

WT2.10: L'Sigetel L'ecole des Science et Technologies du Neumerique, France

Report

Activities performed during the visit

in Wroclaw

period: 30.09.2013 - 9.10.2013

author: Michał Woźniak

1 Personal Information

~~Mr./Ms.~~ PROF. KATARZYNA WĘGRZYN-WOLSKA., faculty member of L'ESIGETEL L'école des Sciences et Technologies du Numérique visited Wrocław University of Technology, Department of Systems and Computer Networks in the period from 28-09-2013 to 9-10-2013 in order to carry out research and training activities in the fields of medical informatics, social networks analysis especially for epidemic models, telemedicine systems

2 Information about Seminars

The seminar presentation was organized on Department of Systems and Computer Networks, Wrocław University of Technology, room 40 building C4 the date 1-10-2013 10:00 a.m.

It was entitled:

Presentation of the ESIGETEL research potential and topics. Discussion on the potential fields of cooperation

3 Description of scientific activities

The main objective of the seminar/meeting was a presentation of the research activities of the research teams from L'ESIGETEL L'école des Sciences et Technologies du Numérique and from Department of Systems and Computer Networks from Wrocław University of Technology in the areas of medical informatics, intelligent data analysis and computer networks with a view to establish close cooperation, know how exchange, as well as submission of common publications and proposals.

L'ESIGETEL presented their work in the mentioned above areas:

- Applications for the e-health
- Web intelligence and social networks analysis
- Distributed computing using P2P model

Prof Wegrzyn-Wolska presents results of the following project which have already finished by her team:

- Home Automation System at Home - Verso 2009 - the main contribution of L'ESIGETEL was development & optimization of algorithms for environmental sound monitoring
- Analyzing Twitter's messages to predict epidemic (flu)spread (comparison with Sentinelle database used in France)

- Interactive robot (agenda, cognitive therapy, help, monitoring) and a home automation system for monitoring vital signals) - project realized under the framework of IP - FP7 (2008-2012). The main contribution of L'ESIGETEL was to Improve and integrate of sound sensors: microphones and data fusion
- Project Ubi@ctiv (AAL Call 6) - which was devoted to Simplified access to a market place fostering relationships between active older adults wishing to remain in a structured activity paid or voluntary in spite of frailty or obstacles and service demanders.
- Project MEDIATAGS, which focused on the use of 2D barcodes and on indoor localization techniques.

The list of publication of the L'ESIGETEL can be found on http://www-dev.esigetel.fr/index.php?option=com_content&view=article&id=405&Itemid=88&lang=fr

The team from Wroclaw University of Technology presented their work, which have been focusing on the following subjects:

- From the area of computer networks:
 - Modeling and optimization of computer networks
 - Network survivability
 - Content-oriented networks
 - Multicast and anycast services
 - Peer-to-Peer and overlay systems
 - Distributed computing systems
 - Hierarchical systems
 - Cloud computing
 - Branch-and-bound and branch-and-cut methods for network optimization
 - Soft optimization techniques for network optimization
 - p-Cycles and other protection structures
 - Elastic optical networks
 - Multilayer network planning
 - Simulation of computer networks
- From the area of machine learning:
 - Machine learning and data mining
 - Methods of improving and stabilizing weak classifiers
 - Hybrid and compound classification
 - Information fusion and combined classifiers (multiple classifier systems, classifier ensembles)
 - Big data analytics
 - Data stream classification and concept drift (novelty) detection
 - One-class classification
 - Imbalanced data analysis
 - Active learning
 - Distributed and parallel computing systems for data mining
 - Applications to real-life problems

Additionally the short description of the following projects realized by the team from Wroclaw University of Technology were shortly described:

- Methods of designing compound structures of computer decision support systems
- Computer pattern recognition and data mining methods for distributed computing systems

We identified the following possible fields of cooperation on the basis of the meetings, presentations and discussions

- designing computing systems for big data analytics, especially for tweet analysis (Twitter's messages),
- designing telemetric systems for the medical decision support systems, especially for the patient in motion.

Additionally we were discussing about the schedule of future visits which looks as follows:

Ingoing visits:

1Q2014 (1 short-term visit), 4Q2014(1 short-term visit), 1Q2015(2 short-term visits), 3-4Q2015 (1 middle-term visits)

Outgoing

1Q2014 (1 short-term visit), 3Q2014 (1 short-term visit), 2Q2015 (1 middle-term visit),3Q2015 (1 short-term visit)