

# CCNx Organization Extensions to CCNx Messages draft-mosko-icnrg-ccnxorgext-00

## Abstract

This document specifies a mechanism to embed Vendor specific information, labeled with the Vendor Identification number, in a CCNx Message via an optional Message TLV. Vendor numbers are obtained from the last three digits of the IANA Private Enterprise Numbers (<http://www.iana.org/assignments/enterprise-numbers/enterprise-numbers>)

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## 1. Introduction

This document specifies a mechanism to embed Vendor specific information, labeled with the Vendor Identification number, in a CCNx Message via an optional Message TLV. Vendor numbers are obtained from the last three digits of the IANA Private Enterprise Numbers (<http://www.iana.org/assignments/enterprise-numbers/enterprise-numbers>)

Packets are represented as 32-bit wide words using ASCII art. Because of the TLV encoding and optional fields or sizes, there is no concise way to represent all possibilities. We use the convention that ASCII art fields enclosed by vertical bars "|" represent exact bit widths. Fields with a forward slash "/" are variable bitwidths, which we typically pad out to word alignment for picture readability.

TODO -- we have not adopted the Requirements Language yet.

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### 1.1. Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 (Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels," March 1997.) [RFC2119].

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## 2. Protocol Description

Vendor specific TLVs MUST begin with the T\_ORG type, followed by a Length which is 3 bytes more than the Length of the vendor specific information to be included. Lastly, the first three bytes of the Value portion of the TLV is the Private Enterprise Number for that Vendor; followed by the rest of the Value, which may include multiple nested TLVs..

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Type	Abbrev	Name	Description
%x000B	T_ORG	Vendor Specific Information	Information specific to a vendor implementation.

Table 1: Additional CCNx Message Types

1										2										3									
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1								
(T_ORG)										Length (3+value length)																			
PEN[0]										PEN[1]										PEN[2]									
Vendor Specific Value																													

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### 3. Acknowledgements

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### 4. IANA Considerations

TODO: Work with IANA to define the type space for CCNx messages types.

All drafts are required to have an IANA considerations section (see Guidelines for Writing an IANA Considerations Section in RFCs (Narten, T. and H. Alvestrand, “Guidelines for Writing an IANA Considerations Section in RFCs,” May 2008.) [RFC5226] for a guide). If the draft does not require IANA to do anything, the section contains an explicit statement that this is the case (as above). If there are no requirements for IANA, the section will be removed during conversion into an RFC by the RFC Editor.

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### 5. Security Considerations

All drafts are required to have a security considerations section. See RFC 3552 (Rescorla, E. and B. Korver, “Guidelines for Writing RFC Text on Security Considerations,” July 2003.) [RFC3552] for a guide.

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### 6. References

## 6.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels," BCP 14, RFC 2119, March 1997 (TXT, HTML, XML).

## 6.2. Informative References

[CCNx] PARC, Inc., "CCNx Open Source," 2007.

[RFC3552] Rescorla, E. and B. Korver, "Guidelines for Writing RFC Text on Security Considerations," BCP 72, RFC 3552, July 2003 (TXT).

[RFC5226] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs," BCP 26, RFC 5226, May 2008 (TXT).

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