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Additional Media Type Structured Syntax Suffixes
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Abstract

This document defines several Structured Syntax Suffixes for use with media type registrations. In particular, it defines and registers the "+json", "+der", "+fastinfoset" and "+wbxml" Structured Syntax Suffixes.

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[1.](#) Introduction

[RFC3023] created the +xml suffix convention that may be used by media types whose representation uses XML underneath, that is, they could have been successfully parsed as if the media type had been application/xml in addition to their being parsed as their media type that is using the +xml suffix. [I-D.ietf-appsawg-media-type-regs] defines a registry to be used for future Structured Syntax Suffixes.

A variety of Structured Syntax Suffixes have already been used in some Media Type registration, in particular "+json", "+der", "+fastinfoset" and "+wxml". This document defines and registers these four Structured Syntax Suffixes in the Structured Syntax Suffix registry.

Discussion of this document should occur in the Apps Area Working Group (apps-discuss@ietf.org).

[2.](#) When to Use these Structured Syntax Suffixes

Each of the Structured Syntax Suffixes defined in this document are appropriate for use when the media type identifies the semantics of the protocol payload. That is, knowing the semantics of the specific media type provides for more specific processing of the content than that afforded by generic processing of the underlying representation.

At the same time, using the suffix provides receivers of the media types to do generic processing of the underlying representation in cases where they do not need to handle specially the specific semantics of the exact media type.

[3.](#) The +json Structured Syntax Suffix

[RFC4627] defines the "application/json" media type. The suffix "+json" may be used with any media type whose representation follows that established for "application/json". The Structured Syntax Suffix registration form follows:

Name JavaScript Object Notation (JSON)
+suffix +json
References [\[RFC4627\]](#)
Encoding considerations Per [\[RFC4627\]](#), JSON may be represented using UTF-8, UTF-16, or UTF-32. When JSON is written in UTF-8, JSON is 8bit compatible. When JSON is written in UTF-16 or UTF-32, JSON is binary.
Interoperability considerations n/a
Security considerations See [\[RFC4627\]](#)

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Author/Change controller The Apps Area Working Group has change control over this registration.

[4.](#) The +der Structured Syntax Suffix

The CCITT defined the Distinguished Encoding Rules (DER) message transfer syntax in [CCITT.X690.2002]. The suffix "+der" may be used with any media type whose representation follows the DER message transfer syntax. The Structured Syntax Suffix registration form follows:

Name Distinguished Encoding Rules (DER) message transfer syntax
+suffix +der
References [\[CCITT.X690.2002\]](#)
Encoding considerations DER is a binary encoding.
Interoperability considerations n/a
Security considerations There are no security considerations inherent in DER. Each individual media type registered with a +der suffix may have additional security considerations.
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Author/Change controller The Apps Area Working Group has change control over this registration.

[5.](#) The +fastinfoset Structured Syntax Suffix

The ITU-T and ISO have defined the Fast Infoset document format as a binary representation of the XML Information Set in [ITU.X891.2005]

and [ISO.IEC.24824-1.2007]. These documents further define the "application/fastinfofet" media type. The suffix "+fastinfofet" may be used with any media type whose representation follows that established for "application/fastinfofet". The Structured Syntax Suffix registration form follows:

Name	Fast Infofet document format
+suffix	+infofet
References	[ITU.X891.2005] and [ISO.IEC.24824-1.2007]
Encoding considerations	Fast Infofet is a binary encoding. The binary, quoted-printable and base64 content-transfer-encodings are suitable for use with Fast Infofet.
Interoperability considerations	n/a
Security considerations	There are no security considerations inherent in Fast Infofet. Each individual media type registered with a +der suffix may have additional security considerations.
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[6.](#) The +wxml Structured Syntax Suffix

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The WAP Forum has defined the WAP Binary XML (WBXML) document format as a binary representation of XML in [WBXML]. This document further defines the "application/vnd.wap.wxml" media type. The suffix "+wxml" may be used with any media type whose representation follows that established for "application/vnd.wap.wxml". The Structured Syntax Suffix registration form follows:

Name	WAP Binary XML (WBXML) document format
+suffix	+wxml
References	[WBXML]
Encoding considerations	WBXML is a binary encoding.
Interoperability considerations	n/a
Security considerations	There are no security considerations inherent in WBXML. Each individual media type registered with a +der suffix may have additional security considerations.
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[7.](#) IANA Considerations

See the Structured Syntax Suffix registration forms in sections [2-5](#).

[8.](#) Security Considerations

See the Security considerations sections found in the Structured Syntax Suffix registration forms from sections [2-5](#).

[9.](#) References

[9.1.](#) Normative References

- [1] Crockford, D., "The application/json Media Type for JavaScript Object Notation (JSON)", [RFC 4627](#), July 2006.
- [2] International International Telephone and Telegraph Consultative Committee, "AASN.1 encoding rules: Specification of basic encoding Rules (BER), Canonical encoding rules (CER) and Distinguished encoding rules (DER)", CCITT Recommendation X.680, July 2002.
- [3] International Telecommunications Union, "Information Technology - Generic applications of ASN.1: Fast infoset", ITU-T Recommendation X.891, May 2005.
- [4] International Organization for Standardization, "Information Technology - Generic applications of ASN.1: Fast infoset", ISO Standard 24824-1, May 2007.
- [5] Open Mobile Alliance, "Binary XML Content Format Specification", OMA Wireless Access Protocol WAP-192-WBXML-20010725-a, July 2001.

[9.2.](#) Informative References

- [1] Murata, M., St. Laurent, S. and D. Kohn, "XML Media Types", [RFC 3023](#), January 2001.
- [2] Freed, N., Klensin, J. and T. Hansen, "Media Type Specifications and Registration Procedures", Internet-Draft [draft-ietf-appsawg-media-type-regs-04](#), April 2012.

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