

GENESYS

GENERIC Embedded SYStem Platform
[FP7/2007-2013] n°213322



WORKPACKAGE 4 Networking, security, and resource management

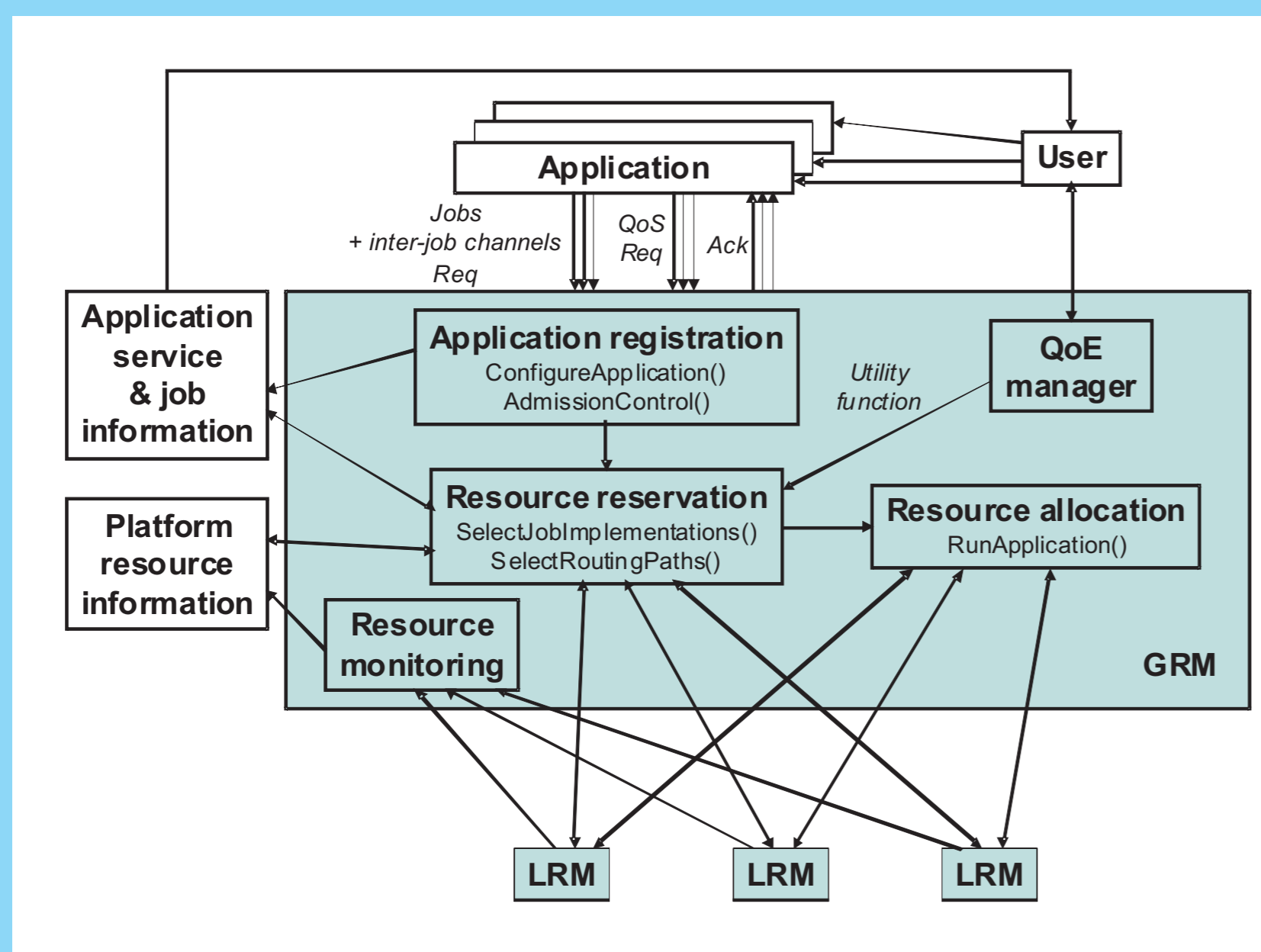
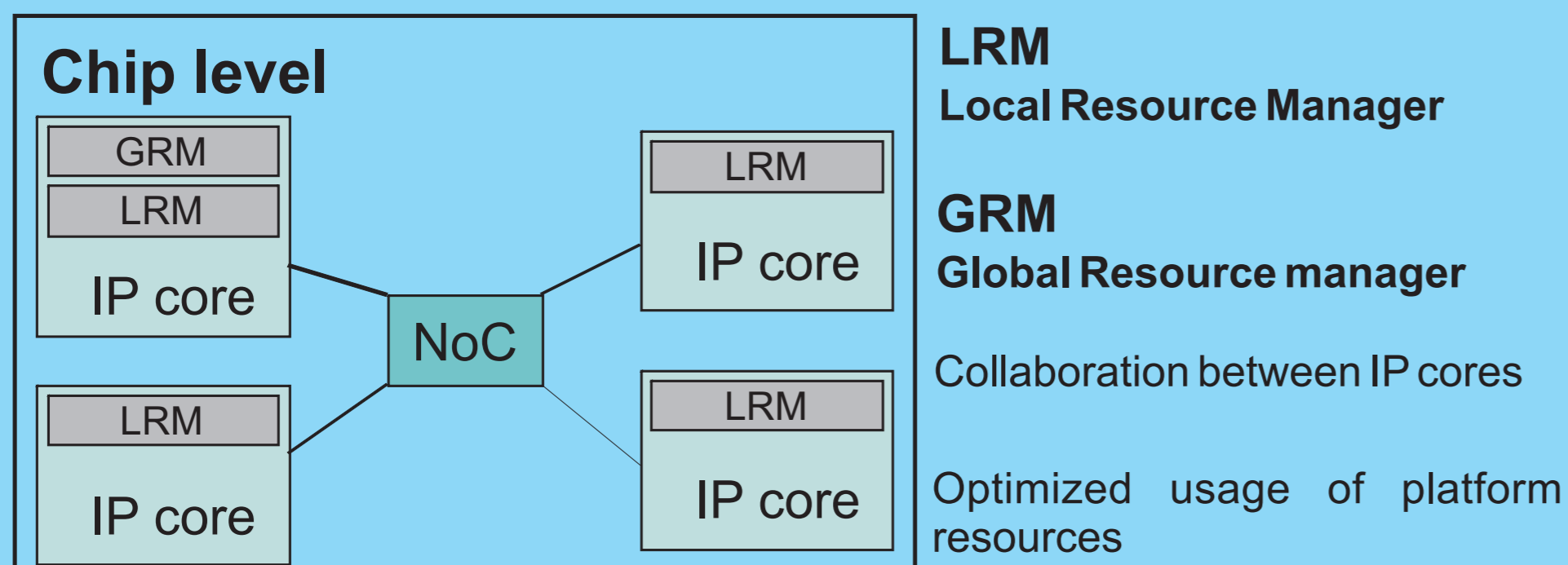


STARTING POINT

- Need to provide multi-core programming guidelines to system developers
- Need to provide application-level resource management capabilities
- Need to manage shared resources in closely distributed systems
- Links: Artemis, Multicore Association, NoTa (Network on Terminal Architecture) project

APPROACH

Resource management at chip level



OBJECTIVES

- Specify the platform services with respect to **networking** and **security** considering the constraints of diverse application domains
- Specify an **integrated resource management** framework using platform services to facilitate the application development

CURRENT STATUS

- Requirements for networking, security, and resource management are available
- Principles have been defined
- Preliminary report on definition of core and optional services has been written for:
 - Networking
 - Periodic, sporadic, and streaming messages
 - Off-chip memory access
 - Application management and execution
 - Quality-of-Experience management
 - Security

WP CONTEXT

- Provide generic resource management services
- Ensure predictability, flexibility, optimized platform usage, security
- Use design-time application knowledge to improve run-time decisions
- Input from industrial work packages (WP1 and WP2)
- Consider diverse application domains: automotive, avionic, mobile systems, consumer electronics

BENEFITS

Cost-effective development of applications

- Reduction of integration effort
- Energy efficiency through holistic usage of platform

resources

- Robustness increase in application mapping
- Platform component authentication and secure communication

WORKPACKAGE PARTNERS

IMEC

Infineon
STMicroelectronics

TU Vienna
Università di Bologna