

**Application development without the need to  
Consider OS differences**

VIVID Runtime® is a software platform that enables execution of the same application binary on any mobile terminal and any OS. VIVID Runtime facilitates software development and commercial deployment across multiple platforms by eliminating the need to address OS specific issues.

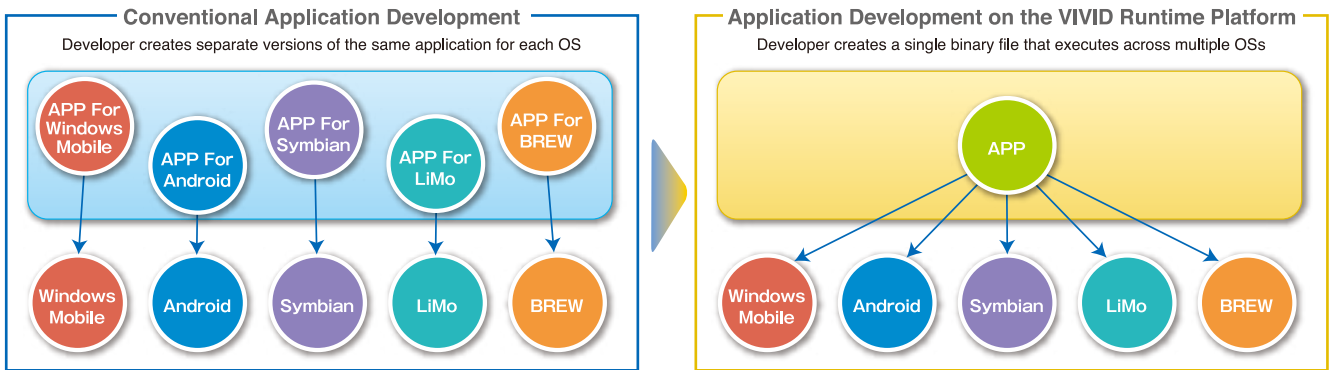


**VIVID**  
**Runtime®**

 **ACRODEA**

The goal of VIVID Runtime is to enable the same application binary to be executed on any mobile terminal. The solution improves software portability, lowers cost and fosters consistency across multiple platforms, which ultimately facilitates effective deployment of application software.

VIVID Runtime fully supports C/C++ application programming languages, which improves the situation e.g. for many RTOS-platforms, where this functionality is not always available. The low-level platform abstraction is done through standard industry standard APIs, such as OpenKODE, OpenGL ES, OpenSL ES, etc. Other functionalities of the underlying platform are exposed through OpenKODE Extensions (e.g. accelerometer, GPS, SMS, etc.). The middleware can be customized according to customer needs by developing proprietary extensions.

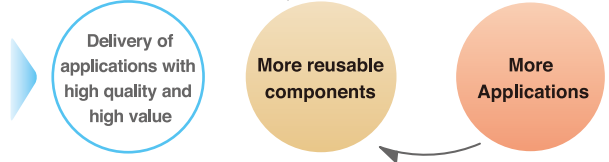


## Providing an Attractive Platform to Mobile Operators and Handset Makers

VIVID Runtime absorbs the differences across handset OSs wherever it is implemented. Creating and maintaining software specific to each OS is a costly problem for developers and manufacturers with multiple product lines. VIVID Runtime minimizes issues that they are faced with. The unification of development and execution environments through VIVID Runtime means more effective utilization of limited development budgets. Developers can create richer applications and reduce development times as they have less porting issues to deal with. Service platforms for applications can be launched soon.

## Application Development Benefits

- A single binary that can execute across multiple OSs means reduced development and testing costs.
- Porting work is eliminated. Highly reliable libraries created by other developers can be leveraged.
- Shared libraries can be used among applications.

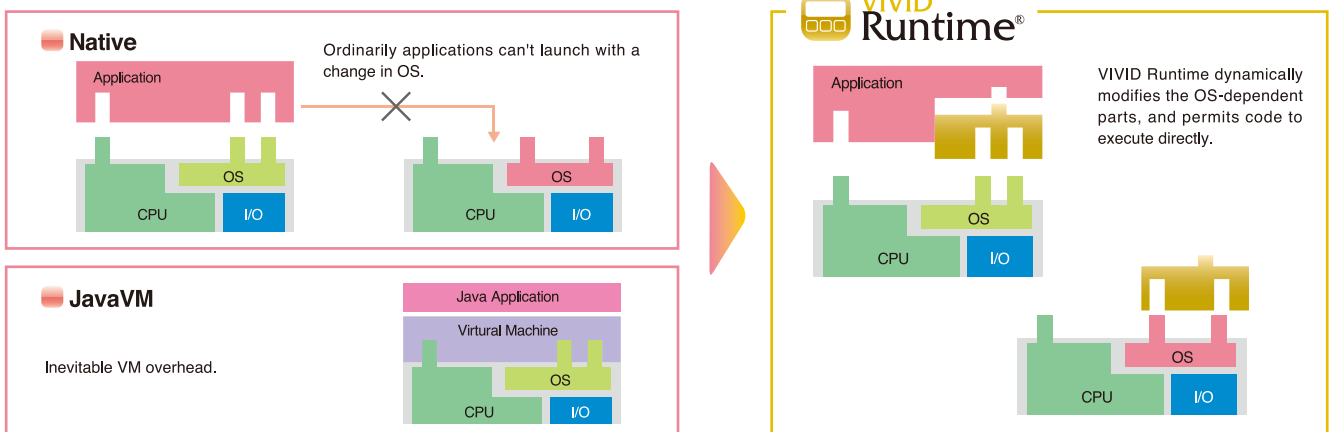


## Development process non-reliant upon handset environment

VIVID Runtime applications can be developed in either Microsoft Visual Studio or the open source development environment Eclipse, in conjunction with the VIVID Runtime SDK. In the PC environment, the CPU emulator provided with the VIVID Runtime SDK can verify operations of, and help to debug the same binary as that being run on the physical handset. Instead of the conventional approach of transferring the application repeatedly to a physical handset for testing with a dedicated debugger, the new development environment provides maximum benefit with minimum effort.

## How VIVID Runtime Works

VIVID Runtime dynamically modifies portions of application code dependent upon the OS, and enables the launch and execution of the code directly without any overhead.



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