PCEP ASSOCIATION GROUP
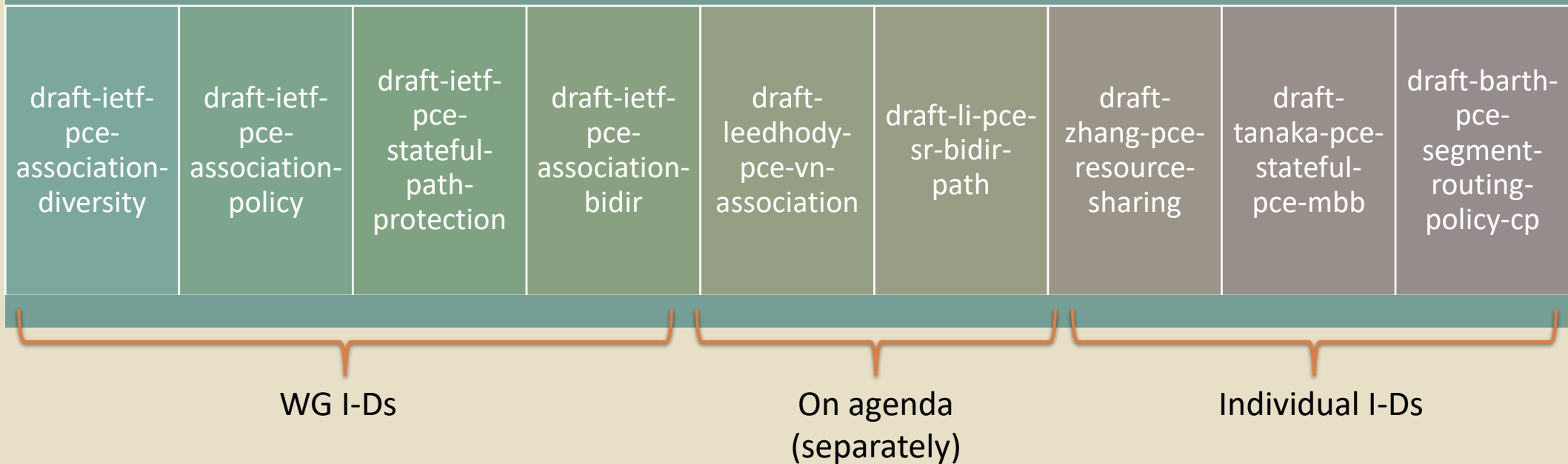
& the "associated" drafts!

Dhruv Dhody, Huawei

The Association Landscape…

draft-ietf-pce-association-group								
draft-ietf-pce-association-diversity	draft-ietf-pce-association-policy	draft-ietf-pce-stateful-path-protection	draft-ietf-pce-association-bidir	draft-leedhody-pce-vn-association	draft-li-pce-sr-bidir-path	draft-zhang-pce-resource-sharing	draft-tanaka-pce-stateful-pce-mbb	draft-barth-pce-segment-routing-policy-cp

WG I-Ds   On agenda (separately)   Individual I-Ds
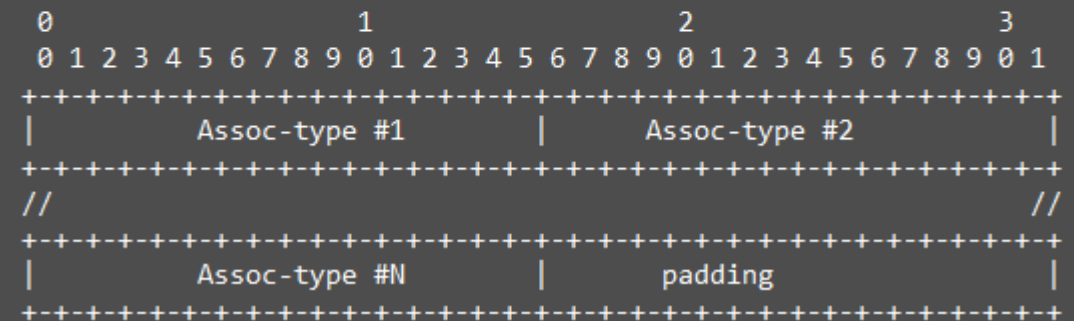
draft-ietf-pce-association-group-06

◦ Status: WG LC done

◦ Last update: One pending comment from Cyril to add "capability advertisement/discovery" for the associations is handled.

◦ Discovery of Supported Association Types

  ◦ A new PCEP ASSOC-Type-List (Association Types list) TLV is defined to be carried in OPEN.

  ◦ The use of ASSOC-Type-List TLV is OPTIONAL.

    ◦ Thus the absence of the ASSOC-Type-List TLV in an OPEN object MUST be interpreted as an absence of information on the list of supported association types (rather than the association-type is not supported).

  ◦ Association type can be marked as 'mandatory'

    ◦ A missing Assoc-type in the ASSOC-Type-List TLV (or missing ASSOC-Type-List TLV) is to be interpreted as the association type is not supported by the PCEP speaker.

```
The PCEP ASSOC-Type-List TLV has the following format:

  TYPE:    TBD
  LENGTH:  N * 2 (where N is the number of association types)
  VALUE:   list of 2-byte association type code points, identifying
           the association types supported by the sender of the Open
           message.

      0                   1                   2                   3
      0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
     |          Assoc-type #1         |         Assoc-type #2         |
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
     //                                                             //
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
     |          Assoc-type #N         |            padding            |
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

Ready for next step!

Now, any I-D that defines a new association type should…

> …specify if the association type advertisement is mandatory

- or not!

> …state if the association type is dynamic, operator-configured or both!

- Operator-configured Association Range needs to be set for 'both'!

Update to the WG I-Ds

draft-ietf-pce-association-diversity-04

- Capability advertisement (mandatory)
- Dynamic and Operator-Configured
  - Operator-configured Association Range must be set
- Other editorial changes…

draft-ietf-pce-association-policy-03

- Capability advertisement (mandatory)
- Operator-configured

Update to the WG I-Ds

draft-ietf-pce-stateful-path-protection-02

- Capability advertisement (optional)
- Dynamic
- PT field (protection type) – as per RFC 4872

draft-ietf-pce-association-bidir-01

- Update done by Rakesh based on the comments received during WG adoption
  - Figures and description added for single/double-sided initiation
  - Error handling!

```
The format of the Path Protection Association TLV (Figure 1) is as
follows:

 0                   1                   2                   3
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|        Type = TBD2         |            Length             |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|    PT     |       Path Protection Association Flags        |S|P|
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

```
PT (Protection Type 6 bits) Flags - Indicates the Protection Type
as per [RFC4872].  Following values are currently defined:

*  0x00: Unprotected

*  0x01: (Full) Rerouting

*  0x02: Rerouting without Extra-Traffic

*  0x04: 1:N Protection with Extra-Traffic

*  0x08: 1+1 Unidirectional Protection

*  0x10: 1+1 Bidirectional Protection
```

Others

draft-zhang-pce-resource-sharing-06

- No update

draft-tanaka-pce-stateful-pce-mbb-06

- Capability advertisement (mandatory)
- Dynamic
- Error Handling
- Editorial Changes

draft-barth-pce-segment-routing-policy-cp-00

- New I-D for associating various candidate SR path belonging to a SR-TE policy
- SR Candidate Path Association Group
  - with a TLV to identify SR-TE policy (Color, Destination end-point, Preference)

Next Step

- This is quite a useful feature..
    - Evident from the list of association types being specified…

- Let get the shepherd reviews done for association group and ship to the IESG
    - We could then decide the order for other association types!

THANKS!