WCTP 1.1 Corrections and Clarifications

Technical Note #6

XML Encoding in WCTP

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1 Purpose

The purpose of this technical note is to clarify the valid XML encoding type for WCTP 1.1.

2 XML Encoding in the WCTP 1.1 Specification

Section 3.4 of the WCTP 1.1 specification states:

> *A WCTP operation must begin with a suitable XML document type definition declaration such as:*

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation
  SYSTEM "http://dtd.wctp.org/wctp-dtd-v1r1.dtd">
```

> *Any alternate form of the above XML declaration is acceptable so long as it meets the following criteria:*

> - *The XML version must be 1.0.*

> - *The DOCTYPE must be wctp-Operation.*

> - *The SYSTEM keyword must appear, and must be followed by a valid URI that will return a WCTP/XML DTD that defines the version of the WCTP protocol being used to create the operation.*

No specific information is provided about the character encoding types that are valid or acceptable for inclusion in the XML declaration using the keyword **encoding**.

3 Clarification of Encoding Type

In WCTP 1.1, the only XML encoding type supported is UTF-8 (the default encoding value if the **encoding** keyword is not specified). The XML/WCTP information is further restricted to single-octet UTF-8 (corresponding to the set of 7-bit US-ASCII characters), including the #PCDATA in the wctp-Alphanumeric and wctp-TransparentData elements. 8-bit binary data can only be passed in the wctp-TransparentData element by using the base64 encoding algorithm.

For details of UTF-8 encoding, see RFC2279, *UTF-8, A Transformation Format of ISO 10646*, dated January 1998.

4 Examples

The following XML declaration is valid, and is equivalent to the declaration shown in Section 3.4 of the WCTP 1.1 Specification:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE wctp-Operation SYSTEM "http://dtd.wctp.org/wctp-dtd-v1r1.dtd">
```

Although the following XML declaration is valid by XML standards, and UTF-16 is a valid XML encoding type, it is **NOT** valid in WCTP 1.1:

```
<?xml version="1.0" encoding="UTF-16"?>
<!DOCTYPE wctp-Operation SYSTEM "http://dtd.wctp.org/wctp-dtd-v1r1.dtd">
```

5 Future Enhancements

Future versions of WCTP may extend encoding support beyond single-byte UTF-8 to provide for international support.