

SOURCE: Communication Systems Division, Centre Tecnològic de les
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CASTLE: A user-friendly platform to test, evaluate and develop contemporary wireless communication standards

CASTLE is a hybrid testbed composed of both software and hardware components that can be easily configured to obtain standard-compliant implementations of network elements in contemporary wireless communication systems. CASTLE focuses on the functions and services provided by the Physical (PHY) layer of wireless standards, including LTE and LTE-Advanced (mobile communications), BGAN (satellite communications) and Li-Fi (Visible Light Communications). With CASTLE, researchers from both Industry and Academia can test, evaluate and develop new algorithms using software-simulation tools or configuring hardware devices with Software-Defined Radio (SDR) capabilities. CASTLE runs directly from the cloud and, due to that, does not require the installation of dedicated software or hardware in the local computer of the user. Therefore, all simulations and SDR implementations are executed on dedicated servers and Universal Software Radio Peripherals (USRPs), which are accessible online to all users via different user-friendly interfaces.

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