Wi-Fi P2P made usable

How providing Wi-Fi P2P connectivity in a simple manner has been solved through ConnMan

Tomasz Bursztyka
tomasz.bursztyka@intel.com
P2P:

- create local wifi network without the need of a dedicated AP
- share services (WFD, UPnP, Bonjour)
- credentials are set through WPS

However:

- has a complicated way of creating the network (group handling)
- works on IPv4 only
- specs allows a bit too much (legacy sta support …)
- weird device type advertisement policy
- complex scanning requests
ConnMan simplifies by hiding all the group related informations and logic

→ provides Peer list

→ each Peer provides a Peer Service list (if any)

→ provides methods to connect/disconnect a Peer

→ provides methods to register/unregister local Peer Service

→ provides ui-centric mechanism to handle incoming/outgoing connection
Current support:

- scans for all P2P Peers and their services
- One on one context only
- temporary groups for now
- WPS PBC is enforced on incoming connection

→ The API is still marked as experimental
Next:

- persistent group handling
- complex context
Ideally:

- wpa_supplicant
- ConnMan (Or NM, or ...)
- WFD
- UpnP stack (Gupnp ...)
- Bonjour (Avahi...)
- UI (for ConnMan, NM, ...)

ConnMan (Or NM, or ...)

wpa_supplicant
Already upstream:

git://git.kernel.org/pub/scm/network/connman/connman.git

API is documented in doc/peer-api.txt and doc/manager-api.txt