

Org	Clause/ Subclause	Paragraph/ Figure/Table/ Field	Type of comment	Comments	Proposed change	Disposition	Status
NIST-6	2.3	Page 4	ed	Syntactical (Level 2) conformance. Leave example paragraph but remove color coded reference to 2013 update.	Leave example paragraph and remove 2013 color coded reference.	Accept	OBE
NIST-7	3	Pages 5-9	ed	Normative references – color coded text	Remove color coded reference to 2013 update	Accept	OBE
NIST-8	4	Pages 10-38	ed	Terms and definitions – color coded text	Remove color coded reference to 2013 update	Accept	OBE
NIST-9	5	Pages 39-50	ed	Data conventions – color coded text	Remove color coded reference to 2013 update	Accept	OBE
NIST-138	5.4	1st para	Te	Add bi-directional information, as this better reflects the current state of the biometric exchange landscape	Backward compatibility is important, since organizations adhering to earlier versions of the standard may create transactions according to that version, and these transactions may still be received by organizations that have updated to a newer version of the standard and vice versa.	Accept	Complete

<b>NIST-14</b>	5.5	Page 50	te	Many of these character classes can be represented with regular expressions, which would simplify the representation here and avoid ambiguity (for instance, ambiguity on if “H” can contain lowercase hex alpha characters).	Generate and substitute regular expressions for character types.	OBE. Section has been completely rewritten	OBE
<b>NIST-15</b>	5.5	Page 50	te	Can “H” be lowercase?	Specify if A-F can also be a-f (it likely can).	OBE. Section has been completely rewritten	OBE
<b>NIST-16</b>	5.5	Page 50	ed	Numeric class N used before defined (as in class AN)	Define “N” before used, before “AN”	OBE. Section has been completely rewritten	OBE
<b>NIST-17</b>	5.5	Page 50	ed	Lots of characters used as example in “U” are not printed.	Fix printing defect such that all Unicode example characters are rendered properly.	OBE. Section has been completely rewritten	OBE
<b>NIST-18</b>	5.5	Page 50	ed	Base64 character type is not defined	Include the Base64 character set (A-Z, a-z, 0-9, +, =)	OBE. Section has been completely rewritten	OBE
<b>NIST-19</b>	5.6	Table 4	te	Index 1 is missing from Table 4 Character encoding, but in a note that it is legacy.	Add to table and explicitly deprecate. Delete paragraph: “Note that the value “1” does not appear in the table...”	Accept	Complete
<b>NIST-20</b>	5.6	Page 50	ed	Footnote for Type 10 record layout states two fields which should either be three or not specified.	Update to remove “two” from footnote so it just reads “Type 10 record layout for these fields...”	OBE	OBE

<b>NIST-21</b>	6	Page 51	ed	Implementation domain and application profiles – color coded text	Remove color coded reference to 2013 update	Accept	OBE
<b>NIST-22</b>	7	Pages 52-116	ed	Information associated with several records – color coded text	Remove color coded references to 2013 and 2015 updates.	Accept	OBE
<b>NIST-46</b>	8	Pages 117-499	ed	Record type specifications – color coded text	Remove color coded references to 2013 and 2015 updates.	Accept	OBE
<b>NIST-48</b>	8.1	Page 119	ed	This sentence is complicated: “Note that since the alternate character encoding is specified in this record, there must be specified characters agreed upon in order to read this Record Type, particularly with Traditional encoding, and the characters that can be represented by the 7-bit ASCII code are those characters”	Simplify this sentence. “Type 1 shall be ASCII” or similar.	OBE	OBE
<b>NIST-49</b>	8.1	Table 34, Page 121	ed	Recommend removing “otherwise xx.xx” from the Value Constraints column in Field Numbers 1.011 and 1.012 (Mnemonic NSR and NTR, respectively).	Remove comment from Value Constraints column.	OBE	OBE
<b>SW-1</b>	8.10			how ‘face latents’ are transmitted? (coding for 10.003: do we need always to define the image down to the subject pose or could we just indicate ‘10.003: ‘face latent’)	Explain how to declare a face image as a ‘trace’? (= unknown person, for example a frame from a surveillance camera.	Accept	Complete

<b>SW-2</b>	8.10			should we consider to being able to send movies within a NIST file? (for instance coming from a surveillance camera)	T10 WG agreed that it might be desirable to allow say a field operative to send video in a T20 Source Record, to be clipped for T10 records at a lab or station. This change was added to the T20.	Accept	Complete
<b>NIST-97</b>	8.11	Page 271	ed	Recommend removing “Forensic and investigatory” from Record Type 11.	Suggest changing section title to “8.11 Record Type 11: Voice record” (and appropriate adjustments to other text)	Accept	Complete
<b>NIST-100</b>	8.13	Table 102; Page 348	te	In Table 102, Field Number 13.994, the External File Reference (EFR) should have a Minimum Occurrence of 0 (zero).	Change minimum occurrence for EFR to 0 (zero) JS: This table no longer exists.	Accept; clarify the mandatory "choice" relationship between fields x.994 and x.999	OBE
<b>NIST-99</b>	8.13	Page 343; 2nd P	te	13.046 exists to document deceased.	Under 8.13 Record Type 13: Friction-ridge Latent Image Record, in the second paragraph indicate that field 13.046 should be used for this use case.	Reject. This text doesn't really fit here in context. (this was my comment anyway)	Complete
<b>NIST-106</b>	8.14	Table 104; Page 365	te	In Table 104, Field Number 14.994, the External File Reference (EFR) should have a Minimum Occurrence of 0 (zero).	Change minimum occurrence for EFR to 0 (zero) JS: This table no longer exists.	OBE	OBE
<b>NIST-50</b>	8.4	Table 36, Page 131	ed	Under Value Constraints column for Field Number 4.003 Impression Type, the range should be “41 ≤ IMP ≤ 42”	Update Value Constraints column for Field Number 4.003 Impression Type range to be “41 ≤ IMP ≤ 42”	OBE. These codes are now deprecated.	OBE
<b>NIST-51</b>	8.9	Title	te	This type contains much more than minutiae data.	Change type name to “Friction Ridge Metadata” or “Friction Ridge Features and Metadata”	Accept	Complete

<b>NIST-52</b>	8.9	Table 41	te	Floating point when using 1/2540 for 10 micrometer units would allow for better precision going back to pixel locations.	Allow for floating point in all fields, or switch to using pixel values.	FRWG agreed to allow pixels. Accepted.	complete
<b>NIST-53</b>	8.9	Table 42, Page 148	ed	Under Value Constraints for Field Number 9.302 friction ridge generalized position FGP (row) need to add a range “60 ≤ 79”	Under Value Constraints for FGP add range “60 ≤ 79” JS:Table is OBE but corresponding text has been corrected.	Accept	Complete
<b>NIST-54</b>	8.9	Table 42, Page 152	te	Under Condition Code for Field Number 9.321 Mnemonic DTP row the condition should be Optional or “O”	Change Condition Code to “O”. JS:Table is no longer exists.	Accept	OBE
<b>NIST-55</b>	8.9	Table 42, Page 155	te	Condition Code for 9.335 RCC EFS Ridge Count Confidence should be Optional.	Change Condition Code to “O”. JS:Table is no longer exists.	Accept	OBE
<b>NIST-56</b>	8.9	Table 42, Page 160	te	Under Minimum Occurrence for 9.357 LQP Polygon, the value should be “3”	Change Minimum Occurrence to “3”. JS:Table is no longer exists but corresponding text has been corrected.	Accept	Complete
<b>NIST-57</b>	8.9	Table 42, Page 161	te	Under Minimum Occurrence for 9.360 AOP Polygon, the value should be “3”	Change Minimum Occurrence to “3”. JS:Table is no longer exists but corresponding text has been corrected.	Accept	Complete
<b>NIST-58</b>	8.9	Page 139	te	“In the 2008 version of the standard, only one vendor block (including the M1 format) could be present in a single “record.”	Elaborate on this. Does one block supersede the other? Should they be taken in unison? What if one block contradicts the other? FRWG: discussed this topic and agreed more than one block may exist.	Accept	Complete

<b>NIST-59</b>	8.9	Table 39, Page 140	te	<p>This type contains proprietary fields.</p> <ul style="list-style-type: none"> <li>-Many companies have consolidated.</li> <li>-User-defined records can be used as a workaround (though I would also discourage this, see next bullet)</li> <li>-This is not interoperable and is antithetical to the standard.</li> </ul>	<p>Remove proprietary vendor blocks:</p> <p>9.031-9.125</p> <p>9.151-9.225</p> <p>FRWG:The Other Features Sets block (9.176-9.225) is used by some agencies for agency-required fields that are not included in the other sets.</p>	Partial accept; deprecate vendor blocks 9.031 -9.175.	Complete
<b>NIST-60</b>	8.9	Table 39, Page 140	te	Remove deprecated fields.	Remove 9.005-9.012.	Reject; these fields are <i>Legacy</i> , not deprecated	Complete
<b>NIST-61</b>	8.9		te	Many seemingly arbitrary limits in the table. Quality map size, number of minutiae (but not number of cores or deltas), etc.	Remove all limits.	Reject; no specific change requested	Complete
<b>NIST-5</b>	1	Page 1	ge	Suggest removing second paragraph as it is specific to 2013 and is not needed in the Scope section. This will be repeated throughout the document to remove color coded references and/or footnotes.	Remove second paragraph as the prior 2015 Update version of the ANSI/NIST-ITL standard maintains history of version updates to the standard.	Accept	OBE

INT-2	14.018	14.018	te	<p>The word ‘amputated’ is used if a body part is completely missing. So it’s meaning is the same as ‘unable to print’. We translated the word in german, french and italian as ‘mutilated’. I think that matches the meaning of the word better than amputated. Even amputated as it is is misleading. The missing of a partial print could not only be the result of an amputation (as the explanation states) but also of an accident.</p>	<p>replacing the word ‘amputated’ by ‘mutilated’ in the standard for a better understanding?Form a focus group to discuss all the nuances of partial amputations, and system ramifications.</p> <p>JS: T14 complete are T15 &amp; T19 changes needed as well?!</p>	<p>Accept AMP Code reconciliation proposal from UK. (AMP Code ad hoc focus group).</p>	Complete
NIST-117	3	Page 5	Te	<p>Need to provide support for inclusion of contactless collected imagery.</p>	<p>Suggest adding new subsection 3.1 titled “Contactless friction ridge” containing verbiage that if the user of the standard chooses to incorporate contactless imagery then NIST Special Publication 500-334 becomes a normative link to the ANSI/NIST standard and the record-specific guidance in 500-334 supersedes that which is in the ANSI/NIST standard. Section 3.1 will also include a citation reference to 500-334.</p>	<p>Partial Accept; will add SP500-334R1 as a normative reference. The other fields have already been updated in the new draft.</p>	complete
NIST-135	3	p5	ed	<p>add citations for LITS docs: <a href="http://dx.doi.org/10.6028/NIST.SP.1152">http://dx.doi.org/10.6028/NIST.SP.1152</a> <a href="http://dx.doi.org/10.6028/NIST.SP.1151">http://dx.doi.org/10.6028/NIST.SP.1151</a></p>	<p>These are helpful and possible normative references for EFS markup in Type-9</p>	<p>Reject. Greg says these would be confusing rather than helpful</p>	Complete

NIST-143	3	Page 9	ge	Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST), Standards for examining friction ridge impressions and resulting conclusions. It is available at: <a href="http://www.swgfast.org/Documents.html">http://www.swgfast.org/Documents.html</a>	this URL is an Ad-Farm when checked on 8/12/24. NIST has it: <a href="https://www.nist.gov/system/files/documents/2016/10/26/swgfast_examinations-conclusions_2.0_130427.pdf">https://www.nist.gov/system/files/documents/2016/10/26/swgfast_examinations-conclusions_2.0_130427.pdf</a> update reference	Accept	complete
NIST (Submitted on behalf of ??? at first meeting)	4	Page 32	ed	Slaps can include thumbs (FGP 15)	Update definition of slap to include thumbs.	Accept. 11&12 as well	complete
NIST (Submitted on behalf of ??? at first meeting)	5.3	Table 3, Page 40	ed	What are the names of Record Types 3, 5, 6?	Add names of Record Types 3, 5, 6.	Reject. These types have been deprecated for many years. Removing their information was intentional to signal that they are no longer acceptable in current version of the standard.	Complete
NIST-12	5.3.13; 5.3.14		te	Resolution requirement seems operational in nature. Fields limits in these records don't mandate this.	Remove all requirements about image resolution here and in subsequent documentation. Let standard profiles mandate resolutions.	Reject	OBE. These sections no longer exist.



NIST-10	5.3.2	Page 41	ed	Reiterate third sentence in each record: “Data contained in this record shall conform in format and content to the specifications of the domain name(s) as listed in Field 1.013: Domain name/DOM found in the Type-1 record, if that field is in the transaction.”	Replicate comment in each records’ user defined fields.	Accept	Complete
NIST-11	5.3.3		te	Define what you mean by deprecated somewhere earlier. Deprecated typically means you can still use it and it’s supported, but it’s going away soon. In this case, it says these records shall not be contained, which is different.	Explicitly remove all entities that have been marked deprecated in Update 2015.	Reject; leave “(Deprecated)” following those Type-# records that have been deprecated.	Complete
NIST-13	5.3.4		te	Remove Type 4 and require use of Type 14 instead.	Remove Type 4 and require use of Type 14 instead.	Reject; include “(Legacy)” following Type 4 records	Complete
NIST-127	5.5	Page 50	te	Example “Unicode characters” are displayed, but it is not clear what set of Unicode we’re referring to. Being more clear about this field would simplify many other areas of the document.	Define “U” as the set of Unicode characters that are allowable in Type 1 field 1.015. This would mean that if the 1.015 is ASCII, that Unicode is not allowed. JS: This section has been completely rewritten. OBE.	Accept	OBE

NIST-118	7.1	Table 5	Te	Table 5 lists the min and max occurrences for the LEN field for all record types (X.001). The current values do not make sense. Types 1 & 2 are text records, but have no maximum value, while types 10 and up, which contain large amounts of binary data, are restricted in size. Annex B, page 510, first paragraph also contradicts Table 5: “The first field in all records shall contain the length in bytes of the record...The length has no upper bound.”	Re-evaluate the desired min and max values for all record types and either remove them or set more reasonable limits. Similar to NIST-23, but propose setting min and max values to be consistent across all record types. This would also render the table unnecessary.	Accept. See NIST-23	Complete
NIST-23	7.1	Table 5, Page 52	te	Maximum size of xx.001 is limited to 8 characters, which makes the max size of a record 99999999 bytes, or ~100 MB. An uncompressed palm image could easily go over this size in 15.999 alone.	Change “Maximum Field Length” column to Unrestricted, to better match other record types and avoid the situation. JS: Note that character length can be constrained by Application Profiles OverallWG#1: Group agreed that all record types (except binary) should have unrestricted length field, allowing unrestricted image size. Add language that points out Application Profile may restrict size if desired.	Accept	Complete

<b>NIST-126</b>	7.1 for example	Table 5, Page 52	ed	Numbered footnote marks the same size and style as the body text make it difficult to discern when the footnote is applied to a number. In the example of Table 5 row 3, the value is 4 with reference to footnote 27. The value is not 427.	Throughout the document, use a unique style/color/size/etc. for footnote marks in the body that cannot be confused with body text.Consider whether footnotes are needed or if they can be part of the body. Many of these footnotes were due to clarifications added in 2015 and can likely be incorporated into the body text for this revision.	Accept	OBE
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NIST-24	7.5.2		te	Allow other types of hashes beyond SHA-256. xx.996 can have a second item that indicates the hash type.	Add text like the following (check for technical correctness):This field supports multiple subfields. For backwards compatibility, when present, the first subfield shall have exactly one item, the 64-hexadecimal character SHA-256 checksum. Each subsequent subfield shall contain two information items. The first information item shall contain a variable-length hexadecimal character checksum. The second information shall contain the name of the hash function whose hash has been stored in the first information item, as documented on the NIST Cryptographic Algorithm Validation Program’s validation list. OverallWG#2 - JS will draft language for review	Discuss	Next version
NIST-45	7.7.12	Page 111	ed	Typo: Make paths singular, and correct circle	Replace “paths” with “path” and correct spelling of “circle”	Accept	Complete
NIST-25	7.7.2	Page 64	te	Date and time section updates and encoding discussion	Discuss with group: UTC replaces GMT but older terminology retained in this standard. Do we need to change? Considerations for Z table/description?	Revisit; please review Jennifer’s matrix for text recommendation Follow-Up 5/22	OBE

<b>NIST-26</b>	7.7.4	Table 8	te	Update Table 8 Friction ridge impression types to include multiple fingers and palms.	Modify Table 8 under Plain Contact to read “Finger(s)/Palm presented on platen or paper without rolling”; and for Live-scan Swipe read “Finger(s)/palm swiped on platen”	Partial Accept; changed to Friction Ridge Skin	complete
<b>NIST-27</b>	7.7.4.2	Field FGP; Table 9	te	FGP 11 and 12 mix FGP 1/6 and IMP codes. These should be distinct. No explanation of differences between 11/1, 12/6.	Note that 11 and 12 should only be used when representing a segmented inked fingerprint card scan. FRWG#2 disagreed with this statement, livescans use 11 & 12 for thumbs. Size is different between 1/11 and 6/12.	Reject	Complete
<b>NIST-28</b>	7.7.4.2	Field FGP; Table 9	te	No explanation of “left four fingers” or “right four fingers”	Prepend “simultaneous capture of” to “left four fingers,” “right four fingers,” and “left & right thumbs” FRWG#2 requested better description of slaps be added as well, encompassing thumbs (1/11, 6/12, sizes) plus this one	Accept	Complete

<b>HID-1</b>	7.7.4.2	page 75, Table 9	te	request to add a position code for finger scanners that allows the collection of The right index and middle, and the left index and middle, in one capture session. My proposed position number for this multifinger position would be 55... It would be great to keep the ANSI NIST standard in sync with the SC37 standards in this regard...	add position code 55 to table 9 FGP, "Multiple Finger Position Codes" section to represent the right index and middle, and the left index and left middle, captured simultaneously. JS: What should the minimum height and width be in this case? FGP 13 & 14 are 3.2x3.0 in BUT since this capture involves both hands, it may need to be larger. OWG#2 approved size, no objections to adding code.	Accept	Complete
<b>NIST-142</b>	7.7.4.5	Table 11, page 82	te	Code value 2 is missing the "scanned" portion of the description: "Ink applied to friction ridge skin, and then applied to paper, typically with assistance from a trained technician."?	change description to "Ink applied to friction ridge skin, which is applied to paper, typically with assistance from a trained technician and then scanned with a flatbed scanner (not a camera)."	Accept	Complete
<b>NIST-29</b>	7.7.4.5	Table 11	te	Some of these are obscure enough and will end up being used incorrectly.	Include commercial equipment example for each.	Partial Accept; NIST will establish a webpage to list (confirmed) technologies submitted by vendors.	Complete

NIST-30	7.7.6		te	“Each image formatted in accordance with this standard shall appear to have been captured in an upright position and approximately centered horizontally in the field of view” is not true for Type 13.	Add “... except for Type 13.”	Accept	Complete
NIST-31	7.7.6.1		te	This is operational in nature. The fields that store resolution themselves do not currently enforce this operational requirement.	Remove resolution requirements, let standard profiles enforce this.	Reject	Complete
NIST-32	7.7.6.2		ed	Poor English grammar in this section, specifically “ppi class”	Rewrite to improve English grammar. Specifically remove “class” from occurrences of “ppi class”. JS: each "ppi class" includes a range of allowable values, which are defined directly below. Add a reference to the defining section.	Partial Reject	Complete

NIST-33	7.7.6.3.2		ed	<p>“For variable-resolution friction ridge images (those in Record Types 13, 14, 15, 19 and possibly in Record Types 16 and 20), the transmitting resolution shall be at least as great as the class resolution of 500 ppi. This statement contradicts 7.7.6.2.2 for Type 13.</p>	<p>Remove Type 13 reference in 7.7.6.3.2.  JS: This is the transmitting resolution. 7.7.6.2.2 is the scanning resolution. The statement "the <b>transmitting</b> resolution shall be <i>at least as great</i> as... 500 ppi" does not contradict the statement "Latent images shall have a minimum <b>scanning</b> resolution of the 1000 ppi class"</p>	Reject	Complete
NIST-146	7.7.7	Page 96	te	<p>With NFIQ 2 and other quality measures, it may be useful to record the checksum of the model used to compute quality.</p>	<p>Add new "checksum" item to Quality Measure, QCK. JS: The location of this change is not in this section, but attached to the quality scores in each record type.</p>	Accept.	Complete
NIST-147	7.7.7	Page 96	te	<p>No way to record supplemental information about quality components used to compute quality.</p>	<p>Add new field, 14.029 Friction Ridge Quality Component, the same as Quality Measure, but allowing an unconstrained value score instead of an integer 1-100. This should have unbounded occurrences, and perhaps a subfield to indicate if higher or lower is better. JS: Also added as 15.029, 13.029, and 19.029.</p>	Accept.	Complete



<b>INT-4</b>	7.7.7	Page 96	te	No way to record supplemental information about quality components used to compute quality. Dec24 Interpol NIST WG asked for this for face as well.	Add new field, Face Quality Component, the same as Quality Measure, but allowing an unconstrained value score instead of an integer 1-100. This should have unbounded occurrences, and perhaps a subfield to indicate if higher or lower is better. (JS: 10.035 added)	Accept.	Complete
<b>NIST-34</b>	7.7.7	Page 96	te	No way to represent the version number of a quality algorithm.	Add a new item that allows for storing a version number for quality algorithm	Accept	Complete
<b>NIST-35</b>	7.7.7	Page 96	te	No way to record supplemental information about quality or quality implementation. With NFIQ 2, it may be useful to record the version, name, checksum of the model used to compute quality.	Add a new “comment” item.	Accept	Complete
<b>NIST-36</b>	7.7.7	Page 96	te	Permit more than 9 items. If we wanted to represent the quality components from NFIQ 2, we’d need many more.	Allow for an unlimited amount of subfields.	Accept	Complete
<b>NIST-37</b>	7.7.7	Page 96	te	Permit more than 0-100, 254, 255 for QVU. If we wanted to represent real quality component values from NFIQ 2, we’d need floating point.	Allow for any numerical value, including floating point, to be used in a quality metric. Ranges can be mandated by the quality algorithm and validated by implementations or profiles.	Partial Accept; QVU will remain unchanged, new field will be added for quality metrics instead.	Complete

NIST-38	7.7.8.6	Page 100	te	<p>It is not sufficient to say that BPX=24 indicates an RGB image. We also need to indicate the number of color channels and/or the color type and/or specify bit per channel. As it is, we cannot easily transmit high bit per channel image. We should add an optional field that is bits per channel (defaults to 8 if not set). Is there an alpha channel?</p> <p>-This could be a 24 bits per pixel single-channel image</p> <p>-This could be a CYMK image using 6 bits per color channel</p> <p>-Values go from 8-99. What does 99 mean?</p> <p>-Is there an alpha channel? How do we specify it?</p>	Add bits per channel field. Add color type field. Add alpha channel present field.	GFiumara and JStathakis will mock up language for group to review. Add color space (CSP) to friction ridge types, optional but needed when BPX > 8 bits	complete
NIST-39	7.7.8.6	Page 100	te	<p>Many types require the minimum value here to be 8. BPX=1 is a useful value for skeletonized binary images. Sure, these can be padded to BPX=8 but can be wasteful.</p>	Change minimum value of BPX to be 1. JS:OBE by NIST-38	Reject	Complete

NIST-150	7.7.9	Page 103, Field CGA Compression Alg	te	The CGA values are constrained to the codes listed in Table 19, but Type 16 and Type 20 CGA fields say "when appropriate but not limited to those values". This is not adequate to convey the necessary information.	Add a standardized manner of including other compression algorithms to CGA fields, particularly the T20 and T16. JS: Also Type 21! GFiumara's MediaType suggestion was agreed on. What do we do with CGA in these fields? OverallWG#3 discussion: See MediaType Usage attachment for T20 example. <b>Greg doesn't like the "other" representation. Will work with him to find solution; NIST-136 &amp; NIST-156</b>	Accept	complete
NIST-40	7.7.9	Table 19	te	Image formats known to be in use are not supported.	Add additional known image formats like TIFF, WebP, HEIC. Revisit; being worked by FR Metadata WG. Apply MediaType solution instead of adding codecs to CGA	Accept	Complete
NIST-41	7.7.9	Table 19	te	Future formats and other image formats not specifically mentioned are not supported by the standard.	Use MIME types to specify image types such that the standard does not need to be updated to support alternate image formats.	Partial Accept; FRWG agreed to add new CGA values for friction ridge images, and incorporate Mediatypes as suggested for other image types.	Complete

NIST-42	7.7.9	CGA	te	<p>‘WSQ’ has been seen in operational records. The ‘WSQ20’ value refers to WSQ 3.1 anyway, and this is confusing.</p>	<p>Permit ‘WSQ’ as an acceptable substitute for ‘WSQ20’</p> <p>Since this is an enumerated list, the likely solution would be to add a second code with the same description value. This is messy when processing on the backend though.How important is this?</p> <p>OverallWG#1: Jstathakis will prepare new text for group review, after examining the codes/labels issues with the CGA table use. using additional labels for version was rejected by the group, but an alias or second code value were ok.</p> <p>OverallWG#2 review option. See WSQ 20 tab. OWG#2: Don't like the proposed solution; Deprecate <del>WSQ20</del> add WSO value</p>	Accept	complete
NIST-43	7.7.9.1	Page 102	te	<p>This all seems like an operational suggestion and not specifying data interchange information and could be removed.</p>	<p>Remove operational considerations, allow standard profiles to enforce this if necessary for their use.</p>	<p>Reject. FRWG agreed that specific requirements for compression types are needed, esp for FR. see NIST-44</p>	complete

NIST-44	7.7.9.2	Table 20, Page 103	te	<p>There is no reason that any lossless image format (like PNG, TIFF) should not be allowed for use for any of these record types. This also seems like an operational suggestion.</p>	<p>Remove operational considerations, allow standard profiles to enforce this if necessary for their use. OR Allow PNG, TIFF support for all uses. RLessman: Here are some thoughts for the image compressions (CGA) for friction ridge.</p> <p>RLessman's contribution -</p> <p>So far we do have already:</p> <ul style="list-style-type: none"><li>•Raw format (whatever we understand by the term raw)</li><li>•WSQ</li><li>•PEGB</li><li>•PEGL</li><li>•J2K Lossy</li><li>•J2K Lossless</li><li>•PNG</li></ul> <p>The problematic entry in this list is the RAW format. It could be understood as a memory field noting the pixel values or even as a raw media type, where an implementer should read the data based on the magic number. The ISO community addressed this in ISO/IEC 39794-4 by eliminating the RAW format. I am aware that this will be not an option, but we could clearly state that the raw format will be domain/agency/implementation dependent and should not be used for cross domain/agency interoperability. ISO/IEC 39794-4 introduced PGM (portable gray map) with the binary encoding.</p> <ul style="list-style-type: none"><li>•PGM (P5)</li></ul> <p>This format simply notes the width, height, gray value range (0..max) and all the pixel values. So, it will be a truly lossless format suitable to replace RAW.</p> <p>In the future we might even explore JPEG XL, which supports lossy and lossless compression like J2K.</p> <p>However, the performance of JPEG XL lossy on fingerprints was not yet been investigated. Therefore, I would like to</p>	<p>Partial Reject. FRWG agreed that some restrictions for friction ridge images is desireable. Add PNG, TIFF with caveats, perhaps more...RLessman will contribute list. OWG#2, GFiumara took action item to review PGM and make recommendtation.</p>	<p>complete</p>
NIST-140	8.1.11	Field 1.011	Te	<p>Do we still need to include NSR for all transactions, or could it be omitted when no applicable records are included?</p>	<p>Withdrawn by submitter (JS)</p>	<p>Reject</p>	<p>Complete</p>
NIST-137	8.1.12	Field 1.012	Te	<p>Do we still need to include NTR for all transactions, or could it be omitted when no applicable records are included?</p>	<p>Withdrawn by submitter (JS)</p>	<p>Reject</p>	<p>Complete</p>

NIST-139					<del>Remove the character restriction from the</del> user-defined field. Change the character restriction to align with the rest of the T1: “Shall contain only allowable 7-bit ASCII values from Table 128.” Bring to the Overall WG and re-evaluate who these restrictions benefit, if anyone (since the exchangers will need to agree on values in any case.) OverallWG#1: Group did not feel that the ToT was a problem, but no one objected to removing the limits. However, NIST Standard WG @ Interpol felt that a known upper limit is very helpful.		
	8.1.4	Field 1.004, TOT	Te	Since TOTs are user-defined, do we care how long they are, or if they have numeric or special characters?		Reject	Complete

INT-3	8.10	Page 217	te	<p>Interpol NIST WG has requested that all non-face images be separated out from the Type-10 and be placed in a new record type instead.</p>	<p>Interpol SME is compiling expert opinion on this comment &amp; will provide.</p> <p>Would moving SMTs in the standard actually prevent people from putting them in the T10? Is there some other action we can take that might better prevent people from marking SMTs and body parts as faces?</p> <p>OverallWG#1: The group agreed that this is a people problem, and that this change would break systems. Also agreed that putting faces elsewhere should be reconsidered in the future, especially if adding a new type of face image, such as machine readable travel document images for automatic facial recognition.</p>	Reject for now; revisit in next update	complete
NIST-88	8.10	Table 70, Page 222	te	<p>In Table 70 Type-10 Record Layout the Field Number for 10.029 FPC (Feature point code) the minimum character should be 1 vs. 3</p>	<p>Update Minimum character to “1”</p>	Accept	Complete
NIST-89	8.10	Table 70, Page 228	ed	<p>In Table 70 Type-10 Record Layout Field Number 10.049 the Mnemonic for Lip print comparison descriptive text should be “LPCD”</p>	<p>Update Mnemonic to LPCD</p>	<p>Reject. The Cheilosopic fields will be removed per the Type-10 WG</p>	Complete

<b>NIST-90</b>	8.10	Table 70, Page 232	te	In Table 70 Type-10 Record Layout Field Number 10.999 the Minimum Occurrence should be 0 (zero) vs. 1	Update Minimum Occurrence to 0 (zero)	Accept	Complete
<b>NIST-92</b>	8.10.28.1	p. 244, Second paragraph	ed	Update the last sentence in the section, “Both A and B are in the range from 1 to 15.”	Update sentence to read, “Both A and B are codes and can range from 1 to 15.”	Accept	Complete
<b>NIST-93</b>	8.10.28.3	Table 78	ed	Typo: correct spelling of “mandibural” to “mandibular”	Spelling correction “mandibular”	Accept	Complete
<b>NIST-91</b>	8.10.3	Table 71, Page 232	ed	Table 71 Type-10 Image types is missing a row for Right Arm. Duplicate description in table.	Add row for Right Arm in Table 71.Remove redundant text in description column.	Accept	Complete
<b>NIST-94</b>	8.10.45	Page 261	ed	Typo: “The seventh information item is the lip contact line descriptor/LCLD.” Not LPCT.	Correct the acronym to LCLD	Reject. The Cheilosopic fields will be removed per the Type-10 WG	Complete
<b>NIST-95</b>	8.10.45	Page 262	ed	Typo: “It is the lip print comparison descriptive text/LPCD.”	Remove “text” and leave “lip print comparison description/LPCT.”	Reject. The Cheilosopic fields will be removed per the Type-10 WG	Complete
<b>NIST-96</b>	8.10.45	Page 264	ed	Typo: “The eighteenth information item is optional...” lip print characterization descriptive text/LPCT.”	Remove “descriptive” and leave “lip print characterization text/LPCT.”	Reject. The Cheilosopic fields will be removed per the Type-10 WG	Complete



DoD-RT4	8.11	all	te	Ryan suggested to reach out to OLIVE vendors	Jennifer agreed to reach out to OLIVE vendors Ryan suggested, and report back to the group via email: <a href="https://www.sri.com/platform/olive/">https://www.sri.com/platform/olive/</a> . Final resolution:ALawson never responded	Noted	Complete
FBI-DM1	8.11	all	te	Dave Marks expressed an interest in adding information that would allow for authenticity of speech samples to be analyzed, e.g., potential “deepfake” use cases	Consider what information would be necessary for this use case and potentially add to Type 11. OverallWG#3: consider in light of other types of deep fake/morph/synthetic data. See NIST-161, below.	Partial Accept	See NIST-161
DoD-RT2	8.11.13	Field 11.013. Pages 275 & 289, para. 4	te	Ryan received a comment that multiple containers with different compression levels should be allowed if they are not currently. Dave Marks agreed that this is important and common. Ryan sent a follow up email that included the comment	JS: After re-reading Ryan's email, I think that the solution here would be to use multiple T11s instead. The optional 11.013 Container field is used to describe the actual data file in the 11.999 field, which is maxOccurs=1. Therefore, it doesn't make sense to allow multiple 11.013 fields.	Reject	Complete
NIST-136	8.11.13, 8.11.14	Fields 11.013, 11.014	te	Shahram Orandi and Jim Horan noted that improvements in general technology should be considered in the context of voice for potential updates, such as compression methods.	Review codecs and containers OverallWG#3 - review proposed revision, See NIST-136 attachment. <b>Greg doesn't like the "other" representation. Will work with him to find solution that makes him happy, also NIST-136 &amp; NIST-156</b>	Partial Accept; adapted the MediaType solution from NIST-41	complete

DoD-RT3	8.11.14	p 292, Field 11.014	te	Ryan also asked that the sampling rate be expanded to allow value of 16KHz	JS: This is already allowed	Reject	Complete
FBI-DM2	8.11.23	p 303, Field 11.032	te	Dave Marks pointed out that the GEO location references are limited to Earth	<del>we should consider expanding this.</del> For example, the Apollo Mission transmissions have been processed by researchers, and others may be in the future It seems like this should already be possible. Review the GEO fields more closely with a SME if possible. OSI/OSV seem to have a contradiction in definitions (on Page 69) Any volunteers with geolocation experience? OverallWG#1: nope	Accept	complete
NIST-141	8.11.24	Field 11.033, page 304	Te	First Bullet, Second paragraph is a copy and paste error from the GEO location field: "A value of 0 in this subfield indicates the segment geographical information in this subfield shall be considered the default value for all segments not specifically identified in other occurrences of this subfield. If multiple segments are identified, they are designated as integers in a list."	Correct text to indicate that a 0 in this information item indicates the <b>Quality Score</b> applies to all segments not listed.	Accept	Complete

NIST-101	8.13.18	Page 353	ed	Should 8.13.18 include Centimeters in the first information item? If so, BOTH will also need to be changed.	Make changes to allow use of centimeters, requiring changing “BOTH”	FRWG did not feel this inclusion was important, as scales and rulers that have CM also have MM, and would add unnecessary complexity. Reject.	Complete
NIST-102	8.13.19	Page 353	ed	Typo: second information item is known scale length not known scale units.	Change second information item to Known Scale Length (KSL).	Accept	Complete
NIST-103	8.13.19	Page 354	ed	Third information item: centimeters or other units?	Add Centimeters to Inches and Millimeters to third information item.	Reject. See NIST-101	Complete
NIST-104	8.13.19	Page 354	ed	Eighth information item specifies UNICODE (and in fact, this appears many other places). It should not explicitly say UNICODE but should instead defer to the encoding specified in Type 1.	Remove “UNICODE” (and search for this elsewhere in the document), the "U" refers to "User-defined".	Accept	Complete

NIST-144	8.13.19	Page 354	ge	Field 13.019 information item 2, The second information item, KSL has a copy/paste error from information item 3.	correct error as shown: The second information item, known scale <del>length units</del> / KSL, specifies the length of the known scale from point A to point B. It may contain a period. <ul style="list-style-type: none"><li>• The third information item, known scale units / KSU indicates whether the known scales units are in inches or millimeters.</li></ul>	Accept	Complete
NIST-105	8.13.21		ed	Link to Table 9 and Section 7.7.7 do not work.	Links will need to be re-established with update of the document.	OBE	OBE
NIST-107	8.14.21	Page 373	ed	Field 14.022: NIST quality metric (NQM)	Deprecate in favor of NFIQ 2, which could be represented in 13.024	Partial Accept; FRWG voted to make this "Legacy" instead.	Complete
NIST-108	8.14.28		ed	Missing space: Section7.7.52 à Section 7.7.5.2	Add space between Section and 7.7.5.2	OBE	OBE
NIST-109	8.14.37	Page 377	te	It is “highly recommended” that information about the external file be in 14.020. Why not make this a requirement in an information item? It seems pretty important.	Change “highly recommended” to “shall”	Partial Accept; Add a new required information item to EFR to identify the format instead of relying on a general purpose comment field. (FRWG#5)	complete

NIST-110	8.14.37	Page 377, Field 14.994 EFR	te	I think having this option is bad, because the interchange file can no longer be used for complete interchange.	Disallow external files.	Partial Reject; Add new language stressing the importance of agencies' Application Profiles in allowing or forbidding this behavior, and the guidance for when it would be appropriate. (FRWG#5)	complete
NIST-111	8.14.37	Page 377, Field 14.994 EFR	te	Records "generally contain" 14.999 or 14.994 but not both. In the preceding paragraph, it's a "shall" statement that only one or the other can exist. Fix the contradiction.	Fix the contradiction.	Accept	complete
NIST-112	8.14.37	Page 377, Field 14.994 EFR	te	Length of this field is a max of 200 characters, but that's lower than even the Windows file path limit, let alone a URL to a local file.	Make the field length unlimited. [Add nudge language for guidance in agency Application Profiles. ] (FRWG#5)	Accept	complete
NIST-113	8.14.42		ed	Typo: 14,994 to 14.994	Replace comma with period	OBE	OBE

NIST-151	8.20.15	Page 466, Field 20.015 SFT	te	This information is critically important for processing the record, but this field doesn't provide nearly enough information or structure to do so accurately.	Legacy/Deprecate field in favor of new MediaType field (NIST-150)	Partial Accept. This field is mandatory, so deprecating it would be a substantive change. Add MediaType and new information item instead	Complete
NIST-152	8.21.6	Page 474,Field 21.015 AFT	te	This information is critically important for process the record, but this field doesn't provide nearly enough information or structure to do so accurately.	Legacy/Deprecate field in favor of new MediaType field (NIST-150)	Partial Accept. This field is mandatory, so deprecating it would be a substantive change. Add MediaType and new information item instead	Complete
Kerry Shannon	8.9	(page 139) for example	ed	Most agencies do more than fingerprints now. “ABIS” is preferred to “AFIS.”	Replace “AFIS” with “ABIS” throughout or where appropriate.	OBE	OBE
NIST-131	8.9	p 157, Table 42, Field 9.342	te	Field 9.342E IPD is marked mandatory, but the field description on page 196 clearly says it should be omitted in some cases	Change minimum occurence to 0	Accept	Complete

<b>UK-1</b>	8.9	Page 154, Field 9.331, Table 42	te	Field 9.331 EFS Minutia – this repeating element is up to 999 in the underlying NIST 2015 schema. It has been increased 9999 in the schema for Home Office use to support palm images that can potentially go over 999 minutiae.	Increase the maximum number of minutiae	Accept (FRWG #7)	Complete
<b>NIST-62</b>	8.9.5.10	Field 9.135 FQD; Page 167	ed	Need to know why one might omit the second and third fields. How do we know if we used the 2004 standard or if we used the 2009 standard but didn't fill in the mandatory fields? This ANSI/NIST-ITL field doesn't properly enforce this mapping. Need to know the INCITS version to properly assess the value stored here.	Clarify rules for omitting second and third fields. JS: Add text to both: "Mandatory if Field 9.126 B/CBEFF Format Type = "515", otherwise omitted."	Accept	Complete
<b>NIST-63</b>	8.9.5.11	Field 9.136 NOM; Page 167	te	M1 has a max of 255 minutia, this says 9999.	Change limit to 255.	Accept	Complete
<b>NIST-64</b>	8.9.5.12	Field 9.137 - MAN; Page 167	te	What is the point of the first information item? "The first information item (minutia index number / MAN) shall be initialized by "1" and incremented by "1" for each additional minutia in the fingerprint."	Remove unnecessary counter field. JS: Needed for backwards compatibility	Reject	Complete

<b>NIST-65</b>	8.9.5.13	Field 9.138 RCI; Page 168	te	What is the point of a filler item?	Remove unnecessary filler items.	Partial Accept; add language that these are only required for Traditional Encoding, and otherwise omitted.	Complete
<b>NIST-66</b>	8.9.5.13	Page 168	te	CMI can be 0, but this says positive integer.	Change to positive integer or 0.	Accept	Complete
<b>NIST-67</b>	8.9.5.13	Page 168	te	NMN says it cannot be 0, but CMI can be 0 (adjacent minutia)	Change to positive integer or 0.	Accept	Complete
<b>NIST-68</b>	8.9.5.16		ed	Typo: “maintaing”	Spell maintaining correctly.	OBE	OBE
<b>NIST-69</b>	8.9.6	Page 169	ed	For 8.9.6 Externally defined feature sets recommend adding the term “legacy” to each vendor reference in this section.	Update section title to “Externally defined legacy feature sets” and adding “legacy” before “feature set” for each vendor.	Partial accept; <b>deprecate</b> vendor blocks instead.	Complete
<b>NIST-70</b>	8.9.6	Page 169	ed	Type in 8.9.6 first sentence “definition” should be plural	Update “definition” to “definitions”	Reject, this sentence has been removed from the 2025 draft.	OBE
<b>NIST-148</b>	8.9.6.7	Page 170. Fields 9.176 - 9.225	te	UK Home office has stated that they use this block in conjunction with the INCITS 378 fields to convey supplemental information about the minutiae covered in the 378 block.	Recast this externally-defined fields as "user-defined" for additional information not covered in EFS or 378 minutiae.	Accept	Complete



NIST-71	8.9.7.1	Page 171	te	<p>Suggest using the exact value of 1/2540, not the approximation of 0.00039, which loses too much precision when converting from 10micrometer units to pixels.</p> <p>-Pixels: (1362, 526) at 100 PPI</p> <p>-(1362 * 2.54 * 10000) / (10 * 1000) = 3459.48 = 3459</p> <p>-3459 * 0.00039 * 1000 = 1349.01 = 1349</p> <p>-3459 * (1/2540) * 1000 = 1361.81 = 1362</p> <p>Using the approximation resulted in a value that was 13 pixels away.</p>	Replace 0.00039 with 1/2540. Clarify rounding rules.	Accept	Complete
NIST-72	8.9.7.1	Page 171	te	<p>Referring to “units of 10 micrometers” is verbose. Replace with a symbol or abbreviation for this unit of measurement</p>	<p>Determine an abbreviation or symbol for unit of measurement. Consider λ. JS: Pronounced as "barred lambda" or "ct-tl" in the Makah language. I'm going with "Blambda"</p>	Accept	Complete
NIST-76	8.9.7.12	Page 181-2	ed	<p>“Unknown” is to be used for ambiguous, but the field is to be omitted if no tonal reversal. Change the constant “Unknown” to “ambiguous.”</p>	Change “unknown” to “ambiguous”	<p>Partial accept. Change description to "Unable to determine" and leave the code as "U" for backwards compatibility</p>	Complete

NIST-77	8.9.7.12	Page 181	te	Instructions to software interfaces is operational and has nothing to do with interchange. Remove. Optional anyway.	Remove software interfaces instructions. [Remove final sentence ("When this field is set...".)]	Partial Accept. Reword sentence to emphasize the import of the described action.	Complete
NIST-121	8.9.7.16, 8.9.7.17	Pages 184, 186	Te	the mnemonic RPU is used in both 9.320 and 9.321---is it valid to reuse the mnenomic?	Fix mnemonic. JS:They do represent the same thing, I would give it a pass	Reject	Complete
NIST-78	8.9.7.17	Table 52, Page 187	te	Item 6 is optional, but one of the fields possible value is <sup>NUL</sup> <NULL>. Ambiguous if we mean it's an other delta or we skipped it.	Add a code to table 52 for “other delta,” replacing <NULL> <sup>NUL</sup> JS:The information item that uses this code is mandatory, although the text incorrectly identifies it as optional. Fix text. I think this addresses the ambiguity, because you cannot skip it.	Partial Reject	Complete
NIST-120	8.9.7.24	Page 191, Field 9.331	Te	in the description of 9.331, item 5 (MRU, radius of position uncertainty) is missing units.	<del>Based on existing records and</del> general consistency, the units are the same as RPU ("units of 10 micrometers (0.01mm), and may overlap the edge of the image"). The description should likely also substitute "(X,Y) of the minutia" with "(MXC, MYC)" (and do so similarly for 9.320 and 9.321's RPU). JS:Since FRWG voted to allow pixels as a unit, these field descriptions will need to be revised.	Accept	Complete

UK-2	8.9.7.24	Page 191, Field 9.331 MIN and Field 9.350	te	Field 9.350 MFD EFS Method of Feature Detection does not allow per-minutia level specification of detection method. It does allow multiple values to be added, but only 99, and not linked in any way to any specific feature, only to Field number.	each subfield of 9.331 to allow per-minutia specification of the Feature Detection Method. JS: It will also need to be specified how to use the existing 9.350 - should it be explicitly used only to communicate a blanket record-level detection? How should they be interpreted if both appear? Is the additional information about Which field, algo, vendor, timestamp, examiner, and notes worth adding too? discuss - we could alternately add an index number to 9.350 and remove the maximum occurrences cap. FRWG #7 10/29/24 - Add index to 9.331, and add pointer to it in 9.350. Increase max occurs for 9.350 to unbounded (or more than 9.331, since there can be more than one pass over the data, keep all for historical reasons)	Accept	Complete
NIST-73	8.9.7.3	Page 173	ed	Update section numbering	Replace second reference to 8.9.7.3 with 8.9.7.4 and renumber rest of sections (thru 8.9.7.57) pages 173-215.	Reject. The new format will take care of this issue.	OBE

<b>NIST-74</b>	8.9.7.3	Page 175. Field 9.302 -	ed	Second information item only applies if "The second information item fingerprint segment / FSM) is optional and only applies to fingerprints in which all or part of the medial or proximal segments (lower joints) are present in the image...This information item shall be omitted if the FGP indicates a palm or plantar". I would likely want to use this for FGP =13-14 and palms.	Clarify restrictions and broaden applicability to more FGP positions. JS: Is this something that we should reconsider? That is, would it be beneficial to remove the requirement of indicating the segments included in the ROI, thereby allowing a complete Slap instead? (FGP 13&14) 10/29/24 - FRWG #7 decided that FGP 13 & 14 should be allowed. Remove "shall" be segmented.	Accept	Complete
<b>NIST-123</b>	8.9.7.31	p 195, Field 9.342	te	there is no clear association between the 9.342 CLD subfields and the referenced 9.302 FPP subfield unless you are matching the coordinates.	Create an explicit association between 9.342 CLD subfields and the relevant 3.302 FPP subfield. Would this be advantageous? Or perhaps adding the relvant FGP as an information item in CLD? 10/29/24 - FRWG #7 Latent experts like the idea of tying CLD subfields to FPP segments. Adding an information item.	Accept	Complete
<b>NIST-124</b>	8.9.7.31	p 196, Field 9.342	te	linear discontinuities are not adequately described in CLD, only the coordinates	Add information item for further description	Reject. 10/29/24 - FRWG #7 likes current wording.	Complete

NIST-125	8.9.7.31	p. 195, Field 9.342 CLD	te	A scar is not considered a linear discontinuity. Instead it is marked with a polygon as a "distinct feature" 9.324. However, a "non-permanent scar" is considered a linear discontinuity and would be marked as a line in 9.342. Is this correct representation?	Consider whether permanent and non-permanent scars would be better handled differently. 10/29/24 - FRWG #7 Latent experts like the current wording. Greg and Shahram sent out questions to algo developers to ask about line vs polygon here. No reponses.	Reject	complete
NIST-132	8.9.7.31	p. 196, Field 9.342 CLD	te	The fifth information item says "TPD may be set to RLC, PTC, DTC, WC or <b>DPC</b> only if any instances of Field 9.302: EFS finger - palm - plantar position / FPP indicates a palm (values 20-38, 81-86)." <b>BUT DPC is not defined in the code list for this field.</b>	Decide what was meant by this probable typo & correct. PDC? FRWG #7- accept	Accept	Complete
NIST-133	8.9.7.31	p. 196, Field 9.342 CLD	te	"TPD may be set to RLC, PTC, DTC, WC or <b>DPC only if any instances of ... FPP indicates a palm</b> (values 20-38, 81-86). TPD may be set to DIP, PIP or <b>PDC only if any instances of FPP indicate a finger</b> (values 0-10, 16,17)"	If the palms may be DPC (pending NIST-132) then the statements are not true that PDC may <b>only</b> be a finger. Correct ambiguity here. FRWG#7 prefers new table to replace this confusing text.	Accept	Complete

NIST-134	8.9.7.31	p 196, Field Field 9.342 CLD	te	footnote 138 says "For fingerprints, the only permanent flexion crease is the DIP (the distal inter-phalangeal crease separating the distal and medial segments of the finger, or between the proximal and distal segments of the thumb); all other permanent flexion creases relate to the palms or lower finger joints. For a feathered crease, multiple line segments may all share the same flexion crease label."	This footnote seems to imply that only fully segmented ROIs are allowed in this field. This is an important implementation detail. If this is the case, then this footnote should be promoted to the main text and expanded to explicitly describe how this field should be encoded.	This footnote employs the common usage of the term "fingerprint," meaning <b>only</b> the friction ridge pad at the <b>end</b> of a finger (Distal). This is very confusing in this context, though, so rewrite the text to be more precise. Addressed in NIST-133 . (new table with correct information)	Complete
NIST-149	8.9.7.39	Page 199, Field 9.350	te	This field doesn't allow enough precision to make minutia-level statements about feature detection method.	Add an explanation of how it should be interpreted in light of UK-2.	Accept. Completed. Further addressed in UK-2	Complete
NIST-75	8.9.7.4	Table 52, Page 187	ed	EFS Profile 2 is EFS Profile 1 + some info. Profile 3 is Profile 2 plus more info, so do I need to specify 1, 2, and 3? Does the order matter?	Clarify if compatible with multiple EFS Profiles means you need to specify them all. JS: the normative document referenced here has much more detail about this field, add more context about its use	Accept	complete

<b>NIST-128</b>	8.9.7.41	p 201, Field 9.352	te	If this is used for documentation, shouldn't it be important to document all processing methods used? Combinations of some LPM may have effects.	Modify last sentence in paragraph. JS: The order of the methods applied is also important. Should we also state they should be listed in order? FRWG #7 Agreed that these two changes should be made. ("most to least destructive").	Accept	Complete
<b>NIST-79</b>	8.9.7.41	Table 60	te	Are there updates to Table 60 (EFS Codes for methods of latent Processing) needed?	call for contributions OverallWG#3: AshLee Taylor has prepared contributions & I will send to the group for review.	Accept	Complete
<b>NIST-80</b>	8.9.7.44	Table 63	te	Are there updates to Table 63 (EFS Codes for latent substrate) needed?	Update Table 63 with more substrates, especially those with unique development techniques, like thermal paper, circuit boards, currency. Clarify types of plastic (rigid, flexible). Clarify types of paper (clean, contaminated). call for contributions. OverallWG#3: AshLee Taylor has prepared contributions & I will send to the group for review.	Accept	Complete
<b>NIST-129</b>	8.9.7.45	Table 64	te	Are there updates to Table 64 (EFS Codes for latent matrix) needed?	Update Table 64 with more matrix codes. call for contributions. OverallWG#3: AshLee Taylor has reviewed - No new matrix designations.	Accept	complete

<b>NIST-130</b>	8.9.7.45	p 202, Field 9.356	te	Is there a need to differentiate between a mark made WITH vs IN a matrix? Touching an existing pool of blood (matrix == 9?) is different than having blood on fingers and touching a substrate (matrix == 2).	Perhaps what is matrix == 9 should be a subfield? Use a comment?	Reject. (FRWG #7) Greg and Shahram reached out to algo vendors to get their weigh in on this topic. No results.	Complete
<b>NIST-81</b>	8.9.7.48	p 209	ed	Latent Interoperability Transmission Specification (LITS) is not referenced.	Reference Latent Interoperability Transmission Specification (LITS)	Reject. See NIST-135	Complete
<b>NIST-82</b>	8.9.7.49	Page 212, Field 9.362	te	<a href="https://www.nist.gov/system/files/documents/2020/03/23/OSAC%20FRS%20CONCLUSIONS%20Document%20Template%202020%20Final.pdf">OSAC has a different conclusion scale. https://www.nist.gov/system/files/documents/2020/03/23/OSAC%20FRS%20CONCLUSIONS%20Document%20Template%202020%20Final.pdf</a>	Align with OSAC Friction Ridge draft of “Standard for Friction Ridge Examination Conclusions”:	Accept	Complete
<b>NIST-83</b>	8.9.7.49	Page 212	te	OSAC has a different complexity scale (9th item). <a href="https://www.nist.gov/system/files/documents/2020/10/02/OSAC%20FRS%20Analysis%20BPR_Final_Sept2020.pdf">https://www.nist.gov/system/files/documents/2020/10/02/OSAC%20FRS%20Analysis%20BPR_Final_Sept2020.pdf</a>	Align with OSAC Friction Ridge draft of “Best Practice Recommendation for Analysis of Friction Ridge Impressions”: Non-complex comparison Low complexity comparison High complexity comparison	Partial Accept; aligned with the complexity impression scale, not the comparson scale. (per Greg's email 5/1/2025)	Complete



NIST-84	8.9.7.49	Page 212, Field 9.362	te	Remove ambiguity in 9th item: complexity	Add “not determined” or make item required	Partial accept. This information item is included for QC/QA purposes, which may not be implemented universally. (making item required is a substantive change, forcing new operational requirements on systems.) Add new language to specify that no assumptions should be made based on absence of the field, only on its presence. See NIST-114 for similar resolution.	Complete
NIST-85	8.9.8.1	Page 216, Field 9.901	te	Do not limit the length of the operation. File path takes up a lot of this field.	Remove length limit. Discuss. ULW is no longer being updated, so how would these changes take effect? Overall WG#1: Group agreed this would be ok - ULW is already breaking this limit today.	Accept	complete

<b>NIST-86</b>	8.9.8.1	Page 216, Field 9.901	te	Instead of prefixing each field with the date, make it an item.	Add item for date. Remove requirement to prefix item with date. Discuss. ULW is no longer being updated, so how would these changes take effect? OverallWG#1: Tabled for a future revision, as this would be a breaking change and updates are not available at this time.	Reject	Complete
<b>NIST-87</b>	8.9.8.1	Page 216, Field 9.901	te	Why limit the character type? There will certainly be Unicode characters in file paths. What should be done then?	Change character type to Unicode. JS: <i>User-defined</i> not <i>Unicode</i> . Discuss. ULW is no longer being updated, so how would these changes take effect? OverallWG#1: Group agreed this would be ok - ULW is already breaking this limit today.	Accept	Complete
<b>NIST-2</b>	Acknowledgements	Page xxviii	ed	Update Acknowledgements	Remove old Acknowledgements and update with 2023 WG and participants	Accept	Complete
<b>NIST-114</b>	Annex F.4	Page 544	ed	If both 9.320 and 9.325 are missing, what does this mean? Same for deltas everything in If no 9.320 and 9.325 = Y, then no cores. If no 9.320 and no 9.325, did we not look or did we not find any and not set 9.325, because 9.325 is not required by EFS Profile levels (only 9.320 is)?	Fix the possibility for ambiguity in all “feature not present” fields. JS:After FRWG discussion, no one seems too concerned about this. Agreed to add some clarifying language about making no assumptions unless indicated by Application Profile. JS:Found the resolution in F.4. and added the language to each field description.	Partial accept	Complete

<b>Compass-1</b> (J. Tomanavich)	Appendix E	E.3.4 and E.3.5 Exposure	Edit/Tech	Exposure range in both sections should be 0.05 to 1.5	Update 0.5 to 0.05 neutral density	Accept	Complete
<b>NIST-115</b>	B.1.8 (page 516)		te	Use of the start/end of text characters is allowed to inject character data that does not align with Type 1 Field 1.015 and is retained for backwards compatibility. This is a burden for system developers.	Deprecate use of this technique as opposed to setting Field 1.015 correctly. It also contradicts the "Shall" requirement in the preceding paragraph about how to do this correctly by including field 1.015. Is this a helpful tool, or a treacherous relic? OverallWG#1: no input.	Accept	complete
<b>NIST-116</b>	B.1.8 (page 516)		ed	“However, these codes must be used for UTF-16 or UTF-32 data, since only UTF-8 is allowed to be used without the codes.” This seems incorrect, since Field 1.015 supports both of these (per Table 4, page 50)	Remove incorrect sentence.	Partial accept. OverallWG#1 allowed removing the "backdoor" method of character set switching described here. Remove the entire 3rd paragraph instead of just the sentence.	Complete
<b>NIST-3</b>	Canvasees	Page xxxi	ed	Update Canvasees list	Remove old Canvassee lists and update with 2023 participants	Accept	Complete
<b>NIST-98</b>	Figure 18	Page 333	ed	Remove image of teeth covering Figure 18 on page 333.	Remove from document and determine if image needs to be in another Figure.	Reject. The issue seems to have been taken care of in the errata	OBE

NIST-1	Foreword	Page xxii	ed	Update Foreword with 2023 Updates to ANSI/NIST-ITL	Remove old Forewords lists and update with 2023 input	Accept	Complete
NIST-4	Introduction	Page xlii	ed	Document Introduction needs to be updated	Update Introduction section to reflect 2023 effort	Accept	complete
Noblis-4				Some EFR and DATA fields have a minimum occurrence of 1. However, fields with a Dependent condition code always have a minimum occurrence of zero. Currently the following conditions exist: 10.994, 11.994, 12.994, 20.994, 21.994, 22.994 – minimum occurrence of 0 13.994, 14.994, 15.994, 16.994, 17.994, 19.994 – minimum occurrence of 1 11.999, 12.999, 13.999, 14.999, 15.999, 17.999, 19.999, 20.999, 21.999, 22.999 - minimum occurrence of 0 10.999, 16.999 - minimum occurrence of 1			
	Multiple Tables	EFR and DATA fields	Ed		Change the minimum occurrence of the following fields to zero: EFR: 13.994, 14.994, 15.994, 16.994, 17.994, 19.994 DATA: 10.999, 16.999	Accept	OBE
Noblis-1	Table 107	16.994 EFR	Ed	The Data Type for this field is B, but all other EFR fields have a data type of U. Should the data type be “U”?	Correct data type for 16.994 EFR to “U”	Accept	OBE
Noblis-7	Table 121	Page 465	Ed	NSTC needs to be changed to NTSC for code #19 “Television – NSTC” in Table 121	Seems to be a typo.	Accept	Complete

<b>Noblis-2</b>	Table 39 & Table 104	Indicator fields (E.g., 9.325)	Ed	Field 9.325 and other “indicator” fields	For “indicator” and other Boolean fields, display the maximum XML lengths since these differ from Traditional lengths. Fields include, 9.004 FMT, 9.325 NCOR, 9.326 NDEL, 9.327 NDIS, 9.334 NMIN, 9.344 NPOR, 9.346 NDOT, 9.347 NINR, 9.348 NCLD, 9.349 NREF, 14.027 SIF	Reject. These tables are not included in 2025 document.	OBE
<b>Noblis-5</b>	Table 70	10.029 FPC	Te	The Feature Point ID (Table 78) can include values that are only 1 character in length. For example, ‘v’ (vertex) and ‘g’ (glabella). The current minimum length is stated as 3.	Change minimum length to 1 to include allowed Feature Point ID code values for 10.029 information item FPC.	Accept	OBE
<b>Noblis-8</b>	Table 78	Page 248	Ed	The MPEG4 Feature Point for the Feature Point ID of “go”is listed as 2.15 and 2.16. However, these points in Figure 14 and disagrees with ISO/IEC WD 39794-5 Extensible biometric data interchange formats – Part 5: Face image data which has values of 2.13 and 2.14, which I believe are correct.	Correct MPEG4 Feature Point for the Feature Point ID of “go” to 2.13 and 2.14.	Accept	Complete

INT-1	Table 8	7.7.4.1 IMP		<p>So there is an inconsistency between 15.003 and table 8. It seems table 8 misses the codes 10 and 11 which should go under “Contact Impressions” category. In previous version, 10 was livescan palm, and 11 non livescan palm.</p> <p>In the new version, we have another field (FCT/15.901) to distinguish livescan vs non-livescan. But we still need at least one code for palm in the IMP table.</p>	<p>Change language to be inclusive of all friction ridge, not just finger. This applies to type 19 as well.</p>	Accept	Complete
DoD-RT1		p 283, Field 11.999	te	<p>11.999 is incorrectly limited to base64 encoding, but it should allow binary as well</p>	<p>11.999 should allow binary as well. Js: There are a few x.999 fields that have this variation. Mistake? Barring objections, I will change this to B. OverallWG#1: no input. SOrandi asked if this would be a problem for systems in use, but these are all newer record types, and the change would only affect traditional encoding.</p>	Accept	Complete

<b>Noblis-6</b>	Table 88 & Table 70	Footnotes 163 & 203	Ed	Think it would be useful to add to the following footnote to see section 7.7.13 for more information. “Character Min# and Max# refers to each element in the list. The number of elements in the list is mentioned in Occurrence Max#. There is a maximum of one list.” (Footnotes 163 & 203).	Add – See section 7.7.13 (Lists of values in a single information item)” to footnotes 163 and 203: “Character Min# and Max# refers to each element in the list. The number of elements in the list is mentioned in Occurrence Max#. There is a maximum of one list. See section 7.7.13 (Lists of values in a single information item) for more information.”	Reject; footnotes, tables, and section 7.7.13 are removed in the new version. Specific language detailing lists is included in each affected field.	OBE
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FBI-X				tracking (or similar information) in future ANSI/NIST revisions? Using the Type-17 Iris Image Record as an example, there are fields that hold sensor related information (17.017 DUI; 17.019 MMS), but none that hold information at this level. I know that sensor firmware sometimes changes imaging properties for iris acquisition and assume this can be the case with other modalities as well. Sensor firmware versioning would be interesting to us for research purposes and potentially in secondary processing scenarios. Alternatively, if there is already a field for this purpose, can you let me know where to find it?			
	Type 17		Te		Include a “firmware” field for Type-17, perhaps related to the ANSI/NIST ITL 17.019: Make/model/serial number / MMS?? JS: This is covered in the Contactless WG recommendations too.	Accept	Complete



NIST-122	Type-13		Te	Type-13 is sometimes used to transmit low-quality fingerprints, such as for deceased persons. In these cases, Contactless FP devices may be employed, and the FCT, IMP, and MMS fields should be updated to capture this information in accordance with the Contactless BPR	Add FCT, and additional IMP code and MMS subfields with requirements that they be used for contactless capture	Accept	Complete
NIST-153	Type-21 Associated Context Record	ContextMediaDetailType	te	<pre>&lt;xs:annotation&gt;   &lt;xs:documentation&gt;A data type for the details of a biometric context media file&lt;/xs:documentation&gt; &lt;/xs:annotation&gt; &lt;xs:complexContent&gt;   &lt;xs:extension base="structures:ObjectType"&gt;     &lt;xs:sequence&gt;       &lt;xs:element ref="biom:BiometricCapture" minOccurs="0" maxOccurs="unbounded"/&gt;       &lt;xs:element ref="biom:ImageSegment" minOccurs="0" maxOccurs="unbounded"/&gt;       &lt;xs:element ref="biom:TimeSegment" minOccurs="0" maxOccurs="unbounded"/&gt;       &lt;xs:element ref="biom:MedicalDevice" minOccurs="0" maxOccurs="unbounded"/&gt;       &lt;xs:element ref="biom:SubjectExistentialDetails" minOccurs="0" maxOccurs="unbounded"/&gt;       &lt;xs:element ref="biom:ContextMediaDetailAugmentationPoint" minOccurs="0" maxOccurs="unbounded"/&gt;     &lt;/xs:sequence&gt;   &lt;/xs:extension&gt; &lt;/xs:complexContent&gt; &lt;/xs:complexType&gt;</pre>	BiometricCapture should be something like ContextMediaCapture, as this record type is explicitly NOT for biometrics, only media demonstrating their context. This needs to trickle down all the way through the complex type definitions.	Accept. BUT not in this document. Revisit with the encoding working groups	Complete
NIST-119	Type-9		Te	Type -9 records should include FCT field, and require it when IMP=43. Previously, IMP codes also included technology information, which is no longer implied by the new IMP codes.	Add Field 9.905 FCT; require it when IMP=43	Accept	Complete

DoD-RT5			Te	Proposal to define terms in the ANSI/NIST-ITL revision or at a minimum differentiate between terms (i.e., touchless vs. contactless).	Recommended terms to define include but not limited to: Contact; Contactless; Touch; Contactless fingerprints; Touchless fingerprints; Contactless biometrics; Contact biometrics	Accept	complete
DOD/IC-1			te	help track the images back to their original submission if at some point they are stripped from the contextual data when being passed between different interagency databases. OverallWG#3: discuss; what should this look like? BHarrig: "Just wanted to add some additional context to the request for biometric identifiers outside of a latent scenario: Consider the scenario where person X authors several document portfolios, each of which is composed of many distinct documents, and X wishes to pass these portfolios to person Y. If X is required to pass one document separately (perhaps one at a time due to file size	The DoD/IC is requesting that a new repeating field for a unique identifier (or collection-id) for each biometric image/signature is included for each record type in the next revision of the ANSI/NIST-ITL. The new unique identifier field should also have a subfield that can store a reference to the TCN generated from the submission that will stay with that biometric image. Note: Interpol ITL WG seconded this request, especially for latent records, to provide a permanent identifier, rather than a relative (to the transaction) one.	Accept; discussed at Interpol NISt working group and Overall WG, no objections.	Complete

NIST-145	Type-9		te	Add new OPTIONAL field 9.304 to record the EFS measurement units. Allowed values should be "Pixels" and "10 micrometers". If omitted, the default should be "10 micrometers"	FRWG voted to create as indicated. Optional with default value to allow backwards compatibility	Accept	Complete
Noblis-3			te	Note 111 seems to indicate that the max characters should be 4 in order to be NIEM compliant, but the table has a max of 1. The MRTs list the XML version with a maximum length of 4 and the Trad version with a maximum length of 1.	OBE, this table is not included in ITL2025. The substance of this comment included in Noblis-2	Reject	OBE

NIST-154	Section 8; Section 5.6; A.1		te	<p>Make the default value consistent across the entire document: "Data contained in these fields shall conform in format and content to the specifications of the domain name(s) as listed in Field 1.013: Domain name/DOM found in the Type-1 record, if that field is in the transaction, <b>otherwise, the default shall be X.</b>"</p> <p>OverallWG#2 discussion. What should it be? Greg &amp; Ralph L expressed concern that default UTF-8 for any encoding would open a potential attack vector. 7-bit ASCII was agreed on as the default for all encodings when unspecified.</p>	Make the default value consistent across the entire document (7-bit ASCII)	Accept	complete
NIST-155	8.9	9.352 LPM EFS Latent Processing Method, page 159	te	<p>2015 calls for 1-9 repeating subfields, but wince the FRWG changed the guidance ot list *all* methods, this should be increased.</p>	<p>Increase the maximum number of allowed processing methods.</p> <p>OverallWG#2 discussion. What should the new maximum be?</p> <p>OWG#2: unlimited (*)</p>	Accept	Complete

NIST-156	8.20.14	20.014 AQS Acquisition source, page 464	te	Now that we have added Natively captured Contactless FR to the possible things in a type-20 record, do we need new Acquisition Source values?	Consider whether new values should be added, or if the current ones are sufficient for this new type of data. OverallWG#3 discussion, See Acquisition Source attachment. No one wants to add a code for contactless, feel that the source is mostly covered already. Group was not happy with having 2 "undefined" codes, 30 & 31. Either they mean the same thing, or one/both should have requirements for more data. Follow-up with Greg & produce new draft language.	reject for now, revisit next version	revisit next version
NIST-157	8.21.17	Field 21.994: External file reference / EFR, page 447	te	ITL 2015 has this unexplained exception for this field only: “This conditional field shall be used to enter the URL / URI or other unique reference to a storage location for all associated context files EXCEPT 2D still images.” Since the rules around allowing EFR are specifically ceded to application profiles, it seems like this decision should be also.	Delete exception for 2D images. OverallWG#3 discussion, no objections	Accept	complete

<b>NIST-158</b>	Table 88; 8.11.22 (page 303); 8.11.25	Field 11.034	te	This field was described in 2015 as both a list and as a set of repeating items/subfields.	Clearly describe the representation of this information (list, repeating information item, or repeating subfields?)	Accept	complete
<b>NIST-159</b>	8.11.29, page 312	Field 11.038, AQC	te	The sixth information item is the acquisition source code / AQC. It is an optional integer that specifies the source from which the voice in the identified segments was received. Only one value is allowed. Permissible values are given in Table 121 Acquisition source of the Record Type-20: Source Representation record.	This doesn't make sense. The AQS 11.008 Field already contains all the sources that may have audio - only still images are added in the T20 table. Use the 11.008 AQC Table instead.	Accept	Complete
<b>NIST-160</b>				Standardize guidance for ID card/document images?		Reject for now; revisit in next update	Next version
<b>NIST-161</b>			te	Standardize guidance for Morphed/Deep Fake/Synthetic Biometrics?	We already have discussed these in context of Faces (i.e., they are not biometrics and should be placed in a Type 21 record). We should consider if that guidance applies to all modalities. OverallWG#3 discussion. Group ok with placing these in the Type 21 for now; revisit in update to make sure that any needed metadata is incorporated.	Accept; revisit for next update	complete

<b>NIST-162</b>	Section 7.7.8.3	SLC Fields x.008, page	te	SLC describes the SLC for FR like this: "For contact exemplar friction ridge images, a value of 1 or 2 shall be specified." Now that contactless are explicitly allowed, FR records should also allow "0".	Add value "0" to SLC fields for FR records	Accept	complete
<b>NIST-163</b>	Section 8.18.16	Field 18.016, DLR and KID	te	DNA Working Group agreed to change these outdated static lists to use STRBase-maintained lists. This change makes them informative instead of normaitve, and changes the data specs to 1-20 AN from 1-3 N	For both infromation items, replace the a/n-itl website with the new STRBase webpage ( <a href="https://strbase.nist.gov/Information/Type-18_Record">https://strbase.nist.gov/Information/Type-18_Record</a> ); change the guidance to "informative"; and change the allowed value range form 1-3 N to 1-20 AN.	Accept	complete

NIST-47	8	Page 118	te	<p>Field 99.101: Biometric type/BTY text reads “Numeric values (values contained in a field with a numerical character type) shall not contain leading zeros...” Recommend changing “shall” to “should”.</p>	<p>Change “shall” to “should” JS:This is a larger issue. We need to discuss the "leading zeroes" dilemmas faced by people transforming legacy &lt;-&gt; XML ITL-2015, page 117-118: For data with leading zeros, (such as “0101”), the encodings (Traditional and NIEM-conformant XML) may handle them differently. The leading zeros shall be included in the Traditional encoding as ASCII characters, but need not be included in XML encoding. However, the leading zero(s) shall be shown when displaying the data in printed format. The following contain leading zeros: Field 1.002: Version number / VER Field XX.003: Information Designation Character / IDC Field 1.011: Native scanning resolution / NSR</p>	<p>Accept ; OverallWG#1: JStathakis will draft new clarifying language for group review, and change shall to should. OverallWG#2: review draft of new language. See Leading Zeros tab. OWG#2 - no objections to language as drafted.</p>	<p>Complete. BUT what about other fields that reference IDC values, like T2C? See Tab.</p>
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