

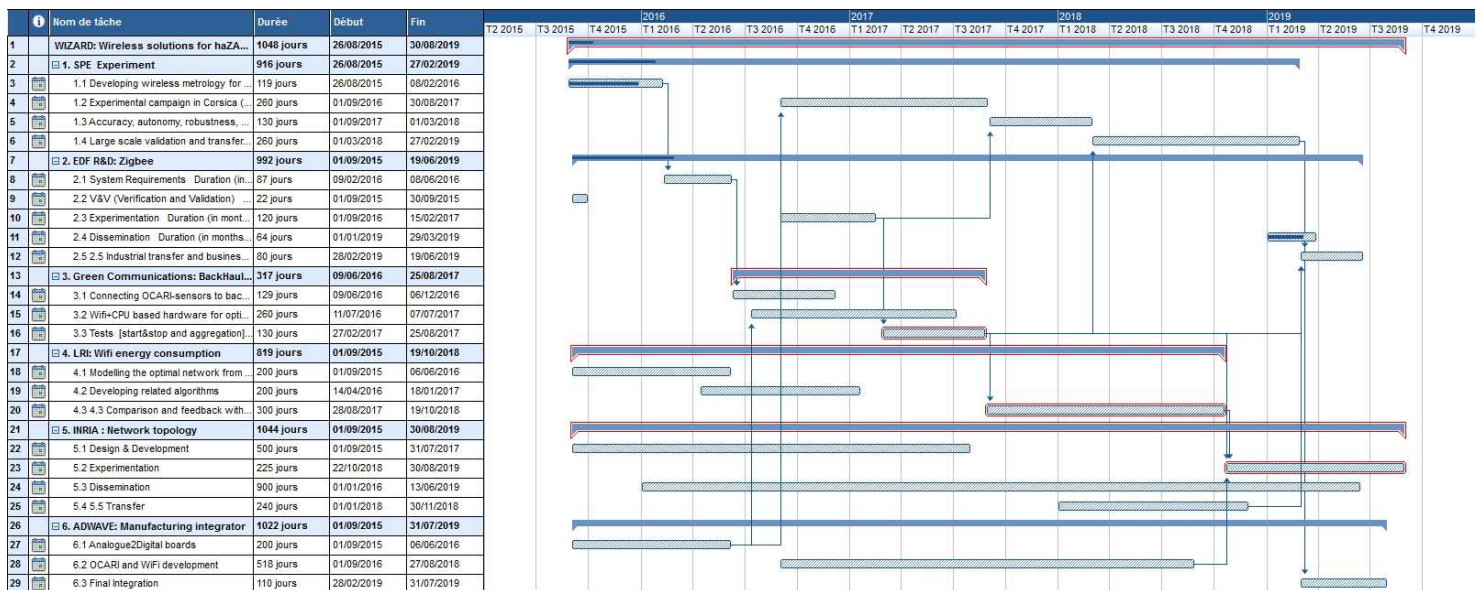
## WIZARD : WiREless solutions for haZARD moniroting and mitigation

The consortium meets the following partners for 48 months from the starting date T0:

- **Laboratoire des Sciences Pour l'Environnement (CNRS UMR 6134 – Université de Corse) – Lab. SPE**
- **EDF R&D**
- **Laboratoire de Recherche en Informatique (CNRS UMR 6823 – Université Paris Sud)**
- **INRIA Rocquencourt & Saclay**
- **Green Communications**
- **ADWAVE**

The GANTT schedule of the program is presented as follows.

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### Significant publications:

- **Lab. SPE:[1-9]**

- [1] X. Silvani and F. Morandini, "Fire spread experiments in the field: Temperature and heat fluxes measurements," *Fire Safety Journal*, vol. 44, pp. 279-285, 2009.
- [2] E. Innocenti, X. Silvani, A. Muzy, and D. R. C. Hill, "A software framework for fine grain parallelization of cellular models with OpenMP: Application to fire spread," *Environmental Modelling & Software*, vol. 24, pp. 819-831, 2009.
- [3] X. Silvani, F. Morandini, and J.-F. Muzy, "Wildfire spread experiments: Fluctuations in thermal measurements," *International Communications in Heat and Mass Transfer*, vol. 36, pp. 887-892, 2009.

- [4] T. Antoine-Santoni, J.-F. Santucci, E. De Gentili, X. Silvani, and F. Morandini, "Performance of a Protected Wireless Sensor Network in a Fire. Analysis of Fire Spread and Data Transmission," *Sensors*, pp. 5878-5893, 2009.
- [5] F. Morandini and X. Silvani, "Experimental investigation of the physical mechanisms governing the spread of wildfires," *International Journal of Wildland Fire*, vol. 19, pp. 570-582, 2010.
- [6] X. Silvani, F. Morandini, and J.-L. Dupuy, "Effects of slope on fire spread observed through video images and multiple-point thermal measurements," *Experimental Thermal and Fluid Science*, vol. 41, pp. 99-111, 2012.
- [7] X. Silvani, *Metrology for Fire Experiments in Outdoor Conditions*: Springer London, Limited, 2013.
- [8] F. Morandini, X. Silvani, D. Honoré, G. Boutin, A. Susset, and R. Vernet, "Slope effects on the fluid dynamics of a fire spreading across a fuel bed: PIV measurements and OH\* chemiluminescence imaging," *Experiments in Fluids*, vol. 55, pp. 1-12, 2014/07/18 2014.
- [9] X. Silvani, F. Morandini, E. Innocenti, and S. Peres, "Evaluation of a Wireless Sensor Network with low cost and low energy consumption for fire detection and monitoring," *Fire Technology, minor revision*, 2014.

- **OCARI [10-12]**

- [10] <http://ocari.org>
- [11] T. Dang, T. Val, A. Guitton, K. Al Agha, P. Minet, M-H Bertin, J-B Viollet, "Which wireless technology for industrial wireless sensor network? The development of OCARI technology", *IEEE Transactions on Industrial Electronics*, 2009.
- [12] S. Mahfoudh, P. Minet, I. Amdouni, "Energy efficient routing and node activity scheduling in the OCARI wireless sensor network", *Future Internet* 2010, 2(3), 308-340, August 2010.

- **Inria [13-19]**

- [13] I. Khoufi, S. Mahfoudh, P. Minet, A. Laouiti, "Data gathering architecture for temporary worksites based on a uniform deployment of wireless sensors", *International Journal of Sensor Networks (IJSNet)*, to appear in 2014.
- [14] I. Khoufi, P. Minet, A. Laouiti, S. Mahfoudh, "Survey of deployment algorithms in wireless sensor networks: coverage and connectivity issues and challenges", *International Journal of Autonomous and Adaptive Communications Systems (IAACS)*, to appear in 2014.
- [15] R. Soua, P. Minet, "Multichannel Assignment Protocols in Wireless Sensor Networks: a Comprehensive Survey", *Pervasive and Mobile Computing Journal*, <http://www.sciencedirect.com/science/article/pii/S1574119214000613>, May 2014.
- [16] R. Soua, E. Livolant, P. Minet, "Adaptive Strategy for an Optimized Collision-Free Slot Assignment in Multichannel Wireless Sensor Networks", *Journal of Sensor and Actuator Networks, Special Issue on Advances in Sensor Network Operating Systems*, 2(3), July 2013. <http://www.mdpi.com/2224-2708/2/3/449>
- [17] I. Amdouni, P. Minet, C. Adjih, "OSERENA: a coloring algorithm optimized for dense wireless networks", *the International Journal of Networked and Distributed Computing (IJNDC)*, Volume 1, Issue 1, November 2012.
- [18] I. Khoufi, P. Minet, A. Laouiti, E. Livolant, "A Simple Method for the Deployment of Wireless Sensors to Ensure Full Coverage of an Irregular Area with Obstacles", *ACM MSWiM 2014*, Montreal, Canada, September 2014.
- [19] I. Khoufi, E. Livolant, P. Minet, M. Hadded, A. Laouiti, "Optimized trajectory of a robot deploying wireless sensor nodes", *Wireless Days 2014*, Rio de Janeiro, Brazil, November 2014.

- **LRI [20-25]**

[20] Y. Benfattoum, S. Martin, and K. A. Agha, "QoS for real-time reliable multicasting in wireless multi-hop networks using a Generation-Based Network Coding," *Comput. Netw.*, vol. 57, pp. 1488-1502, 2013

[21] H. Noura, S. Martin, and K. A. Agha., " E3SN: Efficient security scheme for sensor networks," presented at the International Conference on Security and Cryptography, Reykjavik, Iceland, 2013.

[22] S. Martin, K. A. Agha, and G. Pujolle, "Traffic-based topology control algorithm for energy savings in multi-hop networks," *Annals of Telecommunications, Springer*, vol. 67, 2012.

[23] Y. Benfattoum, S. Martin, and K. A. Agha, "DYGES: A network-aware Generation-Based Network Coding for multicast flows," presented at the IEEE VTC-Fall'12: Vehicular Technology Conference, Quebec City, Canada, 2012.

[24] Y. Benfattoum, S. Martin, and K. A. Agha, "TC-IROCX: Network coding with topology control and interference awareness," presented at the IEEE WCNC'12: Wireless Communications and Networking Conference, Paris,France, 2012.