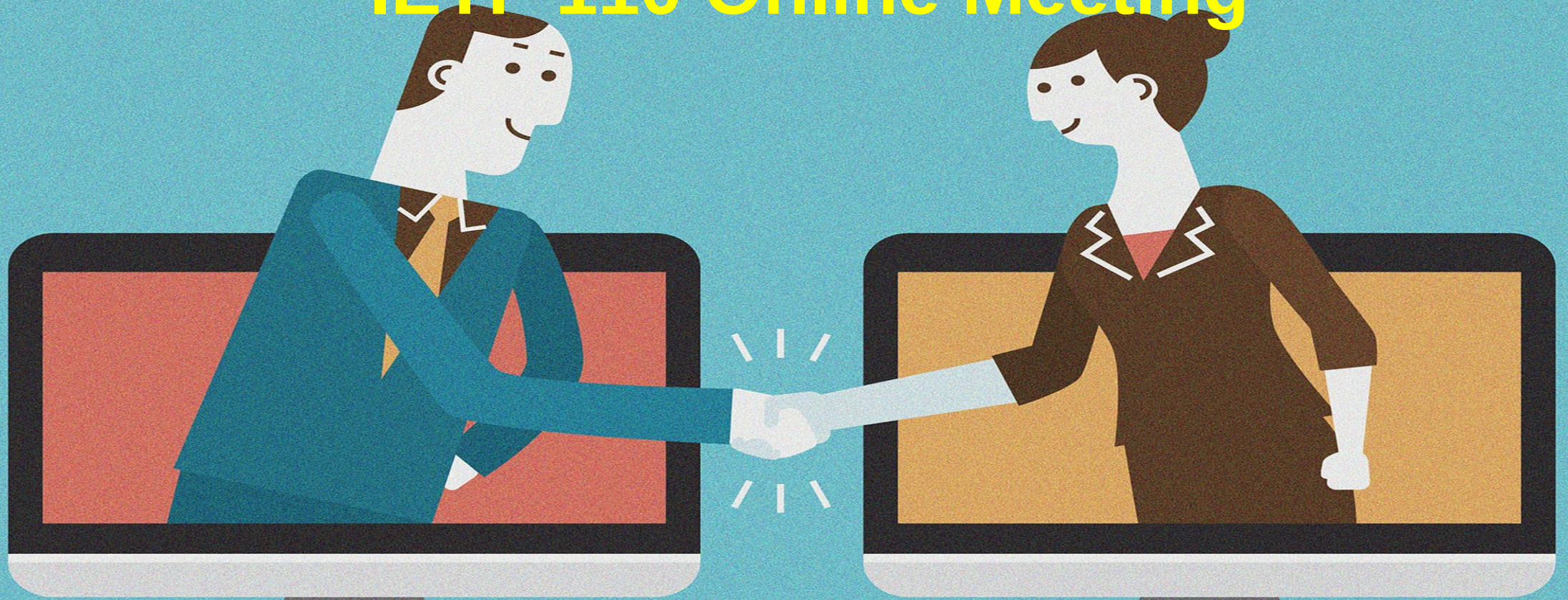


# IETF 110 Online Meeting



## CCAMP Working Group

Online Agenda and Slides at: <https://tools.ietf.org/wg/ccamp/agenda>

Data tracker: <http://datatracker.ietf.org/wg/ccamp/>

Tools page: <http://tools.ietf.org/wg/ccamp>



# Note Well

This is a reminder of IETF policies in effect on various topics such as patents or code of conduct. It is only meant to point you in the right direction. Exceptions may apply. The IETF's patent policy and the definition of an IETF "contribution" and "participation" are set forth in BCP 79; please read it carefully.

As a reminder:

- By participating in the IETF, you agree to follow IETF processes and policies.
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- As a participant in or attendee to any IETF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.
- Personal information that you provide to IETF will be handled in accordance with the IETF Privacy Statement.
- As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (<https://www.ietf.org/contact/ombudsteam/>) if you have questions or concerns about this.

Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

- BCP 9 (Internet Standards Process)
- BCP 25 (Working Group processes)
- BCP 25 (Anti-Harassment Procedures)
- BCP 54 (Code of Conduct)
- BCP 78 (Copyright)
- BCP 79 (Patents, Participation)
- <https://www.ietf.org/privacy-policy/> (Privacy Policy)



**I E T F**

# Session

- **Date:** 11<sup>th</sup> March 2021
- **Meeting Time:** 12:00 PM (UTC), Thursday
- **Duration:** 120 Minutes

- **Details:**

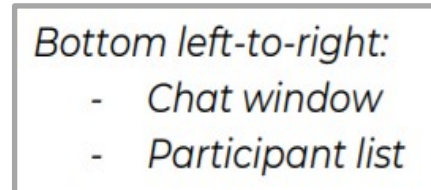
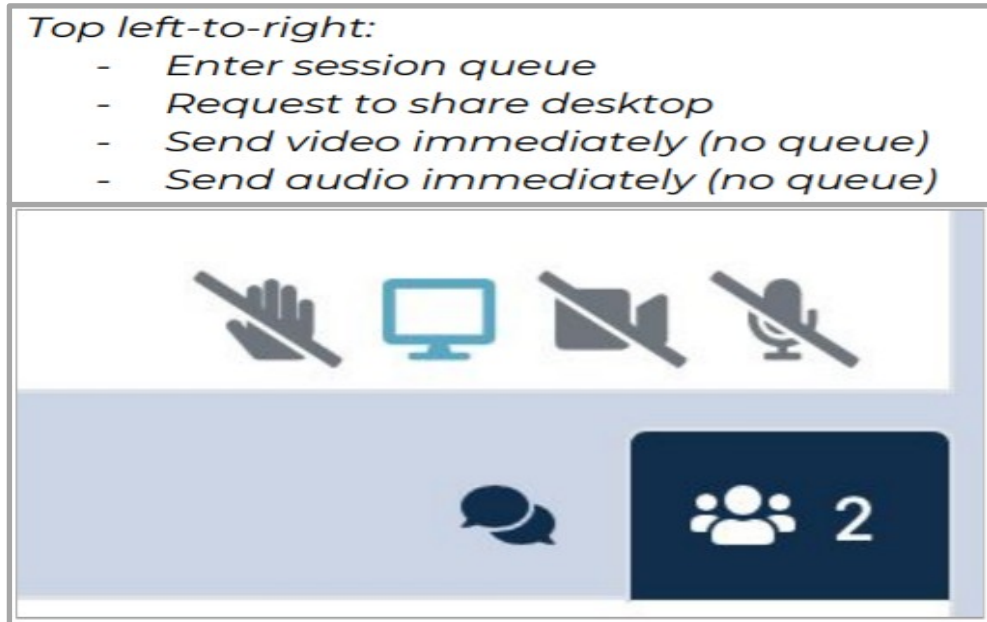
<https://datatracker.ietf.org/meeting/110/agenda/>

# Agenda

Presentation	Start Time	Duration	Information	
0	12:00	30	Title:	Administrivia - WG Status - Reporting on WG drafts not being presented - Milestones Update - Charter Update
1	12:30	15	Presenter:	Chairs
			Title:	A YANG Data Model for Optical Impairment-aware Topology
			Draft:	<a href="https://datatracker.ietf.org/doc/draft-ietf-ccamp-optical-impairment-topology-yang">https://datatracker.ietf.org/doc/draft-ietf-ccamp-optical-impairment-topology-yang</a>
			Presenter:	S.Belotti/D.Beller
2	12:45	10	Title:	A YANG Data Model for Layer 0 Types - Revision 2
			Draft:	<a href="https://datatracker.ietf.org/doc/draft-esdih-ccamp-layer0-types-ext/">https://datatracker.ietf.org/doc/draft-esdih-ccamp-layer0-types-ext/</a>
			Presenter:	S.Belotti/D.Beller
3	12:55	10	Title:	A YANG Data Model for Flexi-Grid Optical Networks
			Draft:	<a href="https://datatracker.ietf.org/doc/draft-ietf-ccamp-flexigrid-yang/">https://datatracker.ietf.org/doc/draft-ietf-ccamp-flexigrid-yang/</a>
			Title:	A YANG Data Model for Flexi-Grid Media Channels
			Draft:	<a href="https://datatracker.ietf.org/doc/draft-ietf-ccamp-flexigrid-media-channel-yang-03">https://datatracker.ietf.org/doc/draft-ietf-ccamp-flexigrid-media-channel-yang-03</a>
			Presenter:	Daniel King
4	13:05	15	Title:	Update on OTN Models
			Draft:	<a href="https://datatracker.ietf.org/doc/draft-ietf-ccamp-layer1-types/">https://datatracker.ietf.org/doc/draft-ietf-ccamp-layer1-types/</a> <a href="https://datatracker.ietf.org/doc/draft-ietf-ccamp-otn-topo-yang">https://datatracker.ietf.org/doc/draft-ietf-ccamp-otn-topo-yang</a> <a href="https://datatracker.ietf.org/doc/draft-ietf-ccamp-otn-tunnel-model/">https://datatracker.ietf.org/doc/draft-ietf-ccamp-otn-tunnel-model/</a>
			Presenter:	Haomian Zheng
5	13:20	10	Title:	Update on L1CSM
			Draft:	<a href="https://datatracker.ietf.org/doc/draft-ietf-ccamp-l1csm-yang">https://datatracker.ietf.org/doc/draft-ietf-ccamp-l1csm-yang</a>
			Presenter:	Italo Busi
6	13:30	15	Title:	OTN Slicing Draft
			Draft:	<a href="https://datatracker.ietf.org/doc/draft-zheng-ccamp-yang-otn-slicing">https://datatracker.ietf.org/doc/draft-zheng-ccamp-yang-otn-slicing</a>
			Presenter:	Aihua Guo
Adjourn	13:45			

# Administrative

- Meetecho
  - <https://gce.conf.meetecho.com/conference/?group=ccamp>
- Meetecho documentation:
  - <https://www.ietf.org/media/documents/IETF110-Meetecho-Documentation.pdf>
- Participant view of controls and tabs



# Administrative

- Minute takers
  - <https://codimd.ietf.org/notes-ietf-110-ccamp>
  - Anyone taking the minutes would be much appreciated.
- Bluesheets
  - will be automatically generated based on your datatracker information so there is no need to do anything further after you've authenticated with the IETF Datatracker to join the session.

# Reminder: IPR Process

- Polling of draft authors & contributors
  - Prior to moving to next step in WG process
    - e.g., before an individual draft becomes a WG document or a WG document goes to last call
  - Requires IPR compliance statement from ***all*** listed in draft

# Reminder - Utilizing Mailing List

- We strongly encourage the mailing list to be more actively used for all Working Group discussions
  - Open issues
  - Introducing new drafts
  - Potential new Working Group topics
- Reminder – Working Group Consensus is determined on the mailing list
- Future meeting time will be scheduled relative to mailing list discussion



# CCAMP Working Group Status

## Chairs:

Daniele Ceccarelli <[daniele.ceccarelli@ericsson.com](mailto:daniele.ceccarelli@ericsson.com)>

Fatai Zhang <[zhangfatai@huawei.com](mailto:zhangfatai@huawei.com)>

## Secretary:

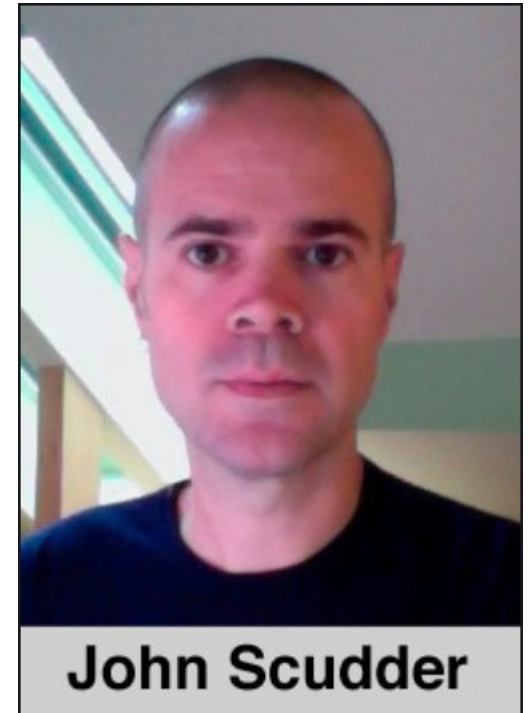
Oscar Gonzalez de Dios

<[oscar.gonzalezdedios@telefonica.com](mailto:oscar.gonzalezdedios@telefonica.com)>

## Responsible AD:

Deborah Brungard [db3546@att.com](mailto:db3546@att.com)

John Scudder [jgs@juniper.net](mailto:jgs@juniper.net)



# Document Status – RFCs

- Recent RFCs:

- None

- RFC Editor's Queue:

- [draft-ietf-ccamp-layer0-types](#)

- [draft-ietf-ccamp-wson-yang](#)

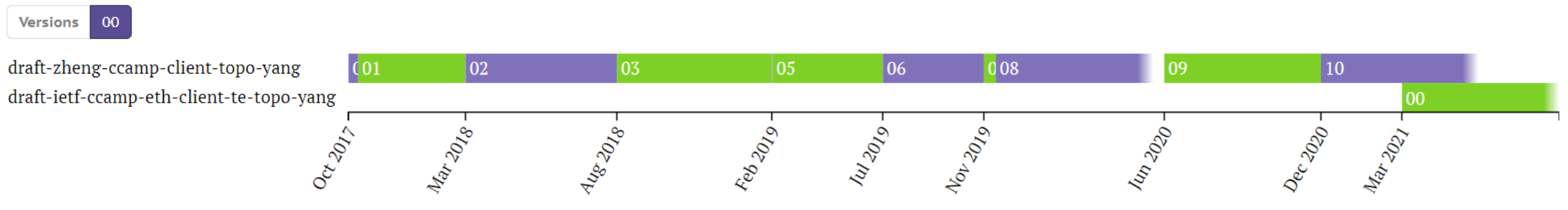
Draft parked while waiting on YANG prefixed alignment

- IESG processing

- None

# Document Status – WG Drafts

- Expired and waiting for the authors
  - [draft-ietf-ccamp-wson-tunnel-model](#)
- New WG draft:
  - [draft-ietf-ccamp-eth-client-te-topo-yang-00](#)



# Document Status – WG Drafts on Agenda

- [draft-ietf-ccamp-optical-impairment-topology-yang](#)
- [draft-ietf-ccamp-flexigrid-yang](#)  
Awaiting YANG doctor review
- [draft-ietf-ccamp-flexigrid-media-channel-yang-03](#)
- [draft-ietf-ccamp-layer1-types](#)
- [draft-ietf-ccamp-otn-topo-yang](#)
- [draft-ietf-ccamp-otn-tunnel-model](#)
- [draft-ietf-ccamp-l1csm-yang](#)



# Document Status – WG Drafts Not on Agenda

- Nothing changed since the last virtual interim meeting
  - [draft-ietf-ccamp-dwdm-if-imp](#)
  - [draft-ietf-ccamp-dwdm-if-param-yang](#)
  - [draft-ietf-ccamp-gmpls-otn-b100g-applicability](#)
    - Stable and no dependency on other documents/models. Second in line for WGLC
  - [draft-ietf-ccamp-transport-nbi-app-statement](#)
    - IPR polling concluded. WG last call to be issued after IETF week
  - [draft-ietf-ccamp-wson-iv-info](#)

# Document Status – WG Drafts Not on Agenda

- [draft-ietf-ccamp-client-signal-yang](#)
  - Updated to -04 on Jan 13<sup>th</sup>, to add state information in modules;
  - Next step: work on more underlying technology entries, and proceed for WG LC after done.

# YANG doctor reviews

Draft	V.Revd	CurV	When	Deadline
L1 types	3	10	12/2019	
Flexigrid YANG	8	9	Ongoing	2021/02/22
L1CSM	7	14	08/2018	
OTN topology	11	12	10/2020	
OTN tunnel	11	12	10/2020	
WSO				
WSO tunnel				
<b>WSO topology</b>				<b>Editor queue</b>

# Liaisons and Communications

- From ITU-T SG15
  - Title: LS on OTNT Standardization Work Plan Issue 28
  - Submission Date: 2020-10-05
  - URL of the IETF Web page: <https://datatracker.ietf.org/liaison/1698/>
  - Action is needed for a joint effort from ccamp, mpls, pals, pce, teas
  
- **Please review incoming documents and comment on [ccamp@ietf.org](mailto:ccamp@ietf.org)**



# Topics to be discussed

- Milestones
- Charter
- YANG prefixes alignment

# Milestones - current one

## Goals and Milestones:

- Feb 2015 - Submit OTN signal types update and sub registry drafts to IESG for review
- Apr 2015 - Submit flexi grid framework to IESG for review
- Apr 2015 - First draft of G.698.2 LMP and MIBs working group draft
- Jun 2015 - First draft of technology specific version of signaling and routing bandwidth availability working group draft.
- Jun 2015 - First draft of Information Encoding for WSON with Impairments Validation working group draft
- Jul 2015 - First version of YANG modelling for flexi grid Working Group draft
- Sep 2015 - Submit flexi grid label, signaling and routing extensions to IESG for review
- Oct 2015 - Submit flexi grid LMP to IESG for review
- Nov 2015 - First versions of impairments related solutions Working Group drafts
- Dec 2015 - Submit Info Model for WSON with impairments validation to IESG for review
- Feb 2016 - Submit G.698.2 LMP and MIBs drafts to IESG for review
- Mar 2016 - Submit technology specific version of signaling and routing bandwidth availability draft to IESG for review
- May 2016 - Submit Information Encoding for WSON with Impairments Validation draft to IESG for review
- May 2016 - Submit YANG modelling for flexi grid draft to IESG for review
- Jul 2016 - Recharter or close Working Group
- Jul 2016 - Submit impairments related solutions for IESG review

All done or deleted

# New Milestones for discussion

## Submit to IESG

### Goals and Milestones:

- Mar 2021 – First version of YANG model of Ethernet Topology Working Group drafts
- Mar 2021 – Submit T-NBI model applicability to IESG for review
- Jun 2021 – First version of YANG model of Ethernet Tunnel Working Group drafts
- Jun 2021 – Submit YANG model of Layer 1 Types to IESG for review
- Jun 2021 – Submit YANG model of OTN topology & Flexi-grid topology to IESG for review
- Sept 2021 – Submit L1CSM YANG model to IESG for review
- Sept 2021 – Submit applicability of gmpls to OTN beyond 100G to IETF for review
- Dec 2021 – Submit WSON IV info to IESG for review
- Dec 2021 – Submit WSON tunnel YANG model to IESG for review
- Dec 2021 – Submit OTN tunnel model to IESG for review
- Dec 2021 – Submit YANG model of Flexi-grid media channel to IESG for review;
- Mar 2022 - Submit client signal YANG model to IESG for review
- Mar 2022 - Submit DWDM interface LMP and YANG to IESG for review
- Jun 2022 – Submit YANG model of WSON Impairment Topology YANG model to IESG for review;
- Sept 2022 – Submit Interface YANG model to IESG for review

# New Milestones for discussion

## WG adoption

### Goals and Milestones:

- First version of YANG model of Ethernet Tunnel Working Group drafts
- First version of flexigrid LMP extensions working group draft ?
- First version of client signal performance monitoring YANG model working group draft
- First version of client topology YANG model working group draft
- First version of client tunnel YANG model working group draft
- First version of OTN network slicing working group draft



# Charter update (1/2)

The CCAMP working group is responsible for standardizing a common control plane and a separate common measurement plane for non-packet technologies found in the Internet and in the networks of telecom service providers (ISPs and SPs). Examples of the devices in such networks include photonic cross-connects, OEO switches, ROADMs, TDM switches, microwave links, and Ethernet switches.

In this context, measurement refers to the acquisition and distribution of attributes relevant to the setting up of tunnels and paths.

The working group develops extensions to core Traffic Engineering protocols that are under the care of other working groups **as well as YANG models for the control and management of non-packet networks (this includes both device models and network models)**. The CCAMP working group will coordinate with the TEAS working group to ensure that extensions that can be generalized for use with more than one technology are made appropriately, and with the working groups that have responsibility for the specific protocols.

# Charter update (2/2)

CCAMP WG work scope includes:

- Definition of protocol-independent metrics and parameters (measurement attributes) for describing links and paths that are required for routing and signaling in technology-specific networks. These will be developed in conjunction with requests and requirements from other WGs to ensure overall usefulness.
- Maintenance and extension of the Link Management Protocol (LMP)
- Functional specification of extensions for GMPLS-related routing (OSPF, ISIS) and signaling (RSVP-TE) protocols required for path establishment and maintenance in non-packet, technology-specific networks. Protocol formats and procedures that embody these extensions will be done jointly with the WGs supervising those protocols and the TEAS working group has the responsibility to determine whether such protocol extensions should be generalized for Traffic Engineering in any network. This may include protocol work to support data planes that have already been approved by another Standards Development Organization. Note that the specification or modification of data planes is out of scope of this working group.
- Definition of management objects (e.g., as part of MIB modules or YANG models) and control of OAM techniques relevant to the protocols and extensions specified within the WG. ~~The OAM work will be synchronized with the LIME WG~~
- Describe non-packet-specific aspects of traffic engineering including for multi-areas/multi-AS/multi-layer scenarios and define protocol extensions in cooperation with the TEAS and PCE working groups.
- Define how the properties of network resources gathered by a measurement protocol (or by other means such as configuration) can be distributed in existing routing protocols, such as OSPF, IS-IS, and BGP-LS. CCAMP will work with the WGs that supervise these.

The CCAMP WG currently works on the following tasks:

- Protocol extensions **and YANG models** in support of **optical networks (e.g. WSON, flexi grid) with and without awareness of the optical impairments.**

~~–Protocol extensions in support of flexible grid lambda networks.~~

- **Protocol extensions and YANG models in support of TDM networks (e.g. OTN).**
- **YANG models in support of microwave networks.**
- **YANG models in support of L1 services**
- **Client TE topologies**
- Maintenance of existing protocol extensions for non-packet technology-specific networks (Ethernet, TDM, OTN) already specified by CCAMP.
- Maintenance of LMP.

# YANG prefixes alignment

- wson-topo vs wsont
- wsont:
  - aligned with tet and nt prefix convention used in RFC8795 and RFC8345.
  - TEAS preference.
- wson-topo:
  - Potentially aligned with wson-tunnel or wson-tnl prefix conventions
  - More self explanatory
- draft-ietf-ccamp-layer0-types and draft-ietf-ccamp-wson-yang waiting in AUTH state.

**THANK  
YOU!**