End-to-end Extension for PCN Encoding

draft-menth-pcn-e2e-encoding-00

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Note

- This draft looks at problems that are out of scope of current charter but are important for possible evolution of PCN as they impact selection for encoding.

Baseline Encoding vs. End-to-end Extension for PCN Encoding

- **Issue**
  - Baseline encoding proposes the use of ECN field of the Voice-Admit DSCP for PCN only inside the PCN-domain and for ECN use outside the PCN-domain.
  - We propose that to be able to support end-to-end extension for PCN encoding, the ECN field of the DSCP that is used to mark PCN-traffic (possibly Voice-Admit DSCP) uses alternate ECN semantics.

Motivation for e2e PCN

- **Motivation**
  - Real-time applications like VoIP require QoS assurance end-to-end.
  - Define encoding method that can support possible evolution of PCN across multiple domains and end-to-end in controlled environments.
- **Idea**
  - ECN semantics (RFC 3168) do NOT apply to the Voice-Admit DSCP
  - Voice-Admit DSCP uses newly defined semantics for the ECN field possible as defined in draft-menth-pcn-psdm-encoding
  - RFC 4774 in Section 3.1 suggests the above as viable approach for defining alternate semantics for ECN field
  - No dropping is required of "11" market packets at the PCN-domain edges
  - No remarking of ECN field on egress from PCN domain
  - e2e PCN potentially used for rate adaptation, etc.

Request

- PCN WG as that an DSCP be assigned to which ECN semantics as defined in RFC 3168 do not apply.
  - Possible candidate could be the Voice-Admit DSCP.

    (draft-ietf-tsvwg-admitted-real-time-dscp)
  - At a later time, PCN WG could define new semantics that could be used for PCN and applied it to the new DSCP.
  - Comments!