

Haggle Application: Ad Hoc Email on 802.11 Networks



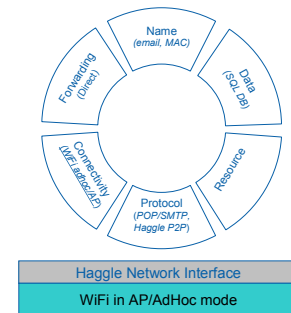
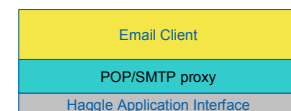
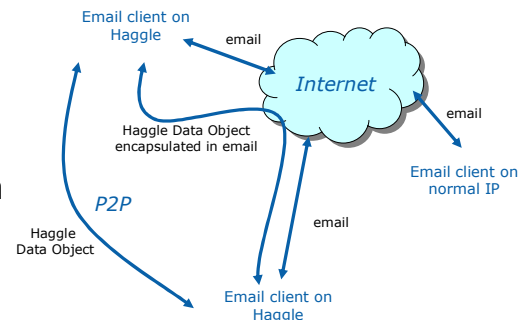
Haggle Architecture

- A layerless networking architecture for mobile devices
- Separates out the “what” (e.g. a message), the “who” (James Scott; james.w.scott@intel.com) and the “how” (the end-to-end message path)
- Allows applications to become independent of infrastructure, and use ad-hoc or mobility-based connectivity as easily as Internet access
- Implemented in Java for portability; available as open source software



Application: Email

- Email uses a huge deployed infrastructure allowing asynchronous send and receive
- Haggle can make use of this infrastructure, as well as using local ad-hoc connectivity between Haggle-enabled nodes for when infrastructure is unavailable or broken
- Backwards compatible – can email people without Haggle as before, and use a POP/SMTP proxy on top of Haggle to support existing email apps



Implementation Using 802.11

- Messages stored in SQL database
- Destination names map to both email and MAC addresses
- Forwarding directly to either name, or via store-and-forward
- Both POP/SMTP and a Haggle P2P protocols used
- 802.11 connectivity switched between ad-hoc and AP mode as forwarding load demands, with APs automatically assessed for Internet connectivity

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