



The European Open Ecosystem for Future Internet Experimentation & Innovation

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Forging Online Education through FIRE

The Forging Online Education through FIRE (FORGE) project has transformed the Future Internet Research and Experimentation (FIRE) testbed facilities into learning resources for higher education. Through FORGE, online courses has been enhanced with FIRE-enabled interactive labs supporting experimentally driven research in an online environment.

How does it work?

FORGE is leveraging FIRE testbeds and is enhancing learning approaches by producing educational material reinforced with hands-on experimentation that are supported by multimedia resources for engineering educators and learners. The courses are freely available in different formats, such as HTML, epub3 and Apple iBooks. It is now easy to experiment on real high-performance testbeds on a laptop or tablet from any location in the world.

Key achievements

FORGE has developed a framework called FORGEBox, which enables hands-on-enhanced interaction with FIRE testbeds. FORGE has also created the FORGESTore as a marketplace of widgets as well as FIRE adapters to support interactive courses. To date, FORGE has produced courses covering a wide range of networking and communication domains. These are freely available from FORGEBox and has resulted in over 20,000 experiments undertaken by more than 600 students at several

universities worldwide. FORGE is also contributing to the IEEE P1876 Networked Smart Learning Objects for Online Laboratories Standard.

In 2015, the FORGE project was the winner of the "Hottest Pitch" award at NetFutures conference and saw the launch of the FORGE iBook on the Apple iBooks Store. Additionally, the FORGEBox framework was extended to include Learning Analytics for both learners and educators. FORGEBox also saw the addition of several advanced experimentation courses including Trinity College Dublin's OFDM and Wireless Signalling courses and iMinds Long Term Evolution (LTE) course. Some of these courses were taught to students in Brazil and Mexico, who were also able to access the advanced FIRE testbed resources, thereby adding to the broad international impact made possible by the FORGE framework.

How to get involved?

New partners can join the FORGE project through the fourth and final Open Call.

Project Facts

CALL: Collaborative Projects Call 10 | **EXECUTION:** From October 2013 to September 2016

COORDINATOR: John Domingue (The Open University)

PARTNERS: The Open University (UK), University of Patras (Greece), iMinds (Belgium), GRNET (Greece), University Pierre et Marie Curie - Paris (France), Trinity College Dublin (Ireland), NICTA (Australia)