IMPLEMENTING A SMART ANTENNA IN
A WIRELESS LOCAL AREA NETWORK

**Abstract**

A method for implementing a smart antenna in establishing association between a station (STA) and an access point (AP) in a wireless local area network begins by transmitting a beacon frame by the AP on one antenna beam. The beacon frame is received at the STA, which measures the signal quality of the beacon frame. The AP switches to a different antenna beam and repeats the method until the beacon frame has been transmitted on all antenna beams. The STA associates to the AP that transmits the beacon frame with the highest signal quality on one of its antenna beams. A similar method may be used in which the STA sends a probe request frame to the AP, which then responds with probe response frames sent on multiple antenna beams.

Fig. 2