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WorldScript: What Is It & How Does It Work? (6/96)

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TOPIC -----

WorldScript simplifies the way languages (or scripts) are supported in the system software. A script system determines the writing system's components:

- Character encoding
- Macintosh keyboard layout
- Fonts
- Input methods
- Sorting
- Date/time/number formats
- Script-specific access routines

For example, the script tells the system about such features as writing direction, accent placement, and special characters. This article describes WorldScript technology.

DISCUSSION -----

Before WorldScript, all scripts were developed independently. This meant that each script installed its own modifications to the system. If more than one script system was installed, conflicting modifications often affected performance, RAM footprint, and stability.

With WorldScript, all script-specific behavior is defined by tables in system resources, and all processing is done by common routines in the WorldScript I and WorldScript II extensions. The WorldScript I extension provides the routines for one-byte languages, and the WorldScript II extension supports two-byte languages. The two extensions can coexist and provide functionality in the system at the same time. This means that the language support comes from a script bundle, which defines the language rules and behavior. WorldScript supports the language as it's defined in the rules from the script bundle.

WorldScript allows support for developing additional languages independently of system software releases. Today, Arabic, Hebrew, and Thai are examples of existing one-byte script bundles, and Japanese and Chinese are examples of existing two-byte bundles. And additional bundles can easily be developed. Developers don't have to write new code to support a new language -- only tables and language-specific resources. For example, to support another one-byte language, they develop a new language table (containing rules for date and time formats, writing direction, and so on) for the language's script bundle. This script bundle will then work transparently with the WorldScript engine to support that language.

To clarify, the WorldScript technology isn't a translation technology: It can't take input in one language and translate it into another language. What WorldScript provides is the ability to support written languages more easily in a single system software version.

WorldScript provides enhanced support for the interaction between applications and input methods. A common interaction for input methods and applications simplifies the support for in-line text entry. Bundling an input method with each product to provide in-line support is no longer necessary. Instead, users can buy their preferred input method, and it will work with any of their WorldScript-ready applications. Similarly, users have the ability to choose between multiple input methods installed in the same system.

WorldScript allows users to type and display text in almost any language, within the same document. Customers can purchase a language module or bundle of languages (for example, a Far East bundle) to use additional languages on their Macintosh.

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