PEER-TO-PEER WIRELESS COMMUNICATION SYSTEM

Abstract

A peer-to-peer communication system using a direct link setup (DLS) is disclosed. A mobile station (STA) establishes a direct communication link with another STA by sending a message requesting a DLS to an access point (AP), (i.e., a centralized controller). The AP may accept or reject the DLS request based on channel measurements. If the DLS request is accepted, the DLS is established such that the STAs may directly communicate with each other. An established DLS connection may be torn down by the AP sending a message including a DLS teardown request to one of the STAs, or based on channel measurements. The system may be an Ad hoc network comprising a plurality of STAs without an AP where each STA maintains a database of one-hop and two-hop STAs, and establishes a direct link to other STAs after informing neighboring STAs of an intention to establish a direct communication link.

Fig. 1