PASSIVE BLUETOOH MONITORING IN SCAPY

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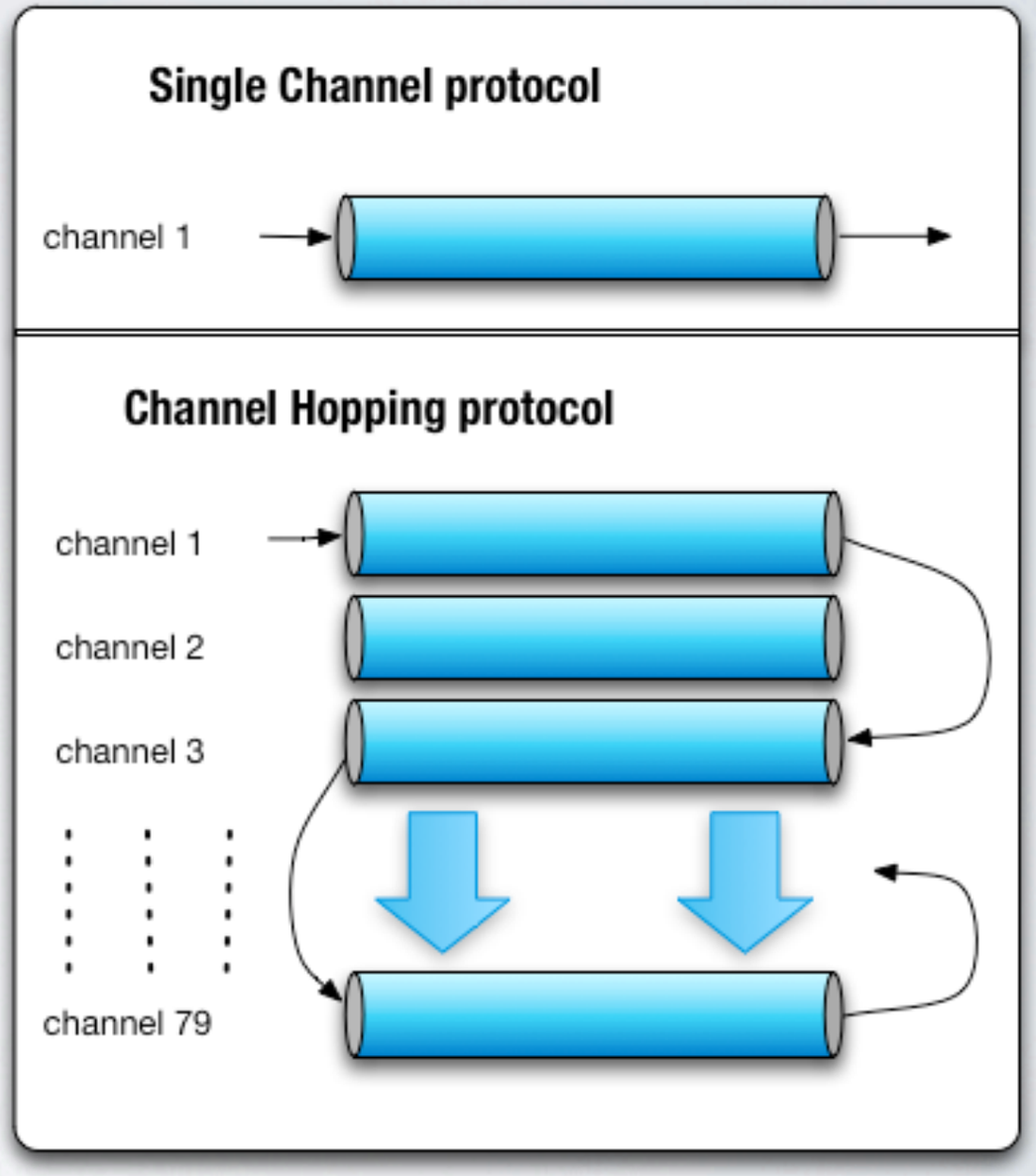
AGENDA

- bluetooth essentials
- fundamental projects
- scapy-btbb project overview
- demo

ESSENTIAL

BLUETOOTH

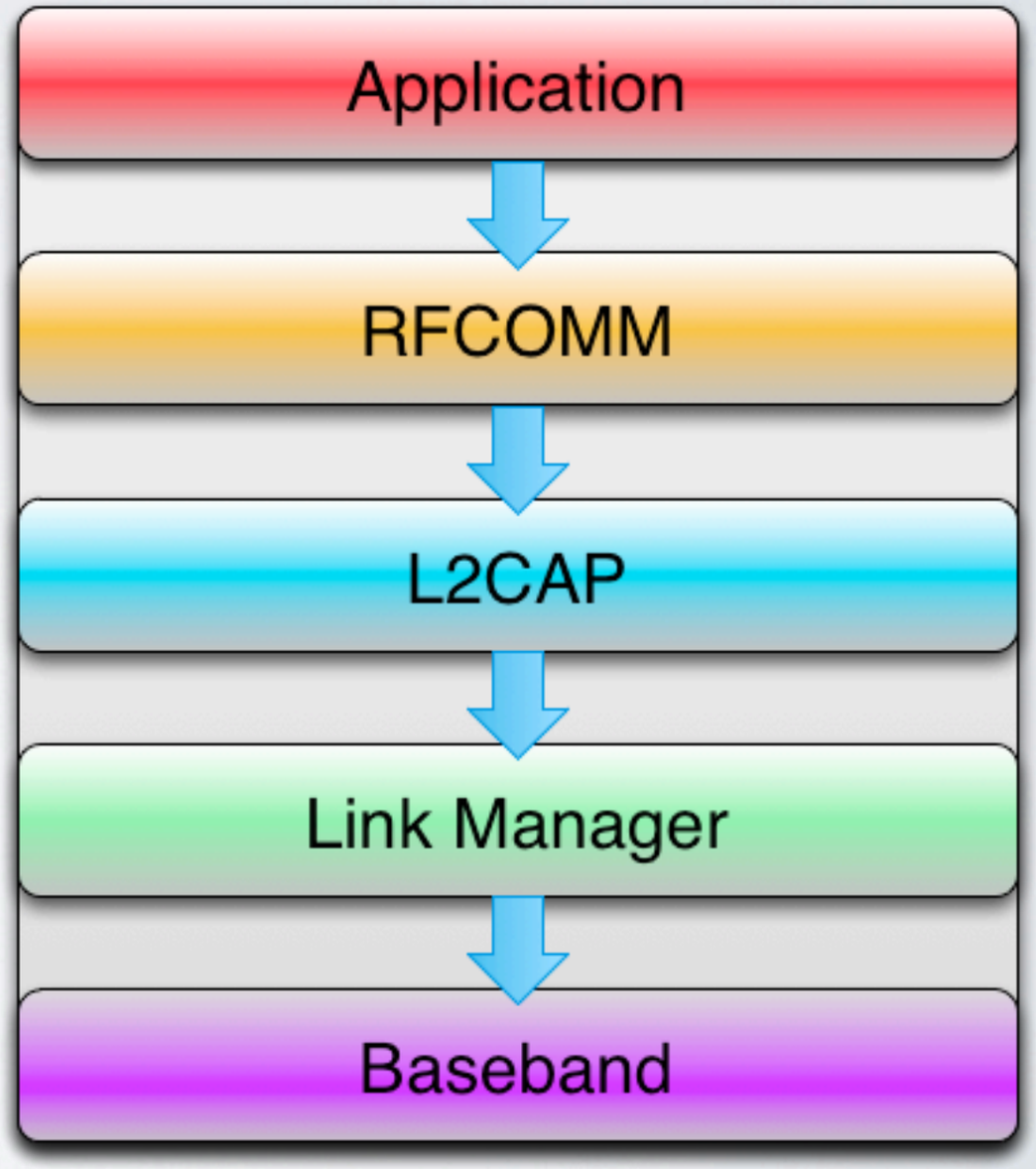
- bluetooth is a frequency hopping protocol



ESSENTIAL

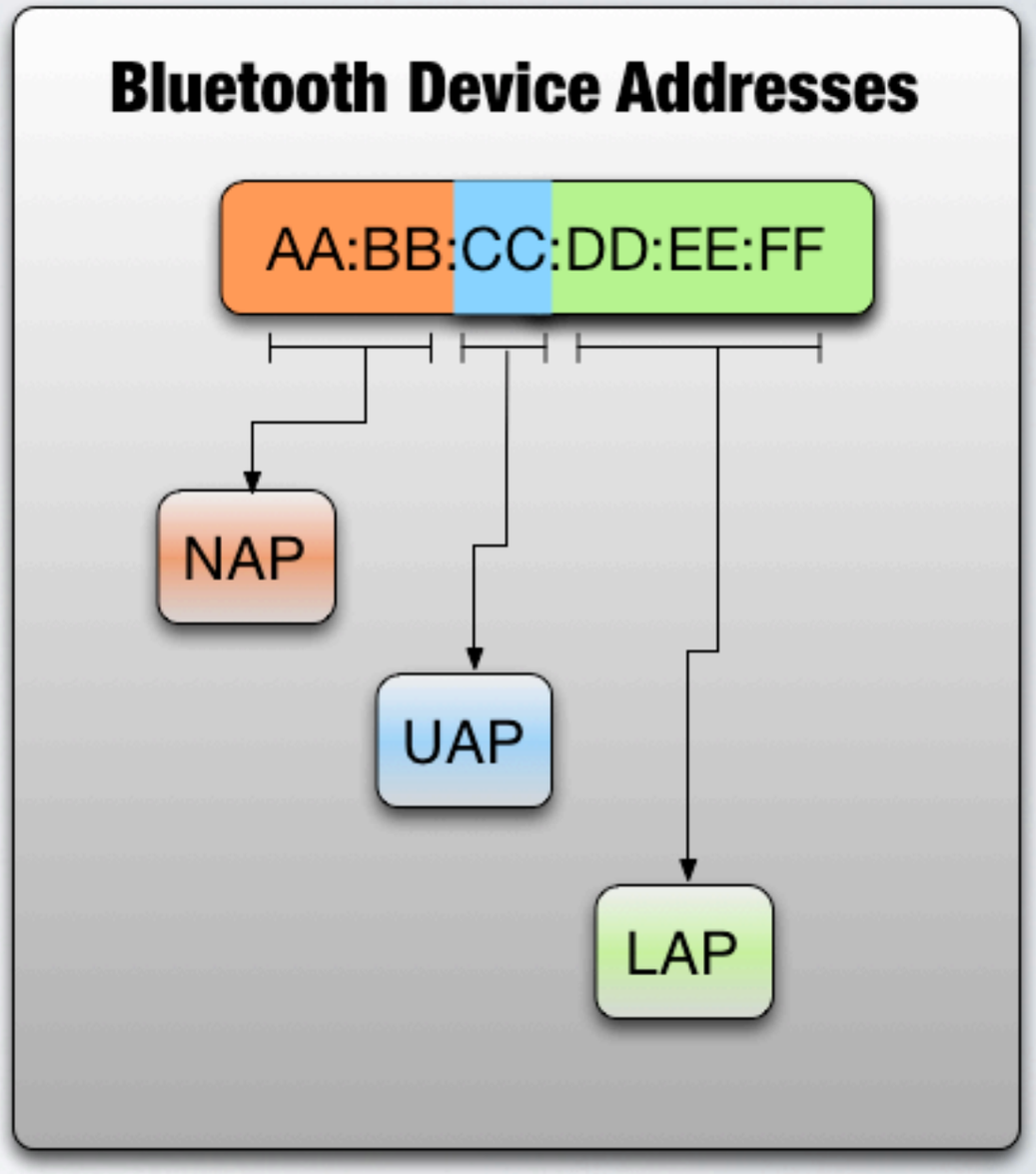
BLUETOOTH

- BTBB - bluetooth baseband
- air traffic between master and slave bluetooth devices



ESSENTIAL
BLUETOOTH

- nap
  - non-significant for communication
  - vendor association
- uap
  - upper address part
  - vendor association
  - calculated from btbb packets
- lap
  - lower address part
  - easily obtained in btbb packet



FUNDAMENTAL PROJECTS

SCAPY

- Philippe Biondi
- python network analysis and manipulation tool
- supports many protocols and layers
  - Ethernet, Tcp/Ip, 802.11, 802.15.5, etc

FUNDAMENTAL PROJECTS

LIBBTBB

- Dominic Spill and Mike Ossmann
- provides methods for:
  - uap discovery, clock discovery, etc
- wireshark plugin
  - wireshark btbb support

FUNDAMENTAL PROJECTS

UBERTOOTH

- bluetooth baseband sniffer
- Mike Ossmann
- kismet plugin

SCAPY-BTBB

GOALS

- bluetooth baseband traffic in python

SCAPY-BTBB

CONTRIBUTIONS

- btbb layer in scapy
- a stream utility for pcap files in scapy
- btbb helper methods
  - vendor from nap/uap
  - distinct address lists from btbb traffic
- extensive documentation of related projects

SCAPY-BTBB

RELEVANCE

- real time and postmortem data analysis for btbb traffic
- compatibility across hardware
  - though pcap files
- easily incorporated into:
  - developer debugging tools
  - auditing tools
  - exploitation tools

DEMO

REFERENCES

- scapy
  - Phillippe Biondi
  - secdev.org/projects/scapy
- libbtbb
  - Dominic Spill & Mike Ossmann
  - sourceforge.net/projects/libbtbb
- ubertooth
  - Mike Ossmann
  - ubertooth.sourceforge.net
- kismet
  - Mike Kershaw
  - kismetwireless.net
- bluez
  - bluez.org
- pybluez
  - pybluez.googlecode.com
- wireshark
  - wireshark.org
- ipython
  - ipython.org
- pandas
  - pandas.pydata.org

PROJECT HOME AND CONTACT INFO

- project home
  - hackgnar.com/projects/btbb
- contact
  - email: ripper@hackgnar.com
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