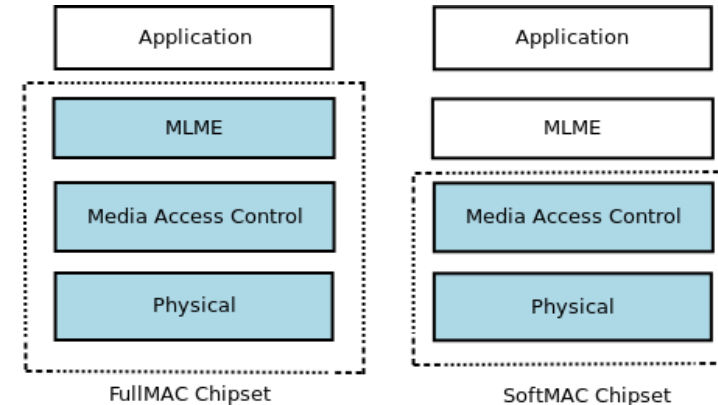


Adapting Android for Multi-Hop Communication in Infrastructure-Less Ad-Hoc Networks

Background

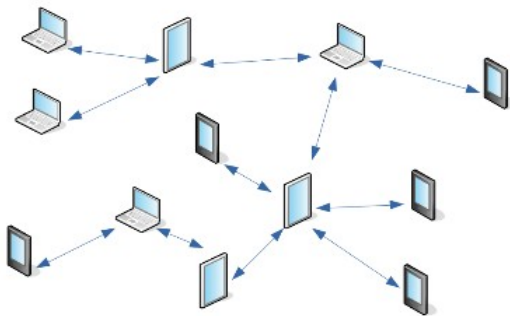
- Wi-Fi ad-hoc mode was removed from Android 2013 and replaced with Wi-Fi direct
- Wi-Fi direct is not suitable for multi-hop since it uses a group owner as a central switch, have fixed IPv4 address on Android and an upper limit for the number of connected clients among other things
- FullMAC Chipsets common on mobile devices
 - Energy efficient
 - Simple API for the operating system
 - Change functionality with firmware



IBSS Chat: Multi-Hop Capable Server-Less Ad-Hoc Chat Protocol

Adaptable, Portable, Usable

- System service that communicates with the Wi-Fi driver to enable ad-hoc mode and configure the wireless interface
- Broadcast messages with improved delivery through acknowledgement
- Multi-hop capability by re-transmitting received messages



Ad-hoc network without routers or access points