



Report on industrial-oriented and scientific-oriented dissemination activities 3

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Table of contents

Executive Summary	4
1 Introduction	5
2 Dissemination tools.....	6
2.1 Website.....	6
2.1.1 Videos	7
2.1.2 Newsletter and PASSION supply chain interest group	8
2.2 Social media	8
2.2.1 Facebook.....	8
2.2.2 LinkedIn.....	9
2.2.3 Twitter.....	9
2.3 Webinars	10
2.4 Flyers and rollup	11
3 Scientific-oriented dissemination	12
3.1 Conference & workshops	12
3.2 Conference proceedings	14
3.3 Peer-reviewed journal papers.....	16
4 Industrial-oriented dissemination	17
4.1 Industry events and workshops organized by the project.....	17
4.2 Industry publications and magazines	19
5 Conclusions	20
Annex 1 – Supported dissemination events.....	21
EPIC World photonics technology Summit 2020.....	21
PASSION contribution and other auditable claims.....	22
Annex 2 – EPIC support package.....	22



EXECUTIVE SUMMARY

This document summarises the industrial and scientific oriented dissemination activities performed by PASSION in its last and a half year. The activities are outlined in detail in the document. The main objective of the dissemination activities is to promote the project both from the point of view of the obtained results and for the generation of business around them.

This objective is pursued by exploiting the project dissemination tools such as PASSION:

- website
- social media
- webinars
- promotional material e.g. flyers and roll-up banners
- press-releases and newsletters,

D6.4 Section 2 provides the update statistics and related analytics of all these tools.

Section 3 discusses the scientific oriented dissemination activities, which comprise the participation to main conferences and workshops, the presentation of results in proceedings as well as in peer-reviewed journals.

Section 4 is dedicated to industrial-oriented activities including the presence at relevant exhibition fairs, the participation to industry driven workshops, and the publication in industry-related journals and magazines.

Finally, Annex 1 presents a description of main (third year) supported dissemination events, outlining evidence of their impact and connection to the PASSION project and clearly presenting funds usage and benefits of the support package in Annex 2.



1 INTRODUCTION

This document illustrates the industrial and scientific oriented dissemination activities performed during PASSION third year in order to accomplish the PASSION dissemination objectives as planned in D6.1.

The goal of the dissemination activities throughout the project has been its promotion among the different stakeholder groups, focusing on the ones that are key for the commercialization of the PASSION results. These were identified at the different levels of the PASSION supply chain:

- i) suppliers,
- ii) metro-network developers and
- iii) end-users of the technology.

It includes the organization of industrial EPIC workshops and events in which PASSION has been presented to engage with suppliers. A group of relevant importance is represented by the end-users of the technology, that will be reached at the main exhibitions and invited to the different events, many of them due to COVID-19 emergency took place online. Furthermore, we promoted actions toward standardization bodies in order to create opportunities to promote PASSION technology within standard bodies and associations as reported in D6.6 Contribution to standardization.

In order to accomplish these objectives, PASSION website and landing pages at relevant social media, i.e., LinkedIn, Facebook and Twitter were continuously updated.

PASSION partners participated to workshops, conferences and exhibitions disseminating the project results also thanks to developed promotional materials. These and future activities will continue to be announced at the different social media in order to attract as much attention as possible towards the project also after the end of the project.



2 DISSEMINATION TOOLS

In this section the updated statistics and related analytics for the dissemination tools exploited to promote the project among the different stakeholder groups and communities will be given.

2.1 WEBSITE

www.passion-project.eu

Also during this third year and a half the most viewed page is the home page, which contains most recent news on the project, a quick overview of the objectives, the link to the project promotional video and the contact information, including social accounts, newsletter and PASSION supply chain interest group subscription links.

Figure 1 presents also the views obtained by the other website pages.

The total number of page views of this this third year and a half has been 5086 and Figure 2 gives the time domain distribution of them for the last eighteen months. Some peaks can be identified around the main conferences, workshops and events.

Page	Page Views
	5,086 % of Total: 100.00% (5,086)
1. /PASSION home	1,737 (34.15%)
2. /partners/	364 (7.16%)
3. /publications/	256 (5.03%)
4. /project/objectives/	255 (5.01%)
5. /project/technical-approach/	232 (4.56%)
6. /private-area-2/	183 (3.60%)
7. /documents/factsheet-project-presentation/	169 (3.32%)
8. /news-events/allnews/	167 (3.28%)
9. /documents/deliverables/	137 (2.69%)
10. /project/	122 (2.40%)
11. /documents/multimedia/	106 (2.08%)
12. /news-events/events/	98 (1.93%)

Figure 1 Number of views and related percentage for the first 12 web pages in the ranking of last 18 months.

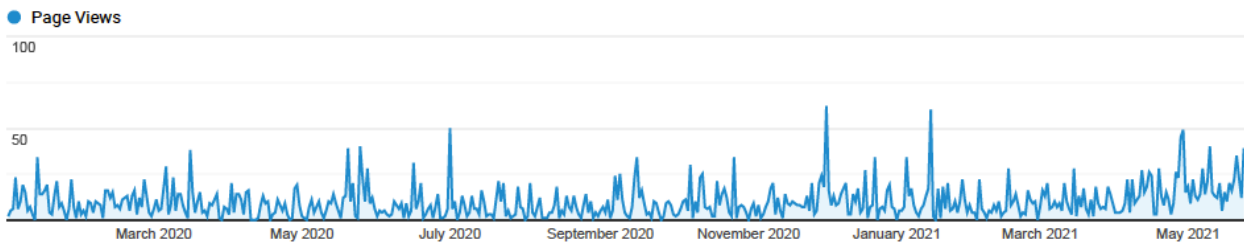


Figure 2 Time distribution of the web page views.

The number of people who accessed our website in this third year and a half is 2386, 99% are new visitors, they come from 101 different countries as evidenced in Figure 3 b), while Figure 3 a) displays the distribution of accesses over the last eighteen months.

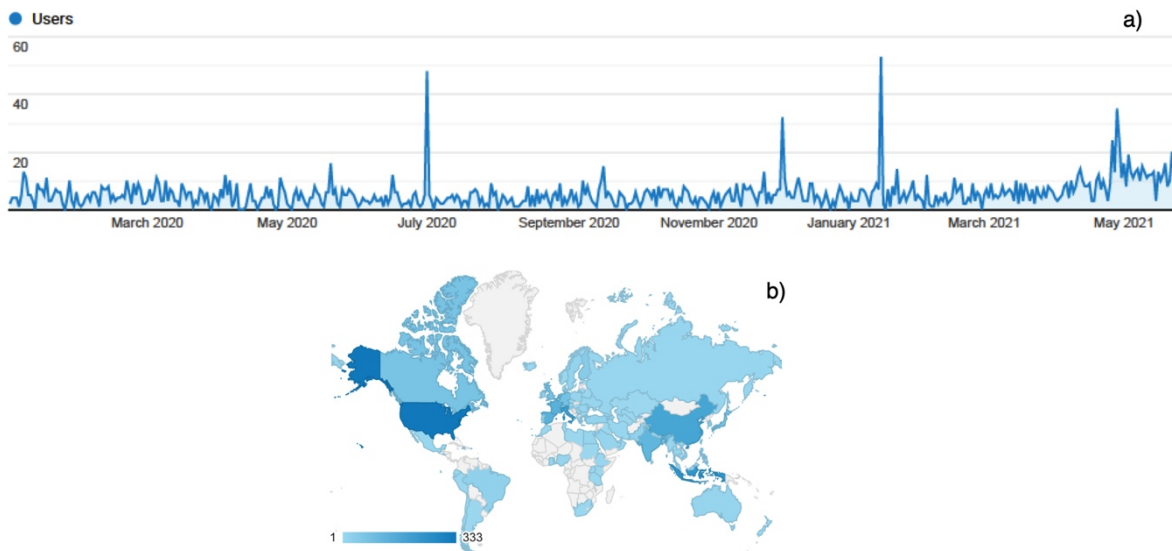


Figure 3 Time distribution of users' accesses and visiting countries location.

2.1.1 Videos

During this third year and a half the project video (link: <https://www.youtube.com/watch?v=XmFqzquboYw>) received around 450 visualizations on YouTube. The other 2 videos present in the multimedia page, promoting PASSION vision, the “Coordinator perspective” and “Scientists harness photonics to develop faster, high capacity internet”, have been played more than 200 and 1100 times respectively. Moreover, the Multimedia gallery hosts Ricardo Martinez presentation at EAI Broadnets 2020 “Experimental Evaluation of RSA Algorithms for SDN programmable VCSEL-based S-BVT in High-Capacity and Cost-Efficient Optical Metro Networks” and the links to the recording to the second PASSION webinar (2021).



Figure 4 PASSION video on YouTube.

2.1.2 Newsletter and PASSION supply chain interest group

The website, in the contact section, contains also the subscription to the newsletter, one release promoted the project midterm results and one final results.

Suppliers are encouraged to subscribe to the PASSION supply chain interest group through the website link present in the contact page, in this third year and a half 4 companies contacted the project.

2.2 SOCIAL MEDIA

PASSION social network accounts are used to inform the business, global and scientific communities on PASSION achievements, events and presentations through tweets and posts. Also during this third year and a half of the project the number of followers of the different accounts increased considerably.

2.2.1 Facebook

In this third year and a half Facebook posts obtained more than 100 likes reaching out around 500 persons.



Figure 5 Facebook account.





2.2.2 LinkedIn

LinkedIn group PASSION H2020 project

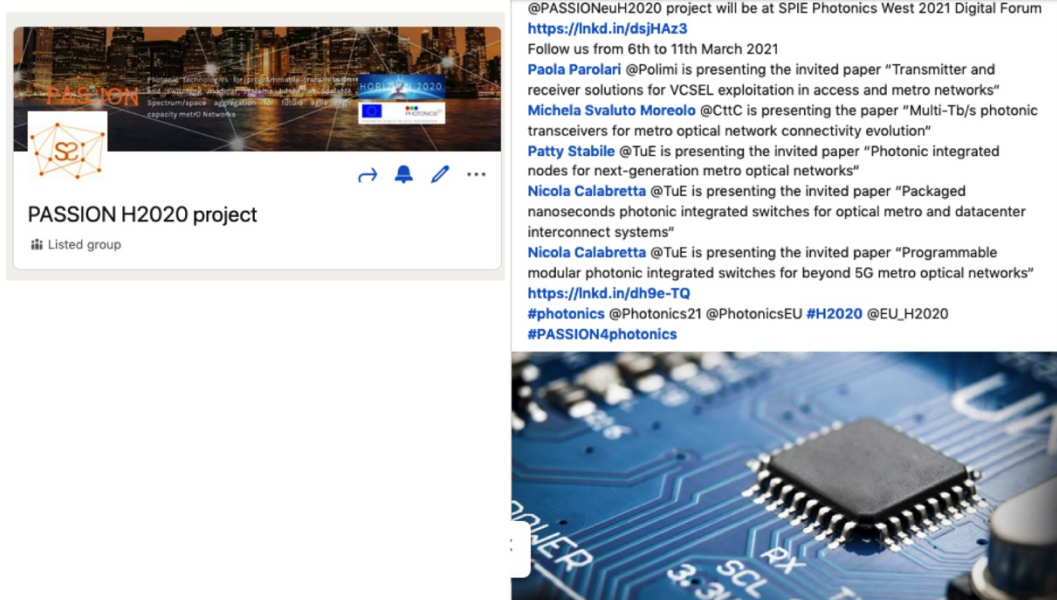


Figure 6 LinkedIn group.

The LinkedIn community has grown to 128 members, and 38 discussions were opened among the group in this this third year and a half obtaining around 400 likes.

2.2.3 Twitter

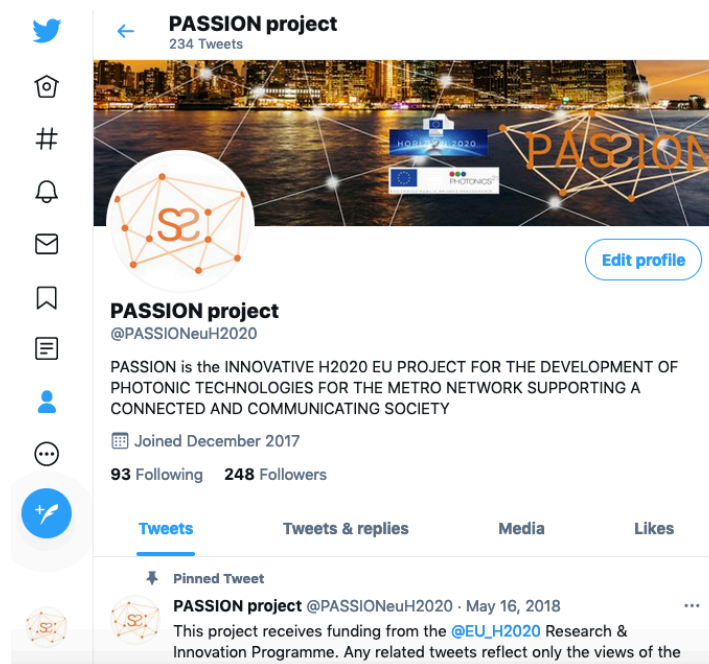


Figure 7 Twitter account



In the third and a half project year the Twitter account reached 248 followers. We had 90 tweets which received 552 likes, it is estimated that the tweets received thousands of “impressions” with an engagement rate of 1.6%.

2.3 WEBINARS

On April 29th at 15:00 CEST the second PASSION Live Webinar took place. The title was “Photonics technologies for supporting the future multi Tb/s metro network” and it presented the PASSION project disruptive approach to develop innovative photonic devices as well an optical fibre network infrastructure for the future metropolitan area network (MAN). The webinar showed the design, the realisation and the performance of an innovative vertical cavity surface emitting laser (VCSEL) - based modular sliceable bandwidth/bitrate variable transceiver (S-BVT) in realistic MANs organised by hierarchical levels with the crossing of multiple nodes characterised by new switching/aggregation technologies. The capabilities and challenges of the proposed cost-effective, energy-efficient and reduced footprint technological solutions were presented to face the request of huge throughput and traffic scalability both at the system and network level. The speakers were:

- Pierpaolo Boffi – POLIMI
PASSION objectives and VCSEL-based SiPh TX module
- Michela Svaluto Moreolo – CTTC
Programmable multi-Tb/s S-BVT for metro networks
- Nicola Calabretta – TUE
PASSION network node
- David Larrabeiti – UC3M
Metro network exploiting PASSION technologies.

135 people registered to attend the webinar, and it is still available “On Demand” for a year at https://event.webcasts.com/viewer/landing.jsp?ei=1451931&tp_key=3348fc8493

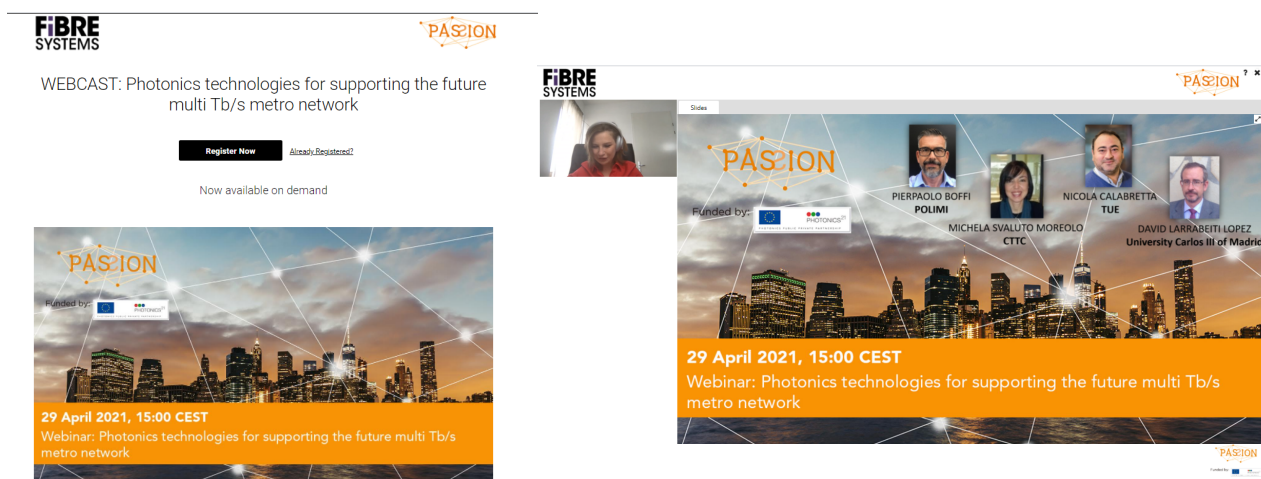


Figure 8 2021 PASSION webinar

On the 30th of June 2021, PASSION will also contribute with a talk by our Coordinator Pierpaolo Boffi in the webinar: European Photonics Manufacturing Services Funded by EC.



Figure 9 Webinar European Photonics Manufacturing Services Funded by EC

2.4 FLYERS AND ROLLUP

During conferences and exhibitions attended live in 2020 before the pandemic situation, the attention was attracted also by flyers and roll-up, used for promotion and to create awareness about the PASSION project.

The roll-up clearly presents PASSION visual identity and outlines project funding by H2020 work programme and Photonics 21 PPP.

The current flier is presented in the figure below.



Figure 10 Current flyer.



3 SCIENTIFIC-ORIENTED DISSEMINATION

In the last months PASSION partners participated to 16 of the main relevant conferences and workshops in the field of optical communications and technologies, presenting 35 talks about the project results among the scientific and industry communities. The participation of PASSION was announced on the website and in social media. Furthermore 4 contributions will be presented at next OFC2021 in June including a PASSION Demo.

Moreover, 28 conference proceedings and 10 journal papers were published in 2020- 2021. Green open access was adopted for the conference proceedings and journals. Publications can be downloaded also from the webpage related section.

3.1 CONFERENCE & WORKSHOPS

Date	Event	Location	Activity Note	PASSION Topic
3/2/2020	World Photonics Technology Summit 2020	San Francisco, CA, USA	Participation	
1-6/2/2020	SPIE Photonics West 2020	San Francisco, CA, USA	Event, Booth	
06/02/2020	SPIE Photonics West 2020	San Francisco, CA	J.M. Fabrega	Programmable transmission systems using coherent detection enabling multi-Tb/s interfaces for IT-communications convergence in optical network
06/02/2020	SPIE Photonics West 2020	San Francisco, CA	D. Larrabeiti	Upcoming applications driving the design of next-generation metro area networks: dealing with 5G backhaul/fronthaul and edge-cloud computing
06/02/2020	SPIE Photonics West 2020	San Francisco, CA	P. Boffi	Multi-Tb/s sustainable MAN scenario enabled by VCSEL-based innovative technological solutions
10-12/3/2020	OFC 2020	San Diego, CA, USA	Event, Booth	
09/03/2020	OFC 2020	San Diego, CA	M. Svaluto Moreolo	Experimental Assessment of a Programmable VCSEL-based Photonic System Architecture over a Multi-hop Path with 19-Core MCF for Future Agile Tb/s Metro Networks
09/03/2020	OFC 2020	San Diego, CA	B. Pan	Disaggregated, Sliceable and Load-aware Optical Metro Access Network for 5G Applications and Service Distribution in Edge Computing
18/05/2020	ONDM 2020 Workshop 4	Barcelona, ES On-line	C. Neumejr, D. Larrabeiti, R. Martuinez, G. Parladori	Advancements of long wavelength VCSELS for high data rate communications applications and integration with silicon photonic technologies; How will 5G new radio affect MAN traffic in the next years?, Design, Deployment and Hands on for Programming Future Photonic-based High-Capacity Metro Networks; Boosting metro-access optical network: next steps to enhance micro node platform
18/05/2020	ONDM 2020	Barcelona, ES On-line	R. Martuinez	Experimental Evaluation of an On-line RSA Algorithm for SDN-Controlled Optical Metro Networks with VCSEL-based S-BVTs
20/05/2020	ONDM 2020	Barcelona, ES On-line	A. Gatto	Long-wavelength VCSEL-based System Exploiting Direct DMT Modulation and Coherent Detection for multi-Tb/s Metro Link



21/05/2020	ONDM 2020	Barcelona, ES On-line	D. Larrabeiti	Tradeoffs in Optical Packet and Circuit Transport of Fronthaul Traffic: The Time for SBVT ?
21/05/2020	ONDM 2020	Barcelona, ES On-line	J. M. Fabrega	Cost-effective Coherent Systems for Metropolitan Networks
21/05/2020	ONDM 2020	Barcelona, ES On-line	N. Calabretta	LPB: A Novel Load Balance Algorithm for OPSquare DCN Under Real Application Traffics
10/06/2020	ICC 2020	Dublin, On-line	A Gatto	Next generation 50G PON flexible transmitters based on directly modulated VCSELs
14/07/2020	APC 2020	Montreal, CA On-line	M. Rapisarda	SOA Impact on High-Capacity DMT signals in Switching/Aggregation Node for Future MAN
16/07/2020	APC 2020	Montreal, CA On-line	Hyun-Do Jung	Polymer-based Optical Switch for Future Metro-area Networks
21/07/2020	ICTON 2020	Bari, IT On-line	G. Otero	Strategies to scale edge computing throughout the MAN with optical networking technologies (Invited)
21/07/2020	ICTON 2020	Bari, IT On-line	R. Martínez	Design and deployment of a SDN programmable optical metro network with VCSEL-based S-BVTs (Invited)
21/07/2020	ICTON 2020	Bari, IT On-line	P. Parolari	Preliminary assessment of photonic solutions based on C-band VCSELs for multi-Tb/s metro networks (Invited)
21/07/2020	ICTON 2020	Bari, IT On-line	N. Tessema	Modularly integrated photonic switches for metro core and access network for 5G applications (Invited)
21/07/2020	ICTON 2020	Bari, IT On-line	J. P. Fernandez-Palacios	Zero touch metro optical networks using sliceable bandwidth variable transponders (Invited)
21/07/2020	ICTON 2020	Bari, IT On-line	G. Delrosso	Development and scalability of a 2 Tb/s data communication module based on a 3 μm SOI silicon photonics platform (Invited)
7/10/2020	OECC 2020	Taipei On-line	N. Calabretta	Photonic Integrated WDM Cross-Connects for Telecom and Datacom Networks
7/12/2020	ECOC 2020	Brussels, BE On-line	N. Tessema	Modularly and Hybrid Integrated SiPh/InP Wavelength Blocker Switch for Metro Networks
12/12/2020	BROADNETS2020	On-line	R. Martinez	Experimental Evaluation of RSA Algorithms for SDN programmable VCSEL-based S-BVT in High-Capacity and Cost-Efficient Optical Metro Networks
17-18/2/2021	Photonics+ Virtual Exhibition and Conference	On-line	Participation Event, Booth	
17/2/2021	Photonics+ Virtual Exhibition and Conference	On-line	P. Boffi	H2020 PASSION project technological solutions enabling multi-Tb/s transmission
6-11/3/2021	SPIE Photonics West 2021	On-line	P. Parolari	Transmitter and receiver solutions for VCSEL exploitation in access and metro networks
6-11/3/2021	SPIE Photonics West 2021	On-line	M. Svaluto Moreolo	Multi-Tb/s photonic transceivers for metro optical network connectivity evolution
6-11/3/2021	SPIE Photonics West 2021	On-line	P. Stabile	Photonic integrated nodes for next-generation metro optical networks
6-11/3/2021	SPIE Photonics West 2021	On-line	N. Calabretta	Packaged nanoseconds photonic integrated switches for optical metro and datacenter interconnect systems
6-11/3/2021	SPIE Photonics West 2021	On-line	N. Calabretta	Programmable modular photonic integrated switches for beyond 5G metro optical networks



6-11/3/2021	Photonics West Digital Marketplace 2021	On-line	Participation Event, Booth	
9-14/5/2021	CLEO 2021	On-line	A. Gatto	Performance Impairments due to Inter-Core Crosstalk Dynamics in a 7-Core MCF-Based DMT-Modulated Link
18-19/5/2021	Photonische Netze 2021	On-line	M. Svaluto Moreolo	SDN-controlled Photonic System Architectures or Tb/s MAN Connectivity
18-19/5/2021	Photonische Netze 2021	On-line	P. Boffi	Long-wavelength InP VCSEL exploitation for innovative sustainable high-capacity transmitter
6-11/6/2021	OFC 2021*	On-line	M. Svaluto Moreolo	DEMO Demonstration of an SDN-enabled VCSEL-based Photonic System for Spectral/Spatial Connectivity in Disaggregated Optical Metro Networks
6-11/6/2021	OFC 2021*	On-line	R. Martinez	Autonomous SDN-based Global Concurrent Restoration for High-Capacity Optical Metro Networks
6-11/6/2021	OFC 2021*	On-line	M. Rapisarda	Add-Drop Lossless Switch Node in Multi-Hop Multi-Tb/s Metropolitan Area Networks
6-11/6/2021	OFC 2021*	On-line	J. A. Hernandez	Enabling dynamic all optical IP off-loading at Tb/s rates in large Metro Networks
28/6-1/7/2021	ONDM 2021*	On-line Invited	N. Tessema	Wavelength selective photonic integrated switches for ROADM node functionality in ultrahigh capacity metro network
27-29/9/2021	PSC 2021*	On-line Invited	P. Parolari	SOA-based loss-less switch nodes for Tb/s multicarrier transmission

* Invited and contributions that were accepted and will be presented in next months

3.2 CONFERENCE PROCEEDINGS

#	Publication Reference 2020- 2021
1	P. Boffi, et al., "Multi-Tb/s sustainable MAN scenario enabled by VCSEL-based innovative technological solutions," Proc. SPIE 11308, Metro and Data Center Optical Networks and Short-Reach Links III, 113080G (31 January 2020)
2	J. M. Fabrega, et al., "Programmable transmission systems using coherent detection enabling multi-Tb/s interfaces for IT-communications convergence in optical networks," Proc. SPIE 11308, Metro and Data Center Optical Networks and Short-Reach Links III, 113080D (31 January 2020)
3	D. Larrabeiti, et al. "Upcoming applications driving the design of next-generation metro area networks: dealing with 5G backhaul/fronthaul and edge-cloud computing," Proc. SPIE 11308, Metro and Data Center Optical Networks and Short-Reach Links III, 113080F (31 January 2020)
4	M. S. Moreolo, et al., "Experimental Assessment of a Programmable VCSEL-based Photonic System Architecture over a Multi-hop Path with 19-Core MCF for Future Agile Tb/s Metro Networks," in Optical Fiber Communication Conference (OFC) 2020, OSA Technical Digest, paper M4D.5.
5	B. Pan, et al., "Disaggregated, Sliceable and Load-aware Optical Metro Access Network for 5G applications and Service Distribution in Edge Computing," in <i>Optical Fiber Communication Conference (OFC) 2020</i> , OSA Technical Digest, paper M3Z.15.
6	A. Gatto, et al. "Long-wavelength VCSEL-based System Exploiting Direct DMT Modulation and Coherent Detection for multi-Tb/s Metro Link" in 24th international conference on optical network design and modelling ONDM 2020, Barcelona, Spain, May 2020.



7	R. Martinez, et al., "Experimental Evaluation of an On-line RSA Algorithm for SDN-Controlled Optical Metro Networks with VCSEL-based S-BVTs" in 24th international conference on optical network design and modelling ONDM 2020, Barcelona, Spain, May 2020.
8	D. Larrabeiti, et al., "Tradeoffs in Optical Packet and Circuit Transport of Fronthaul Traffic: The Time for SBVT ?" (invited) in 24th international conference on optical network design and modelling ONDM 2020, Barcelona, Spain, May 2020.
9	J. M. Fabrega, et al., "Cost-effective Coherent Systems for Metropolitan Networks" (invited) in 24th international conference on optical network design and modelling ONDM 2020, Barcelona, Spain, May 2020.
10	F. Yan et al., "LPB: A Novel Load Balance Algorithm for OPSquare DCN Under Real Application Traffics" in 24th international conference on optical network design and modelling ONDM 2020, Barcelona, Spain, May 2020
11	F. Wang et al., "Traffic Load Balancing Based on Probabilistic Routing in Data Center Networks" " in 24th international conference on optical network design and modelling ONDM 2020, Barcelona, Spain, May 2020
12	M. Rapisarda et al., "SOA Impact on High-Capacity DMT signals in Switching/Aggregation Node for Future MAN" in OSA Proceedings Advanced Photonics Congress 2020, 13 – 16 July 2020 OSA Virtual Event
13	H. Jung et al., "Polymer-based Optical Switch for Future Metro-area Networks" in OSA Proceedings Advanced Photonics Congress 2020, 13 – 16 July 2020 OSA Virtual Event
14	P. Parolari et al., "Next generation 50G PON flexible transmitters based on directly modulated VCSELs" in Proceedings IEEE International Conference on Communications 7-11 June 2020 Virtual Conference
15	G. Otero et al., "Strategies to scale edge computing throughout the MAN with optical networking technologies" in 2020 22th International Conference on Transparent Optical Networks (ICTON), IEEE CONFERENCE PROCEEDINGS 2020, pp. 1 - 4
16	R. Martinez et al., "Design and deployment of a SDN programmable optical metro network with VCSEL-based S-BVTs" in 2020 22th International Conference on Transparent Optical Networks (ICTON), IEEE CONFERENCE PROCEEDINGS 2020, pp. 1 - 4
17	P. Parolari et al., "Preliminary assessment of photonic solutions based on C-band VCSELs for multi-Tb/s metro networks" in 2020 22th International Conference on Transparent Optical Networks (ICTON), IEEE CONFERENCE PROCEEDINGS 2020, pp. 1 - 4
18	N. Tessema et al., "Modularly integrated photonic switches for metro core and access network for 5G applications" in 2020 22th International Conference on Transparent Optical Networks (ICTON), IEEE CONFERENCE PROCEEDINGS 2020, pp. 1 - 4
19	J. P. Fernandez-Palacios et al., "Zero touch metro optical networks using sliceable bandwidth variable transponders" in 2020 22th International Conference on Transparent Optical Networks (ICTON), IEEE CONFERENCE PROCEEDINGS 2020, pp. 1 - 4
20	G. Delrosso et al., "Development and scalability of a 2 Tb/s data communication module based on a 3 μm SOI silicon photonics platform" in 2020 22th International Conference on Transparent Optical Networks (ICTON), IEEE CONFERENCE PROCEEDINGS 2020, pp. 1 - 4
21	N. Calabretta, A. Rasoulzadeh, K. Prifti, J. Wang, R. M. G. Kraemer and Y. Wang, "Photonic Integrated WDM Cross-Connects for Telecom and Datacom Networks," 2020 Opto-Electronics and Communications Conference (OECC), 2020, pp. 1-3, doi: 10.1109/OECC48412.2020.9273599.
22	N. Tessema et al., "Modularly and Hybrid Integrated SiPh/InP Wavelength Blocker Switch for Metro Networks," 2020 European Conference on Optical Communications (ECOC), 2020, pp. 1-4, doi: 10.1109/ECOC48923.2020.9333290.
23	Martinez R. et al. (2021) "Experimental Evaluation of RSA Algorithms for SDN-Programmable VCSEL-Based S-BVT in High-Capacity and Cost-Efficient Optical Metro Networks". Broadband Communications, Networks, and



	Systems. BROADNETS 2020. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 355. Springer, Cham. https://doi.org/10.1007/978-3-030-68737-3_8
24	P. Parolari, et al. "Transmitter and receiver solutions for VCSEL exploitation in access and metro networks," Proc. SPIE 11712, Metro and Data Center Optical Networks and Short-Reach Links IV, 1171208 (5 March 2021); https://doi.org/10.1117/12.2579757
25	M. Svaluto Moreolo, et al. "Multi-Tb/s photonic transceivers for metro optical network connectivity evolution," Proc. SPIE 11712, Metro and Data Center Optical Networks and Short-Reach Links IV, 117120A (5 March 2021); https://doi.org/10.1117/12.2577521
26	R. Stabile, et al. "Photonic integrated nodes for next-generation metro optical networks," Proc. SPIE 11712, Metro and Data Center Optical Networks and Short-Reach Links IV, 117120D (5 March 2021); https://doi.org/10.1117/12.2578846
27	N. Calabretta, et al., "Packaged nanoseconds photonic integrated switches for optical metro and datacenter interconnect systems," Proc. SPIE 11689, Integrated Optics: Devices, Materials, and Technologies XXV, 116890E (5 March 2021); https://doi.org/10.1117/12.2580376
28	N. Calabretta, et al., "Programmable modular photonic integrated switches for beyond 5G metro optical networks," Proc. SPIE 11690, Smart Photonic and Optoelectronic Integrated Circuits XXIII, 116900O (5 March 2021); https://doi.org/10.1117/12.2580374

3.3 PEER-REVIEWED JOURNAL PAPERS

#	Publication title
2020- 2021	
1	K. Prifti, X. Xue, N. Tessema, R. Stabile and N. Calabretta, "Lossless Photonic Integrated Add-Drop Switch Node for Metro-Access Networks," in IEEE Photonics Technology Letters, vol. 32, no. 7, pp. 387-390, 1 April1, 2020, doi: 10.1109/LPT.2020.2975885.
2	G. Otero Perez, et al., "Decentralized Coordination of Converged Tactile Internet and MEC services in H-CRAN Fiber Wireless Networks," in Journal of Lightwave Technology, doi: 10.1109/JLT.2020.2998001
3	P. Parolari, et al., "Flexible transmitters based on directly modulated VCSELs for next-generation 50G passive optical networks," in IEEE/OSA Journal of Optical Communications and Networking, vol. 12, no. 10, pp. D78-D85, October 2020
4	F. Yan et al., "Load balance algorithm for an OPSquare datacenter network under real application traffic," in IEEE/OSA Journal of Optical Communications and Networking, vol. 12, no. 8, pp. 239-250, August 2020, doi: 10.1364/JOCN.394023.
5	P. Reviriego, J. Martínez, D. Larrabeiti and S. Pontarelli, "Cuckoo Filters and Bloom Filters: Comparison and Application to Packet Classification," in IEEE Transactions on Network and Service Management, vol. 17, no. 4, pp. 2690-2701, Dec. 2020, doi: 10.1109/TNSM.2020.3024680.
6	Xuweï Xue, et al., "SDN enabled flexible optical data center network with dynamic bandwidth allocation based on photonic integrated wavelength selective switch," Opt. Express 28, 8949-8958 (2020)
7	<i>P. Reviriego and O. Rottenstreich, "The Tandem Counting Bloom Filter - It Takes Two Counters to Tango," in IEEE/ACM Transactions on Networking, vol. 27, no. 6, pp. 2252-2265, Dec. 2019. doi: 10.1109/TNET.2019.2944954</i>



8	<i>P. Reviriego and D. Ting, "Security of HyperLogLog (HLL) Cardinality Estimation: Vulnerabilities and Protection," in IEEE Communications Letters, vol. 24, no. 5, pp. 976-980, May 2020. doi: 10.1109/LCOMM.2020.2972895</i>
9	M. Svaluto Moreolo et al., "Programmable VCSEL-based photonic system architecture for future agile Tb/s metro networks," in IEEE/OSA Journal of Optical Communications and Networking, vol. 13, no. 2, pp. A187-A199, February 2021, doi: 10.1364/JOCN.411964.
10	B. Pan, F. Yan, X. Guo and N. Calabretta, "Experimental Assessment of Automatic Optical Metro Edge Computing Network for Beyond 5G Applications and Network Service Composition," in Journal of Lightwave Technology, vol. 39, no. 10, pp. 3004-3010, 15 May15, 2021, doi: 10.1109/JLT.2021.3064800.

4 INDUSTRIAL-ORIENTED DISSEMINATION

In the third year the industrial-oriented dissemination activities continued in the establishment of a global PASSION brand identifying the most adequate entities to build strategic partnerships, targeting the different levels of the supply chain (suppliers, metro-network developers and end-users).

Due to COVID-19 pandemic most of the events took place on-line. Suppliers and companies were engaged in EPIC Online Technology Meetings; metro-network developers and end-users were reached at on-line exhibitions and conferences. In the following the main attended events and the publications in technical and generalist magazines are displayed.

4.1 INDUSTRY EVENTS AND WORKSHOPS ORGANIZED BY THE PROJECT

Date	Event	Location	Type
3/2/2020	World Photonics Technology Summit 2020	San Francisco, CA, USA	Participation
1-6/2/2020	SPIE Photonics West 2020	San Francisco, CA, USA	Event, Booth
18/05/2020	Workshop4 ONDM2020 supported by the project	On-line (Zoom)	Dissemination: C. Neumeyr, D. Larrabeiti, R. Martuinez, G. Parladori
20/5/2020	EPIC OTM on Beyond 400G (in cooperation with COBO & EA)	On-line (Zoom)	Presentation (Pierpaolo Boffi, Politecnico Milano)
29/5/2020	EPIC Online Technology Meeting on VCSEL Technology and Applications	On-line (Zoom)	Dissemination PASSION (Christian Neumeyr, Vertilas)
8/6/2020	EPIC OTM on Co-packaged Optics (in cooperation with COBO & EA)	On-line (Zoom)	Dissemination PASSION Participation (Giovanni Delrosso, VTT)



21/7/2020	ICTON 2020 PhotoMAN workshop organized by the project	On-line	Dissemination, PASSION organization and participation (G. Otero UC3M, R. Martinez CTTC, P. Parolari POLIMI, N. Tessema TUE, J. P. Fernandez-Palacios TID, G. Delrosso VTT)
8/9/2020	EPIC Online Technology Meeting on New Pluggable Transceivers (in cooperation with COBO)	On-line (Zoom)	Presentation (Pierpaolo Boffi, Politecnico Milano)
8/12/2020	EPIC Online TechWatch of ECOC2020 Exhibition	On-line (Zoom)	Presentation (Pierpaolo Boffi, Politecnico Milano)
25/01/2021	EPIC Online Technology Meeting on Commercial Challenges for Photonics as 5G Booms (in cooperation with COBO & EA)	On-line (Zoom)	Dissemination PASSION Participation (Michela Svaluto Moreolo, CTTC)
17-18/2/2021	Photonics+ Virtual Exhibition and Conference	On-line	Booth and Presentation (Pierpaolo Boffi, Politecnico Milano)
3/3/2021	EPIC Online Technology Meeting on Roadmap 2021 for Co-packaged Optics (in cooperation with COBO & EA)	On-line (Zoom)	Dissemination PASSION Participation (Iñigo Artundo, VLC Photonics)
6-11/3/2021	Photonics West Digital Marketplace 2021	On-line	Booth
9/4/2021	EPIC Online Quantum Technology Meeting on Implementing Secure Strategies for Past, Present & Future Communications	On-line (Zoom)	Dissemination PASSION Presentation (Antonio Pastor, Telefónica) Participation (Giovanni Delrosso, VTT)
21/4/2021	EPIC Online Technology Meeting on Roadmap 2021 for Beyond 400G Ethernet Optics (in cooperation with COBO & EA & OIF)	On-line (Zoom)	Dissemination PASSION Participation (Giovanni Delrosso, VTT) Participation (Jose Galan, VLC Photonics)



4.2 INDUSTRY PUBLICATIONS AND MAGAZINES

Technical and generalist magazines 2020- 2021	
1	Photonic Transceivers Drive Ethernet Solutions, Europhotonics Winter 2020
2	New opportunities for collaboration within the photonic packaging supply chain, PIC Magazine II 2020
3	N. Tessema, K. Prifti, A. Rasoulzadehzali, Yu Wang, R. Stabile, and N. Calabretta from Eindhoven University of Technology and G. Delrosso, S. Bhat, and T.Aalto from VTT Research institute, "Superior Switching", Compound Semiconductors Magazine, 2021, June Edition



5 CONCLUSIONS

PASSION started with the promotion of the activities and objectives since the very beginning of the project. The dissemination plan outlined in D6.1 greatly facilitated partner participation in the promotion of PASSION-project all through its execution, even during COVID times.

Moreover, the creation of digital contents for the social channels and the organization of specific events has been very successful in maintaining the already attained group of interest in social networks: with 215 likes in Facebook, 128 members in LinkedIn and 248 followers in Twitter.

Attention has continued to be attracted by the videos on YouTube (now 640 views) and on Vimeo (around 1340 views).

In addition to these online activities, PASSION moved early on in 2020 to promote and participate in online conferences initially due to the cancellation of many of the presential events and later on taking advantage of the availability of people and recordings. This fast adaptation to online presence can be appreciated in the number of conferences and industrial events PASSION has attended to with one or several partners (see sections 3 and 4).

In the 2020- 2021 period two workshops were organized with the project sponsorship, moreover the second webinar was performed in April 2021. Despite the pandemic situation PASSION continued with its participation at several different scientific conferences and industrial exhibitions strongly related to PASSION technological developments and to the most interesting stakeholder groups such as end-users of metro-networks.

In these 18 months, partners participated to 37 plus 14 scientific-oriented and industrial-oriented dissemination events, namely congresses and workshops, and there have been 41 publications in proceedings (28), journals (10) and magazines (3).

Finally, PASSION signed a liaison letter with Open Networking Foundation (ONF) specifically with ONF-OTCC/TAPI, to propose Yang model extensions to accommodate PASSION based infrastructure and in April 2021 participated to an ONF group meeting.



ANNEX 1 – SUPPORTED DISSEMINATION EVENTS

Meetings organised by EPIC are always set up as a business meeting. Whether it is a technology meeting or a networking reception or a VIP Party these meetings are always business oriented and are organized in atmosphere of networking, cooperation and discussion. In all cases, the goal of EPIC events is always to foster the collaboration between all the levels of the supply chain. During the events, we ensure that all the attendees make the right contacts, giving a huge visibility to the contributors through the benefits of the support package (see Annex 2).

The meetings could be focused on a particular technology or industry and discuss in detail the latest state-of-the-art technical achievements and needs and requirements from the end users or be a networking event bringing together experts in photonics technologies from different markets and applications. The diversity of participants offers opportunities to explore different markets and new applications.

High visibility of PASSION project during EPIC events was achieved by using marketing materials (flyers, banners, etc.) as well as dedicated presentation, mentioning the project as supporting body and direct communication with those potentially interested in the technology developed within project or supplying components, services, etc. as the technology can be moved to the large scale production.

EPIC WORLD PHOTONICS TECHNOLOGY SUMMIT 2020

The EPIC World photonics technology summit is a unique event bringing together experts and leaders from industrial companies around the world to discuss photonics technology developments, applications, and challenges. The event is by invitation only at CTO/CEO level (companies less than 100 employees), VP R&D VP Engineering (companies 100-250 employees), Director R&D (companies more than 250 employees), NO sales and NO marketing. Such setting of the meeting ensures not only the highest level of business discussion and increased opportunities for follow up cooperation, but also deep technological discussions in various directions of photonics. This meeting is a perfect platform for understanding of current state of photonics technology and its directions as well as finding best ways for cooperation. Being promoted at this meeting PASSION project got visibility among 128 representatives from companies such as Intel, Ibeo, Philips, STMicroelectronics, AMS Technologies and others. From the attending companies 23, prospects from supply chain and 2 prospects from end-users were identified.





PASSION CONTRIBUTION AND OTHER AUDITABLE CLAIMS

As agreed, in the table below the relation of the costs expensed to PASSION for booths, EPIC events and meetings is presented. The presented costs include contributions to the meetings, receptions and events (packages detailed in Annex 2), costs for travel, marketing material, etc. The total expenses of events are typically shared among different projects disseminated by EPIC, the portion related to each project is accounted dividing the total amount by the number of projects supporting the event.

Table: Breakdown of the PASSION contribution and other auditable claims

MEETNG:	World Photonics summit 2020
EPIC Bronze package*	1500EUR
PASSION contribution	666,67EUR
Total	666,67EUR

* EPIC Bronze package cost for external supporters for comparative purposes

PASSION contribution was calculated based on the relevance of summit participants to the PASSION project (refer to EPIC Events Split – EU Projects).

ANNEX 2 – EPIC SUPPORT PACKAGE

The general EPIC support packages for World Photonics Technology Summit 2020 are:





Activities / Packages	PLATINUM – 10000 EUROS	GOLD – 5000 EUROS	SILVER – 2500 EUROS	BRONZE – 1500 EUROS
Logo on printed material	Yes, biggest logo	Yes	Yes	Yes
Advertisement in printed booklet	Full page	Full page	½ page	No
Tickets	3	2	1	1
Opportunity to display printed brochures	Yes	Yes	Yes	No
Opportunity to display rollups	Yes, pop up booth	Yes, 2 units	Yes, 1 unit	Yes, 1 unit
Logo on event website	Yes, biggest logo	Yes	Yes	Yes
Announcement on Social Media (LinkedIn / Twitter)	Yes, including overview of your product / service	Yes, including overview of your product / service	Yes, mention as sponsor	Yes, mention as sponsor
Logo on meeting videos/pdfs thanking the sponsors	Yes, biggest logo	Yes	Yes	Yes
Name mentioned by our CEO/CTO when thanking the sponsors	Yes	Yes	Yes	Yes