Bluetooth PAN profile

Nokia's Bluetooth® enabled devices can organize networks according PAN profile. The payloads from other networking protocols can be encapsulated into BNEP protocol packets.

Phones can participate in network in different roles as PAN users, NAPs (network access points) and Group Ad-hocs participants.

Network Access Point

The Network Access Point acts as a bridge, router or proxy between Bluetooth® network and other network technologies. For example NAP can provide Internet connection over Bluetooth®.

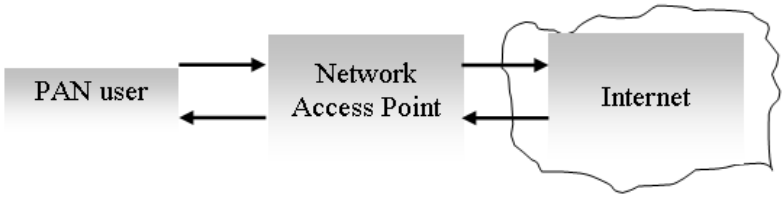

Diagram 1 - Network Access Point scenario

Group Ad-hoc Networks

Group Ad-hoc Networks allows to mobile phones to form networks among themselves and to exchange information by IP and other networking protocols. This scenario is based on Bluetooth® piconet. So there are a master and slaves.

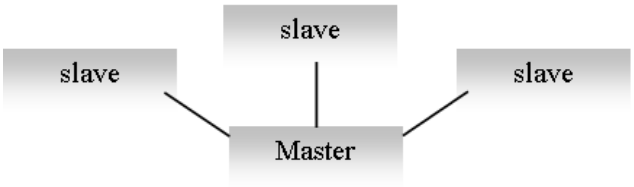

Diagram 2 - Group Ad-hoc scenario

PAN Users

PAN users can work in 3 ways:

- PAN users can communicate directly just the two together.
- PAN users can connect to NAP
- PAN users can join the Group Ad-hoc Network

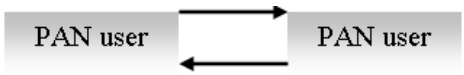

Diagram 3 - PANU-PANU scenario

Service Discovery

As Bluetooth® technology has service discovery protocol, PAN profile also has. By this way application running on mobile phone can choose PANU, NAP or GN service from other phone device.

Progress

PAN is a key feature of mobile phones. There are attempts to realize PAN profile in Symbian powered phones. Look here and here for that. You can participate in last one.

Internal Links

BNEP protocol

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External Links

- Bluetooth PAN Profile Overview
- Open Source Bluetooth PAN's Nokia Developer Blog
- PAN overview
- Ethernet Framing IEEE 802.3

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