Analysis on binding distribution protocol

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Analysis on binding distribution protocol

- Why distributing bindings?
  - If a SAVI device wants to set up an initial binding for an address, it must firstly decide whether this address has been “assigned to another node” in the subnetwork.
  - BDP tells the device whether this address has been “bound on other SAVI devices”.
  - DAD tells the device whether this address is “being used by another node”.
  - “address assigned to another node” ,“address bound on other SAVI devices”, and “address being used by another node” have different meanings.

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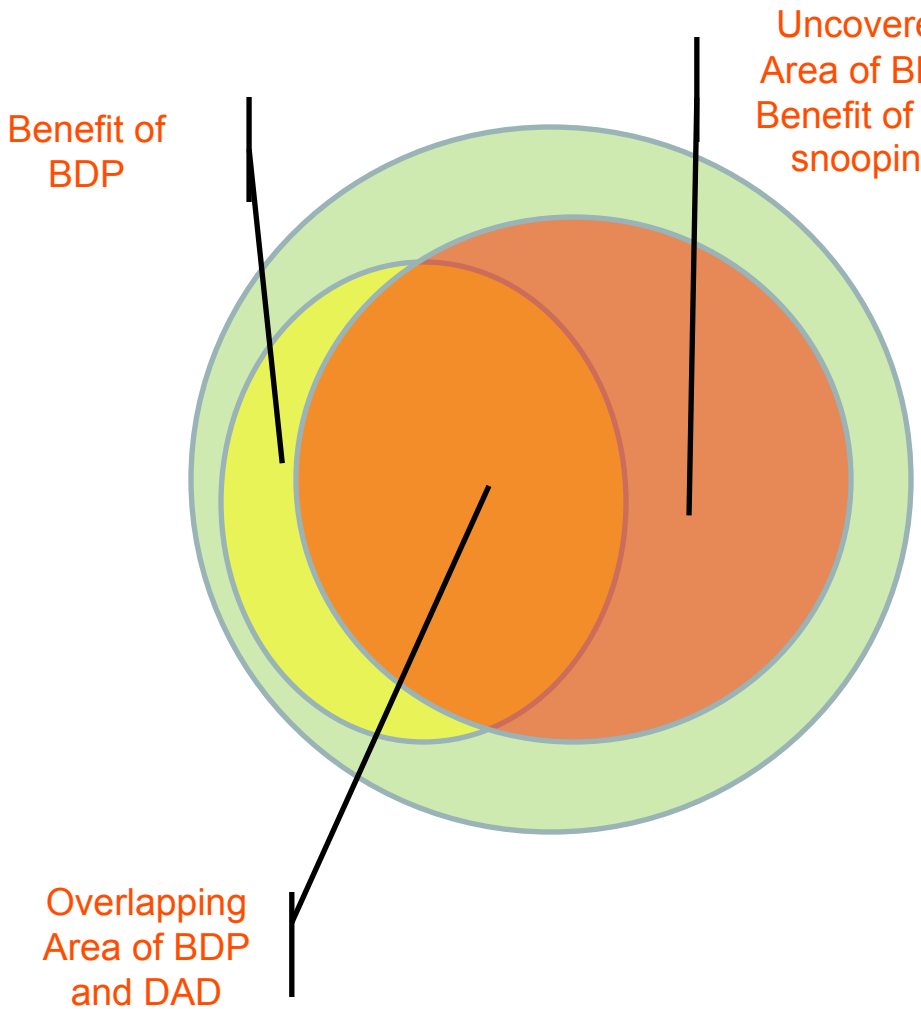

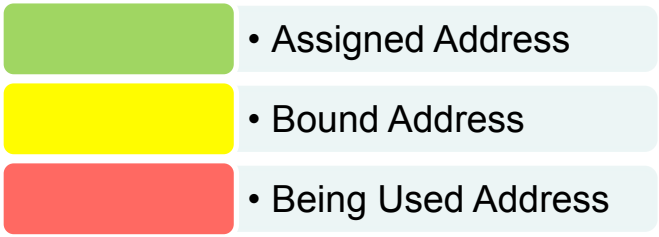

Address bound but not being used:

- Some protected static address (could be manually set ?)
- Sleeping host (addr renew?)
- Temporarily disconnected host ?

Address being used but not bound:

- Hosts attached to non-SAVI device (SAVI-device and non-SAVI device In the same L2 link).

Analysis on binding distribution protocol

- Benefits of BDP
  - The yellow part
- Limitations of BDP
  - For overlapping area (orange part), BDP is equal to DAD
  - For uncovered area (red part), DAD is still needed.

Analysis on binding distribution protocol

- How should a perfect BDP look like?
  - Once a binding is established or removed on a SAVI device, any other SAVI devices have the ability to get known this event immediately through the BDP.
  - Once a binding event is synchonized by BDP, the corresponding binding must be truly established or removed.

Analysis on binding distribution protocol

- Difficulties of designing a good BDP
  - Synchronization in real-time
    - Push or pull?
    - Push: handling the conflict, etc…
    - Pull: Not real time
  - Source authentication and event verification
- Currently, didn’t see a BDP yet
- If there is a BDP, we would provide more analysis

Thank You!
Q & A