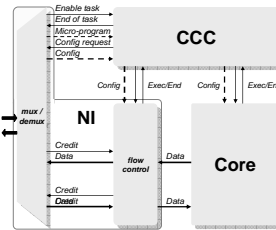
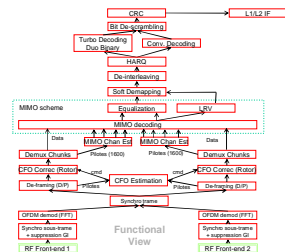


# MAGALI

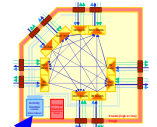
## A Flexible NoC-Based SoC for Advanced Telecom Applications

### Objectives

MAGALI project is a twofold project. Firstly, it aims at solving issues appearing in complex System-on-Chip such as **performance versus power consumption trade-off**, SoC design methodology and SoC programming. Secondly, it proposes an architecture for 4G Telecom Physical Layer, **with focus on the flexibility and reconfiguration speed** for multi-mode.



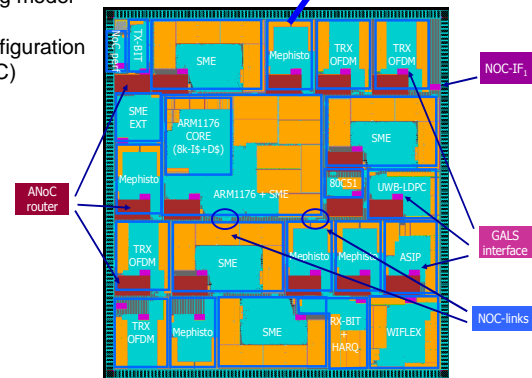
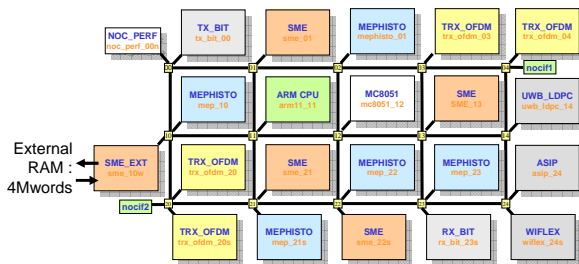
Globally Asynchronous Locally Synchronous (GALS) thanks to Asynchronous routers



### Demonstrator

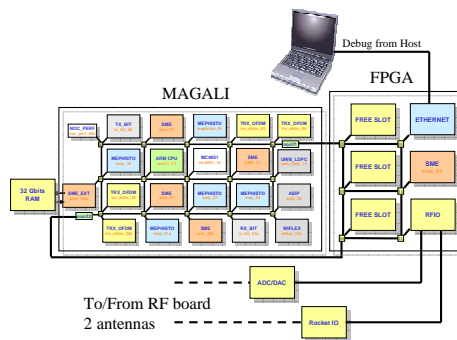
3GPP-LTE Physical Layer  
63 high/low throughput modes  
High flexibility required  
Low power constraints  
Complexity management

MAGALI programming model support  
Communication & Configuration Controller (CCC)



MAGALI Layout  
ST 65 nm technology  
Area: 30 mm<sup>2</sup>  
Total power < 500 mW  
NoC overhead ~ 11%

### MAGALI in NEWCOM++ project



SYSTEMC-TLM integration and simulation environment



Physical Layers & MAC prototyping into MAGALI board

### Team

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