

Scope and Proposed Work Items for the Handoff Group

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May 2003

Groups working on Handoff-related issues

- Layer 2 and lower

802.11	802.3	802.16	802.20	802.15.3	3GPP
802.11k		802.16e			SA2?
802.11i					
802.11f					
802.1X	802.1X	802.1X	802.1X	802.1X	
WNG					

- Above Layer 2

- Seamoby
- Trigtran
- PANA
- MIP
- SIP

- It is important to identify the gaps, and the niche and opportunities of this Group

Proposed Scope of the Handoff Group

- 802-wide mechanisms to address roaming over heterogeneous 802 media
- Enable seamless roaming to support real-time applications

Suggested Work Items (1)

- Coordinate handoff-related work across various 802 TGs
- Build a taxonomy of L1 & L2 handoff requirements
- Build a list of standardizable elements/aspects of 802 HO based on L1 & L2 primitives → provide requirements to TGk
- Based on L3 requirements, develop a common abstraction for trigger requirements that are semantically similar across 802 technologies
- Liaise with IETF & 3GPP to comprehend L2 handoff requirements for handoff
- Context abstraction and transfer between different 802 technologies
- Context abstraction and transfer between 802 technologies and non 802 technologies

Suggested Work Items (2)

- Virtualize handoffs
 - Simultaneous AP associations
 - Network planning: come up a recommendation of how to plan network coverage
 - Create AP constellations with aggregated controls – make associations very fast; only intra/inter channel beacon/probe processing
 - Keep another radio primed at all times - proactively handoff sessions

Suggested Work Items (3)

- Proactive handoffs
 - If handoff virtualization is not feasible, minimize L2 handoff delays
 - Pick AP with best connectivity characteristics (AP provides heuristic/statistical values, or APs determine collectively which one is most appropriate)
 - Use protocol between APs for state sharing
 - Examples: Pre-authentication; Proactive trigger
 - initiate things to do

Suggested Work Items (4)

- Improve visibility to L3 handoff
 - Earlier indications of impending inter-subnet handoffs
 - Notify only if subnet change occurred (no link up/down is same subnet for example) - any reason to indicate otherwise? - understand conflict with multi-AP association

Not Suggested as Working Items

- Any layer 3 or above mechanisms (except for convergence procedures)
- Billing/Accounting mechanisms related to handoff
- Authentication methods

Motion

- To include the proposed scope and work items in the PAR.