

Document Information

This Ebsotech White Paper describes the general purpose and the benefits of using the Ebsotech IX™ Release 2.0 development environment.

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About Ebsotech

Founded in 2003, Ebsotech was formed to create a new level of software tools previously unavailable to the IT-industry for multi-platform high-performance software development. As a part of this mission company has released Ebsotech IX™ product-line offering high productivity C/C++ development and high-performance state-of-the-art results. As supplementary, Ebsotech offers support services and technology consulting services in co-operation with various technology partners.

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Ebsotech IX™ SDK – A Powerful Development Kit for Production of Globally Functioning Software

Ebsotech IX™ SDK is a framework for rapid development of platform-independent software. Its innovative Operating System Abstraction technology effectively encapsulates 32-/64-bit, processor architecture and byte order differences, providing a common interface for all the major operating systems.

This White Paper describes the Ebsotech IX™ Software Development Kit (SDK), an intelligent solution to software development in multi-platform environments where good globalization capabilities are a required key feature.

The Challenge of Making It Globally Distributable

Professional computing environments these days consist of a great variety of hardware and operating systems. This often forces software application developers and systems integrators to make laborious adjustments, so that such a multi-platform location would be operational in all respects. Moreover, software products rarely have local significance only, and the ability to provide software which either includes several language versions by default, or which can be localized with minimal effort, can mean significantly expanded markets for the product in question. In addition, the need to transfer data from one system to another, from one network structure to another, from one language area to another, means that there must be simple but nevertheless reliable ways to make the data move back and forth. And the transfer must be performed faultlessly, regardless of the size of the data block.

Producing software that really meets the tough requirements described above can be laborious - unless one has the appropriate tools available for the job. Ebsotech IX™ SDK, a high-class software development kit based on the Ebsotech IX™ foundation architecture, provides these features and more. Ebsotech IX™ SDK is a highly efficient multi-platform development kit with extensive support for both internationalization and localization. The new Ebsotech IX™ Localizer translation manager is the latest addition to the IX SDK development environment. Equipped with such a powerful localization tool, Ebsotech IX™ SDK has reached another notable milestone in the process of becoming the number one multi-platform software development environment.

The Modular Component Structure of Ebsotech IX™ SDK

The modular components of Ebsotech IX™ SDK enable software application developers to swiftly produce software applications for robust data processing – simultaneously for several target environments and language areas.

Equipped with extensive integration and distribution capabilities, Ebsotech IX™ SDK forms an ideal framework for multi-vendor projects and provides a unique methodology for integrating legacy systems with the latest technologies to meet the technical requirements of different environments.

One of the main benefits of the IX SDK is that its usage is not restricted to any particular programming language or development environment. The IX SDK effectively hides operating system specific complexities with highly optimized data management and data algorithms as well as with platform specific optimizations in memory management, for example.

The core of the SDK is written in low-level C language for optimal performance. However, all functionality is accessible from any programming language capable of calling C-style library functions (C/C++, most scripting and macro languages, Java, etc.). The SDK framework is provided as 64-bit and 32-bit static and dynamic libraries.

Due to the fact that Ebsotech IX™ SDK is based on the C language, the code it produces is a lot faster than Java code, for example. Moreover, programmers used to working with object oriented programming languages such as Java, rather than with traditional C, may still find moving to using Ebsotech IX™ SDK relatively easy as the IX SDK architecture has a sophisticated object oriented structure.

As shown in the following figure, by using the modular, platform-independent library functions of Ebsotech IX™ SDK, the developed user applications can be compiled for any of the currently supported platforms without having to make extensive re-coding, which is often the case in multi-platform projects.

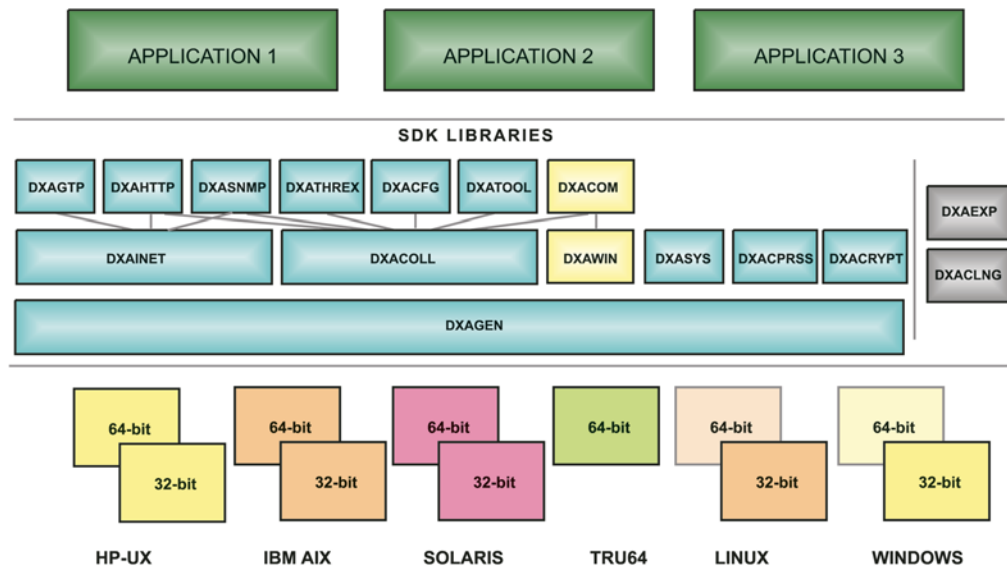


Figure 1. Ebsotech IX™ SDK Framework

Optimized Framework For Platform-Independent Development

Installing and setting up the environment is effortless. Each disk in the Ebsotech IX™ SDK release package has an easy-to-use HTML interface, which contains information on how to install the packages for each platform.

Using the Ebsotech IX™ SDK development environment harnesses your resources with extreme efficiency. Modular SDK function libraries, quality documentation, example programs with sources included, a unique localization tool, and widely used 3rd party applications together provide a powerful development environment. As a result, multi-platform development becomes extremely fast, especially if compared to the traditional means of coding for one platform and then trying to port the software to platforms with totally different requirements.

The Key Features

...of the architectural design:

- ▶ byte order transparency
- ▶ 32-/64-bit transparency
- ▶ extensive internationalization and globalization support
- ▶ consistent error handling
- ▶ several higher-level protocols
- ▶ extensive support for threading
- ▶ program logic management utilities
- ▶ unified interface to text conversions
- ▶ compression and encryption features
- ▶ static and dynamic binaries for all libraries
- ▶ internal build environment functions transparently in every supported platform
- ▶ object oriented, modular architecture allows selective usage of libraries
- ▶ developed program code can be easily optimized for increased performance while maintaining stability

...of the included SDK documentation:

- ▶ *Developer's Guide* provides programmers valuable information on how to make the most of the IX SDK and how to develop high-class applications in general
- ▶ *Reference Manual* provides detailed descriptions of the SDK libraries and the functions they contain
- ▶ *Installation and Setup Guide* provides instructions on how to install the SDK and set up the development environment

...of the included software accessories:

EBSOTECH IX™ software accessories

- ▶ a collection of software applications programmed with the Ebsotech IX™ SDK
- ▶ the included program sources and technical documentation make the learning of how to program with the SDK considerably quicker
- ▶ the included source code can be re-used as templates in user's own projects

...of the Localizer tool:

EBSOTECH IX™ Localizer

- ▶ effective tool for localizing software internationalized with the IX SDK
- ▶ allows comparing of translated software versions, so that only the new and changed strings need to be translated; consequently, translation time is significantly reduced
- ▶ *User's Guide* provides instructions both on installing and using IX Localizer
- ▶ contains also a built-in online help

...of the IXMLp software modules:

EBSOTECH IX™ IXMLp

- ▶ a full implementation of XML functionality specifications
- ▶ high-performance low-level modules
- ▶ high-level interfaces for speeding up software development

Globalization and Ebsotech IX™ SDK

First of all, what actually is “globalization”? The term comprises the entire process of first creating software that supports making of different language versions (i.e. internationalizing software) and then making the actual language versions (i.e. localizing software). Internationalization, then, is primarily the work of coders, and localization the work of language experts (that is, translators).

A very important aspect in software internationalization concerns the use of character sets. Many languages, especially European, can be represented with a single 8-bit character set (a set of 255 characters), but there is no single 8-bit character set that could be used to cover even the European languages alone. Unicode, on the other hand, has wide support for most human languages.

As the target environment dictates the appropriateness of character sets, Ebsotech IX™ SDK provides extensive character set mapping for single-byte, multi-byte, and Unicode character sets.

Moreover, with Ebsotech IX™ Localizer the language source file of each translated language can be made to include just the character set suitable for that particular language, which means that there is no additional baggage being carried in the language source files.

The globalization abilities of Ebsotech IX™ SDK are a significant, money- and time-saving feature of the development kit as a whole. The globalization engine of the IX SDK makes it possible to develop internationalized software that has extremely good localization qualities when the product comes out. This really does make the product fit for global use as all the words used in an application can be localized for a wide selection of languages and language variations (that is, a locale-specific variation of a language such as “U.S. English”). Consequently, by first creating internationalized software with the IX SDK and then localizing it with IX Localizer, a software application can be distributed globally.

Generally speaking, localization with the Ebsotech IX™ Localizer tool is simple yet effective. The IX Localizer is an independently functioning tool for

translating the strings and messages of a software product into different languages.

Ebsotech IX™ SDK combined with the capabilities of Ebsotech IX™ Localizer is a considerable package which can make localization work easier, more efficient, and more productive.

Availability

Ebsotech IX™ SDK Release 2.0 will be available directly from the vendor in Q4/2003.

Full version

Ebsotech IX™ SDK R2.0 can be obtained directly from the vendor. The delivery contains the full set of library modules and all the available documentation.

Evaluation version

The evaluation version of Ebsotech IX™ SDK R2.0 will be available as a boxed product directly from the vendor. The evaluation version delivery contains the full set of software and all the available documentation, but the SDK libraries are available only as dynamically linked versions.

Summary

Ebsotech IX™ SDK is an answer to the needs of software application developers and systems integrators working in multi-platform environments.

Considering what software professionals around the world require from the tools they work with, we can say that a software development environment which supports software development for multi-platform environments, provides simple means of both internationalizing and localizing software, and has been designed modularly so that it allows a selective usage of function libraries, has all the key elements available.

Enhanced with Ebsotech's new software localization tool, Ebsotech IX™ Localizer, and expanded with additional reference documentation, Ebsotech IX™ SDK becomes significantly more powerful than its predecessors. Ebsotech IX™ SDK expands with every new release, including updates and additions to the accompanied reference documentation. In addition, the new web site at www.ebsotech.com provides useful material for developers working with the IX SDK.

Consequently, Ebsotech IX™ SDK is the answer to the worldwide need for a robust development kit that can be used to create locally as well as globally targeted solutions. If software application development or systems integration is what you do, Ebsotech IX™ SDK 2.0 is truly what you need.