

**Press Release 2017/01  
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## **5G Lab Germany supports Deutsche Telekom and Nokia at Mobile World Congress 2017 in Barcelona**

The development of the 5<sup>th</sup> generation of mobile communication (5G) is driven in Dresden. As the 5G Lab Germany at TU Dresden supports its industrial partners in research and development, it also supports them at conference and fairs with demonstrators to show a first glimpse on the future of communication.

Following the great success of last year's Mobile World Congress and the IEEE 5G Dresden Summit, 5G Lab Germany supports this year Deutsche Telekom at MWC'17. The teams of Prof. Frank Fitzek from Deutsche Telekom Chair of Communication Networks, Prof. Uwe Aßmann from Chair of Software Engineering and Jun.-Prof. Jens Krzywinski from the Chair of Industrial Design Engineering set up this main attraction in a common effort. The idea of control and steer in real-time is main driver for a faster reacting communication network. A humanoid robot is copying the movements of a sensorized human to show the necessity of fast communication. Future robots, communication networks and humans will learn from each other with tremendous and novel developments and achievements for our life. In a second showcase, 5G Lab Germany supports Nokia with a stadium demonstrator.

Prof. Frank Fitzek: "This combination of technologies, robots and virtual reality will extend and augment human capabilities. Robots controlled with 5G could give a human greater strength for industrial applications or smaller size for tele surgery. A robot could be controlled over very long distances so that a robot could work in a hazardous place like the Fukushima nuclear reactor or a surgeon with specialized skills could perform an operation requiring very precise motion control."

Prof. Uwe Aßmann: "In the future, humans will collaborate with robots to achieve difficult tasks in dangerous scenarios. 5G with guaranteed latencies is an indispensable technology for reliable human robotic co-working. The Telekom is well aware of this important development, and the demo of the 5G Lab of TU Dresden, the two-arm robot, has impressively shown its principal feasibility."

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