



DEVELOPMENT SOFTWARE FOR QUICK CREATION OF PARTITIONED COMPUTING PLATFORMS

Innovative implementation of middleware generic services enabling rapid development of partitioned modular computing platforms

Potential applications

Any embedded system

Aeronautics, automobile, transport, power, consumer electronics

Onboard computers for all kinds of applications

Summary of the invention

Development software for generating partitioned software solutions for services (Service Orientated Architecture -SOA) for multi-level embedded applications.

Offers client partitions a set of generic "middleware" services for virtualising the whole hardware platform.

Has a standardised software interface, that can be adapted to any hardware platform through the generic basic software (LDB) and input-output

Technological advantages

Independent partitions

Unified implementation of generic middleware services within one or more partitions managed by the hypervisor

Generic basic software (Logiciel de Base Générique: LDB)

Simplification of the software architecture for client partitions

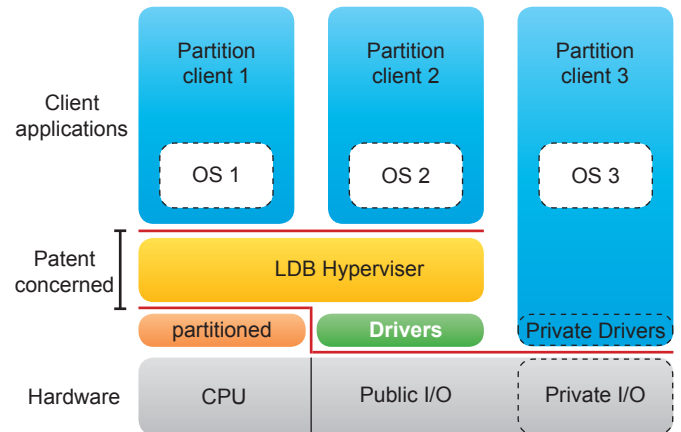
Total separation between the context for execution of client partitions and the hardware platform, which enables increased portability of binary codes of client partitions on different hardware platforms

A standardised software interface

Standardised communication protocol between the LDBs and the client partitions

Integrated management services for public I/Os confined to one or more independent partitions of client partitions

Possibility of client partitions managing private I/Os



Caption

— Standardised interfaces
 - - - Optional

Drivers Only element to be adapted in case of modification of an I/O

Commercial advantages

Simplified development

Solution for creating partitioned computers at the least cost while avoiding complete, complex and costly recompiling of middleware when porting to a new hardware platform

The impact of evolution of the hardware platform input-output is concentrated at the level of the input-output drivers

Accelerates the maturity curve for client application partitions

A universal solution

Simplified portability

No space field-type specifications

TRL : 4-5

Patented invention available under licence