CHANGES WORKGROUP MEMBERS HAVE PROPOSED TO AIRS XSD 2.03 – UPDATED to Reflect XSD 2.04 Candidate Release

The current version of the AIRS XML Schema Document is version 2.03. We have received feedback on ways to improve the standard and we discuss here some of the suggested changes. Most of the following suggestions do not pose technical problems in adding to the XSD but require a decision on whether they conform to the goals of the AIRS XSD standard.

1. *Move/Copy Resource Info from ServiceSiteLink to Agency and VirtualAgency.* *Added ResourceInfo as an optional element to Agency and VirtualAgency.* This change allows the vendors to indicate whether a record was Added/Deleted/Updated at the agency level. A *Resource Info* element at the agency level can indicate whether the agency and all its services have been deleted from the database. This change will be helpful in detecting deletions faster than a full comparison with a previous snapshot of the database.

   As per discussions on the conference call, copying the *Resource Info* element instead of moving it seems to be better. Copying is better because it does not require changing export functionality compliant with version 2.03 and it also allows for finer control. For example, when only a few sites and services are deleted *Resource Info* at the *ServiceSiteLink* level can be used to indicate this.

2. *Add city, county, state and province to GeographicAreaDefinition. This change will not require any changes for exports to xsd 2.03. However, it will allow siteServicesLinks to have regions defined by City, County, State or Province instead of only by ZipCode or Province. Many services define their services areas using these as regions.—Added an optional choice block, which allows the selection of one of City, County, State, or Province. The use of ZipCode and PostalCode was unchanged.*

   Currently a geographic area is defined using a list of zip codes. Zip codes serve to simplify location based searches and are at the right level of granularity to allow for accurate searches. For large geographic areas the list of zip codes can extremely long and becomes cumbersome.

   Some I&R software use city, county, state and provinces to define geographic areas. The proposal is to include these when defining geographic areas. Though these are likely good add-ons, but it is debatable whether they should replace zip codes or even be a required field in addition to zip codes.

3. *Simplify taxonomy pattern match – Modality was changed from an enumeration to a pattern based on the prior Level 2 Taxonomy codes. If this does not meet the immediate needs, additional changes will be implemented.*

The taxonomy element uses a generic pattern to match regular taxonomy codes. However, for Modality and Target groups the XSD enumerates the acceptable codes. This static enumeration was correctly indicated to be a problem spot. As Mark pointed out in the conference call, this is a known issue and the original design was to refer to an XSD defining the format of taxonomy codes. Since such a XSD was not available at the time of release of the AIRS XSD version 2.0 a static enumeration was the only solution.

Thus for a long term solution we need a standard, publicly available XML schema document that defines the structure of a valid taxonomy code/modality/target group. The AIRS XSD will then refer to this taxonomy XSD to validate taxonomy codes.

Next we list other minor changes suggested.

4. *Add new optional field BusLines to Site – Added BusServiceAccess xs:string to tSite*

   This change will not require any changes for exports to xsd 2.03. Some Agencies record the Bus Routes that serve each Site.

5. *Add new optional field Documents Required to ServiceSiteLink – Added DocumentsRequired xs:complexType to tServiceSiteLink*

   This change will not require any changes for exports to xsd 2.03.
   Many sites require Documents before Services are provided. A String may be more appropriate, but I have captured the possible enumeration as: `PictureID, SocialSecurityID, BirthCertificate, ProofOfResidence, ProofOfIncome, EvictionNotice, UtilityCutOffNotice, DriversLicense, DoctorsOrders, UtilityBill, LastTaxReturn, SocialSecurityAwardLetter.`

6. *Add new optional fields ResidencyRequirements and ResidencyExclusions to Taxonomy – Added ResidencyRequirements and ResidencyExclusions, both xs:string, added to tTaxonomy*

   This change will not require any changes for exports to xsd 2.03.
   In addition to Aid, Age, Gender, Family and Income Requirements, many agencies have Residency status Requirements.

7. *Add new optional field Hours under Languages – Added Hours tHours*
   Note: xsd 2.04 alters the cardinality of the primary Languages sequence. Name is now a required, non-repeating element, followed by the optional element Hours. The sequence cardinality was changed from one to MaxOccurs="unbounded" to compensate. This change was necessary in order to allow the identification of hours for each individual language.
   This change will not require any changes for exports to xsd 2.03.
   Some agencies capture hours when other languages are available.
   (EX: Mandarin speaking staff is only available Mon and Tues from 9-12)

8. *Change boolean under Agency Transportation to enumeration – Added new datatype tAgencyTranportationList, changed AgencyTransportation from Boolean to tAgencyTransportationList*
   Note: THIS CHANGE IS NOT COMPATIBLE WITH VERSION 2.03.
   In tTaxonomySearch-> Agency Transportation
   Possible types of transportation include:
   Special transportation, school bus, Medicaid patients, none, complimentary to facility

9. *Add Private Grants and Fund Raising to tSourceOfFunds – Added new enumeration values.*

10. *Add CHIP and Veterans Assistance to tTaxonomySearch->PaymentSource – Added new enumeration values.*

11. *Name-based URLs versus IP address URLs – Added IP Address URL option.*
    The current XSD only accepts URLs that are name-based such as www.211.org and not 216.41.21.195, which happens to be the IP address associated with www.211.org. The issue is whether the XSD should permit address-based URLs or restrict URLs to name only. It is common practice for any public resource to use a name-based URL as URLs consisting of IP addresses are not reliable.

Finally, the following questions have been raised by vendors with respect to the XSD.

12. *How should the Program Name be mapped to the XSD? What is the current I&R practice for maintaining Program Name in the Agency-Service-Site model?*
    Program Name is the "Name" element of ServiceSiteLink. The I&R community will need to provide input regarding the state of current practice. – Added an annotation to the XSD recording the use of the Name field to represent Program Name.

13. *Each agency element in the schema has a mandatory "RecordOwner" attribute, which is a 2 letter state code followed by a 4-8 alphanumeric sequence. How is this number determined and is it required to be unique across all vendor implementations?*
    It is desirable that RecordOwner be unique among all I&Rs participating in a data sharing agreement. In an ideal case, the value would be unique for any entity, however, doing so requires centralized registration of Agencies and this registration function does not exist at present. – No action taken.

14. *Each Agency element has a "Key" attribute. What is the intent of the field? The field is defined as a base XML type of nonNegativeInteger. Is this a bad idea since many systems use a Globally Unique Identifier as a unique identifier?*
    The intent is to use a unique value within the XML export in order to replicate the functionality originally contained in the DTD using IDs. Due to the unnormalized

nature of the XML instance, an attribute/element of type ID takes a unique value over the entire XML instance, hence an attribute of type ID cannot be used. Further, some XML validators enforce the uniqueness constraint for every attribute named ID irrespective of the type attached to it. To remain consistent with the original DTD, an element named "Key" was introduced for storing the unique identifier for that element in the database. These Keys will be used by the system in identifying elements within the uploaded XML document.

With respect to the type, the constraint imposed for the export is simply to have a unique value within the export file itself. GUID would provide uniqueness although there is no single standard for their format and generation. – No action taken.

15. *The declaration of tVirtualAgency requires the presence of a phone number and other items. Can this definition be relaxed to provide for more flexibility in mapping an n-level hierarchy to the Agency-Service-Site model?*
    There is no technical reason preventing the relaxation of the definition. The virtual agency was originally intended to address web-based resources and others without a physical location where services are rendered. The field constraints could be relaxed to allow other uses. – The cardinality constraints on the remaining elements in tVirtualAgency were eliminated. The Service, Site, and ServiceSiteLink group elements are unchanged. In further relaxation is needed, a "virtual" definition can be implemented for each of the three group elements.

16. NEW – Add owner contact information to the definition of tResourceInfo. This element will be used to identify a contact at the entity owning the resource information. – Added Owner enumeration to tContact. tContact is referenced in tResourceInfo with a cardinality of zero to many. Therefore, multiple contacts may be associated with a resource; the addition of Owner to the enumeration will facilitate the desired capability.