



Picxel ePAGE

**Plain Text file format
support**



Copyright

Copyright © PicseL 2002

Neither the whole nor any part of the information contained in, or the product described in, this document may be used, sold, transferred, adapted or reproduced in whole or in part in any manner or form or in any media except with the prior written permission of the copyright holder.

The product described in this document is subject to continuous development and improvement. All particulars of the product and its use contained in this document are given by PicseL in good faith. However, the content of this document is provided "as is", without warranties of any kind with regard to its accuracy or reliability, and specifically excluding all implied warranties, for example of merchantability, fitness for purpose, title and non-infringement. In no event shall PicseL be liable for any special, indirect or consequential damages whatsoever resulting from loss of use, data or profits, arising out of or in connection with the use of this document. PicseL reserves the right to revise the document or withdraw it at any time without prior notice.

No licence is granted (nor any rights of whatsoever nature granted), express or implied, to any intellectual property by this document.

Throughout this document, the trade names and trademarks of some companies and products have been used. No such uses are intended to convey endorsement of or other affiliations with the document.

Document number PICSEL-ESF-0008B

April 2002

<http://www.picseL.com/>

Introduction



On handheld computers, traditional applications typically rely on synchronization with a PC to convert content from the original document format into a simpler format used by the device. This creates at least three problems. Firstly, some visual integrity is inevitably lost in the conversion process from a rich format to a simpler one, resulting in documents that do not look exactly like the original. Secondly, the reliance on a PC for synchronization means that direct network access is difficult, and the device is severely hampered when untethered from the PC. Thirdly, traditional applications take a monolithic approach, converting only a single format so that separate applications are needed for each different document type.

PicseL's ePAGE applications present a new concept in document viewing software. Unlike traditional approaches, the viewer can access native files, so synchronisation is not necessary and files can be grabbed straight off PC filing systems, flash cards and networks/internet without the need for pre-conversion. ePAGE deals directly with the original document in its native format, and aims to faithfully represent all of the features of the original. Moreover, the novel software architecture based on PicseL's ePAGE technology enables multiple format types to be richly supported in a single application.

ePAGE achieves a breakthrough in its ability to interpret and render complex file formats. Many apparently straightforward formats have in the past encountered difficulties even when used in their original application software on a different platform, for example when going from a PC to a Macintosh. Sometimes these files assume characteristics of the computer on which they are used, such as the screen size or byte order, and such assumptions have to be unravelled when using them on a different device. To compound the challenge, some formats may contain proprietary features which are not revealed to the public, and which even have been forgotten within the originating company. Others, such as HTML, have written standards yet are still subject to differing interpretations as evidenced by the varying treatment of web pages in proprietary browsers.

ePAGE supports the most popular global file formats. The formats interpreted by ePAGE are richly expressive, containing not just text but sophisticated layout and rendering features, rich fonts, colour, images, tables, graphics and many other document features. Picstel is continuously developing its file format support to eventually cover every feature of the native file. With such a wealth of features across many document types, this is inevitably an ongoing process, with milestone releases of new functionality planned at periodic intervals. The approach involves researching the feature set most commonly found in real documents, building support early for the most frequently used elements, and ensuring these features are reproduced with total faithfulness to the original. The emphasis of ePAGE is on displaying rich content rather than on reproducing the document creation facilities of the original application.

This document describes the features supported in ePAGE. This level of support already covers the vast majority of characteristics that occur in day to day documents of this type, and the specific features are described with notes where appropriate. Those features planned for future implementation are also described, for completeness.

Plain Text

While there are many document formats which encode extra information such as page size and pictures into a single file, the most basic commonly used file format for text is called a plain text file. This has no special file structure; from the first byte to the last is a sequence of characters. Some of these characters do not appear visually, but instead take new lines or indent to a tab stop, as defined in the ASCII standard (ANSI X3.4, initially approved in 1969).

Feature	Support	Notes
Plain 7-bit ASCII text	Yes	
Latin1 text	Yes	
Newlines	Yes	
Tabs	Yes	Converted to sequences of spaces
Unlimited page size	Yes	

Character Sets

ePAGE can work with all characters in the Unicode specification. Text documents are encoded in other encodings, and ePAGE handles these by converting Latin1 to UTF-16 Unicode. (In addition to the encoding

support, the display of characters is also dependent on the availability of appropriate fonts installed on the device.)

Encoding	Comment
ASCII	7 bit
Latin1	Western

Future Support

Picse! continuously strives to enhance the feature set of its software. In addition to the above features supported in Version 1.0, the following features are planned to be incorporated in future versions of the Picse! software. (The ordering in the list does not imply any measure of priority among the items.)

The emphasis in this version of Picse! ePAGE is on document viewing, while the features below introduce more powerful web browsing capabilities.

Character encoding defined by user
Form-feed