



EVOLVED-5G

NEWSLETTER # 7

(July – September 2022)



evolved-5g.eu

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ISSUE HIGHLIGHTS

The seventh issue of EVOLVED-5G Newsletter presents the project activities during the period July - September 2022 focusing on the communication and dissemination activities, upcoming events, and deliverables.

In numbers, the EVOLVED-5G activities are:

- 1 Journal Paper
- 5 Presentations
- 1 Co-organised Workshop & Presentation
- 2 Booth & Demonstration
- NCSR Demokritos Summer School
- 3 YouTube Videos
- 1 Interview
- 4 Articles
- 4 5GPPP Activities
- 4 Submitted Deliverables
- 2 Upcoming Deliverables
- 1 GA meeting



Communication and Dissemination Activities

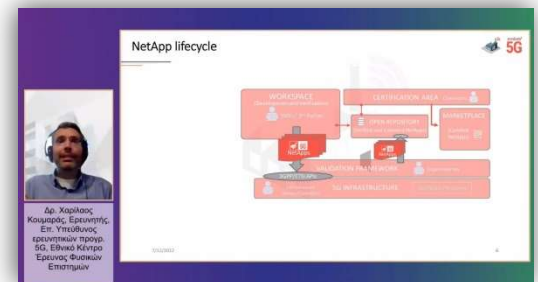
Paper

- The EVOLVED-5G journal paper entitled "Implementation and evaluation of the Multi-connection Tactile Internet Protocol and API" by Rico, D., Grinnemo, K. J., Brunstrom, A., & Merino, P. from UMA was accepted in the 2nd IFIP/IEEE International Workshop on Fully-Flexible Internet Architectures and Protocols for the Next-Generation Tactile Internet (FlexNGIA 2022) at IEEE Communications Society. You may find more information online here: <https://ieeexplore.ieee.org/document/9789842>



Presentations

- EVOLVED-5G technical manager Haris Koumaras from NCSR "DEMOKRITOS" presented our project in the "5G Openness and Programmability" session at the 12th Mobile & Connected World Congress. You may learn more about the event here: <https://mwc.gr/>



- Delia Rico presented Implementation and evaluation of the Multi-connection Tactile Internet Protocol and API. In las Jornadas de Concurrencia y Sistemas Distribuidos 2022, Ávila, España.



- Laura Panizo presented Towards Zero Touch Configuration of 5G Non-Public Networks for Time Sensitive Networking National Spanish Conference, 14-17 June, Ávila, España.



➤ Dr. Harilaos Koumaras (NCSR "DEMOKRITOS") presented the "Experimentation and Validation Openness for Longterm evolution of Vertical inDustries in 5G era and beyond – EVOLVED-5G" during the Workshop 2 "NetApps into Beyond 5G and 6G Networks" in the context of **IEEE MeditCom2022**. You may find more information about the event here: <https://meditcom2022.ieee-meditcom.org/>



➤ Dr. Harilaos Koumaras (NCSR "DEMOKRITOS") delivered a presentation entitled "B5G programmability and NetApps Enablers for XR and Metaverse new business opportunities" at Panel P1 "6G Enablers for Extended Reality and the Metaverse" of **IEEE MeditCom 2022**. You may find more information about the event here: <https://meditcom2022.ieee-meditcom.org/>



Co-organised Workshop & Presentation

➤ The 2nd International Workshop, on Advances on Privacy Preserving Technologies and Solutions (IWAPS 2022) was co-organised by EVOLVED-5G, SealedGRID, SECONDO, INCOGNITO, NetPhish, ERATOSTHENES, CyberSec4Europe and PHYSICS. The workshop took place in conjunction with the **17th International Conference on Availability, Reliability and Security** on the 23rd -26th of August 2022, in Vienna and the EVOLVED-5G partner Christos Xenakis from InQbit, delivered a presentation entitled "EVOLVED-5G: NetApp for CAPIF robustness". You may learn more about the event here: <https://www.ares-conference.eu/workshops/iwaps-2022/>



Booth & Demonstration

- PAL Robotics represented EVOLVED-5G project in **ERF2022** in their booth with a demonstration. During the event, visitors had the chance to meet **TIAGo robot** and see how our project can lead the way towards industry 4.0. You may learn more about the event here: <https://erf2022.eu/>



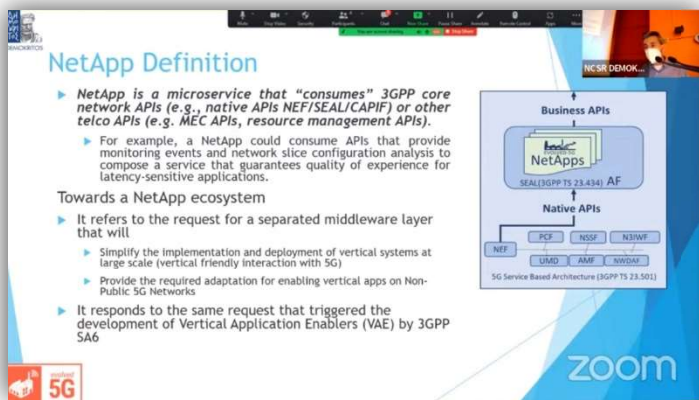
Booth & Demonstration

- PAL Robotics represented EVOLVED-5G project in **Automatica** in their booth. During the event, visitors had the chance to learn about the nature and the progress of EVOLVED-5G project. You may learn more about the event here: <https://automatica-munich.com/en/>



NCSR “DEMOKRITOS” Summer School

NCSR “DEMOKRITOS” summer school returned this year after two years of remote and online participation. This year’s summer school took place on at 11 -15 July 2022 at NCSR “DEMOKRITO’S” facilities. EVOLVED-5G project was represented twice with two different presentations. EVOLVED-5G Technical manager Harilaos Koumaras participated and presented 5G and NetApp programmability during on July 12th. Also, Dimitrios Fragkos, presented EVOLVED-5G NEF Emulator during the same day.



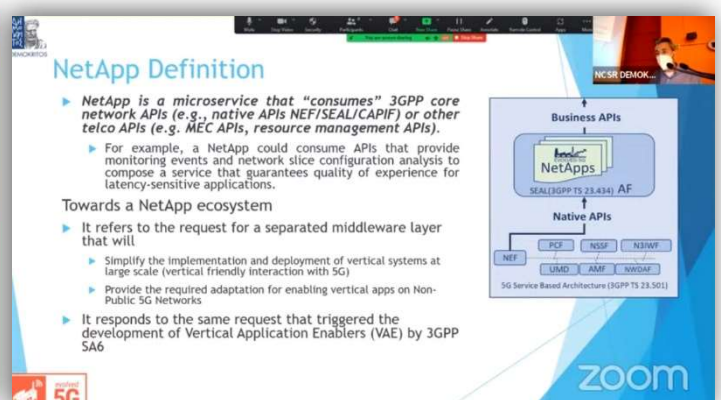
NetApp Definition

- NetApp is a microservice that “consumes” 3GPP core network APIs (e.g., native APIs NEF/SEAL/CAPIF) or other telco APIs (e.g. MEC APIs, resource management APIs).
- For example, a NetApp could consume APIs that provide monitoring events and network slice configuration analysis to compose a service that guarantees quality of experience for latency-sensitive applications.

Towards a NetApp ecosystem

- It refers to the request for a separated middleware layer that will
 - Simplify the implementation and deployment of vertical systems at large scale (vertical friendly interaction with 5G)
 - Provide the required adaptation for enabling vertical apps on Non-Public 5G Networks
- It responds to the same request that triggered the development of Vertical Application Enablers (VAE) by 3GPP SA6

Diagram: A hierarchical diagram showing Business APIs at the top, followed by NetApps (SEAL(3GPP TS 23.434) AF), and Native APIs (NEF, PCF, NSSF, N3IWF, UDM, AMF, NWDNF) at the bottom, all within the context of 5G Service Based Architecture (3GPP TS 23.501).



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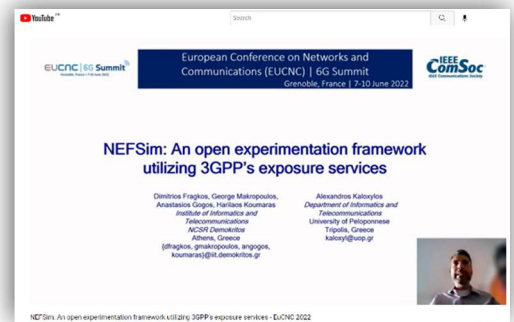
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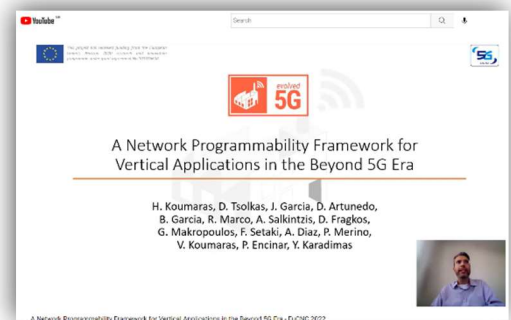


YouTube Videos

- Harilaos Koumaras EVOLVED-5G technical manager presented the conference paper entitled " NEFSim: An open experimentation framework utilizing 3GPP's exposure services" during EUCNC 2022. The video is available at the EVOLVED-5G YouTube channel here <https://www.youtube.com/watch?v=VDQVUvUHeu8>

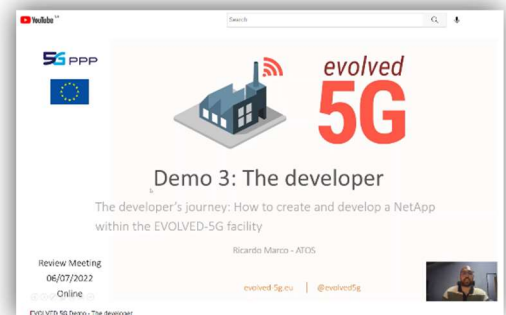


- Harilaos Koumaras EVOLVED-5G technical manager presented the conference paper entitled " A Network Programmability Framework for Vertical Applications in the Beyond 5G Era" during EUCNC 2022. <https://www.youtube.com/watch?v=WO6KdwCM4Yk>



- A EVOLVED-5G video has been produced by Atos, showcasing the journey a developer takes starting from the creation of a NetApp until its verification in the EVOLVED-5G framework. The video overviews in brief the whole process, from joining the EVOLVED-5G GitHub until the verification.

The video is available at the EVOLVED-5G YouTube channel here: <https://www.youtube.com/watch?v=6BBIF3V1g24>



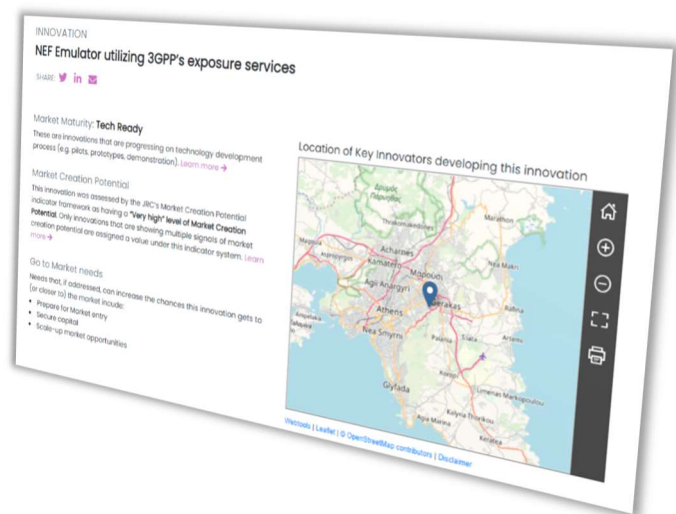
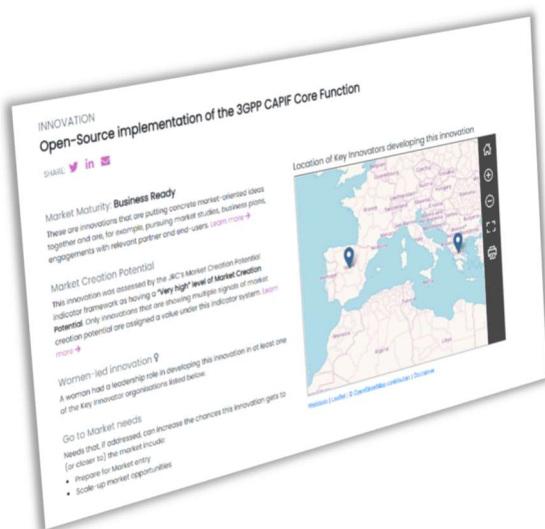
Interview

➤ Julien Castet from Immersion, EVOLVED-5G partner gave an interview at ADI Nouvelle-Aquitaine online magazine (in French) giving insights about our project! You may access it online here: <https://www.adi-na.fr/actualites/immersion-aide-a-lintegration-de-la-5g-dans-les-industries.html>

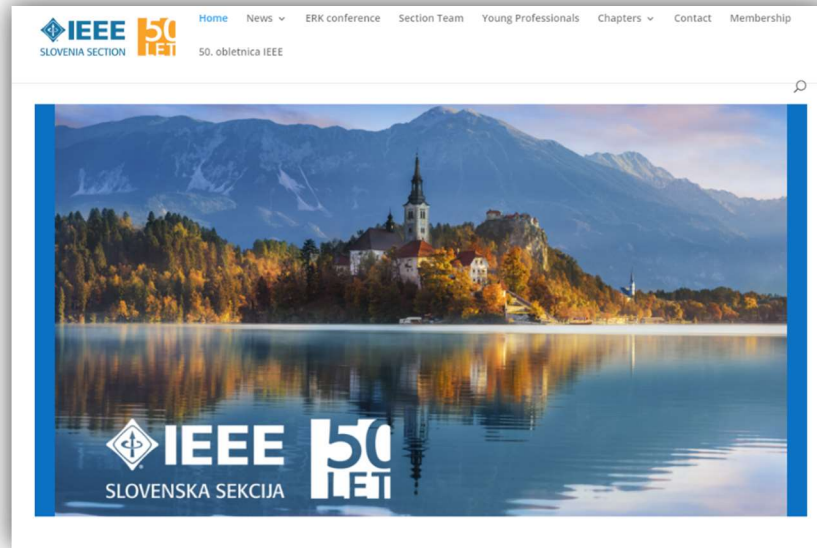


Articles

➤ Two articles have been released by European Commission's innovation radar to describe the innovation and developments within EVOLVED-5G project. You may find the article about NEF Emulator here: <https://www.innoradar.eu/innovation/47484> and the article about 3GPP CAPIF Core Function here: <https://www.innoradar.eu/innovation/47486>.



- An article by ININ entitled "Collecting mobile network radio parameters using consumer CPE modem" has been published in the Proceedings of the **"31st International Electrotechnical and Computer Science Conference"**, which took place in Portorož, Slovenija, 19- 20 September 2022. You may learn more about the event here: <https://erk.fe.uni-lj.si/erk22.html>

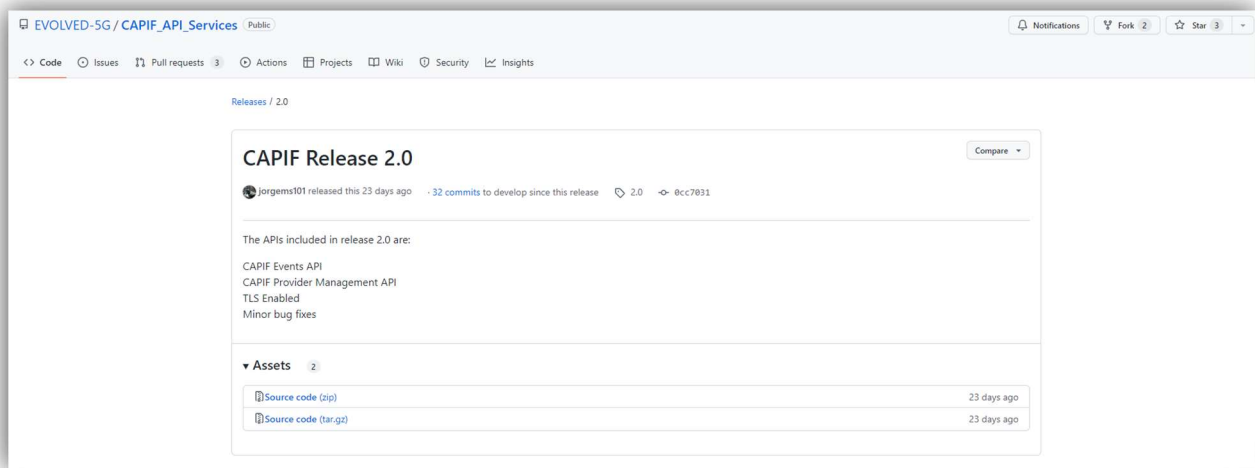


- The EVOLVED-5G online courses are communicated at the 5GPPP platform. You may access more information here: <https://5g-ppp.eu/evolved-5g-online-courses/>



CAPIF Release 2.0

EVOLVED-5G partners Telefonica and FOGUS have released the second version of the 3GPP CAPIF Core Function. You may access the updated code here: https://github.com/EVOLVED-5G/CAPIF_API_Services/releases/tag/2.0?fbclid=IwAR3s6k7t41m7pp0B2U0FLjQHMhi7pjuTL9Nov_Z-L1JM4bRpwajvmHNbJQ



5GPPP ACTIVITIES

5GPPP Newsletter

- July – August 2022
<https://5g-ppp.eu/newsletter-26-july-august-2022/>

5GPPP Newsflash

- June 2022 #65
<https://5g-ppp.eu/newsflash-june-2022-2/>
- July 2022 #66
<https://5g-ppp.eu/newsflash-july-2022/>
- August #67
<https://5g-ppp.eu/newflash-august-2022/>
- September #68
<https://5g-ppp.eu/newsflash-september-2022/>



Submitted Deliverables

D5.1 System level evaluation and KPI analysis (Intermediate, Public – M20): Intermediate report on system evaluation specifying the KPIs and analysing initial monitoring data.

D5.2 NetApps Validation and onboarding to Open Repository (Intermediate, Public – M20): Intermediate report on the use of validation tools and open repository (first release)

D6.1 Training Material and SMEs and Startup Acceleration Program Activities (Intermediate, M19): Intermediate report on the training material preparation and the design and preparatory activities (open call, “Train the Trainer” workshop) for the SMEs and Startup Acceleration Program.

D7.3 Dissemination, Communication and 5GPPP Engagement Activities (Intermediate - Public – M20): Intermediate report on the dissemination, communication and 5G-PPP engagement activities.

Upcoming Deliverables

D2.3 Overall framework for NetApp development and evaluation (Public – M22): The final deliverable of WP2 will report all the updates on the design and the requirements based on the feedback from the monitoring methodology and the final version of the validation and certification processes.

D7.4 Standardisation, Innovation, Exploitation and Technology Transfer Activities (Public – M24): Intermediate report on the innovation, exploitation as well as standardization activities of the project



6th GA Plenary Meeting

The EVOLVED-5G 6th GA meeting took place on September 27-28-29, in Thessaloniki, Greece, at ENVOLVE's 'OkThess' premises. The discussions on this GA meeting were about the Work Packages and deliverables statuses, upcoming activities as well as the update on the communication and dissemination processes. SMEs had also dedicated time to present their work and plans. Group photos from the consortium members were also taken in the traditional way!



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Call: H2020-ICT2018-2020
 Topic: ICT-41-2020
 Type of Action: Innovation Action
 Duration: 36 Months
 Start Date: 1 January 2021

