

# Centre for White Space Communications Research Activities

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## Research Overview

Research within CSWC spans across a range of activities:

- ▶ hardware and implementations (WindFi base station, white space radio equipment testing and operation, renewables, etc);
- ▶ communications systems (PHY/MAC design, white space transceivers);
- ▶ policies and implementation (data bases for white space access etc);
- ▶ social and economic impact.

## Hardware and Implementations

- ▶ base station and radio equipment;
- ▶ system implementation, testing, and trials;
- ▶ renewables aspects and dimensioning;
- ▶ system monitoring and statistics.



## Communications Systems I

- ▶ hybrid WiFi / TVWS networks and optimisation;
- ▶ MIMO co-operative / relay communications;
- ▶ TVWS wideband transceiver (oversampled filter bank implementation for up- and down-conversion);
- ▶ wideband non-linear predistortion;
- ▶ cognitive radio aspects (channel bonding / spectrum aggregation, cooperative spectrum sensing, etc.

## TVWS Transceiver

