

# IEEE P802.3cw Optical Crosstalk Ad hoc Update

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IEEE P802.3ct / .3cw Joint Task Force Interim Meeting

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# Introduction

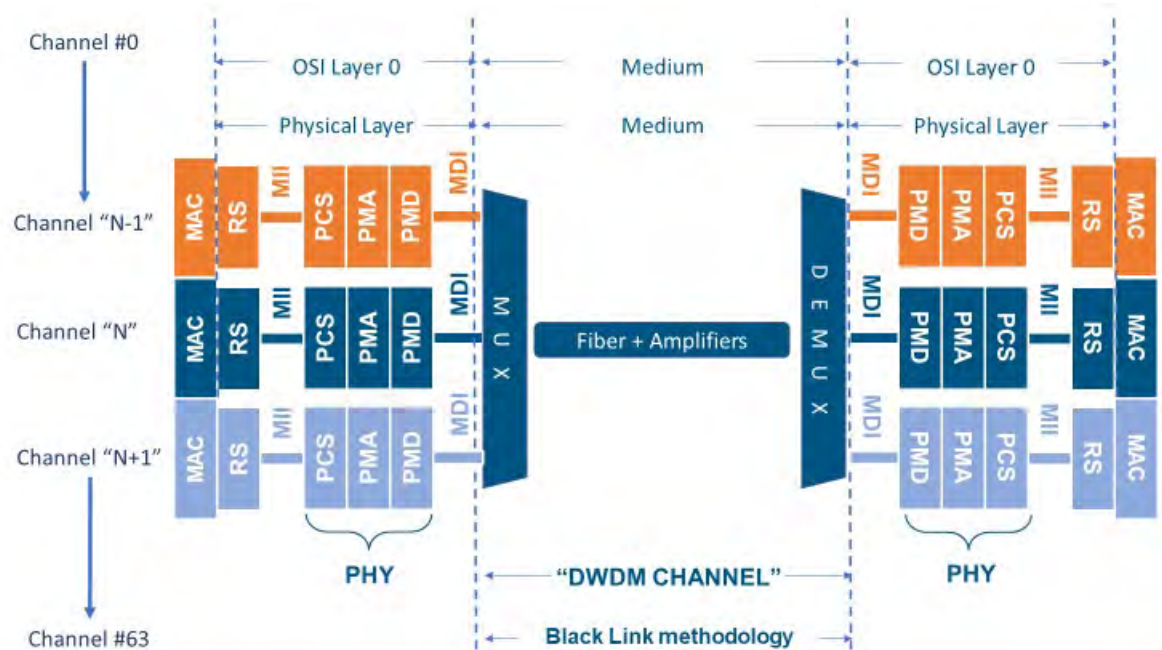
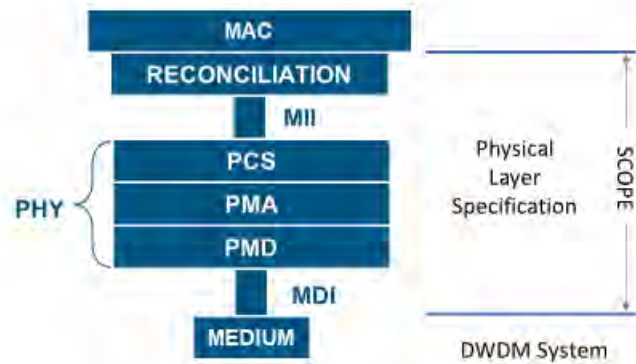
- 1<sup>st</sup> Charter - Bring a proposal on “ how to specify the black link to address optical crosstalk and definition of the mux/demux related parameters” to the Dec 14 joint TF teleconference.
- 2<sup>nd</sup> Charter –
  - Propose normative approach to specifying optical crosstalk at TP2 / TP3 for the Black Link Methodology
  - Identify additional informative annex (es)
  - Provide input on terminology related to specifying optical crosstalk where appropriate
- Optical Crosstalk Ad hoc has met 5 times (<https://www.ieee802.org/3/cw/public/adhoc/index.html>):
  - 12 Feb 2021
  - 01 Feb 2021
  - 21 Dec 2020
  - 09 Dec 2020
  - 02 Dec 2020
- Project Scope needed to be reviewed as part of this effort.
- Two “Approach” proposals emerged (referenced links below final presentations in support of each proposal)
  - Bo Zhang - [https://www.ieee802.org/3/cw/public/adhoc/21\\_0212/zhang\\_3cw\\_01\\_210212.pdf](https://www.ieee802.org/3/cw/public/adhoc/21_0212/zhang_3cw_01_210212.pdf)
  - Eric Maniloff - [https://www.ieee802.org/3/cw/public/adhoc/21\\_0212/maniloff\\_3cw\\_01\\_210212.pdf](https://www.ieee802.org/3/cw/public/adhoc/21_0212/maniloff_3cw_01_210212.pdf)

# Scope Discussion

[https://www.ieee802.org/3/cw/public/adhoc/20\\_1202/dambrosia\\_3cw\\_201202.pdf](https://www.ieee802.org/3/cw/public/adhoc/20_1202/dambrosia_3cw_201202.pdf)

## IEEE P802.3cw PAR Scope

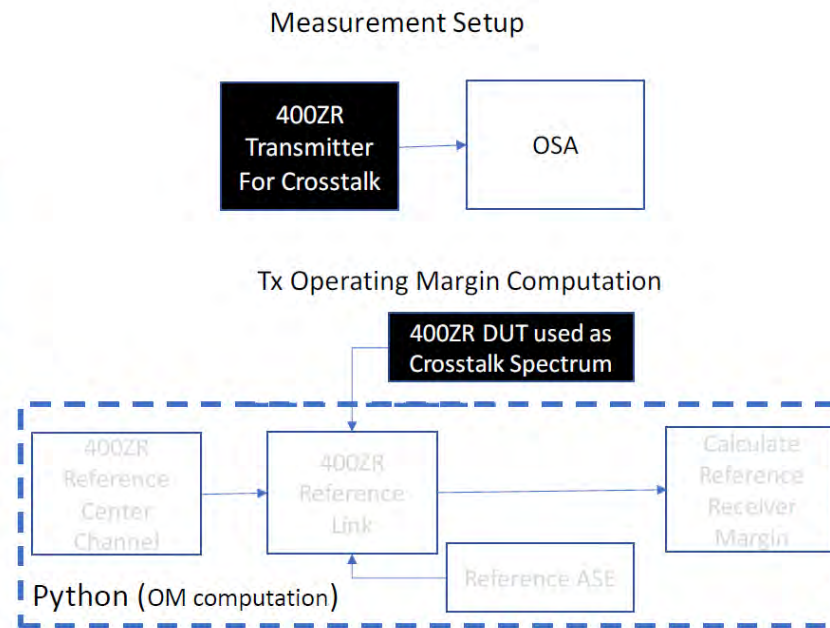
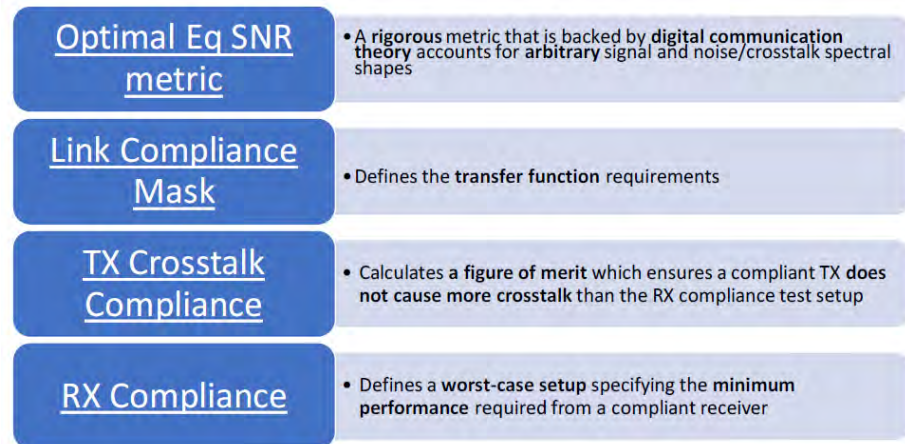
- Define physical layer specifications and management parameters for the transfer of Ethernet format frames at 400 Gb/s at reaches greater than 10 km over DWDM systems.



# Zhang Proposal Summary

## Earlier Proposed 75GHz Compliance Proposal

- See 2020 Nov Plenary P802.3cw contribution:  
[400GBASE-ZR 75GHz specification framework and compliance methodology proposal](#)



8

- Excerpt from [https://www.ieee802.org/3/cw/public/adhoc/21\\_0212/zhang\\_3cw\\_01\\_210212.pdf](https://www.ieee802.org/3/cw/public/adhoc/21_0212/zhang_3cw_01_210212.pdf)
- Updated with permission from Bo Zhang @ 12 Feb 2021 Ad hoc.

# Maniloff Proposal Summary

- See maniloff\_3cw\_01\_210215

# Ad hoc Discussion of two proposals

Aspect	Zhang	Maniloff
Tx	<ol style="list-style-type: none"> <li>1. No explicit spectral mask specification               <ol style="list-style-type: none"> <li>1. Ad hoc Disagreement – Some feel implicit in crosstalk additive noise specification</li> </ol> </li> <li>2. Specification based on operating margin through reference transmitter center channel with reference rx</li> <li>3. Uses Tx Power Deltas that have been adopted (need to review where they came from)               <ol style="list-style-type: none"> <li>1. Is this sufficient?</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Spectral mask</li> <li>2. Tx Power Deltas need to be specified               <ol style="list-style-type: none"> <li>1. Channel power variations are included in proposal (captured as part of black link transfer function)</li> </ol> </li> </ol>
Channel	agreement	
Rx	Receiver must be capable of meeting performance of reference receiver (stressed receiver text)	Rx must be designed to support worst case defined conditions @ TP3

# Strawpoll text

- I favor the optical crosstalk specification methodology approach proposed by
  - Zhang 1
  - Maniloff 11
  - Undecided 1