

# 4G MC- CDMA multiple antenna System On Chip for Radio Enhancements

## 4- MORE

*[www.ist-4more.org](http://www.ist-4more.org)*

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Information Society  
Technologies

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# Partnership: 11 partners, 6 countries

## Industrial partners

- Nokia (G)
- STM (CH)
- Mitsubishi ITE (F)
- France Telecom R&D (F)

## Universities

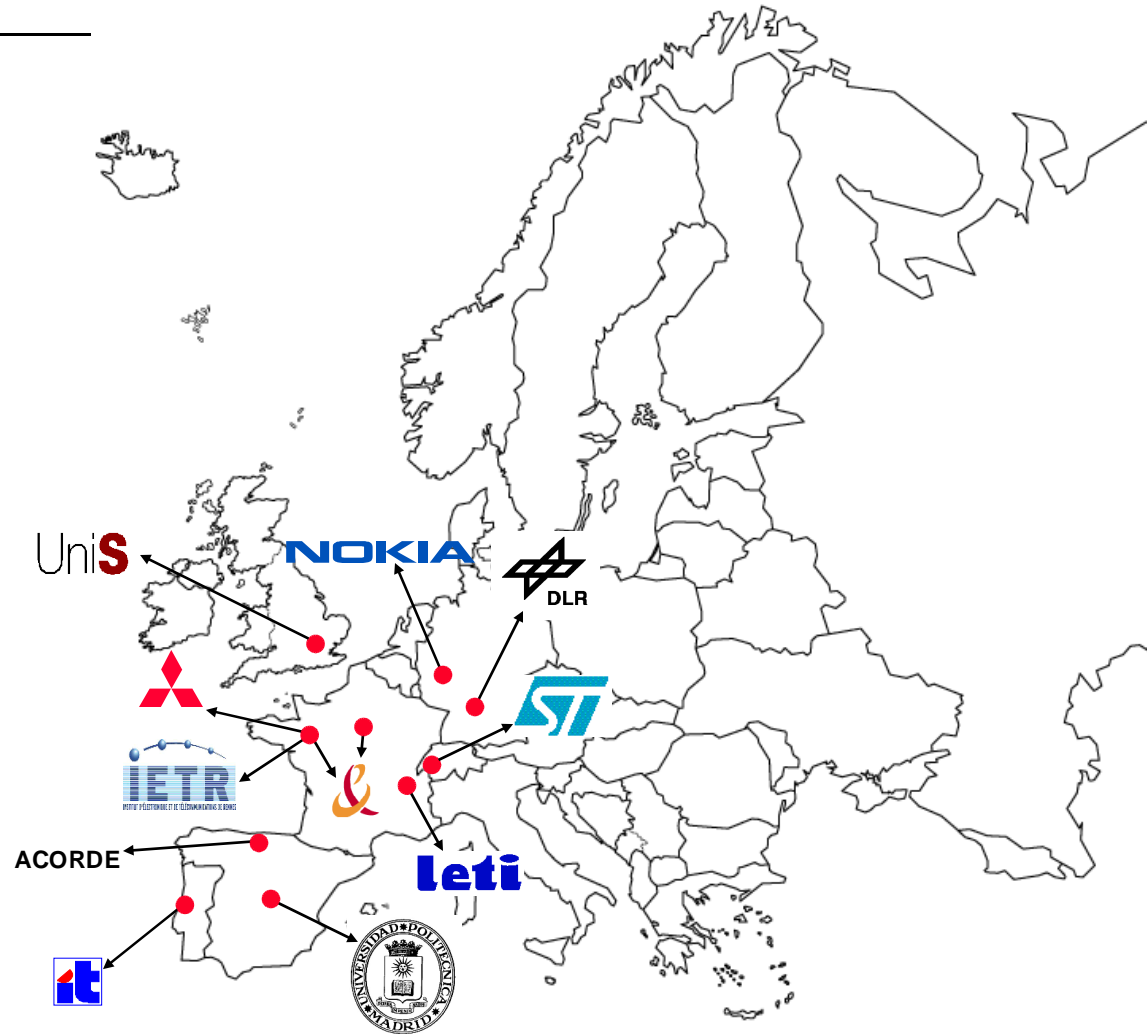
- UPM (S)
- UniS (UK)
- IT (Pt)
- IETR (F)

## R&D Centres

- LETI (F)
- DLR (G)

## SME

- ACORDE (S)



*4- MORE will research, develop, integrate, and validate a cost effective, low power System on Chip (SoC) solution for multi- antenna MC-CDMA mobile terminals, based on joint optimisation of L1 and L2 functions.*



*Particular objectives are:*

*Integrated and jointly optimised approach of Layer 1 and 2 (L1 & L2)*

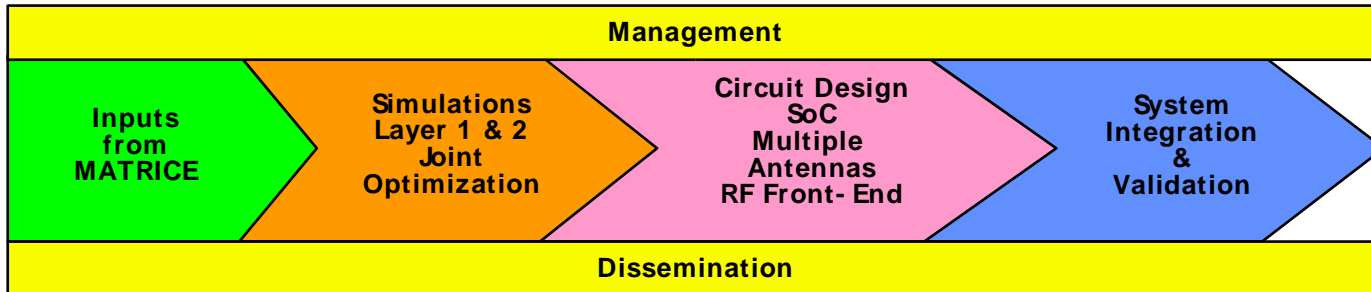
*System and algorithm design dealing with the influence of RF impairments on Layer 1*

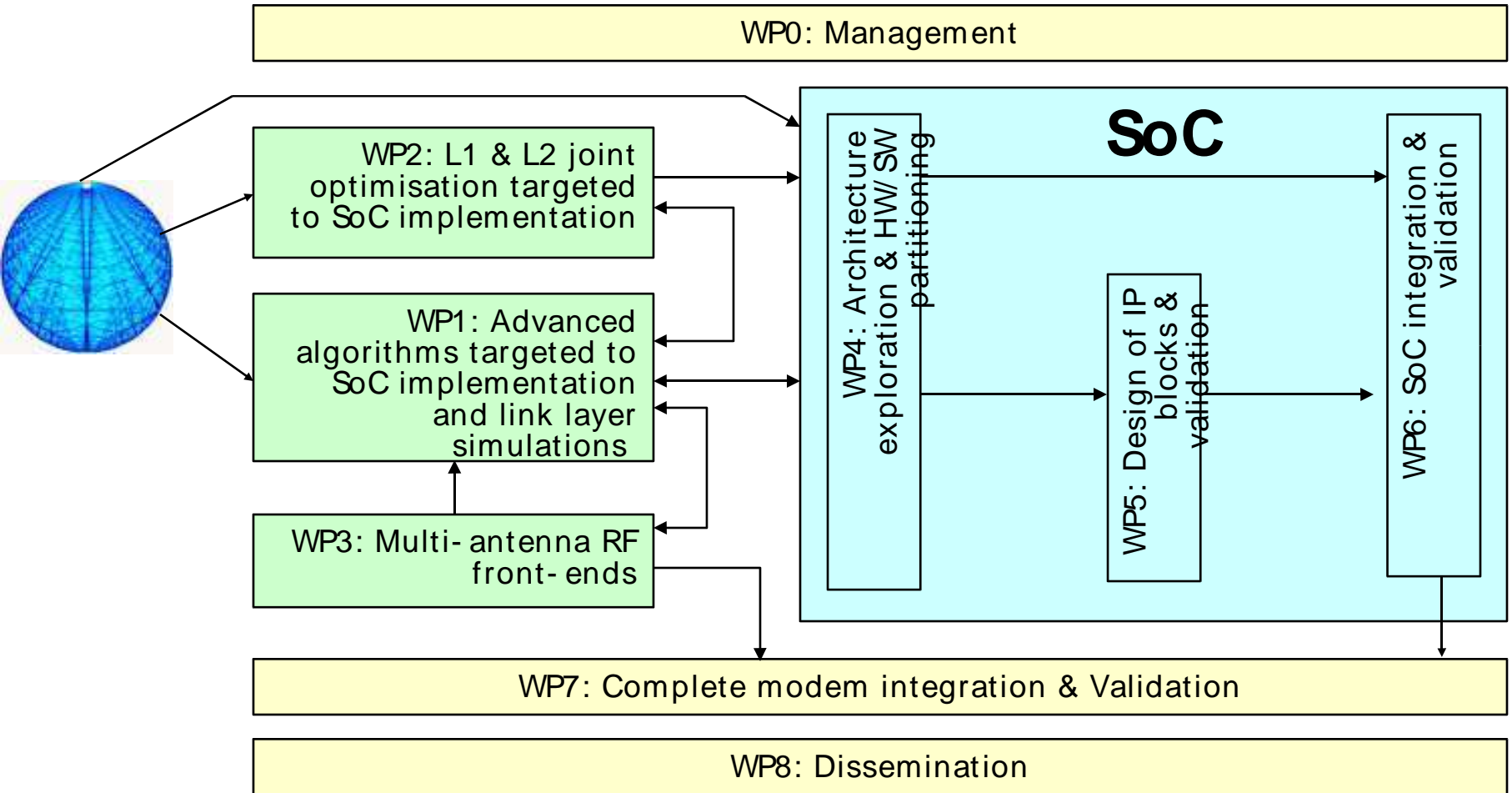
*Architectural design jointly optimises the requested performance with respect to cost, complexity, and power consumption*

*Implementation of a system on chip for demonstration with 4 antennas at the base station and 2 antennas at the mobile terminal*

*Contribution to major fora and standardization organizations like WWRF, ITU, 3GPP, IEEE (802.20, 802.15.3, 802.11n)*







*Establish a public web page*

*Dissemination of project results in conferences, journals, forums and the WWW*

*Demonstration of the 4MORE system concept on key events and exhibitions*

*Provide inputs to standardization bodies*

*Establish cluster with related European and international research projects*

*Co-operation with other projects such as MAGNET and WINNER*



*Wireless Communications with mobile terminals, with special focus on B3G/ 4G air interface design:*

- Flexible MC- CDMA scheme (resource allocation)*
- Optimized MIMO MC- CDMA scheme*
- Joint layer 1 and layer 2 optimization*
- Hardware realization issues*

