

ACE Deliverable 2.4-D1
***Synthesis of Main Architectures
Used in Modular Active Antennas***

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Abstract

As a 1st step for structuring the European Research on Array Antennas, this deliverable D1 presents a clear terminology tree for this antenna category: from passive ones to fully active, the latter using analogue or digital beam-forming with self-adaptive algorithms, via phased arrays using passive controllable devices.

According to this taxonomy, 54 array antennas, built by ACE partners, have been classified. The main characteristics are summed up in a large table (appendix B). Typical examples are shown in §4, covering a wide range of various array categories. Modelling tools are presented, and bottlenecks pointed out, providing input for further research work.

As complements to the main part, five extensive world-wide "State-of-the-art" reviews are attached: each one explains how array antennas are good answers to the requirements of a given type of Communication (and to a lesser extent: Remote Sensing) System: in Base-Stations, on Satellites, for User Terminals, and in Civil or Defence Radar.

Keyword List

Active antenna subsystems, phased arrays, beam-forming, beam-steering, control devices, low-noise (LNA) or high-power (HPA) amplifiers.

