draft-chairs-6lo-dispatch-iana-registry-01

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Background

- ITU-T G3-PLC reported their use of ESC bytes dispatch header space along with Mesh Header
  - Deployment of their use of ESC bytes
    - ESC byte Dispatch values 1-31 for command frames [No IANA assignments]
  - Thierry Lys – April, 2015

- Liaison Statement sent to ITU-T SG15
  - https://datatracker.ietf.org/liaison/1425/
  - During IETF 93, July 2015

Work Around

- Keep draft-chairs-6lo-iana format for complying with the ITU-T usage

- Use a different set of extension dispatch types to address other protocol needs
  - Example: draft-thubert-6lo-routing-dispatch-06

Updates in
draft-chairs-6lo-dispatch-iana-registry-01

- Define ESC Dispatch bytes for 6lowpan
  - Compatible with Liaison statement
  - Assign Dispatch types for G.9905 and G.9903

- Addressed Review comments from the WG

- Ready for WG Adoption after minor editorial updates in v-02

Usage of ESC bytes

- ## ESC EXT Type (EET)
  - ESC dispatch type values are orthogonal to other dispatch values
- ## Extended payloads must be predefined

0	1	2	3 ……
01 000000	ESC EXT Type	Extended Dispatch Payload	

ESC EXT Type Values	Description	Reference/Comment
0,255	Reserved for future use	This document
1 - 31	ITU-T use	ITUT-G.9903, ITU-T G.9905
32-254	Unassigned-Reserved for future IANA assignment	This document

WG Comments Addressed

- Several comments from WG members

Carsten Bormann, Ralph Droms, Thierry Lys, Cedric Lavenu, Pascal Thubert, James Woodyatt, Paul Duffy, Don Sturek, Michael Richardson, Xavier Vilajosana and Scott Mansfield

Plus

Extensive reviews from Jonathan Hui and Robert Cragie

More on Updates

- Handling unknown ESC EXT Types [Jonathan]
  - Drop packets when processing ESC EXT bytes
  - Router forwards [if the EET is not processed]

- Legacy Devices [Jonathan, Robert, Gabriel]
  - Legacy device
    - Devices prior to this specification
  - Assumption: They cannot process ESC bytes
    - Default behavior is to drop packet or ignore
  - Clarified behavior of handling unknown EET (This Doc)

- Clarify RFC 4944 errata [Robert C.] here
  - Added reference to RFC 4944 Errata for max dispatch value(63)

Updates (2)

- The problem sentence in 00 version on legacy behavior has been changed [section 3.1 in -01]

- Can we use NALP for defining ESC bytes for ITU-T?

  - No – NALP used for non-6lowpan packets

- The legacy node behavior has been clarified   [section 3.1 in -01]

- Add G.9905 reference in IANA request [Thiery]

- EET values 32-254 [Reserved for future IANA assignemnt]

- Provide Examples of ESC bytes use [Pascal]

  - Done in Sec 3.2

Dispatch	LOWPAN_IPHC	Payload	ESC	EET	ESC Payload

Proposals Not taken for

draft-chairs-6lo-iana

- Use ESC EXT type per Technology/Other SDO
  - Assign a block of numbers for SDO
  - Assign ESC EXT Types for each L2 technology

- Could not do in draft-chairs-6lo-iana document as they are incompatible with current ESC bytes intent and ITU-T code-space usage

Open Issues

- Sequence of ESC bytes in a packet [Jonathan, Robert, Carsten, Gabriel]
  - Multiple ESC EXT bytes MAY appear
  - A packet may start with ESC EXT dispatch byte
- Definition of Legacy implementation/nodes WRT this document
- Clarify Forwarding node behavior with ESC bytes
  - If processing ESC bytes
- Provide guidance on NALP usage [Michael R]
  - NALP is non-Lowpan packets. Is not it out-of-scope to define them ?
  - Shouldn't a 6lo node drop NALP packets upon receipt ?

Next Step

- Adoption for WG document?

Other Questions:

- Is WG interested in starting to define the 2nd Dispatch Extension Tag [DET] ?
  - 6loRH as a base?
  - Consider assigning some code-space for private use or per-technology use?