




Title:	RADIOCOM@GUT-HMS	  
Responsible person:	Krzysztof Kamil Cwalina	
Institution:	Gdańsk University of Technology (GUT)	
Short description:	The heterogeneous mobile stand RADIOCOM@GUT-HMS of the Department of Radio Communication Systems and Networks (RADIOCOM) at Gdańsk University of Technology (GUT) includes hardware and software developed nodes and data acquisition server (DAS).	
Contact (email):	kkwalina@eti.pg.edu.pl	
Website (if any):	https://eti.pg.edu.pl/katedra-systemow-i-sieci-radiokomunikacyjnych/main	
Equipment:	Three types of devices were developed: reference node (RN) with dimensions of 130 mm × 35 mm × 31 mm and connected via a wired RS232 interface to the DAS; miniaturized mobile nodes (MN) with dimensions of 58 mm × 16 mm × 35 mm and can be attached i.e. to the human body; computer with dedicated software is used as DAS. Each node consists of two parallel working radio interfaces: narrowband (NB) radio module CC1120 produced by Texas Instruments company, working in the 868 MHz band (UHF), used to determine i.e. the propagation attenuation; ultra-wideband (UWB) radio module DWM1000 produced by DecaWave company, working in the 6489 MHz band (SHF), used to perform the radio distance measurements and channel impulse response estimation.	
Aims:	The heterogeneous mobile stand (HMS) is designed for path loss, impulse response, radio distance measurements, radio interface and network parameters measurements in both ultra-wideband (UWB) and narrowband (NB) channels.	
Availability:	For the IRACON members the equipment of the RADIOCOM@GUT-HMS can be used for free, but only on site (in Gdańsk, Poland), e.g. under STSM scheme, and only for non-commercial academic purposes. The equipment is not remotely accessible.	
Annex:		

Place in IRACON RESEARCH MATRIX

	EWG-IoT	EWG-LT	EWG-RA
Working group	X		

	Antennas and Propagation	PHY	MAC	NET
eHealth	X	X	X	
Factory of the Future	X	X	X	
Connected Cars				
Energy Management				