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| AU 001 |  |  |  | Ge | The discussion of machine readable specification of application profiles is currently being considered by W3C in the Dataset eXchange Working Group (DXWG: https[://www](http://www.w3.org/2017/dxwg/wiki/Main_Page)).[w3.org/2017/dxwg/wiki/Main\_Page).](http://www.w3.org/2017/dxwg/wiki/Main_Page)) Whilst I approve of this particular item moving forward and being registered as a new project, I would suggest that tight integration with the W3C working group is necessary to ensure that two competing standards are not created - one of which is more reputable for the web.  There are some items in this proposal/draft that are not relevant to digital interchange models (e.g., Visualisation components), and thus could be deemed out of scope for this activity. I may suggest removal of these particular items during the next stage of development - I merely raise the question of their relevance at this stage.  I will be consulting with the DXWG in future to try and ensure alignment between these two activities, and am happy to help the authors connect with this group too. The working draft for the W3C activity should be available shortly. I am not prepared to provide detailed commentary on the 19160-6 until I have seen this W3C draft. |  | Noted.  Data models relating to visualization are necessary in interchange to enable the address schema owner to provide directives on how an address is displayed. It is unclear how the DXWG work overlaps with this standard.  Serena will help connect with the W3C group for the work. |
| AU 002 |  |  |  | Te | AUS approves the NP but notes some inconsistences with the Data Dictionary and not all elements are described. Also some inconsistent naming convention and lack of reuse of some of the ISO 19115-1:2014 elements. |  | Accepted. The editors invite Australia to provide specific instances that elements are not described, that are inconsistently named or should reuse, for improvement of the standard. Noting the quality control in the next draft. |

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| KR 003 |  |  |  | ge | The purpose of this standard is to present an address interchange object that facilitates address exchange and interaction while supporting human input and human-machine interaction in the process of interacting and exchanging international addresses.  An address layout template, an address display template, an address form template, an interchange address profile, an interchange address instance, the requirements for exchange were presented.  However, ISO19160-4 has already defined the address as a rendering rule definition (PATDL) in a language suitable for computer processing and defined the level of the three components of the address component (segment, composition, basic element). Therefore, it is necessary to clarify what is different from 19160-4.  In ISO19160-5, the project was carried out on how to express non-mail addresses. However, since the number of addresses to be displayed on various devices is too large, a complicated algorithm for determining addresses to be displayed and addresses to be hidden is needed. Is this possible through an address display template?  In addition, 19160-5 describes how to represent addresses on different devices, 19160-6 provides a template for address object and address input and representation by creating address exchange objects, What is the difference between the two projects? |  | Accepted in principle.  The Introduction has been updated to differentiate ISO 19160-6 from ISO 19160-1, 19160-4 and 19160-5.  ISO 19160-1 describes the metamodel of an address scheme.  ISO 19160-4 specifies how to write/detect addresses on mail items, but it is not for interchange.  ISO 19160-5 was meant to display all non-mail addresses, including rendering of them in a 3D space.  ISO 19160-6 describes data models for digital address exchange, and a display mechanism that is purely text based. |
| GB 004 |  |  |  | Ge | It is generally helpful to include a conformance clause, which generally states the ‘conformance target’ of the standard (i.e. what it is that should conform – software, data, other standards….)  TC211 Resolution 877 states that this shall be part of the normative text. | Introduce a conformance clause | Accepted. A set of draft conformance clauses are now provided in clause 4, abstract tests are provided in Annex A. |

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| GB 005 |  |  |  | Ge | There are many attribute descriptions that contain little or no helpful information, for example simply stating that the “Description” is “a textual description of the attribute”.  This may be a large part of the work of the project team. | Provide helpful definition and/or description of each attribute | Accepted in principle.  Description of attributes have been provided as tables. Further suggestions on particular descriptions are welcome.  We have also implemented HMMG recommendations on how to specify attributes in ISO TC2111 standards. |
| GB 006 |  |  |  | Ge | The data descriptions may be easier to follow in a tabular layout, as for example in ISO 19160-1  This may be an outcome of moving the UML models into the Harmonised Model & generating the tables from there. | Introduce a common tabular layout | Accepted. Introduced tabular layout for the data descriptions. See response to GB 005. |
| GB 007 |  |  |  | Ge | We need to understand the user-needs for this proposal – which uses-cases this standard will tackle. | Include a statement of user needs (use cases), probably in the scope or introduction. | Accepted in principle. Added use case of software application to introduction.  Use cases for example software applications in CalConnect will be added as informative annex. |
| GB 008 |  |  |  | Ge | Other relevant work: https://github.com/kdeldycke/awesome- falsehood#postal-addresses |  | Noted. |
| GB  **009** |  |  |  | Ge | Other relevant organisations: W3C |  | Noted. See response to AU001. |
| GB 010 |  |  |  | Ge | Relevant national regulation: [https://www.gov.uk/government/publications/ope](https://www.gov.uk/government/publications/open-standards-for-government/exchange-of-contact-information) [n-standards-for-government/exchange-of-](https://www.gov.uk/government/publications/open-standards-for-government/exchange-of-contact-information) [contact-information](https://www.gov.uk/government/publications/open-standards-for-government/exchange-of-contact-information) - requiring the use of vCard. |  | Noted. |
| NZ 011 |  |  | Fig 6 | te | Confusion between Class and Datatype. InterchangeAddressComponent is modelled as a Class but used as a Datatype. | Redraw | Not accepted. Consult with HMMG for recommendations. |
| NZ 012 |  |  | Fig 6 | te | XML objects generated from 19160-1 are called just “Address” and “AddressComponent”, the term “Interchange” is redundant. | Change Class names | Accepted in principle.  ISO 19160-6 now extends the Address and AddressComponent models as ProfileCompliantAddress and ProfileCompliantAddressComponent. The “interchange” address will be an instance of ProfileCompliantAddress which comforms to an InterchangeAddressClassProfile (inherited from AddressClassProfile). |
| ZA 013 |  | Introduction |  | Ed | Typo in ”ISO 19160-1 describes the Addressing Conceptual models that allows specification…” | ”ISO 19160-1 describes the Addressing Conceptual models that allow specification…” | Accepted. |
| ZA 014 |  | Introduction |  | Ge |  | Describe the relationship to the other addressing standards, specifically to ISO 19160-3 and 19160-4. | Accepted in principle.  See KR 003. |

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| ZA 015 |  | 01 |  | Te | ”AXO” is mentioned only in the scope; never again in the document. | Remove the unused acronym. | Accepted in principle. The acronym is now used extensively in the content. The acronym will also be used in other specifications/standards for example vcard. |
| JP 016 |  | 03. |  | General | There is no definition of ”Interchange model" | The definition of ”Interchange model" should be clarified and added to the document. | Not accepted.  ‘interchange’ is used in its normal English meaning.  Remove definitions starting with ‘interchange’.  No definition of terms are starting with ‘interchange’. |
| ZA 017 |  | 03. |  | Ed | Terms are not sorted alphabetically | Sort terms alphabetically | Not accepted. According to ISO/IEC Directives Part 2 (2018), Clause 16.4, it is expressly stated that “Terms and definitions should preferably be listed according to the hierarchy of the concepts (i.e. systematic order). Alphabetical order is the least preferred order.” |
| ZA 018 |  | 03. |  | Ge | No conformance classes specified. | Specify conformance classes. | Accepted.  See GB 004. |
| ZA 019 |  | 03.01 |  | Ed |  | Add clause to the reference of the term | Accepted. Clause 3 now imports all terms from ISO 19160-1, so no clause reference is needed. |
| ZA 020 |  | 03.02 |  | Ed |  | Add clause to the reference of the term | Accepted. See ZA 019. |
| ZA 021 |  | 03.03 |  | Ed |  | Add clause to the reference of the term | Accepted. See ZA 019. |
| ZA 022 |  | 03.05 |  | Ed |  | Add clause to the reference of the term | Accepted. See ZA 019. |
| ZA 023 |  | 03.09 |  | Ed |  | Add source for the definition of the term | Accepted. See ZA 019. |
| ZA 024 |  | 03.10 |  | Ed |  | Add source for the definition of the term | Accepted. See ZA 019. |
| ZA 025 |  | 03.12 |  | Te | The definition is unexpected when looking at the definitions of interchange address class (3.4) and interchange address component (3.6). | Change to ’representation of a profile suitable for interchange’ | Accepted in principle.  See JP 016. |
| ZA 026 |  | 03.14 |  | Ed |  | Add the source of the definition | Accepted. See ZA 019. |
| ZA 027 |  | 03.15 |  | Ed |  | Add the source of the definition | Accepted in principle. Source is already provided originally. |
| ZA 028 |  | 03.16 |  | Ed |  | Formatting needs to be corrected. | Accepted. Fixed. |
| ZA 029 |  | 03.17 |  | Ed |  | Add the source of the definition | Not accepted. This term is newly defined for the current document, and not defined in any previous ISO document. |

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| ZA 030 |  | 03.18 |  | Ed |  | Add the source of the definition | Not accepted. This term is newly defined for the current document, and not defined in any previous ISO document. |
| ZA 031 |  | 03.19 |  | Te | The definition is not clear. | Improve. | Accepted in principle.  Import address class from ISO 19160-1 and consider the cardinality of some attributes as constraints. |
| ZA 032 |  | 04. |  | Ge | Provide an introduction that explains the purpose of the different clauses and how they are related to each other. |  | Accepted. |
| ZA 033 |  | 04. |  | Ge |  | Requirements and recommendation shall be explicitly identified (e.g. through formatting). | Accepted in principle.  Refer to the updated version of ISO 19105 to ensure requirements conform to it. |
| ZA 034 |  | 04. |  | Ge | Add examples to help to explain the text. |  | Accepted.  Examples will be added in each stage of the lifecycle/process at the upcoming stage. |
| NZ 035 |  | 04.01 |  | te | This appears to be talking about Address Profile Registry Management, and should be a topic for a 19135 profile. | Rethink scope and purpose of this project. | Accepted in principle.  Address profiles need not exist in a registry. But if they do, then they must conform to clause 6 and conditions specified in ISO 19135-1.  The current 4.1 is aligned with ISO 19135, as discussed in Maribor whether address profile registration should be a separate document will be discussed in a later time, because a 19135 profile will inevitably be lengthy (see 19127). |
| NZ 036 |  | 04.02 |  | te | Address Instance Lifecycle is covered by Annex D in 19160-1. If there is a need for additional material it should go into the next version of 19160-1, or into a Jurisdiction Profile. | Rethink scope and purpose of this project. | Accepted in principle.  Move the lifecycle model to informative annex as it has no impact on the interchange model. |
| NZ 037 |  | 05. | Figure 5 is  in Section 7; should move to Section 5, and add preamble. | ed | Editorial comment on format as presented:  Should introduce “Interchange Address Models and Structures”, and then present the full picture of what is proposed, e.g. the content and diagram in Section 7; details of the composite parts should then follow, in order of importance or criticality to the InterchangeAddressProfile (Figure 5) | In the document in its current order of presentation add columns to clarify which sections relate to what attributes.  See proposed new diagram for “InterchangeAddressProfile” which adds a column that refers to each sections where individual attributes are defined and described.  < *InterchangeAddressProfile Orienting Diagram* > attached in Annex C. | Accepted in principle.  All of the attributes have been fully documented in the associated table. |

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| NZ 038 |  | 05. 6. 7. 8. | Figure 5 | ed | Editorial comment on layout and orientation of the document as presented:  The proposed address exchange standard involves coordinating between complex precedent standards, particularly the existing ISO 19115-1, several standards for country codes and publication metadata, and the related accepted interchange Address Class model described in ISO 19160-1. The reader needs to understand where they are in the “zones” of  these related standards; as it is currently written, it takes significant analysis and page-flipping to work out the conceptual map for this complex data model.  Perhaps an orienting graphic or diagram will help the reader work out the details of each of the “zones” of related standards within the proposed InterchangeAddressProfile (19160-6). | For the document as it exists presently, add a “Orienting Diagram” which is a meta-meta model of the composite complex data model “InterchangeAddressProfile”. See diagram attached for review/comment. | Accepted in principle.  The associated tables have been completed. |
| DK 039 |  | 05.01 | Bullet points | ed | It seems that not all the data types mentioned here are used in the document | Evaluate the document for the use of primitives and delete those that are not used. | Accepted in principle.  The associated tables have been completed. |
| DK 040 |  | 05.02.01 | Note | te | The Note not completed. Actually it is more like a place holder. | Either delete the note or put some relevant text into the note. | Accepted.  The note has been removed. |
| NZ 041 |  | 06 |  | te | There is no "top down" model. Specimens can be found in 19160-1 and the Land Administration Domain Model (LADM), where they were useful for presentation of base concepts. | Draw one | Accepted in principle.  An initial “top down” model has been included. It will be further developed at upcoming stages. |
| ZA 042 |  | 06. |  | Ge | It is not clear how this section on common models is related to the remainder of the document. | Add text to explain this. | Accepted. Description will be provided on how these common models are applied. |
| DK 043 |  | 07.01 and 7.02 | Figure 5 and text | ge | This intent with this comment is valid throughout the entire document.  Not all the attributes mentioned in the Figure above (eg. Figure 5) are listed in the clause with the headline “Attributes” and the attributes are not mentioned in the same order of sequence. | If the headline are “Attributes” then all the attributes mentioned in the Figure should also appear and preferably appearing in the same order at both places. | Accepted. See DK 039. |

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| DK 044 |  | 07.02 | TTL | ed | The abbreviation TTL appears in the text but there should perhaps also be included in an clause with abbreviation. | Create an abbreviation clause and evaluate the entire document for use of abbreviations and add these to the abbreviation clause. | Accepted in principle. TTL is used as an attribute name, not in description. It is now changed to “time-to-live”. |
| DK 045 |  | 08.01 | Figure 6 | Ed/te | Why include the note in the Figure? | Delete the note in the Figure. The content are described in the example just below the Figure. | Accepted. The note has been deleted. |
| DK 046 |  | 08.01 | Figure 6 | Ed/te | This comment can also be regarded as a question, and this comment are valid for all the rest of the Figures in this document. Why connect data types to a class via and directed association? – Eg. the class “InterchangeAddressClass” have an attribute named “component” with the data type  “InterchangeAddressComponent” this data type are related to “InterchangeAddressClass” via an association. | We would have thought that the directed associations from a data type to a class could be deleted. | Accepted in principle. All redundant directed associations has been removed to prevent confusion. |
| ZA 047 |  | 09. |  | Te | ’capability’ does not seem to be the correct term to represent the status. It is confusing to call it capability when status is meant. | Use a more appropriate term. | Accepted in principle.  Import address class from ISO 19160-1 and consider the cardinality of some attributes as constraints.  See ZA 031. |
| NZ 048 |  | 1 and 5 - 9 |  | ge |  | Rethink scope and purpose of this project. | Accepted.  Scope and purpose of project will be well formed in CD stage. |
| DK 049 |  | 11 |  | ge |  | Add an attribute where the direction of writing can be described and adjust the text accordingly. | Accepted in principle. While ISO 15924, which the data models of this standard relies on, already provides “Codes of Scripts”, the direction of writing is included in the script code but not always definite. “textDirection” should remain in the working draft.  For more information, see W3C: “https://www.w3.org/International/questions/qa-scripts#which”  “"Languages can be written in more than one script. For example, Azeri can be written in any of the Latin, Cyrillic, or Arabic scripts. When written in Latin or Cyrillic scripts, Azeri is written left-to-right (LTR). When written in the Arabic script, it is written right-to-left.” |
| NZ 050 |  | 4 - 9 |  | te |  | Rethink scope and purpose of this project. | Accepted in principle.  The WFS use case will be included at the upcoming stage. |
| NZ 051 |  | 6 & 9 |  | te |  | Rethink scope and purpose of this project. | See ZA 047, NZ 036. |

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| NZ 052 |  | 7 & 8 |  | te | These models are so far removed in form from 19160-1 that they cannot really be called a “Profile” There seems to be an implication that 19160-1 by itself is not suitable for digital distribution or machine readable implementation. To an external service, an Address conforming to this model would be less interoperable than one conforming more closely to 19160-1. | Rethink scope and purpose of this project.  Explain why this deviation from 19160-1 is necessary. | Accepted in principle.  After consulting with NZ, we decided to extend instead of mirror the Address and AddressComponent models in this standard.  All conforming addresses and address components, i.e. ProfileCompliantAddress and ProfileCompliantAddressComponent will be conforming to ISO 19160-1 schema automatically. |
| JP 053 |  | All |  | General | UML class diagrams does not follow the description rules. For example,   * There are many unnecessary associations between classes, * Some attribute names and types are missing, * Stereo types are not defined. | All UML diagrams shall follow and adopt the rules for class diagrams and conform to the Harmonized Model of TC211. | Accepted in principle. The diagrams have been cleaned and aligns with the Harmonized Model.  It will also be submitted to HMMG at the upcoming stage. |
| ZA 054 |  | Annex B |  | Ge |  | Elaborate this appendix so that the use case that shows how the different parts of the standard would be implemented/used in practice. | Noted. See GB 007. |
| DK 055 |  | Annex B, C and D |  | ge | We do not think the content of these annexes are normative. To us it look more informative. | Reclassify these annexes to be informative. | Accepted. |
| NZ 056 |  | Anywhere |  | te | No geocoding of Addresses | Explain or add. | Accepted.  An incomplete geolocation class has been added. |
| NZ 057 |  | Anywhere |  | ge | No AddressableObject (except in the Glossary 3.2) or ReferenceObject | Explain omission or add to the model | Accepted in principle.  Resolved by extending the Address model in ISO 19160-1. |

Monday, 1 October 2018 9:41 AM

# ISO/TC 211 N 4933 Annex C

Proposed new diagram from New Zealand

**Figure 5: Interchange address profile data model**

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| 1 | **7.2** | id | Unique identifier of this Interchange Address Profile [uri] |
| 2 | **7.2** | type | Intended usage of this profile [uri] |
| 3 | **7.2** | description | Textual description of this definition [Character String] |
| 4 | 8.1 | classes | ***InterchangeAddressClass***[0..\*]: |
| 5 | 5.2 | dataTypes | ***UserDefinedDataType***[0..\*]: |
| 6 | 6.1 | signature | **Crypto-signature**; ISO/IED 14888-3; [Character String] |
| 7 | 7.3 | publisher | **CI\_Party**, ISO 19115-1: |
| 8 | 6.3 | validity | **CI\_Date**, ISO 19115-1: |
| 9 | 6.2 | localization | **PT\_Locale**, ISO 19115-1 plus scriptCode ISO 15924: |
| 10 | 7.5 | areaApplicability | **MD\_Spatial\_Representation**, ISO 19115-1: |
| 11 | **7.2** | ttl | Time to Live; The maximum interval between refreshing of this profile via an authoritative source, in seconds [Integer] |
| 12 | 7.4 | identifier | **MD\_Identifier**, ISO 19115-1 |
| 13 | **7.2** | Country \*\* | The country of which this interchange address profile represents. Expressed as the 2-digit country code specified in ISO 639-1. [0..\*] |

\*\* presented as new to the composite standard, but actually uses precedent standard ISO 639-1.

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| Interface Objects are generated as XML from profiles of 19160-1. There is no need to re- specify them here in UML before generating code. As it stands, this proposed document appears to reject the “Model Driven Approach” to standardisation. |
| Since the direction of writing are not standardised throughout the world perhaps that should also be reflected in this clause (starting with Figure 9). |
| Some of this material might go into a Web Feature Service (WFS) Address Profile spec? |
| This content is metadata. If it is required it should go into a Jurisdiction Profile and be considered for inclusion in the next version of 19160-1. |

Revised Figure 5 Page 1

Meta-Meta Model for Interchange Address Profile (19160-6)

Monday, 1 October 2018 11:05 AM

**Orienting Graphic Presentation of Meta-Meta Model**

**Agreed Interchange Address Class Model [19160-1]**

**New attributes to Identify, Describe and Contextualise the Interchange Address Profile [19160-6]**

***Primitive & Core Data Types User-Defined Data Types***

**Geographic Information - Metadata - Part 1 [19115-1]**

**Section 5: PREAMBLE for ORIENTATION (suggested)**

# The Interchange Address Profile is a composite data model, which integrates and thereby requires coordination between complex precedent ISO standards for Geographic Information. These are 19115-1, 19160-1 and some others [for signature, localization and country codes].

Some new attributes are introduced here for the Interchange Address Profile object, particularly to identify, describe and contextualise it.

Meta-Meta Model Page 2