Charter Proposal
For
Universal Printer Description File Format

Abstract

Currently the driver model for most operating systems is a monolithic model. Systems programmers must implement a unique driver for each operating system (OS) for each printer the programmer wants to support. The graphics interfaces of each OS, while similar, tend to be different enough to require major re-write of system code for each operating system. In order to support a wide variety of operating systems developers must spend a considerable amount of programmer-months duplicating effort to support functionality for one printer to print on each operating system. Since there is not an infinite amount of resources for programming, not all operating systems printer drivers are full-featured. Usually the operating system with the largest market share will have the most functionality. The amount of effort invested in other operating systems decreases proportionate to their market share. A side effect of having to write unique printer drivers is that they tend to become inconsistent across different operating systems. Printer drivers today have different user interfaces and behave differently during a print job. There do exist valid reasons for drivers to be slightly different due to the operating system, however a lot of the differences are "just because we can."

 Another issue with the current driver model is that it is very static. There is no dynamic discovery mechanism for changes in the printer after the initial installation. If accessories are added after the initial installation of a printer, a user must manually install new software into the OS that enables the accessory to be used.

In order for different operating systems to support any printer, there must be a separation of the OS specific components and the printer feature components. This group will define a printer description file format that enables a printer driver to configure itself based on the unique printer characteristics. The goal is to design or specify a description format that can be used by multiple operating systems.

Goals of UPDF charter are:
- To reduce development time for the system programmer.
- To simplify installation and improve end user experience.
- To define a universal printer description file format that enables a printer driver to configure itself based on the unique printer characteristics.
- To design or specify a description format that can be used by multiple operating systems.
- To enable dynamic configuration of printers via bi-directional communication of configuration information.
- To support the largest possible number of existing printers.
- To provide extremely flexible mechanisms for extensibility to enable support for as yet unimagined printers and features.

43 Out of scope for the charter is the creation of an entirely new printer marking language. It was
44 deemed too complicated and time consuming. Also out of scope is the definition of the Universal
45 Printer Driver. The intent is that the UPDF will enable Universal Printer Drivers to be developed
46 on the various operating systems, but this group will not specify any particular design
47 requirements.
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49 This charter is slated for the Printer Working Group only. There are no plans currently to submit
50 it to any other standards organizations.

51 # Milestones

52 ## *Charter Stage*

Charter Proposal	August 1998
Requirements Statement	September 1998
Charter Formal Approval	November 1998
Requirements Formal Approval	December 1998

53 ## *Proposal Stage*

Proposed Draft Standard Last Call	Q2 1999
Proposed Standard Last Call	Q3 1999
Proposed Standard Formal Approval	Q4 1999

54 ## *Specification Stage*

Begin Prototypes	Q4 1999
Working Prototypes	Q1 2000
Draft Standard Last Call	Q2 2000
Draft Standard Formal Approval	Q3 2000

55 ## *Implementation Stage*

Standard Last Call	Q4 2000
Standard Formal Approval	Q1 2001

56 # Related Documents

57 Requirements Document: ftp.pwg.org/pub/pwg/upd/archive/updreq.doc (work in progress)

58 # Officers

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71   subscribe upd
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