# DetNet

## Packet Ordering Function (POF)

draft-varga-detnet-pof

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DetNet WG

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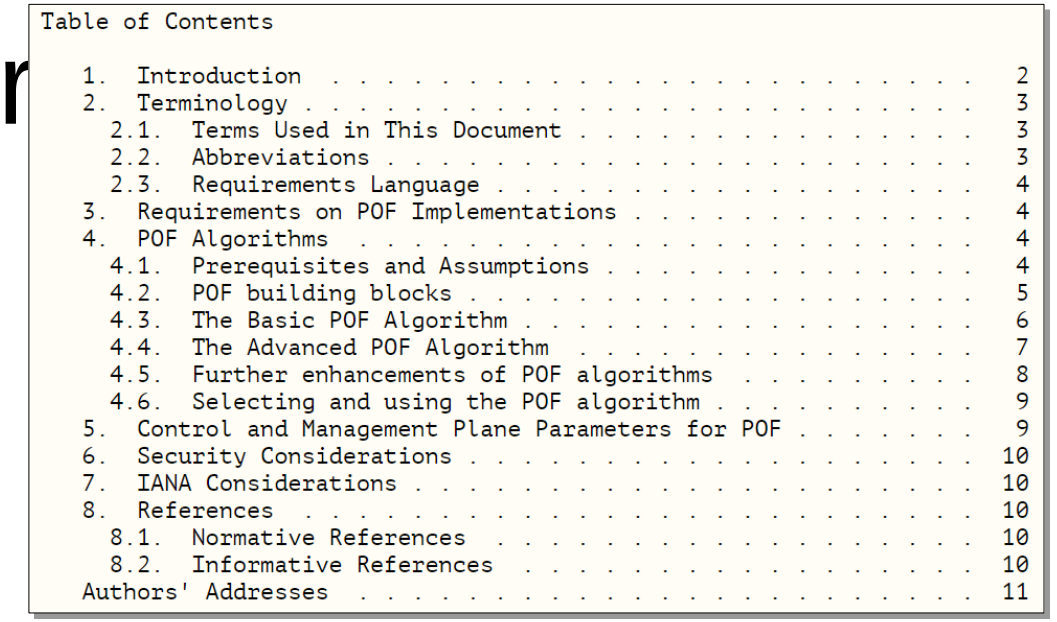
# DetNet Service sub-layer
## Packet Ordering Function (POF)



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- Intended status:
  - Informational
- Actual version:
  - draft-varga-detnet-pof-02

- Abstract:
  - Replication and Elimination functions of DetNet [RFC8655] may result in out-of-order packets, which may not be acceptable for some time-sensitive applications. The Packet Ordering Function (POF) algorithm described herein enables to restore the correct packet order when replication and elimination functions are used in DetNet networks.

# Clarification on DetNet POF

## draft-varga-detnet-pof

- Clarification on possible delay variation caused by POF
  - It is out-of-scope: to eliminate the delay variation caused by the packet ordering.
  - Dealing with delay variation is a DetNet forwarding sub-layer target and it can be achieved for example by placing a de-jitter buffer or flow regulator (e.g., shaping) function after the POF functionality.

  - DetNet functions are defined as building blocks to achieve a given target. Several of these building blocks may be needed to ensure the envisioned deterministic end2end characteristics, required by an application.

# Summary – Next Steps

- Discussion on the list:
  - Content is stable

- Next Steps
  - Asking for WG adoption

# Thanks …

# Two POF Algorithms Defined

## draft-varga-detnet-pof

- Basic algorithm
  - Max incremental packet delay: "POFMaxDelay" time.
  - In-order packets are not delayed.
  - Applicable to all scenarios where the delay budget of a flow allows "POFMaxDelay" time for ordering.
  - Management & Control: "POFMaxDelay“, "POFTakeAnyTime"
- Advanced algorithm adds the following extensions to the basic algorithm
  i. Identify the path of the received packet at the POF location
  ii. Path dependent "POFMaxDelay“: "POFMaxDelay_i", where "i" denotes the path.
  - Management & Control : "POFMaxDelay_i“, "POFTakeAnyTime“, path identification related configuration

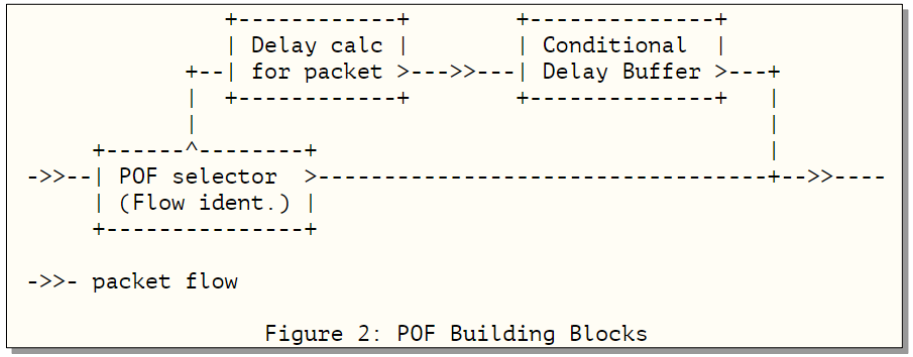


Figure 2: POF Building Blocks

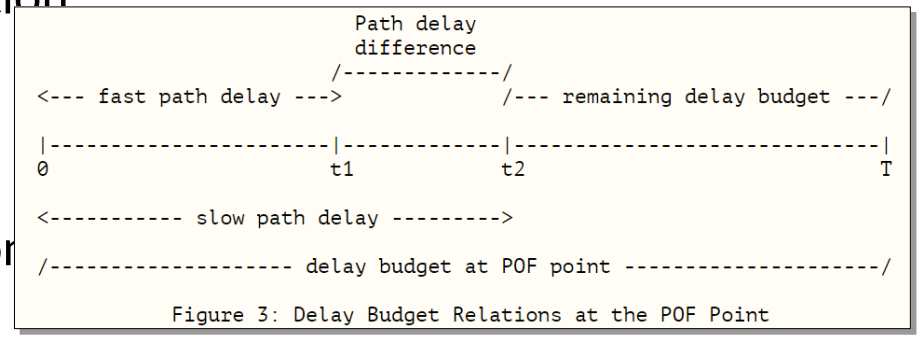


Figure 3: Delay Budget Relations at the POF Point