**Paper for Consideration by the S-100 Working Group**

**Removal of ISO/IEC 8211 ASCII**

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| *Submitted by:* | SPAWAR Atlantic |
| *Executive Summary:* | Removal of ISO 8211 ASCII Encoding |
| *Related Documents:* | S-100 & S-101 Specifications |
| *Related Projects:* | IHO S-100/S-101 Test Bed Project |

## Introduction / Background

In S-100 Part 4a, the S100_DataFormat contains the values "ISO/IEC 8211 ASCII" and "ISO/IEC 8211 BINARY".  It is proposed that these be replaced with a single value "ISO/IEC 8211".

## Analysis / Discussion

The concept of an ASCII or binary encoding of the ISO 8211 dataset is a concept carried over from S-57.  An example can be seen in the S-57 ed 3.1 Main Document (31Main.pdf) table 7.1.  In the format column for the subfields, both ASCII and binary formats are listed.  The field tables listed in section 10a of S-100, however, only contain a single format.  Additionally, 10a-3.1 explicitly calls out the binary format and all non-ASCII subfield formats are always given in binary form.

1.  There is no concept of an ASCII vs. binary ISO 8211 file in the ISO 8211 specification as the terms "ISO/IEC 8211 ASCII" and "ISO/IEC 8211 Binary" imply.  In S-57 this meant there were two different ways to define certain subfields.  That is, all the numbers in an S-57 dataset could be encoded in binary or by its textual form.
2.  None of the S-57 datasets we encountered used the ASCII format for numbers, and doubt any producers ever created any.
3.  The ASCII form provides no added value.
4.  None of the subfields defined in S-100 use it.
5.  Therefore, the inclusion of ASCII form is confusing.

## Recommendations

1.  Replace the "ISO/IEC 8211 ASCII" and "ISO/IEC 8211 BINARY" in the S100_DataFormat table with a single "ISO/IEC 8211" value.

2.  Remove the sentence "For the encoding only the binary ISO/IEC 8211 format is used." from 10a-3.1.

## Action Required of S-100 WG

The S-100 working group is invited to:

      a.    note the paper

      b.    discuss the recommendations

      c.    modify the S-100 product specification as described in this paper