

## ACE Deliverable 2.4-D1

### *Synthesis of Main Architectures Used in Modular Active Antennas*

**Project Number:** FP6-IST 508009  
**Project Title:** Antenna Centre of Excellence  
**Document Type:** Deliverable

**Document Number:** FP6-IST 508009/ 2.4-D1  
**Contractual Date of Delivery:** 30 June 2004  
**Actual Date of Delivery:** 28 September 2004 (with cover-page + reviews: 20 Dec. 2004)  
**Workpackage:** Mainly WP 2.4-1, but also related to WP 2.4-2 & 2.4-3  
**Estimated Person Months:** 18  
**Security (PU,PP,RE,CO):** PU  
**Nature:** R (Deliverable Report)  
**Version:** rev D for the main document, complemented with 5 annexed reviews  
**Total Number of Pages:** 200  
**File name:** ACE\_2.4D1\_total.pdf  
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#### Abstract

As a 1<sup>st</sup> 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.

