

Glenn Parsons, Chair, ITU-T SG15



GLENN PARSONS is an internationally known expert in mobile transport and Ethernet technology. He is a principal standards advisor with Ericsson Canada, where he coordinates standards strategy and policy for Ericsson, including network architecture for 5G radio transport networks. Previously, he has held positions in development, product management and standards architecture in the ICT industry. Over the past number of years, he has held several management and editor positions in various standards activities including IETF, IEEE, and ITU-T. He is currently involved with 5G transport standardization in IEEE and ITU-T and is the chair of ITU-T SG15 as well as the working group chair of IEEE 802.1. In addition, he is a member of the IEEE Standards Association Board of Governors, and the chair of the Public Policy Committee for IEEE Canada. He graduated in 1992 with a B.Eng. degree in electrical engineering from Memorial University of Newfoundland.



ITU Workshop on “Future Optical Networks for IMT2030, AI, broadband and more”

Location: Arcs de Seine, Paris

Date: 12 June 2025

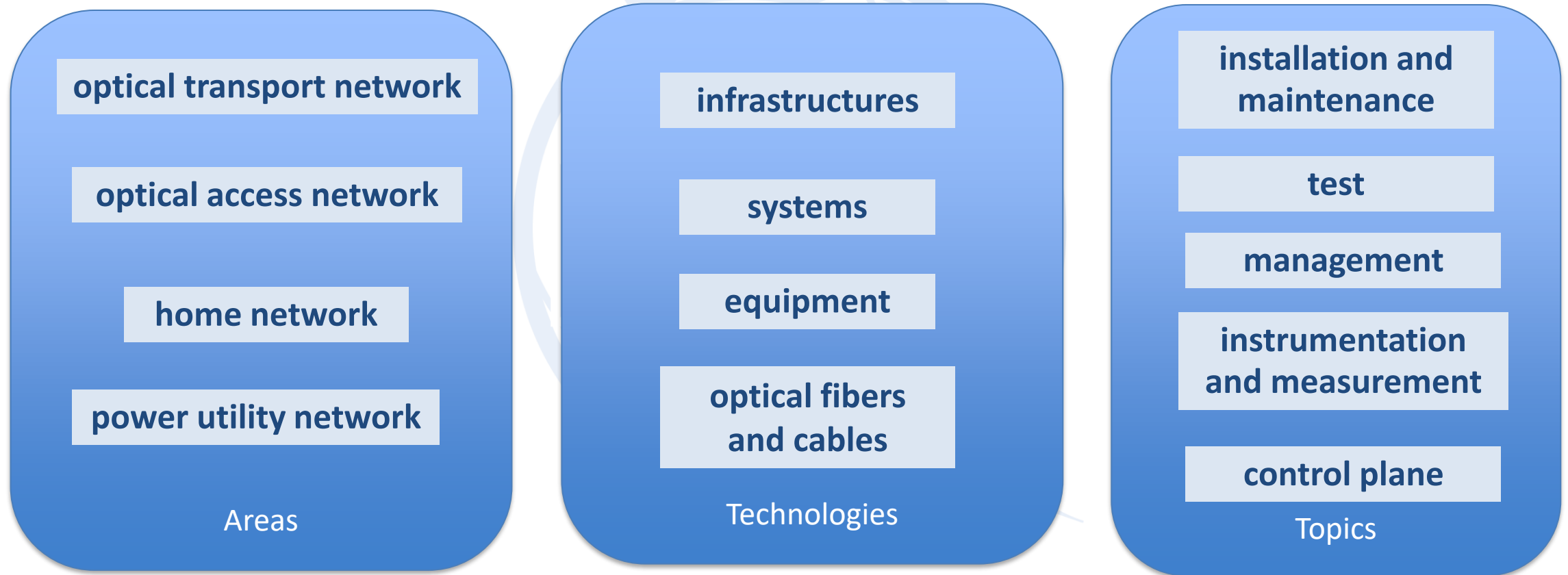
Introduction to ITU-T SG15

Glenn Parsons
Ericsson Canada



Responsibility of Study Group 15

The development of **standards** on:



to enable the evolution toward intelligent transport networks ...

ITU-T SG15 management team (2025-2028)



- Vice Chairs

- Mohamed Amine BENZIANE
- Sudipta BHAUMIK
- Taesik CHEUNG
- Adel HLILOU
- Thomas HUBER
- Umarbek IZBASAROV
- Marcel KEBRE
- Stephen SHEW
- Fatai ZHANG

- WP1/15

- Ian HORSLEY
- Frank VAN der PUTEN

- WP2/15

- Paul DOOLAN
- Sudipta BHAUMIK

- WP3/15

- Tom HUBER
- Silvana RODRIGUES

- Promotion and Coordination

- Taesik CHEUNG
- Vince FERRETTI

- TSB counsellors

- Hiroshi OTA
- Hiyato FUKUZONO



Questions and Working Parties of SG15

	Question Number	Question title
WP1	2/15	Optical systems for fibre access networks
	3/15	Technologies for in-premises networking and related access applications
	4/15	Broadband access over metallic conductors
WP2	5/15	Characteristics and test methods of optical fibres and cables, and installation guidance
	6/15	Characteristics of optical components, subsystems and systems for optical transport networks
	7/15	Connectivity, Operation and Maintenance of optical physical infrastructures
	8/15	Characteristics of optical fibre submarine cable systems
WP3	10/15	Interfaces, interworking, OAM, protection and equipment specifications for packet-based transport networks
	11/15	Signal structures, interfaces, equipment functions, protection and interworking for optical transport networks
	12/15	Transport network architectures
	13/15	Network synchronization and time distribution performance
	14/15	Management and control of transport systems and equipment

WP: Working Party



ITU-T SG 15 deliverables

• Work products:

- Recommendations
- Supplements
- Technical papers and reports
- Flyers

• Recommendation series

- + G.600-G.699: Transmission media and optical systems characteristics
- + G.700-G.799: Digital terminal equipments
- + G.800-G.899: Digital networks
- + G.900-G.999: Digital sections and digital line system
- + G.7000-G.7999: Data over Transport – Generic aspects
- + G.8000-G.8999: Packet over Transport aspects
- + G.9000-G.9999: Access networks
- + G supplements: Supplements to ITU-T G-series Recommendations

+ L.100-L.199: Optical fibre cables

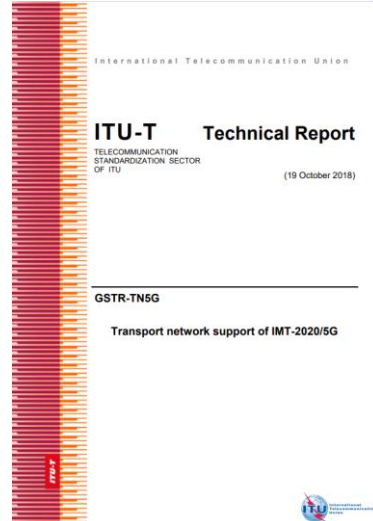
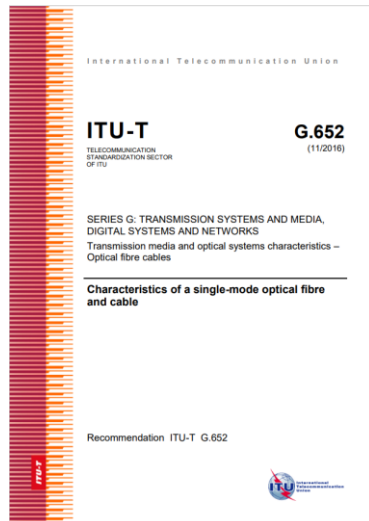
+ L.200-L.299: Optical infrastructures

+ L.300-L.399: Maintenance and operation

+ L.400-L.429: Passive optical devices

+ L.430-L.449: Marineized terrestrial cables

+ L supplements: Supplements to ITU-T L-series Recommendations



ITU-T Study Group 15

Overview ITU-T Passive Optical Network Solutions

1 Gbit/s per channel	2.5 Gbit/s per channel	10 Gbit/s per channel	25 Gbit/s per channel	50 Gbit/s per channel
Splitter-based ODN Single-channel TDMA systems				
G-PON G.884.x series	NG-PON (NG-PON1) G.987.x series	NG-PON (NG-PON1) G.987.x series	NG-PON (NG-PON1) G.987.x series	NG-PON (NG-PON1) G.987.x series
Splitter-based ODN Multi-channel TWDM systems				
NG-PON2 G.988.x series				
Splitter-based ODN Multi-channel WDM Overlay				
NG-PON2 G.988.x series	NG-PON2 G.988.x series	NG-PON2 G.988.x series	NG-PON2 G.988.x series	NG-PON2 G.988.x series
Wavelength multiplexed ODN with logical point-to-point connections (a.k.a. WDM-PON)				
250G-WDM-PON G.9892.x series				

1. ITU-T G.884.x series – Gigabit-capable passive optical networks (GPON)

Both symmetrical and asymmetrical nominal line rates of 1.24 Gbit/s in the downstream direction and 1.0 Gbit/s in the upstream direction.

2. ITU-T G.987.x series – 10-Gigabit-capable passive optical networks (XG-PON)

Asymmetrical nominal line rates of 10 Gbit/s in the downstream direction and 2.5 Gbit/s in the upstream direction.

3. ITU-T G.988.x series – 10-Gigabit-capable symmetric passive optical networks (XGS-PON)

Symmetrical nominal line rates of 10 Gbit/s in both the downstream and upstream directions.

4.1. ITU-T G.988.x series – 40-Gigabit-capable symmetric passive optical networks (40G-PON)

Symmetrical nominal line rates of 40 Gbit/s in both the downstream and upstream directions.

4.2. ITU-T G.988.x series – 40-Gigabit-capable symmetric passive optical networks (40G-PON)

Symmetrical nominal line rates of 40 Gbit/s in both the downstream and upstream directions.

Line rate class 1 from 1.2386 Gbit/s to 1.25 Gbit/s

Line rate class 2 from 2.4576 Gbit/s to 2.48 Gbit/s

Line rate class 3 from 4.9152 Gbit/s to 5 Gbit/s

Line rate class 4 from 9.8304 Gbit/s to 10 Gbit/s

Line rate class 5 from 19.6608 Gbit/s to 20 Gbit/s

Line rate class 6 from 39.3216 Gbit/s to 40 Gbit/s

Line rate class 7 from 78.6432 Gbit/s to 80 Gbit/s

Line rate class 8 from 157.2864 Gbit/s to 160 Gbit/s

Line rate class 9 from 314.5728 Gbit/s to 320 Gbit/s

Line rate class 10 from 629.1456 Gbit/s to 640 Gbit/s

Line rate class 11 from 1258.2912 Gbit/s to 1280 Gbit/s

Line rate class 12 from 2516.5824 Gbit/s to 2560 Gbit/s

Line rate class 13 from 5033.1648 Gbit/s to 5120 Gbit/s

Line rate class 14 from 10066.3296 Gbit/s to 10240 Gbit/s

Line rate class 15 from 20132.6592 Gbit/s to 20480 Gbit/s

Line rate class 16 from 40265.3184 Gbit/s to 40960 Gbit/s

Line rate class 17 from 80530.6368 Gbit/s to 81920 Gbit/s

Line rate class 18 from 161061.2736 Gbit/s to 163840 Gbit/s

Line rate class 19 from 322122.5472 Gbit/s to 327680 Gbit/s

Line rate class 20 from 644245.0944 Gbit/s to 655360 Gbit/s

Line rate class 21 from 1288490.1888 Gbit/s to 1310720 Gbit/s

Line rate class 22 from 2576980.3776 Gbit/s to 2621440 Gbit/s

Line rate class 23 from 5153960.7552 Gbit/s to 5242880 Gbit/s

Line rate class 24 from 10307921.5104 Gbit/s to 10485760 Gbit/s

Line rate class 25 from 20615843.0208 Gbit/s to 20971520 Gbit/s

Line rate class 26 from 41231686.0416 Gbit/s to 41943040 Gbit/s

Line rate class 27 from 82463372.0832 Gbit/s to 83886080 Gbit/s

Line rate class 28 from 164926744.1664 Gbit/s to 167772160 Gbit/s

Line rate class 29 from 329853488.3328 Gbit/s to 335544320 Gbit/s

Line rate class 30 from 659706976.6656 Gbit/s to 671088640 Gbit/s

Line rate class 31 from 1319413953.3312 Gbit/s to 1342177280 Gbit/s

Line rate class 32 from 2638827906.6624 Gbit/s to 2684354560 Gbit/s

Line rate class 33 from 5277655813.3248 Gbit/s to 5368709120 Gbit/s

Line rate class 34 from 10555311626.6496 Gbit/s to 10737418240 Gbit/s

Line rate class 35 from 21110623253.2992 Gbit/s to 21474836480 Gbit/s

Line rate class 36 from 42221246506.5984 Gbit/s to 42949672960 Gbit/s

Line rate class 37 from 84442493013.1968 Gbit/s to 85899345920 Gbit/s

Line rate class 38 from 168884986026.3936 Gbit/s to 171798691840 Gbit/s

Line rate class 39 from 337769972052.7872 Gbit/s to 343597383680 Gbit/s

Line rate class 40 from 675539944105.5744 Gbit/s to 687194767360 Gbit/s

Line rate class 41 from 1351079888211.1488 Gbit/s to 1374389534720 Gbit/s

Line rate class 42 from 2702159776422.2976 Gbit/s to 2748779069440 Gbit/s

Line rate class 43 from 5404319552844.5952 Gbit/s to 5517558138880 Gbit/s

Line rate class 44 from 10808639105689.1904 Gbit/s to 11035116277760 Gbit/s

Line rate class 45 from 21617278211378.3808 Gbit/s to 22070232555520 Gbit/s

Line rate class 46 from 43234556422756.7616 Gbit/s to 44140465111040 Gbit/s

Line rate class 47 from 86469112845513.5232 Gbit/s to 88280930222080 Gbit/s

Line rate class 48 from 172938225691027.0464 Gbit/s to 176561860444160 Gbit/s

Line rate class 49 from 345876451382054.0928 Gbit/s to 353123720888320 Gbit/s

Line rate class 50 from 691752902764108.1856 Gbit/s to 706247441776640 Gbit/s

Line rate class 51 from 1383505805528216.3712 Gbit/s to 1412494883553280 Gbit/s

Line rate class 52 from 2767011611056432.7424 Gbit/s to 2824989767106560 Gbit/s

Line rate class 53 from 5534023222112865.4848 Gbit/s to 5649979534213120 Gbit/s

Line rate class 54 from 11068046444225730.9696 Gbit/s to 11299959068426240 Gbit/s

Line rate class 55 from 22136092888451461.9392 Gbit/s to 22599918136852480 Gbit/s

Line rate class 56 from 44272185776902923.8784 Gbit/s to 45199836273704896 Gbit/s

Line rate class 57 from 88544371553805847.7568 Gbit/s to 90399672547409792 Gbit/s

Line rate class 58 from 177088743107611695.5136 Gbit/s to 180799345094819584 Gbit/s

Line rate class 59 from 354177486215223391.0272 Gbit/s to 361598690189639168 Gbit/s

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Line rate class 61 from 1416709944860893564.1088 Gbit/s to 1446394760758556672 Gbit/s

Line rate class 62 from 2833419889721787128.2176 Gbit/s to 2892789521517113344 Gbit/s

Line rate class 63 from 5666839779443574256.4352 Gbit/s to 5745579043034226688 Gbit/s

Line rate class 64 from 11333679558887148512.8704 Gbit/s to 11491158086068453376 Gbit/s

Line rate class 65 from 22667359117774297025.7408 Gbit/s to 23182316172136906752 Gbit/s

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Line rate class 75 from 23211375736600880154358.5792 Gbit/s to 23738691760268192514048 Gbit/s

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Line rate class 78 from 185691005892807041234868.6336 Gbit/s to 189909534082145540112384 Gbit/s

Line rate class 79 from 37138201178561408246973.2672 Gbit/s to 379819068164291080224768 Gbit/s

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Line rate class 85 from 2376844875427930127806288.1008 Gbit/s to 24308420362514629134385152 Gbit/s

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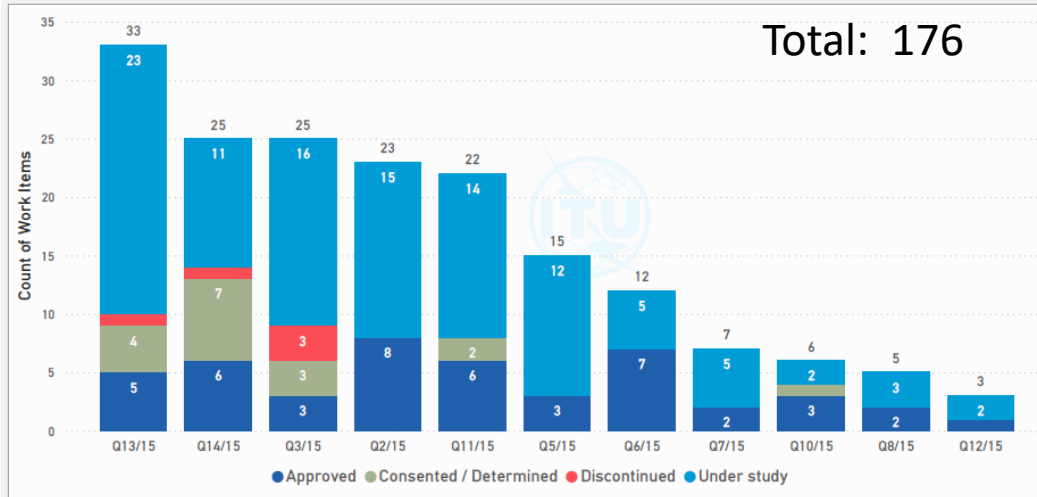
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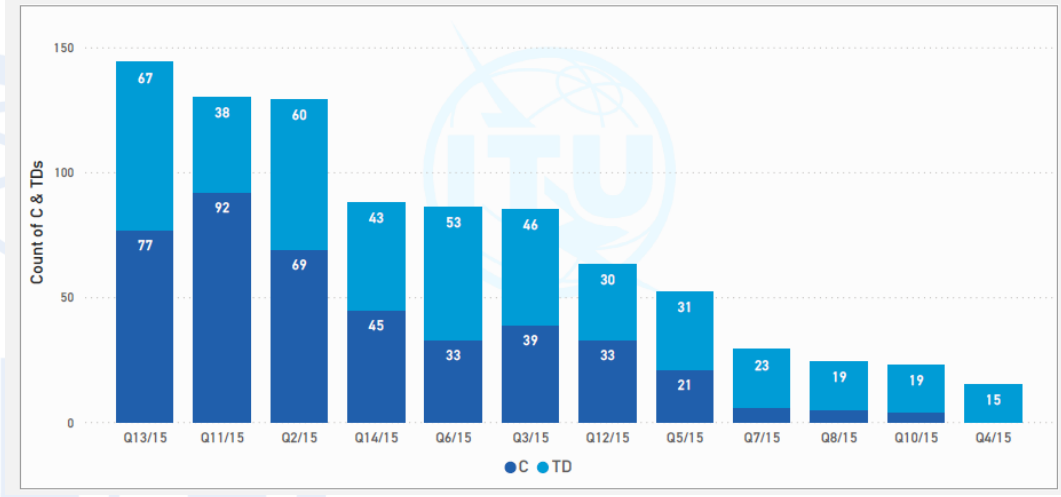
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SG15 – activity and impact

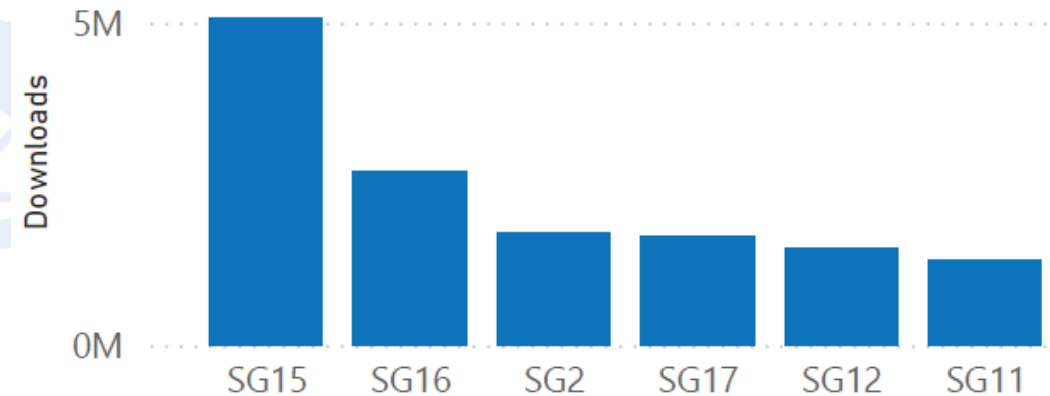
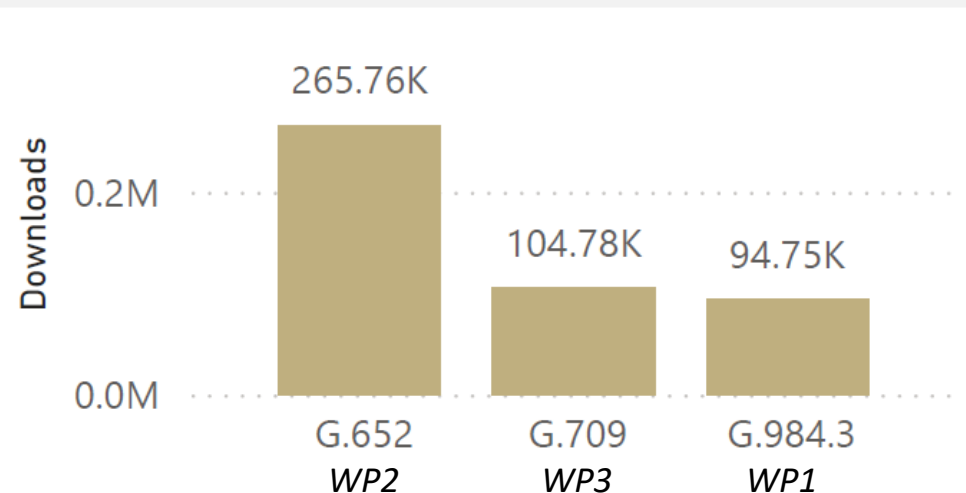
Work items by status



Contributions and TDs by Questions



Study Group 15



G-Series Technical Report (GSTR)

International Optical Networks towards 2030 and Beyond (ION-2030)

- Summary
 - describe the framework and overall objectives of the future development of International Optical Networks for 2030 and beyond (ION-2030), as well as the associated roadmaps and timelines
- Topics
 - Trends of ION-2030
 - Motivation and societal considerations
 - Application trends and drivers
 - Technology trends, particularly in optical communication
 - Usage scenarios of ION-2030
 - Overarching design principles
 - Key characteristics and features in optical systems and transport networks
 - Key characteristics and features in optical access and in-premise networks
 - Capabilities of ION-2030
 - Considerations of standardization development
 - Relationships
 - Timelines
 - Focus areas for further study
- Timing
 - July 2026 agreement



Photograph time!

Smile😊

