Compact Alternate Marking

Tal Mizrahi Huawei Network.IO Innovation Lab
Carmi Arad
Giuseppe Fioccola Huawei Technologies
Mauro Cociglio Telecom Italia
Mach Chen Huawei Technologies
Lianshu Zheng Huawei Technologies
Greg Mirsky ZTE Corporation

draft-mizrahi-ippm-compact-alternate-marking-03
IETF 104, Prague, March 2019
Alternate Marking - Background

Monitor data traffic from MP 1 to MP 2

- Loss
- Delay
- Delay variation

MP = Measurement Point
Every data packet includes a color bit.
Traffic Flow

Color Bit: C =
Time

Timestamp Bit: T =

- Color indication.
- Timestamp indication.

Double Marking

MP 1

Traffic Flow: AAAAA BBBBB AAAAA BBBBB

Color Bit: C = 00000 11111 00000 11111

Timestamp Bit: T = 00100 00100 00100 00100

MP 2
Scope of the Current Draft

• New alternate marking methods with low overhead.
  – Single bit per packet.
  – Zero bits per packet.

• Summary of alternate marking methods.
Related Drafts

- draft-ietf-mpls-rfc6374-sfl
- draft-ietf-bier-pmmm-oam
- draft-fmm-nvo3-pm-alt-mark
- draft-mirsky-sfc-pmamm
- draft-fioccola-ippm-multipoint-alt-mark
- fioccola-v6ops-ipv6-alt-mark
- fear-ippm-mpdm
- draft-ietf-quic-spin-exp
- draft-trammell-quic-spin
- draft-trammell-ippm-spin
- draft-zhou-ippm-enhanced-alternate-marking

Most of these drafts may benefit from the methods and analysis of the current draft.
Summary and Next Steps

• Feedback: consider splitting the draft to two drafts:
  – New alternate marking methods with low overhead.
  – Summary of alternate marking methods.

• Comments will be welcome!