



SEMIOTICS: Smart End-to-end Massive IoT Interoperability, Connectivity and Security

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SEMIoTICS Status

Newsletter
June 2020
Issue Number 5

The main highlights in the context of SEMIoTICS during the last 6 months (January 2020 - June 2020), can be summarized as follows:

- The **COVID-19** situation has severly affected the project meetings, as well as the dissemination/communication activities of the project
- SEMIOTICS has been included in EC's Innovation Radar
- The SEMIOTICS 7th Plenary meeting was held online in March 2020
- SEMIoTICS participated in virtual standardization meetings
- Several **scientific publications** (journals, conferences and bookchapters) have been achieved





SEMIoTICS Standardization Activities

semiotics participated in the virtual meetings of ISO/IEC JTC1/SC27 WG2 and WG4 on Information security, cybersecurity and protection, which were held online on April 2020

ISO/IEC JTC 1/SC 27
Information security, cybersecurity and privacy protection

7th SEMIoTICS F2F Plenary Meeting (virtual)



The 7th SEMIoTICS F2F Plenary Meeting (initially scheduled at University of Passau) was held online during 24th-25th of March 2020. During the meeting, the current status of the running work packages was discussed, including also the next steps.

SEMIoTICS has been included in EC's Innovation Radar



The SEMIoTICS innovations entitled "Improved software components to enable automation and security of existing networking and IoT systems" and "SPDI patterns for IoT/IIoT applications" have been included in the European Commission's Innovation Radar. SAG, CTTC, FORTH and SPHYNX have been identified as key innovators.

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Project Duration: 01.01.2018 – 31.12.2020

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Publications

- 1. Bröring, J. Seeger, M. Papoutsakis, K. Fysarakis, A. Caracalli, **Networking-aware IoT Application Development**, MDPI Sensors, March 2020
- 2. N. Petroulakis, K. Fysarakis, S. Ioannidis, G. Spanoudakis, V. Kulkarni, Smart End-to-end Massive IoT Interoperability, Connectivity and Security (SEMIoTICS), ERCIM News 119, Special Theme: Smart Things Everywhere
- 3. A. Miaoudakis, K. Fysarakis, N. Petroulakis, S. Alexaki, G. Alexandirs, S. Ioannidis, G. Spanoudakis, V. Katos, C. Verikoukis, **Pairing a Circular Economy and the 5G-Enabled Internet of Things: Creating a Class of "Looping Smart Assets**, IEEE Vehicular Technology Magazine.
- 4. L. Sanabria-Russo, J. Serra, D. Pubill, C. Verikoukis, **CURATE: On- Demand Orchestration of Services for Health Emergencies Prediction and Mitigation**, accepted for publication in IEEE JSAC.
- 5. H. Pöhls and N. Rakotondravoni, Physical kill switches for IoT data collection: Adding dynamicity to consent by physical interaction and physical feedback, HCII 2020, Copenhagen, Denmark, Jul. 17-24, 2020.
- 6. E. Sakic, M. Avdic, A. Van Bemten, and W. Kellerer, **Automated Bootstrapping of A Fault- Resilient In-Band Control Plane,** SOSR '20. San Jose, CA, USA, 2020
- 7. E. Sakic and W. Kellerer, **Decoupling of Distributed Consensus, Failure Detection and Agreement in SDN Control Plane,** IFIP Networking 2020, Paris, France, June 2020.
- 8. F. Klement, H. C. Pöhls and K. Spielvogel, **Towards Privacy-Preserving Local Monitoring and Evaluation of Network Traffic from IoT Devices and Corresponding Mobile Phone Applications,** WISP 2020, July 2020.
- 9. E. Lakka, N. Petroulakis, G. Hatzivasilis, O. Soultatos, M. Michalodimitrakis, U. Rak, K. Waledzik, D. Anicic, V. Kulkarni, **End-to-End Semantic Interoperability Mechanisms for IoT, IEEE** CAMAD 2019: 1-6
- 10. E. Lakka, N. Petroulakis, E. Michalodimitrakis, M. Papoutsakis, Validation of Semantic Interoperability between IoT Platforms, WISP 2020, July 2020
- 11. N. Petroulakis, K. Fysarakis, A. Miaoudakis, K. Ramantas, P. Chatziadam, C. Verikoukis, **Service Chaining Using Software-Defined Networks** in Wiley 5G Ref (eds R. Tafazolli, C.-L. Wang and P. Chatzimisios).

SEMIoTICS in Social Media



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