Flag-based MPLS On Path Telemetry Network Actions
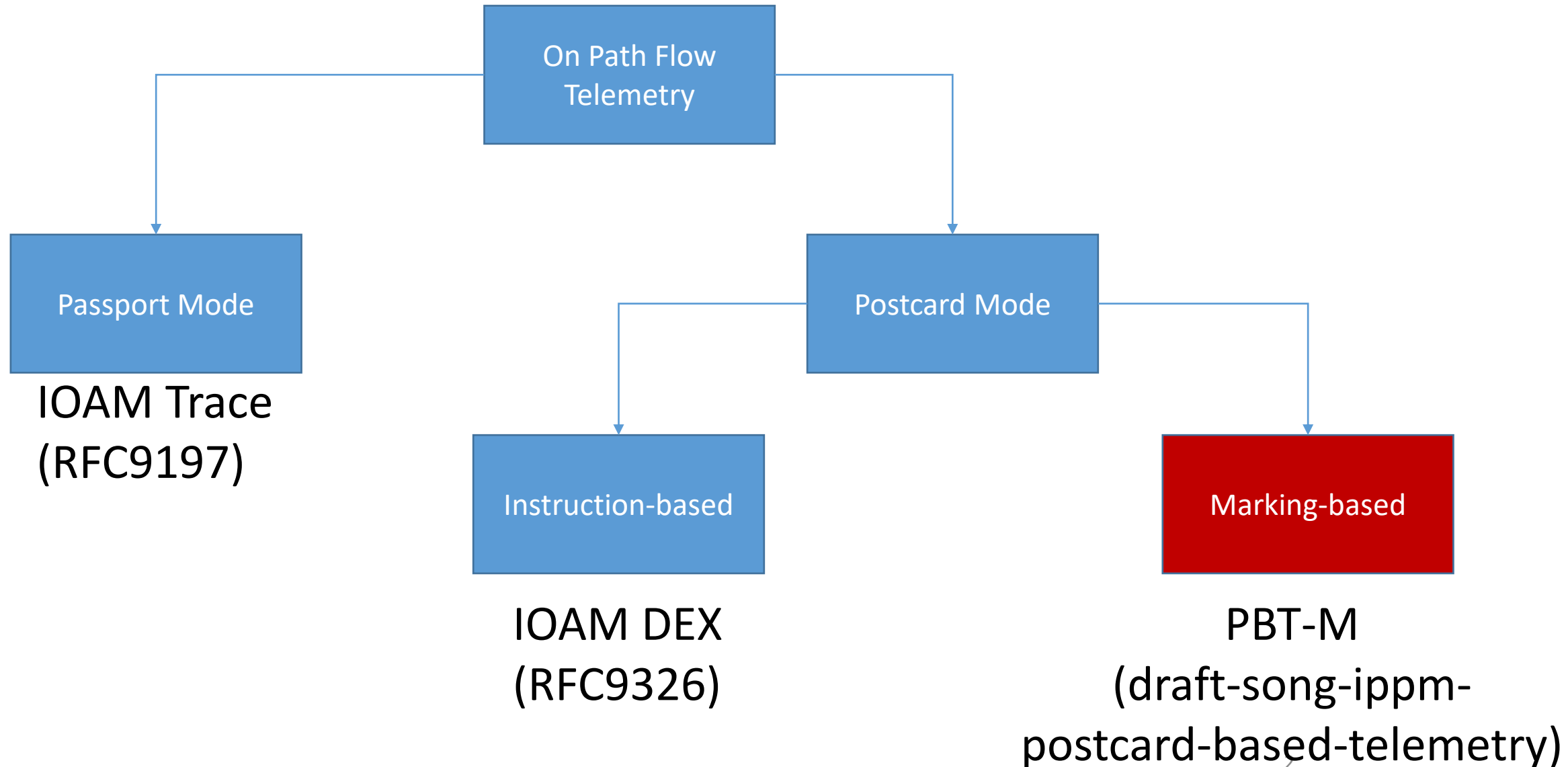
draft-song-mpls-flag-based-opt-01

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On-Path Telemetry Technologies

On-Path Performance Measurements

- RFC9341 Alternate-Marking Method
  - Using one or two bits with controlled pattern alternating to measure packet loss, delay, and jitter on live traffic
  - The method has been widely used in different types of networks (e.g., IPv6, SRv6, etc.)

MPLS MNA for LSP OAM

- Requirements
  - On-path per-node measurement for live traffic
  - Small overhead without bloating the label stack
- Proposal
  - Using flag-based actions as specified in [I-D.ietf-mpls-mna-hdr] to support PBT-M and AM
  - The scope of actions is carried in the IHS field for Ingress-To-Egress (I2E), Hop-By-Hop (HBH) or Select.

```
 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|      NASI=bSPL                            | TC  |S|    TTL        |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|NAI-Opcode=2  |P|AM |                      |0|IHS|S| Res |U| NASL   |
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```

Summary and Next Steps

- Provide two use cases for using MNA to support MPLS LSP OAM

- Complete the document with configuration, deployment, and security considerations

- Seek feedbacks and collaboration from the WG

- Request for WG adoption