

GMPLS OSPF-TE Extensions in support of Flexible-Grid in DWDM Networks

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draft-zhang-ccamp-flexible-grid-ospf-ext-04.txt

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Overview

- Describe the requirements for routing with flexi-grid
- Available Label Set Representation
 - Inclusive/Exclusive Label Range
 - Inclusive/Exclusive Label Lists
 - Bitmap
- Extensions to Port Label Constraint

Changes from 03.txt

- ISCD for Flexi-grid for DWDM Defined

Value	Type
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152 (TBA by IANA)	Flexi-Grid-LSC capable (DWDM-LSC)

Switching Capability and Encoding values MUST be used as follows:

Switching Capability = Flexi-Grid-LSC

Encoding Type = lambda [as defined in RFC3471]

- Implementation Status Update
 - Organization: CTTC
 - ADRENALINE testbed: <http://networks.cttc.es/experimental-testbeds/>
 - Experimental testbed implementation of GMPLS/PCE control plane
 - Support for the 64 bit label for flexi-grid as described in this document

Open Issues

- Shall we use “available label set”?
 - Term “label” may not be proper:
 - Routing protocol advertise (un)available resource;
 - Label represents resource allocated/to be allocated;
 - Propose other terms:
 - Available frequency resource?
 - Available frequency slot set?
- Is there too much variability for just a set of labels?
 - Inclusive/Exclusive Label Range
 - Inclusive/Exclusive Label Lists
 - Bitmap
 - Similar issue for encoding RSVP-TE LABEL_SET and ACCEPTABLE_LABEL_SET

Next Steps

- Comments?
 - Max width will be extended to 16 bits to cover the whole C-band (to be revised in next update)
- WG Adoption?