

PROPOSED TECHNICAL CHANGES TO ANSI/NIST-ITL 1-2011

Based on the development of the
BioCTS for AN-2011 software

Overall Theme

- The Proposed changes address instances where multiple interpretations may lead to a lack of interoperability between two organizations who interpret it differently.
 - Focus on making definitive choices when these instances occur.
 - Aligning sections of the text that refer to the same concept.

No definitive definition for “positive integer”

- Some groups count 0+ as a positive integer.
- Some groups count 1+ as a positive integer.
- Closest thing to a definition is held within a note that specifies “zero or positive integer” indicating that 0 is not part of “positive integers”.
- Propose a definite definition of positive integers.

No definite way to round values

- Occurs when a field can only be an integer, but the value to populate the field is a calculation that may be a non-integer value.
 - Round up?
 - Round down?
 - Truncate?
- Example: PNG images can contain the scale resolution in Pixels Per Meter – and AN-2011 can only be in Pixels Per Inches or Pixels Per Centimeter.

Fixing of Valid Values

- Several tables have more broad valid values than the text
- Proposed changes to align the values.
- Example:
 - Bits Per Pixel is defined in the table as “Positive integer”.
 - Bits Per Pixel is defined in the text as having a minimum value of 8.
 - Solution: Fix the table to be $8 \leq \text{BPX} \leq 99$.

Proposed Changes to some Cardinality Values

- Some Cardinality values in Annex G did not match their values in the Tables.
- This is a problem when Annex G is more restrictive than the Tables in the base standard.
 - Example: When Annex G specifies a field as Mandatory, when the Table specifies it as optional.
- Proposed changes to align the cardinalities in Annex G to match what they are in the base standard tables.

A Modification to the definition of Subfields

- Subfields can contain a single information item (based on Field 10.026).
 - Propose to change the definition of subfield from
 - “is the subfield used for multiple entries of an II or an IF”
 - to
 - “is the subfield used for one or more entries of an II or an IF”

Modifications Proposed to the Schema where it is MORE restrictive than the Base Standard

- In some cases the XML Schema is MORE restrictive than the base standard.
- Problem:
 - Traditional File to XML File = Not Working
 - XML File to Traditional File = Working
- Proposed change to add an additional simple type to be union-ed with the existing enumerated type
- Example:
 - Base Standard: Field 1.004 can be user-defined, containing characters 1 to 16 in length
 - XML Schema: The values are in an enumerated list, not allowing for a user-defined value

Contact

- BioCTS Team
- Email: biocts@nist.gov
- Website: <http://www.nist.gov/itl/csd/biometrics/ansi-nist.cfm>

