802 Handoff ECSG EC Closing Report

David Johnston
david.johnston@ieee.org
dj.johnston@intel.com

Officers

- Chair
  - David Johnston (Intel)
- Recording Secretary
  - Paul Lin (Intel), resigned as recording secretary
  - Michael G. Williams (Nokia) was elected unanimously as recording secretary
- Vice Chair
  - Ajay Rajkumar (Lucent) was elected unanimously as vice chair

Activities this session

- Considered issues surrounding deficiencies with Mobile IP DNA, exacerbated by 802 shortcomings
  - 2 technical submissions (Microsoft)
- Problem statements
- Considered working titles
- PAR text
- Placement

Problem Statements

- Three problem statements approved as findings of the group
  - #1 Detection of a useable attachment to a network is impacted by the ambiguous indicators of network attachment in certain 802 MACs. Thus there is a need to develop a standard that allows a mobile terminal to optimize detection of a useable attachment to a network above the LLC.
  - #2 The information necessary to make effective handoff decisions is lacking in part because the 802 networks provide insufficient information to the upper layers. Thus there is a need to develop a standard that permits information exchange between mobile terminals and/or networks to enable mobile terminals and/or networks to make more effective handoff decisions.
  - #3 There is no standardized mechanism in 802 for information exchange between mobile terminals and network attachment points. This impacts the ability to make informed decisions to select between disparate network attachment points or to initiate handoffs between heterogeneous network types or between administrative domains within a single network type. Thus there is a need to develop a standard that permits mobile terminals and network attachment points to access information on which to base effective handoff decisions.

Draft Scope

- For the purposes of converging towards a consensus on purpose and scope, the group approved the following text as a working copy of the scope for discussion prior to the September interim

  "The scope of this project is to develop a standard that shall define mechanisms that may be adopted into implementations so that handoff of handoff-capable upper layer entities, e.g. MobileIP sessions, can be optimized between homogeneous or heterogeneous media types both wired and wireless, where handoff is not otherwise defined.
  Consideration will be made to ensure compatibility with the 802 architectural model.
  Consideration will be made to ensure that compatibility is maintained with 802 security mechanisms including 802.1x.
  Neither security algorithms nor security protocols shall be defined in the specification."

Draft Purpose

- For the purposes of converging towards a consensus on purpose and scope, the group approved the following text as a working copy of the purpose for discussion prior to the September interim

"The purpose of the project is to

a) facilitate the optimization of handoff between networks that may be of different media types both wired and wireless, where 802 level handoff is not otherwise defined

b) to make it possible for mobile devices to perform seamless handoff where the network environment supports it.

This will improve the user experience of mobile devices by improving the available network coverage through the support of multiple media types and preventing the interruption of upper layer sessions during handoff."

Placement

- The group unanimously approved recommending placing the work as a new working group
  - Co-location issues
  - No overlap between 802.1 membership and the ECSG attendees

Title

- '802 Handoff' considered an inadequate title for the work of the group
- Focus is on L2 optimization of a L3 handoff activity
- No title agreed, several proffered, some cheesy
- Will resolve before September interim

Feasibility

- Feasible solutions identified that serve to establish the feasibility of continuing with technical work:
  - Layer 2 Triggers, semantics and interface
    - Meets needs of mobile IP handoffs but are generally applicable
  - Handoff decision data
    - Data accessible to mobile stations to enable good and timely handoff decisions
      - May include authentication services required, QoS capabilities, upper layer services present, neighbor AP information, vendor proprietary etc.
      - Needs structure and interface
      - Possibly base air/wire conduit for this information on the 802.1x controlled/uncontrolled port mechanism
  - Network model
    - Includes mobile terminal/fixed net and mobile net/fixed terminal

Targets

- Develop and review full PAR submission documentation before next interim
- Approve final text for PAR & 5C text by end of September Interim
- Submit PAR & Coverletters, Recommendations etc. shortly after September interim
- Develop overview document of the work done to date and the current technical thinking within the group for the purpose of exposing the work of the group to a wider audience (DJ)

Continuation

- High expectation that we will be done at the next interim
  - With more meeting time this session we possibly could have been done now
  - We intend to achieve consensus through reflector discussions and approve at the September interim
- Request: Move that the Executive Committee approve that the 802 Handoff ECSG continue its work for one additional plenary cycle