



# KOÇ UNIVERSITY

*the perfect view*



<http://www.ku.edu.tr>



# Project Details & Objectives

<b>Project Title</b>	<b>LABSYNC: FROM PATENT TO STARTUP . Creating Applications for ICT Technologies</b>
<b>Work Programme - Call</b>	<b>ICT 35 – 2014, ICT 34 – 2015, ICT 36 – 2015, ICT 37 – 2015</b>
<b>Action-Budget-Duration</b>	<b>Innovation Actions / 3-5 Mio € / 3 – 4 years</b>
<b>Project Objectives</b>	<p><b>to increase the number and diversity of application and commercialization possibilities of R&amp;D-based telecommunication technologies.</b></p> <p>i. open innovation platform / competition, ii. To increase participation of students and young entrepreneurs, especially from amongst business and engineering faculties; by enabling the usage of developed core technologies, a wider range of younger entrepreneur candidates will have the opportunity to participate in the design thinking and prototyping process of potential products and help get them to market. iii. To increase dialogue and knowledge sharing in the area of telecommunication technology commercialization across Europe;</p>





# PROJECT EXPECTATIONS FROM PARTNERS

**Within the scope of the project, we aim to create and launch three entrepreneurial ventures based on a patented (or patent-pending) telecommunication technology per country per year.**

## **TELECOMMUNICATION OPERATORS - UNIVERSITY STARTUP INCUBATOR**

- Provide 3-5 existing patents or patent-pending technologies,
- Lead / Support the marketing and promotion of the project in their own country,
- Source technical and business mentors to the LabSync space, 5-10 per year,
- Support projects through the sharing of business network and other resources, introductions to potential customers, industry connections, etc.
- Set aside space to support at least 3 projects a year, as well as space for a prototyping workshop





# OTHER PROJECT IDEAS – 5G

**Prof. Ozgur B. Akan** (<http://home.ku.edu.tr/~akan/>) has a strong expertise in 4G and 5G wireless communications and research carried at the Next-generation and Wireless Communications Laboratory (NWCL - <http://nwcl.ku.edu.tr/>), directed by him, which has been funded by several national and international agencies and companies, including **EU-ERC Consolidator Grant**, IBM, EU-COST 290, Intel, **Lockheed Martin**, and **Turk Telekom**.

- 4G Wireless Systems, and recently obtained funding of 1 Million Euros from TUBITAK for his research project titled **"TeraFemto: TeraHertz Femtocell for 5G Wireless Communications"**.

- NWCL directed by Prof. Akan at Koc University, AVEA, one of the largest Turkish Mobile operators, and two SMEs will study the low THz band channel modelling from the analytical and experimental perspectives, design novel communication techniques for indoor THz communications, and develop the first experimental Femtocell testbed for 5G communication systems in THz frequency band providing ultra high bandwidth with extremely challenging channel characteristics.





# OTHER PROJECT IDEAS – 5G

## Recent Trends in Networking - Software-Defined Networking (SDN)

Prof.Dr. Murat Tekalp (<http://home.ku.edu.tr/~mtekalp/index.htm>)

- OpenFlow is the first successful implementation of SDN developed by Stanford Univ.
- Started to be deployed throughout the world.
- Video with end-to-end quality of service (QoS)

### •Decoupling control and forwarding layers of routing.

#### Open Problems

- Distributed architectures for OpenFlow-based end-to-end QoS by dynamically optimizing queue management and/or traffic re-routing.
- Distributed optimization framework for above architectures
- Controller-to-controller interface and controller software to implement the proposed framework with minimum messaging
- P2P architectures over OpenFlow networks
- Deployment of an actual OpenFlow test network



A photograph of a large university campus, likely the University of Kansas, covered in snow. The central feature is a tall, tan clock tower with a dark top section. The surrounding buildings are multi-story and also covered in snow. The sky is overcast with grey clouds. In the foreground, there are dark evergreen trees and a snow-covered hillside.

**Thank you!**

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