XHTML-Print

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Abstract

HTML 4 is a powerful language for authoring Web content, but its design does not take into consideration issues pertinent to printers.

Because there are many ways to subset HTML, there are many almost identical subsets defined by organizations and companies. Without a common base set of features, developing print applications for a wide range of printers is difficult.

XHTML-Print is expected to be defined as a well-specified and separable extension to XHTML family with the addition of some layout features from Cascading Style Sheet (CSS) specifications and can be used in a combination with various XHTML family document types and CSS profile specifications. This positioning allows printing solutions to expand as XHTML expands, without re-work of XHTM-Print.

XHTML-Print is targeted usage is for printing in environments where it is not feasible or desirable to install a printer-specific driver and where some variability in the formatting of the output is acceptable.

The document type definition for XHTML-Print is implemented based on the XHTML modules defined in Modularization of XHTML1.1

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1. Introduction

1.1 XHTML for Printing

This section is informative.

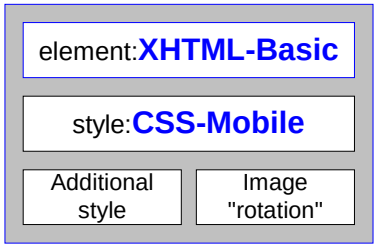
This document specifies XHTML based data stream suitable for printing. And the primary role of the document is to define features that provide a minimal guarantee of interoperability.

XHTML-Print is based on the W3C's XHTML Basic with the addition of CSS. Its targeted usage is for printing in environments where it is not feasible or desirable to install a printer-specific driver and where some variability in the formatting of the output is acceptable. Throughout this document the data stream is called "XHTML-Print."

XHTML-Print is not appropriate when strict layout consistency and repeatability across printers are required. The design objective of XHTML-Print is to provide a relatively simple, broadly supportable page description format where content preservation and reproduction are the goal, i.e. "Content is King." Traditional printer page description formats such as PostScript or PCL are more suitable when strict layout control is required.

The diagram depicts the structure of the XHTML-Print, which consists of four components.

1. **Element** : XHTML Basic is the subset of XHTML1.1 Modularization.
2. **Style** : CSS Mobile is the subset of CSS2.0.
3. **Additional style** : Additional includes paged media associated styles. (@page, page-brakes and among others)
4. **Image "rotation"** : sets image orientation in 90-degree increments, and enables transposition.



Construction of the XHTML-Print

1.2 Terminology

1.3 Design Rational

This section explains why certain HTML features are not part of XHTML-Print.

1.3.1 Script and Events

1.3.2 Presentation

1.3.3 Forms

1.3.4 Tables

1.3.5 Frames

2. Conformance

2.1 Document Conformance

2.2 Client Conformance

2.3 Printer Conformance

2.3.2 XHTML Requirements

A conforming printer shall support all XHTML Modules listed in the **XHTML-Basic** Document Type and, no module is added to the modules required by XHTML Basic

The World Wide Web Consortium has defined a subset of XHTML 1.0 that is appropriate for small format devices such as PDAs and mobile telephones. The subset is called XHTML-Basic and is useful to be examined as a starting point for the definition of XHTML-Print.

2.3.3 CSS Requirements

A conforming printer shall support the CSS constructs and associated values as indicated in **CSS Mobile** Requirements. Support for other values and other properties or constructs are optional.

The CSS Mobile Profile specifies a conformance profile for mobile devices, identifying a minimum set of properties, values, selectors, and cascading rules. The resulting CSS Mobile Profile is very similar to CSS1. CSS-Mobile is useful to be examined as a starting point for the definition of XHTML-Print.

2.3.4 Additional CSS Requirements

The “properties associated with page” are added to the properties required by CSS-mobile property. The CSS additional portion of XHTML-Print includes the following properties:

<CSS-Additional>

Name	CSS Value	Initial value	Applies to	Inherit	Note
@page	size, margin, margin-top, margin-right, margin-bottom, margin-left, first, @top, @bottom, counter-increment, counter-reset				@media
@bottom	text-align, text-decoration, text-indent, color, font, font-family, font-size, font-style, font-weight, content				@page
@top	text-align, text-decoration, text-indent, color, font, font-family, font-size, font-style, font-weight, content				@page
content	inherit, string, counter(name)				page counter
page	string as defined by @page rule				
page-break-after	auto, inherit, always				
page-break-before	auto, inherit, always				
page-break-inside	auto, inherit, always				
size	auto, inherit, length, one and two values (in, mm), portrait	auto	@page	no	

2.3.5 Image Rotation Requirements

3 How to Use XHTML-Print

3.1 Recommended Attributes on the “img” and “object”

3.2 Style Sheets

Conforming XHTML-Print printers shall support referenced style sheets within the link element in the head element of a document. Conforming XHTML-Print printers shall also support the style attributes (i.e. in-line style) when used within other elements as defined by XHTML 1.0

3.3 Page Breaks

3.4 Page Size and Orientation

3.4.1 Size Property

3.4.2 Margined Properties

3.4.2.1 Example

3.4.4 Rendering Page Boxes that do not fit a Target Sheet

3.4.5 Positioning the Page Box on the Sheet

3.5 Running Headers and Footers

3.6 Image Data

3.7 side-by-Side Images

4. Acknowledgements

APPENDIX

A. JPEG Decoder Requirements

A.1 Introduction

A.2 Behaviors of Minimal Printers

B. Image Rotation

While image may be transformed its orientation in 90-degrees by detecting implied EXIF markers, XHTML-Print introduces more explicit means. Image rotation can be performed by either adding “rotate” attribute to the “img/object” element or CSS.Example below describes a rotation using attributes.

```
<html>

<head>
<title>image reference extension</title>
</head>
<body>
<img src=”abc.jpg” rotate=”xxx” />
<img src=”abc.jpg” rotate=” yyy” />
```

Cont’d…..

```
</body></html>
```

C. XHTML-Print DTD and Modules

C.1 Document Type Definition

C.2 Document Model Module

D. Reference

D.1 Normative Reference

D.2. Informative reference