Information Model for WSON Impairments Validation

draft-martinelli-ccamp-wson-iv-info-02

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v02: merging draft and new authors

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Definitions

- **Computational Model**:
  - Should be defined by ITU
  - Current status: only provide transfer functions and parameters, which can be potentially use to compute linear optical impairments
  - Non-linear still under standardization
- **Information Model**:
  - Refer to Control Plane: IETF
  - Represent only information to support the computational models

Sec 1.1 Applicability

- Added a specific section to help mutual understanding with ITU

- Support (existing: G.680) Linear Computational Model

- Clearly state that computed path may not work (support != solve)

- Does not preclude Non-Linear Computational Model => pretend to be *general* enough.

Sec. 4.1 The Impairment vector

- Provide Specific TERM Definition:

  <OIV> ::= ([<LabelSet>] <OPTICAL_PARAM>) …

- Define the wavelength Dependency.

- Define a generic way to add Optical Parameters:
  - The informational model is independent from the list of parameters
  - Can support 1 or multiple parameters; however the exact list is likely defined through ITU Liaison.

- Term used by the along the rest of the model.

The rest of the model

- Sec. 4.2 Node Information, the Impairment Matrix:

  ImpairmentMatrix ::= <MatrixID> <ConnType> ((<LinkSet> <LinkSet> <OIV>) …)

- Sec 4.2 Link Information (add on to existing WSON extention)

  <DynamicLinkInfo> ::= <LinkID> <AvailableLabels> [<SharedBackupLabels>] [<OIV>]

- Sec 4.3 Path Information
  - Just started the definition

Next Step

- ITU Liaison outcome
  - http://datatracker.ietf.org/liaison/1263/
- Model Refinement according to
  - ITU-T standard progress for computation model;
  - RFC6566 (WSON-IV Framework) use cases.
- Encoding will follow.
- When better shape, ask for WG adoption