



# WT2.5: Politecnico di Milano

## Report

Activities performed during the visit

in Wrocław

period: **13.07.2015 -17.07.2015**

author: Krzysztof Walkowiak



## Personal Information

Mr./Ms. **Massimo Tornatore**, faculty member of  
**Politecnico di Milano, Department of Electronics and Information, Milan, Italy.** visited

*(name of sending institution, country)*

in the period from **13.07.2015** to **17.07.2015** in **Wroclaw University of Technology**

*(name of the visited institution, country)*

order to carry out research and training activities in the field  
of **computer network optimization**

*(give the area)*

## Information about Seminars

The seminar presentation was organized on **15.07.2014**

the date

It was entitled:

**Routing and Spectrum Assignment with Distance-Adaptive Transceivers in metro networks**

## Description of scientific activities

(Please describe value added to the ENGINE project i.e. new knowledge, new skills with respect to the objectives of the project, the assigned common area of future cooperation with the partner, plans for common research, projects, publications and how it could be used in the scope of ENGINE)

During stay of Prof. Massimo Tornatore in Wrocław, we discussed potential research cooperation in the following fields

- optimization of elastic optical networks,
- optimization of optical networks using SDM (Space Division Multiplexing),
- optimization of multicast flows in optical networks,
- issues of QoS (Quality of service) in optical networks.

We had several meetings with Prof. Massimo Tornatore and my PhD students to discuss details in the topics mentioned above. Prof. Tornatore is world class expert in the topics related to optical networks, thus his knowledge is very broad and of great value. All mentioned topics are related to very recent advances in network optimization field. But, especially the SDM topic is very novel and up-to-now only very few papers have been published on this topic. As a result of our talks and discussion, we decided to work on research related the following topics:

- optimization of optical networks using SDM with multimode transmissions,
- optimization of multicast flows in optical networks,
- issues of QoS (Quality of service) in optical networks.

Moreover, Prof. Massimo Tornatore proposed me to be opponent (reviewer) of PhD thesis of his student Anna Buttaroni, who was in Wrocław on an ENGINE twinning visit in February 2015.

## Information referring to the intellectual property

(the generally binding law in this area in the visited country and procedures of patenting);

.....

## Description of the cooperation between universities and industry

(how it is organized in partner's organization, the sources of funding, the opinions about drawbacks and strengths of existing solution).

.....

## Other activities

.....

**REMARK:** Apart from this information also a program of the visit and the presentation in electronic version should be given to the project office (please send all of them to Urszula.Markowska-Kaczmar@pwr.wroc.pl). Please respond to the points 1-5 for outgoing visit and points 1-3 for incoming visit. Point 6 is for extra activities that are not put in points 1-5.

