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