Miniaturised Photonics Enabled Next Generation SAR

H2020-SPACE-2018-821943

D9.4

Report on Dissemination and Communication activities

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ABSTRACT

The dissemination and communication activities carried out during the project are summarized in this deliverable.

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1. Introduction

The main goal of RETINA Project has been the development of an advanced reconfigurable multi-beam photonic beamformer with centralised processing. In particular, a very innovative SAR approach based on photonic technologies whose main impact is to increase the EU competitiveness in payloads for advanced SAR missions by bringing to TRL5-6 previous developments in photonic enabled payloads for SAR applications, starting from the previous FP7 project GAIA, solving the limitations found in terms in power consumption and switching speed and incorporating new features such as centralised signal processing and a truly broadband frequency operation approach thanks to the multi-beam TTD reconfigurable beamforming architecture. The dissemination and communications activities have been carried out within WP9 and are here described.

2. Dissemination and Communication objectives

The dissemination and communication of RETINA results is an important objective to ensure that the innovations of the project will be properly transferred, and their benefits exploited industrially and academically by partners upon the project completion. In order to achieve this goal, a dissemination and communication plan was defined in D9.1, and the following objectives were defined:

- To share the technical results of the project with the scientific community interested to the topics addressed by RETINA project, in order to promote the research and receive useful inputs from other scientists and International Communities.
- To improve the knowledge of RETINA results in the industrial community as a basis to create new opportunities for building quality products and services.
- To attract potential customers and generate expectation towards the project results, in order to prepare its exploitation.
- To identify additional potential application fields, customers and business opportunities based on the reactions to the dissemination activity.

3. Summary of Dissemination and Communication Activities

The following activities have been carried out in the context of the dissemination and communication plan defined at the beginning of the project:

- Generation of general project “branded” communication material.
- Establishment of the project website and social networks.
- Publication of results in conferences and journals
- Presentation of project results in other events

3.1 Preparation of general project "branded" communication material

A logo of the project, shown in Figure 1, was created and used during the project in all dissemination and communication actions by all partners. Templates were also created for presentation and deliverables.

Figure 1. Logo of the RETINA project.

3.2 Public website and social networks

A public website (www.retinah2020.eu) was created with a responsive web design (RWD) to adapt the appearance of web pages to the device that is being used to visit them. A site designed with RWD adapts the layout to the viewing environment by using fluid, proportion-based grids, flexible images, and CSS3 media queries. A screenshot of the RETINA website is shown in Figure 2. The following sections have been defined:

- General description about de project.
- Fact sheet of project contract details.
- Consortium description.
- Technology: technical goals, project concept and highlights.
- Dissemination: public deliverables, publications and news.
- Contact and link to social networks.

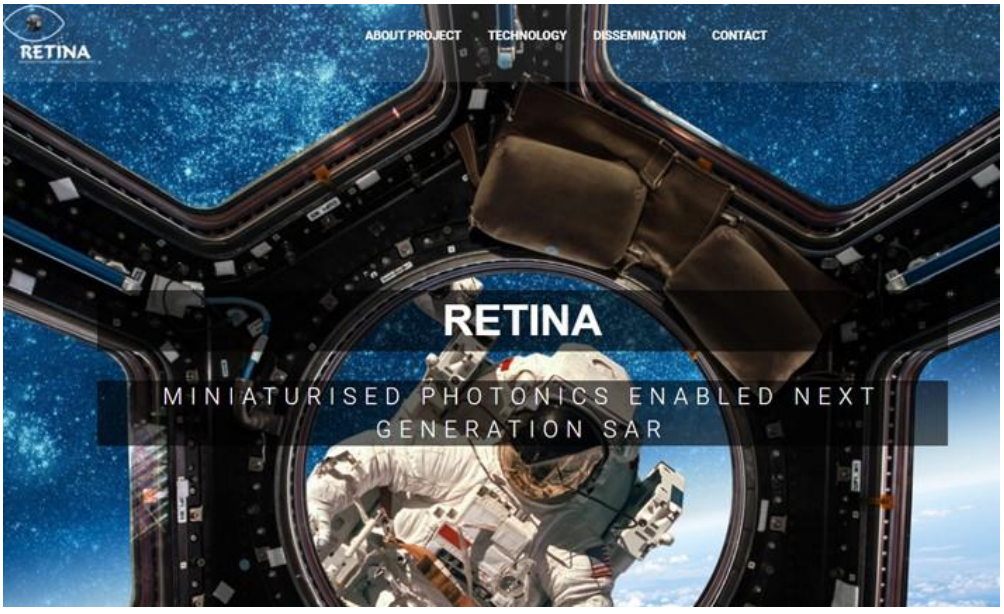

Figure 2. Screenshot of RETINA website.

The website has a plugging to measure statistics and analyse the effective of its implementation. Figure 3 shows the visits and visitors since the creation of the website. The website has received a total of 24.007 visits and 8741 visitors until 24/02/2022. Figure 4 shows the top ten countries of visitors. It is interesting to notice that the main visitors are from USA and Russia. Finally, Figure 5 shows the search engine referrals. Almost all visitors that arrived at RETINA website from Google search engine.

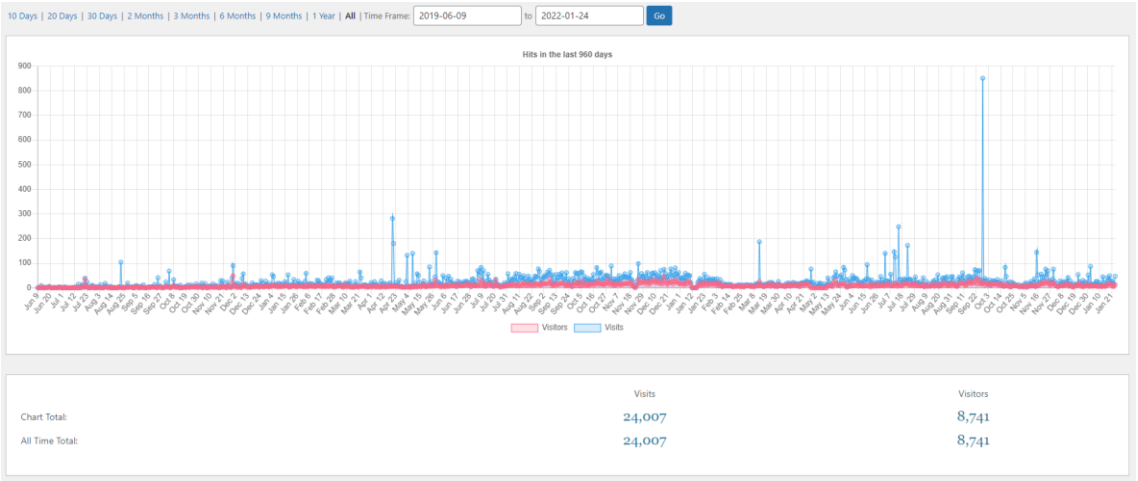

Figure 3. Hit statistics since the creation of the web until 24/01/2022.

Rank	Flag	Country	Visitor Count
1		United States	1,924
2		Russian Federation	1,865
3		Unknown	962
4		Germany	504
5		Netherlands	473
6		France	436
7		Ukraine	343
8		Spain	285
9		China	250
10		Sweden	207

Figure 4. Top ten countries of visitors until 24/02/2022.

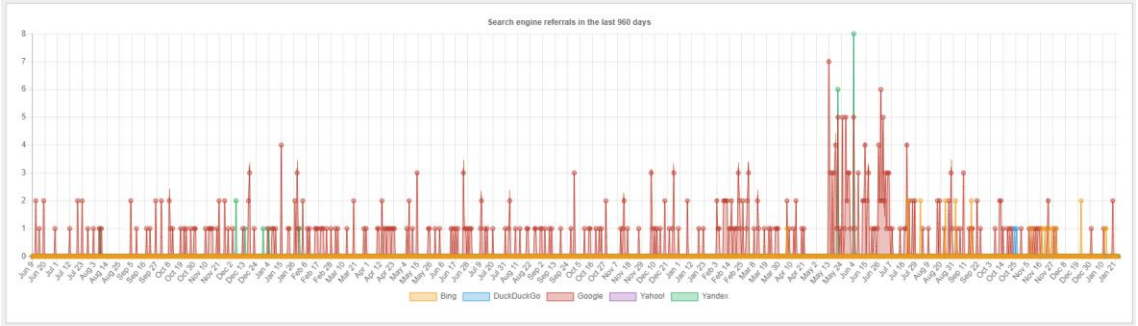

Figure 5. Search engine referrals until 24/01/2022.

The following communication channels were also established to reach the widest audience possible and maximize the awareness of the project impacts:

- **Research Gate group (**https://www.researchgate.net/project/H2020-RETINA) targeting the technical and scientific community.
- **Linkedin group** (https://www.linkedin.com/groups/8770162/) to mainly reach industrial stakeholders.
- **Twitter account** (https://twitter.com/Retinah2020) for addressing the general public.

Figure 6 shows some screenshots of posts in Linkedin and Twitter social networks.

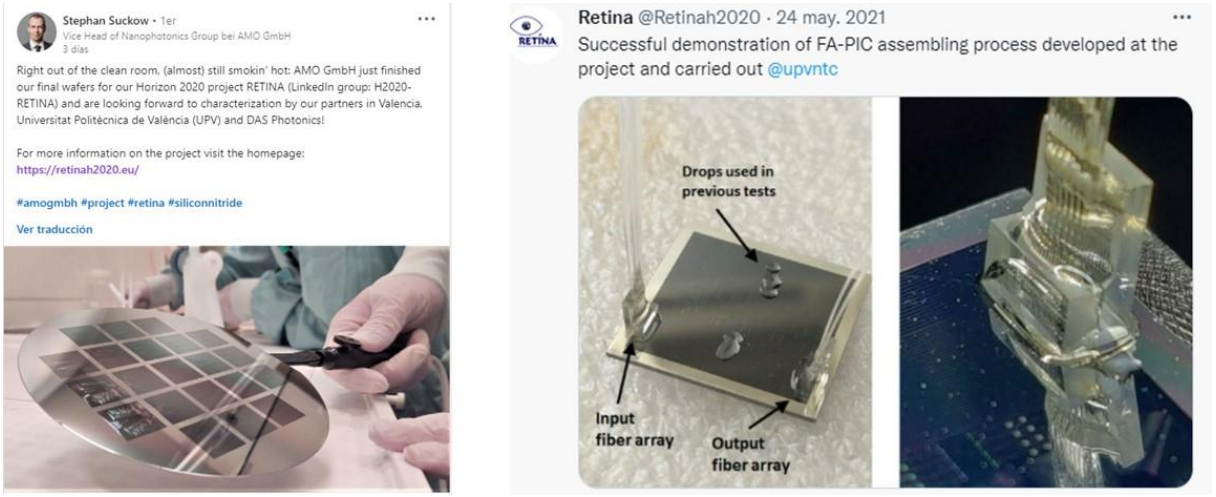

Figure 6. Screenshots of posts in Linkedin and Twitter social networks.

3.3. Publication of project results in conferences and journals

The publication of the project results in conferences has been affected by the COVID pandemic. Nevertheless, the following contributions have been made:

- A. Brimont, D. Zurita, V. C. Duarte, T. Mengual, B. Chmielak, S. Suckow, A. Giesecke, M. A. Piqueras, P. Sanchis, "Optical fiber-to-chip assembly process for ultra-low loss photonic devices based on silicon nitride for space applications", 22th European Conference on Integrated Optics, June 23-25, Paris (France), 2020[1].

- T. Mengual, V. C. Duarte, V. Polo, M. A. Piqueras, P. Sanchis, A. Brimont, D. Zurita, B. Chmielak, S. Suckow, A. Giesecke, E. Matarazzo, L. DiPalma, D. Maiarelli, H. Wang, P. G. Huggard, "Miniaturised photonic front-end for the next generation of space SAR applications," Proc. SPIE 11852, International Conference on Space Optics — ICSO 2020, 1185255 (11 June 2021)[2].

Open Access has been guaranteed for both publications. The publications have also been listed in the project website and a link to the paper has been added. Furthermore, the following publication has been recently submitted for publication to a journal:

[1] https://riunet.upv.es/handle/10251/178658

[2] https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11852/2599928/Miniaturised-photonic-front-end-for-the-next-generation-of-space/10.1117/12.2599928.full?SSO=1

- B. Chmielak, S. Suckow, J. Parra, V. C. Duarte, T. Mengual, M. A. Piqueras, A. L. Giesecke, M.C. Lemme, and P. Sanchis, "High-efficiency grating coupler for ultra-low loss Si_3N_4 based platform", submitted for publication to Optics Letters.

3.4 Presentation of project results in other events

The project results have also been disseminated in the following events:

- Magazine Proespacio #41 (pp. 24) released in January 2019[3].
- 4th ESA Workshop on Advanced Flexible Telecom Payloads by DAS Photonics. The workshop took place 4 – 6 March 2019 at ESA-ESTEC in Noordwijk, The Netherlands.
- Workshop of Optical and Photonic Technologies for Space Applications by UPVLC. The workshop, organized by a SECPho cluster (http://www.secpho.org), took place 7 May 2019 at Madrid, Spain.
- EDA 43rd CapTech RF Sensors Technologies (RADAR) Meeting by DAS Photonics. The Meeting took place in June 2019 at Brussels, Belgium.
- Nano-Optics seminar entitled "Integration of new materials into silicon based nanophotonics" given by AMO in June 2019 at Siegen, Germany.
- Lecture in the SiN Epixfab course entitled "SiN technology presentation" given by AMO in November 2019 at Brussels, Belgium.
- IEEE Photonics Society Newsletter (pp. 18) issue released in April 2020.
- EDA Captech Components and Radars workshop by DAS Photonics. The meeting took place online the 9th of February 2022.
- RETINA Project Summary to be published within the AIRBUS Photonic Group across all AIRBUS entities and countries at the end of the program in February 2022. AIRBUS Italia will organize meetings to disseminate the project results and ignite possible collaborations.
- ADSR to place an internal request for the inclusion of the RETINA unit in the AIRBUS technology portfolio at the end of the program in February 2022.
- Abstract with the project results to be submitted to the International Conference on Space Optics — ICSO 2022 (deadline for abstract submission 2 May 2022)

[3] http://pdfonline.tedae.org/proespacio_41_es/mobile/index.html