



## D5.2: Mid-term report on dissemination and public engagement

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## Executive summary

This deliverable presents the dissemination and public engagement activities carried out during the first half (Month 21) of the project. The first year of the project was mainly devoted to the selection of the two early-stage researchers (ESRs). The open positions were highly advertised and the project attracted several applicants; the applications were meticulously processed and the two ESRs were selected.

The two ESRs started their PhD programs in May 2018 (ESR1) and September 2018 (ESR2), respectively. Their activities were initially focused on understanding and preparing the state of the art of the technical objectives targeted by the project and defining their research plans. These research plans were publicly presented for their approval in the framework of the PhD program at UPC, and were successfully approved. During the planning for their research activities, presentations at the university sites were given in order to discuss the relevance of the proposed research topics and to raise awareness on the project and expected outcomes. The ESRs then started to work on the specific technical topics the outcomes of which led to two papers that were submitted and accepted in a conference (ESR2) and submitted to a journal (ESR1).

This deliverable presents the dissemination activities in the first half period of the project and also a dissemination plan for the following years of the project. More publications and talks are planned in order to disseminate the first obtained results and outcomes of the respective ESRs' research activity.



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## 1 Introduction

As defined in the GA, the objective of Work Package 5 “Exploitation, Dissemination & Public Engagement” is to organise and monitor the communication, dissemination, and result exploitation actions. The target groups are the scientific community, industry and the general public. As this deliverable was prepared at the end of the first half of the project (Month 21), it includes activities carried out in the first year of the project where the two ESRs were recruited, the definition of the research plans by the two ESRs and early technical works.

The deliverable is structured as follows. Section 2 reports the dissemination activities conducted during the first half of the project. Namely, it details the presentations given at the university sites, as well as collaborations and other dissemination activities. Furthermore, dissemination activities for the upcoming period are presented in Section 3. Section 4 concludes the deliverable.



## 2 Dissemination and Public Engagement Activities

This section includes a description of the dissemination activities performed in the first half of the project (Month 21). It is noteworthy to mention that during the first year of the project the dissemination activities were mainly focused on advertising the two ESR positions. Afterwards, the two recruited ESRs started their research activities mainly focused on analysing the state of the art and detailing their individual research proposals.

A **file-sharing platform** (<https://cloud-drive.cttc.es>) was set up to manage the produced project's documents and collect materials related to the dissemination activities (e.g., slides, publications etc.).

### 2.1 Recruitment Process

Dissemination activities concerning the advertising of the open positions have been detailed in the deliverable D4.3 on "Project Management Plan, and Recruitment Report".

### 2.2 Presentations at University Sites and Research Institutes

During the first half of the project, the following presentations were given at university sites and research institutes.

The following presentations were given to receive the approval from the PhD program of UPC:

- **Fabiano Locatelli**, 25 Jan., 2019, "Data plane architectures and monitoring techniques for system margins reduction in disaggregated optical networks", UPC, thesis research plan
- **Ankush Mahajan**, 28 Jan. 2019, "Machine Learning-Assisted Management of SDN-Enabled Disaggregated Packet & Optical Network", UPC, thesis research plan

Both research plans have been approved by a panel taking into account both the research topics and the expected related outcomes in terms of scientific publications.

Moreover, the following presentation was given at CTTC:

- **Fabiano Locatelli**, 16 Jan. 2019: "Data plane technologies for disaggregated optical networks", CTTC, in the context of "CTTC Weekly Seminar Series" (<http://www.cttc.es/tag/weekly-seminars/>)

### 2.3 Presentations at Industry Sites

The secondment of the 2 ESRs at NOKIA-D started recently in particular, in Month M15 for ESR1 and in M20 for ESR2. We have planned for a presentation of ESR1 in September 2020 (M24), and at a later time (not yet defined) for ESR2.

### 2.4 Publications

During the first half of the project the following research paper was submitted and accepted in the well acclaimed ECOC conference:

- **A. Mahajan**, K. Christodoulopoulos, R. Martinez, S. Spadaro, R. Munoz, "Machine Learning Assisted EDFA Gain Ripple Modelling for Accurate QoT Estimation", accepted, European Conference on Optical Communications (ECOC), 2019.

It is worth noting that the above paper was an ECOC **'top scored'** paper. Consequently, an invitation by the prestigious (Impact Factor: 4.162) IEEE/OSA Journal of Lightwave Technology (JLT), to extend that into a journal paper is expected to be received in the following months, after the conference takes place in September.

The following paper was submitted to the IEEE Photonic Technology Letters (PTL) and is currently undergoing peer review process:

- **F. Locatelli**, K. Christodoulopoulos, J. M. Fabrega, M. Svaluto Moreolo, S. Spadaro, "Machine Learning assisted OSNR Estimation from Optical Spectra", submitted to IEEE Photonic Technology Letters (PTL)

## 2.5 Conference Proceedings and Presentations

During the first half period of the project there was no presentation in an international conference. The technical work of both ESRs has indeed recently started and it has already produced interesting first results. Part of such results, as aforementioned, was submitted as a regular paper at ECOC conference (in April 2019), and accepted to be presented at the conference as oral presentation. For the sake of completeness, ECOC 2019 is going to take place in Dublin (Ireland) in September 2019. Consequently, ESR2 (A. Mahajan) is planning to attend ECOC 2019 and present his work there.

## 2.6 Other events

- A symposium (with half-day duration) for the ONFIRE project was organized at CTTC premises Castelldefels, Barcelona, Spain, on January 29th 2019. The speakers of the symposium were formed by a set of senior researchers actually involved and participating in the ONFIRE project as well as some experts outside the project consortium. Both ONFIRE ESRs and several other students (from both CTTC and UPC) attended the symposium.



The ONFIRE symposium at CTTC premises Castelldefels, Barcelona, Spain, 29 Jan 2019.





- A summer school (one-day) focusing on the industrial sector was held at NOKIA-D premises in Stuttgart on July 27<sup>th</sup> 2019. The majority of the speakers were external to the consortium, including a presentation from J. Loehr of NOKIA's ION (IP and Optical Networks) business division on market trends, and several technical lectures. Both ONFIRE ESRs and several other students (members of COIN Marie Curie and from the University of Stuttgart) attended the summer school.

## 2.7 Website

A dedicated website has been developed by CTTC and made available on October 2017. The website link <http://www.h2020-onfire.eu/> will be included in all public documents and presentations.

Additionally, a file-sharing platform available at <https://cloud-drive.cttc.es> compliant with all partners was set up. This platform includes all produced project's documents with restricted access to the project team as well as management tools.

The public section of the website was designed to include:

- A comprehensive description of the project and its objectives;
- A description of the consortium;
- A description of the hired Early Stage Researchers (ESRs), including a short bio and abstract of their current activities;
- Access to published/accepted for publication papers within the project framework;
- Information about the Symposia, Workshops and Summers Schools organized by the project;
- Contact information;
- Access to the project's public deliverables;
- News and events;

## 2.8 Social networking

Social networking services such as LinkedIn (<https://www.linkedin.com/groups/13572889/>), Research Gate, Twitter ([https://twitter.com/@h2020\\_onfire](https://twitter.com/@h2020_onfire)) are utilised as cost-efficient ways of continuous outreach, complementing "traditional" activities.



### 3 Future Steps

#### 3.1 Technical Publications

The number of contributions and presentations reported in the first half of the project has been limited mainly due to the fact that the two ESRs were recruited with some delay, particularly, ESR1 joined in May 2018 (with 1 month delay according to the initial plan) and ESR2 in September 2018 (with 5 months delay according to the initial plan). In D5.1 we reported our publications plan to have 2 papers published in the first year of the ESRs, 4 papers in the second year, and 4 papers in the third year. We are currently in Month 21 and ESR1 was recruited for a year and one month, while ESR2 for less than a year. In this period, we have 1 conference paper accepted (also note that this paper was highly ranked), and a submitted journal paper. In light of these indicators, we consider that we have fulfilled D5.1 plan up to this point, and for the next period we keep unchanged the publication plan reported in D5.1.

#### 3.2 Presentations at University and Industrial sites

Different events are planned to be organised in the upcoming years:

- The two ESRs are planned to present their work internally to NOKIA Bell Labs in technical talk series that are organized bi-weekly by all NOKIA BELL Labs premises around the globe. ESR1 is planned to do his presentation in September 2019 and ESR2 some time later (not yet defined).
- A consortium meeting and a symposium will be organised around January 2020 at NOKIA-D premises. During the consortium symposium, both ESRs will present their technical contributions, research activities and progress up to that point.
- Further talks in both international as well as local events are planned for the next years in order to further raise awareness about the project activities, and disseminate the results being achieved.
- Consortium partners will present the outcome of the ONFIRE research in international leading peer-reviewed conferences/workshops (such as OFC, ECOC, SPPCOM, MiO, ISIT, etc.)

#### 3.3 Media releases

Articles in newspapers and press releases will be targeted, discussing the key innovative ideas of the ONFIRE project and its contribution to ICT development. These releases will highlight the different benefits for the general public and how the MSCA funding scheme fosters the Industrial-focused Doctoral studies. In addition, opportunities of TV or radio interviews will be pursued to bring, at a high level, the knowledge, achievement, and importance of the scientific domain of ONFIRE, as well as the impact of the MSCA for the European Research Area.



### 3.4 Other activities

Other activities will be carried out in the upcoming years, namely:

- **Summer schools and workshops**  
The second ONFIRE summer school has already been planned to take place at CTTC premises in May 2020 (the exact date is not yet decided). There is also a plan to organize the second ONFIRE workshop and symposium together with the consortium meeting around January 2020 at NOKIA-D premises.
- **Alignment with other EU and international projects**  
Alignment with other EU and international projects (such as the Marie Curie MSCA projects COIN, and FONTE, in both of which NOKIA-D is involved) will be ensured in order to exploit the results produced in the field.
- **Participation in program committees and editorial boards** (e.g., special sessions in top-tier IEEE/ACM conferences and/or workshops, and special issues of IEEE/Elsevier/Springer and open journals);
- **Participation in forums and industrial oriented events**  
In order to promote the produced research results to the broader industrial sector, ONFIRE aims to participate at industrial events, at which companies working in the optical, wireless and wireline communications domain will be invited to become introduced to the project activities and trainees.
- **Organisation of engagement activities**  
Fellows of the ONFIRE consortium will engage with the general public and younger citizens to communicate on the key research outcomes, giving popularised presentations in schools, universities and in civic/municipal venues (e.g., libraries). The goal is to inform citizens about H2020, the MSCA actions, and the ONFIRE research on beyond the state of the art of optical networks, illustrating benefits and demonstrating how this research can bring notable and appealing benefits to the citizens.
- **Webcasts**  
To widen the audience, some of the talks given in the organised events (ONFIRE summer school) will be recorded and made available online at the project web site as webcasts. Thus, anyone being not able to attend the events will have the opportunity to watch the talks and get in contact with the conducted project activities and the MSCA in general.



## 4 Conclusions

This deliverable documented the dissemination activities (WP5) undertaken during the first half (Month 21) of ONFIRE project. Furthermore, a plan for the following period was detailed. The first year of the project was mainly devoted to the recruitments of the two ESRs – activity that has been detailed in the deliverable D4.3 on “Project Management Plan, and Recruitment Report”. More publications and presentations in international events are planned for the following years of the project, now that both ESRs have completed the state-of-the-art review, defined their research plans and started to work on focused technical aspects.