VTT Information Technology

Agia
Rapid Symbian Application Development Environment

MOTIVATION

Development of native C++ Symbian applications often feels unnecessarily difficult. Especially the development of graphical user interfaces is laborious, error-prone and requires specific expertise. In order to alleviate the problem, Agia offers a solution that consists of two parts:
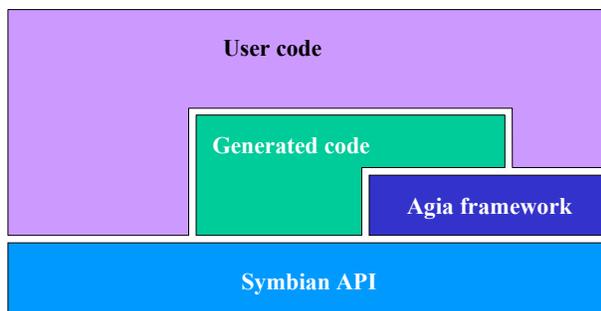
❑ Graphical development tool and code generator that runs on a workstation. The tool can be used as part of the developer's tool chain (editors, compilers and integrated environments).

❑ Application framework that resides as a dynamic library in the target device (or in emulator file system). Each created Agia application is a specialisation of the framework. In addition, the framework offers an intuitive and consistent interface to its features.

FEATURES

Agia tool has an easy-to-use graphical user interface builder. A GUI of each Agia application consists of at least one view group containing at least one view. In terms of GUI construction, a view group contains common functionality for its views while each view represents a different state of application. Application can contain multiple view groups that create a view group hierarchy. A view group can contain arbitrary number of views and a view can be shared between different view groups. Combined with Agia's *overridable delegation* mechanism the views and view groups provide the developer with an intuitive and flexible way of constructing structural GUI that reflects the different states of the application.

Agia raises the abstraction level of application event handling by introducing actions, events and event handlers, all of which are visible in Agia tool.

Generated C++ code is separated from user code, thus making it possible to regenerate code whenever needed. In other words, Agia supports incremental development and facilitates rapid prototyping.

DEVELOPING WITH AGIA

Agia development process for Symbian application consists of the following steps:

❑ Application GUI is created with Agia tool. User can focus on the application logic without needing to bother with mundane GUI implementation details.

❑ Agia generates GUI C++ code and the Symbian project files.

❑ User writes application logic and GUI functionality (event handlers). Since Agia outputs "standard" Symbian SDK project files, the user can develop in the environment of her choice. Besides the Symbian API, the developer can utilise the services provided by Agia framework.

At any time user can refine the GUI with Agia and regenerate the corresponding files.

Since Agia tool integrates Symbian SDK tool chain, it is possible to build (and even deploy to target device) a mock-up application that looks like a finished product, but may lack parts of the application logic. This feature is extremely useful for demonstration and rapid prototyping purposes. It is even possible to create GUI demonstration application *without writing a single line of code!*

With Agia, what you *mean* is what you get!

More info: agia.vtt.fi

VTT