

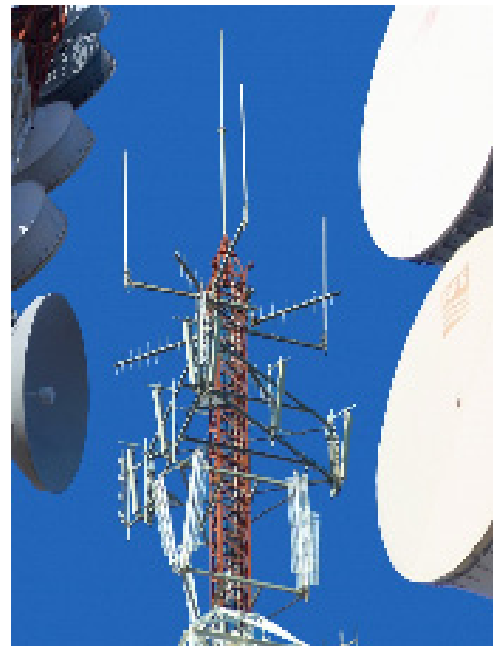


## What are Reconfigurable Radio Systems (RRS)?

Network resources are struggling to meet the growing demands of the Internet and mobile communications. Improving the efficiency of spectrum usage through the application of new technologies offers one solution to the problem.

RRS – intelligent radio devices which can characterise and act upon their environment – are opening up the opportunity for the sharing of unused spectrum among multiple services and radio networks. RRS are therefore expected to become a key driver in the evolution of wireless communications.

Reconfigurable Radio Systems (RRS) are based on technologies such as SDR (Software Defined Radio) and CR (Cognitive Radio) whose systems exploit the capabilities of reconfigurable radio and networks for self-adaptation to a dynamically-changing environment with the aim of ensuring end-to-end connectivity.



As well as a better use of the radio spectrum, potential benefits include reconfigurable, flexible and cost effective architectures for wireless devices and the exploitation of synergies between different domains.

## RRS in ETSI

ETSI has created a Technical Committee for RRS. Our work on RRS complements our existing, extensive commitment to radio standardization, covering many different technologies and application areas, and our contributions to radio spectrum policy.

The committee's activities include studies on the feasibility of RRS standardization, collecting and defining RRS requirements, identifying gaps where existing standards do not fulfil those requirements and proposing solutions to fill those gaps.

The work is being focused on functional architectures for SDR, Cognitive Radio and resource optimization, SDR-based handsets and radio base stations.

Working in response to European Commission (EC) Mandate M/512 on RRS, the main focus of ETSI's Reconfigurable Radio Systems committee is the development of new ways to use spectrum resources, including TV White Spaces (TVWS) and Licensed Shared Access (LSA), solutions for mobile device and generic radio equipment reconfiguration and related certification, and the exploitation of synergies between systems. The committee also addressed the reconfigurable radio architecture and the certification of reconfigurable equipment.

Europe's Radio Equipment Directive covers RRS that affect device certification. TC RRS has defined use cases for mechanisms to enable dynamic Declaration of Conformity, with a view towards dynamic recertification.



For further details on RRS please visit:

<https://portal.etsi.org/rrs>

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