WiSHFUL

Wireless **S**oftware and **H**ardware platforms for **F**lexible and **U**nified radio and network contro**L**

WIRELESS SOLUTION DEVELOPMENT

WiSHFUL has come to the end of its second year this December. During Y2 of WiSHFUL important advancements were made offering a wider range of control on supported platforms. The WiSHFUL core network control framework has reached its version 2.0 and has offered enhanced stability, performance, modular design, and an updated and more user friendly scripting environment. The WiSHFUL Intelligence Toolbox has been instantiated offering a range of components to create data processing chains on top of the basic offered WiSHFUL UPI functionality. An entirely new testbed supporting WiSHFUL UPIs has been added in the family of WISHFUL enabled Fed4FIRE testbeds: the NITOS testbed, supporting LTE experimentation. New radio hardware platforms have been added in the list of WiSHFUL enabled platforms including SDRs and ARM based wireless sensor nodes. Also network layer control support for Wireless Sensor Networks has been integrated. A wide list of showcases ranging from Localization, Offloading to Intelligent Adaptive Networking and Heterogeneous Cooperation/Coexistence scenarios were implemented and are to be presented in the Review Meeting for Y2, which will take place in Berlin, Germany this February.

Furthermore, within Y2, the first Open Calls of WiSHFUL were finalized and their results presented in the OC review meeting in Ghent on November, 2016. Additionally the second and third Open Calls were launched and are still running towards completion within Y3. OC4 and OC5 are scheduled to be launched within 2017.

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OPEN CALL 4

Open Call 4 for Experiments will be announced soon!

CALL FOR EXPERIMENTS: This track targets advanced solutions for controlling wireless networks using the WiSHFUL software platform and unified programming interfaces (UPIs), and using the facilities and hardware supported by the WiSHFUL Consortium. These experiments should be of a short duration (maximum 6 months). Experiments can be inspired by, but not limited to, the example showcases below that have either been implemented or being implemented by the WiSHFUL consortium:

- **MAC adaptations:** Intra-technology airtime management, Load-aware & platform-independent MAC adaptation, Co-existence of IEEE 802.11 and IEEE 802.15.4e, Multi-hop load-aware MAC adaptations and MAC adaptation in the presence of the legacy stations.
- **Intelligent MAC adaptations:** MetaMAC, Cognitive MAC protocol selection, Intelligent interference mitigation in dense networks and Intelligent MCS selection.
- **Load and topology aware networking:** Routing Adaptation, Modulation and Coding Scheme (MCS) selection and Dynamic Link estimator selection.
- **Prioritization in wireless mesh networks**
- **Multiple Radio Access Technologies (Multi-RATs) sharing the same antenna**
- **License Shared Access/Authorized Shared Access**

For more information please visit the http://www.wishful-project.eu

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The 2nd Global 5G Event

Second Global Conference on 5G, Rome 2016 has offered participants lively debates about spectrum, standards and 5G technology exhibits. The exhibition of the demonstrations was opened in parallel to the conference for the two days and participants were encouraged to visit the stands during the breaks or at whatever opportunity they had. The event has in particular covered the main results of European 5G-PPP projects.

The WiSHFUL Project also participated at this exhibition with portable testbed supporting wireless backbone mesh networking and demonstrated the showcase of dynamic MAC adaptation.

OpenCall # 1 Review Meeting

The demonstration of the OpenCall took place on 23rd of November in Ghent, Belgium. **GRIDNET S.A.** with Enabling Agile Spectrum Adaptation in Commercial WLAN Deployments; **I2CAT Foundation** with SENSEFUL: SDN driven Joint Access and Backhaul coordination for dense Wi-Fi Small Cell networks; **Adant** with Reconfigurable antenna system for wireless local area networks; **StreamOwl** with QUEST: Quality-of-Experience in video streaming in wireless networks; **University of Thessaly** with FIRE LTE Experimentation over WiSHFUL (FLEXFUL); **Allbesmart** with WIFI-Dense: Experimental assessment of WiFi coordination strategies in dense wireless scenarios; **University of Perugia (UPG),** Department of Engineering with DVB-T software radio transmitter eXtension for IRIS (DVB-TX-IRIS).

We congratulate the proposers for their results presented in the OC review meeting.

Well done!

Plenary Meeting # 6

The 6th WiSHFUL plenary meeting took place from 23rd to 25th of January 2017 in Telecommunication Networks Group (TKN) at TU Berlin, Germany. It was attended by over 15 people from the Consortium. Several project-related items were discussed including showcases demos, the status and results from OC2 experiments and documentation of the WiSHFUL Project.

Several points about the WiSHFUL Framework were also discussed including: status of implementation, stability and validation tests, examples, tutorials, documentation status online, future plans for 3rd year, and the intelligence framework.

Consortium

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Acknowledgment

Please visit http://www.wishful-project.eu/ or email contact@wishful-project.eu for further information