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5GPPP Software Network WG

CONNECTED HEALTH

Scope, Road So Far, & Way Forward

CONNECTED HOUSE

25 May 2023, 5GPPP to SNS JU: *Passing the Torch* Event

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NOKIA Bell-Labs FR

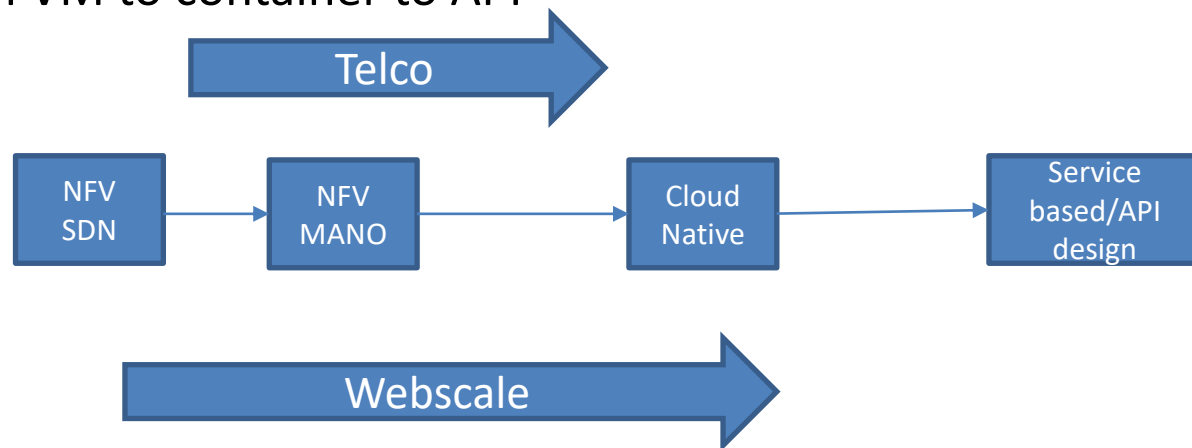
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CONNECTED TRANSPORTATION

May 25th 2023

Software Networks WG Scope

- WG created since beginning of 5G-PPP
- Mission:
 - Technology trend analysis,
 - Demystify new tech trend,
 - Place where projects can collaborate, share best practices,
 - Collect Software released by projects
- Our journey since 2016:
 - transformation to Cloud Native to Service based design and API
 - From VM to container to API



Way of working



- Each year, the WG set-up objectives:
 - Topic of the White Paper
 - Open-Sources: trend, collection
 - Dissemination: Workshop/session in EuCNC, Globecom, ACM MobiHoc etc
 - Contributions in 5G-PPP
- WG organizes technical workshops on some focused area/techno. For example: Function as a Service, K8s, NUMA



Software Networks WG outcomes



<https://5g-ppp.eu/wp-content/uploads/2018/07/5GPPP-Software-Network-WG-White-Paper-July-2018.pdf>

2018



https://5g-ppp.eu/wp-content/uploads/2019/09/5GPPP-Software-Network-WG-White-Paper-2019_FINAL.pdf

2019



MWC 2020
<https://5g-ppp.eu/wp-content/uploads/2020/02/5G-PPP-SN-WG-5G-and-Cloud-Native.pdf>

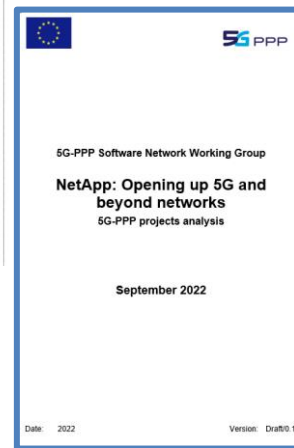
2020

Wide participation from 5G-PPP



<https://bscw.5g-ppp.eu/pub/bscw.cgi/d397473/EdgeComputingFor5GNetworks.pdf>

2021



2022

All these technologies are strengthened in 6G

- Truly Cloud Native system
- More Distributed and Converged Architecture
- EDGE → Extreme EDGE



5G Infrastructure PPP
The European path towards global next generation communication networks

Open-Source Collection



- Important to be included in the outcome of the work programme in addition to standards:
 - Conducted during Phase 1:
 - The link to collect Phase 1 outcomes
 - https://docs.google.com/spreadsheets/d/1C-9VjALm2cnTOLoem6yruTYKPgr5_Q9r0gtmRQhSyU0/edit#gid=0
 - Followed in Phase 2
 - The link to collect Phase 2 outcomes
 - <https://docs.google.com/spreadsheets/d/1xEK5ooFEUPEXtHuomMUuJpkwMYQiHLSixaORmdEutC/edit#gid=0>
 - Continued in Phase 3 through the collection of Network Applications:
 - On-going
 - https://docs.google.com/spreadsheets/d/1pNaDcfy_8AERvf-anisPFh5KIC_DeCoYhP0EXTXYJt4/edit#gid=0

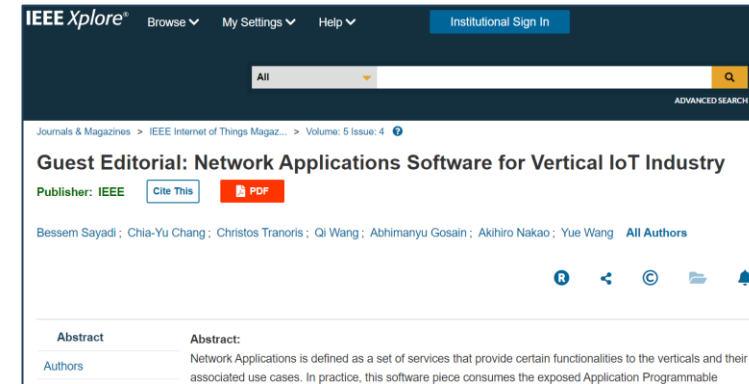


Dissemination

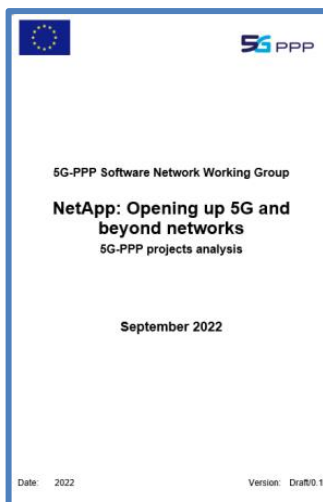


- Cloud Native workshop serie in EuCNC
- Special Sessions
 - E.g. Network Exposure in EuCNC 2023
- Special Issue publication (Comsoc, ACM)
- Webinars
- Joint Workshop with other WG

EuCNC | 6G Summit
Gothenburg, Sweden • 6-9 June 2023



- The list of the Guest Editors are
 - Bessem Sayadi, Nokia Bell Labs, France
 - Chia-Yu Chang, Nokia Bell Labs, Antwerp, Belgium
 - Christos Tranoris, University of Patras, Patras, Greece
 - Qi Wang, University of the West of Scotland, Paisley, UK
 - Abhimanyu Gosain, Northeastern University, Boston, MA, USA
 - Akihiro Nakao, The University of Tokyo, Tokyo, Japan
 - Yue Wang, Samsung R&D Institute, Staines-upon-Thames, UK



Lessons Learned



- Reinforce the visibility of the outcomes like the white papers through participation in international events
- Cross-WG collaboration should be strengthened by joint work in some white papers, e.g.
 - Business analysis
 - Security
 - etc
- Projects should be more engaged: identify the expert, report what it is on-going to your projects, formalize it in the DoA
- Think beyond the funded project



Way forward



The plan is:

- **Network Applications V2**, finalization and release in EUCNC 2023
- Further dissemination activities: potential **EuCNC 2023 Special Session** related on Network Exposure, **EuCNC 2023 convened session** proposal on *5GPPP outcomes and impact generated*
- **Transition of the SN WG to SNS JU as of Sept/Oct 2023** since cloud native, multi-stakeholder orchestration across heterogeneous domains including extreme edge, platform abstraction, exposure, data layer, 6G service delivery framework etc are key for 6G. **There is a lot to do.**





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Thank you for your attention!

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