Name Service in the homenet

Ralph Droms

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Requirements

- Disconnected operation ("fate sharing"): name resolution for reachable devices continues if the local network is disconnected from the global Internet

- Relative name resolution: some naming convention that allows name resolution while mitigating the need to know an absolute location in the global DNS namespace

- Representation in the global DNS namespace, for access from off-net

- Unmanaged operation

- Efficient message utilization: for example, keep unwanted traffic off of an IEEE802.15.4 network

DNS

- Authoritative server for subscriber zone allows local resolution for disconnected operation
- Assumes there is "a place" for an "autonomously operating" server
- DDNS for populating server
- DNS resolution for local and remote queries
- Devices in homenet need to have some notion of "local" resolution context (droms-home.example.net)

mDNS

- Distributed operation; no central server

- Inherent local resolution context

- No dynamic update required

- Limited to single link

- Obvious extensions (xmDNS) require some care in design for scale