Péter Megyesi

EIT Digital Budapest DTC

PhD topic: Traffic measurements, characterization and emulation for emerging networking scenarios

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'The EIT Digital Doctoral School really gave me a whole new perspective on how to see the world. Before I started the programme, I just focused on the theoretical part of my PhD research, but now I am really keen on the business part of it.'

Achievements & further plans

Peter is a doctoral candidate at the Budapest University of Technology and Economics and he is expected to defend his PhD at the end of 2016. The topic of his dissertation is **high-speed network traffic emulation**. He spent his six-month mobility programme at the University of Federico II in Naples, Italy, where he started researching monitoring solutions in Software Defined Networks (SDN).

Currently, he is working on the development of a **business model for an SDN based startup** within the BMD course. Based on this, he plans to pursue the idea during the business development experience phase.

Software Defined Networking (SDN) promises easy, flexible and innovative network integration instead of current rigid and expensive solutions. SDN has already gained significant penetration in cloud environments, e.g. the data centers of Google, Facebook and Microsoft are based on such technology. My goal is to introduce Software Defined Networking in enterprise environments and by that granting a much easier networking solution which could save companies a lot of CAPEX and OPEX.

Educational status at Spring semester of 2016:

RA	OR	BMD	GH	Mobility	BDExp.
✔	✔	✔	⚙	✔	⚙

Reserach topic

Software Defined Networking (SDN) is an emerging concept which will probably revolutionize the way of building computer networks in the future. The idea of SDN is to use basic forwarding devices with little knowledge and independency (called SDN switches) and a centralized controller that will be responsible for setting up the networking policies in the switches. This method decreases the hardware cost of the switches

to a great degree, since they can be built from cheap merchant silicon unlike highly specialized hardware. Furthermore, SDN uses open platforms and standards (rather than closed propriety solutions) which can also decrease maintenance expenditures of future networks. In fact, the whole layered architecture of SDN was created to support networking start-ups which, in the current market situation (with big players such as Cisco, Juniper or HP), is not possible.

Peter is currently conducting research on the proper monitoring of such SDN based networks. Although the SDN architecture provides a better view over the entire network, the idea of a centralized control raises many interesting questions that are yet to be answered by the research community. Peter plans to use his research results and turn his findings into a successful business. He is currently working on a business plan for a possible start-up based on SDN networks.

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