

# Is Physical Layer Research Dead?\*

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# Opportunities in PHY Research

**PHY**

Point-to-point

bits

waveform

mmWave  
vehicular  
invivo  
+video

**Networks**

Relay

Two-way

Interference channel

Uplink

Downlink

Ad Hoc

PHYs are more interesting in networks

Networks involve much more than just the PHY

cellular, LAN, V2V, D2D, PAN, sensor, etc

SDR platforms need to facilitate research that goes beyond point-to-point