the headset. MIT says the MoVR can "learn" correct signal direction to within 2 degrees, meaning it can correctly configure its angles.

The actual MoVR device consists of 2 phased array antennas able to focus signals into narrow beams before steering them at a microsecond timescale. The researchers say the hardware can be built in a device as small as a smartphone, and users can put multiple MoVR units in a single room to allow multiple people to play VR games in the same space simultaneously, all without blocking each others' signals.

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