

**ABSTRACT****SYSTEMS AND METHODS FOR BEAMFORMING IN MULTI-INPUT  
MULTI-OUTPUT COMMUNICATION SYSTEMS**

Methods and apparatuses are disclosed that utilize information from less than all transmission paths from a transmitter to form beamforming weights for transmission. In addition, methods and apparatuses are disclosed that utilize channel information, such as CQI, eigenbeam weights, and/or channel estimates, to form beamforming weights.

Figure 4