

A Vocabulary of Path Properties

draft-enghardt-panrg-path-properties

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Introduction

- This document addresses the first question in the questions draft
- We define properties of paths between two endpoints
- And classify them based on:
 - **Spatiality** (closeness to endpoints)
 - **Temporality** (usefulness over time)

Domain Properties

- Close & strongly influenced by endpoint
- First (few) hops of a path
- High amount of information
- E.g. Access Technology, Monetary Cost

Backbone Properties

- Far & less influenced by endpoint
- Likely to stay constant within the lifetime of a connection
- Change when the route changes
- E.g. MTU, Protocols/Features available, presence of certain devices/ASes

Dynamic Properties

- (Mostly) end-to-end
- Change frequently
- Measure at endpoint or on path
- Sample, aggregate, approximate
- Uni- or bidirectional

Dynamic Properties

- Available bandwidth
- Round Trip Time (RTT) and variation
- Packet Loss
- Congestion
- Wireless
 - Signal strength
 - Modulation rate
 - Channel utilization

Questions

- Anything missing?
- Categorization works?
- Representation?
 - Data types?
 - Units?
- Adoption?