**SIF Data Model Extension Proposal Template**

*This template should be used by individuals or Project Teams to submit (and later track the progress of) proposed extensions to the SIF Data Model. These extensions can either be new data objects or revisions to the schema defining elements and / or attributes in existing ones.*

*It is designed to be a “living document” and contains two “status tracking” sections which should be maintained and updated as the change approval process for this extension evolves.*

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| --- | --- | --- | --- |
| Extension Proposal Version Control | | | |
| Version | Date: | Author/Organization: | Comments |
| 0.1 | 7/27/2011 | James Yap |  |
| .2 | 7/28/2011 | Alex Jackl | Re-did Element table |
| 0.3 | 7/29/2011 | Vince Paredes | Added business case, worked the use case |
| .4 | 9/15/2011 | James Yap | Subtracted Elements after meeting with SIS Profile team |
| .5 | 9/23/2011 | James Yap | Made change suggested by Bill Duncan. Mostly to Data elements |
| .6 | 9/26/2011 | James Yap | Made changes after talking to Eschool Data VP and former SIFA board member, Ann Savino |
| .7 | 10/25/2011 | James Yap | Made changes after discussion at SIF Developers conference |
| .8 | 12/15/2011 | James | Changes made after comment from Ron Kleinman |
| .9 | 01/27/2012 | James Yap | Changes made after design review |

# **1 Identification**

|  |  |
| --- | --- |
| Proposed Extension Name | StaffSectionAssignment |
| Submitted by (Project Team or Individual) | James Yap |
| Date of initial submittal | 7/27/2011 |
|  |  |
| What is the base SIF Data Model release? | 2.6 |
| What is the base SIF Infrastructure release? |  |
|  |  |
| What existing SIF object(s) if any will be affected? | None |
| What is the name of any new object(s)? | StaffSection Assignment |
|  |  |
| DM Extension ID (to be assigned when submitted) |  |

**Status Tracker Phase 1: Documentation and Approval**

*The steps in this initial phase document the proposed extensions to the SIF Data Model to the point where they can be reviewed and approved by the Tech Board as deserving of further effort. Completion of the detailed design and evaluation of the dependencies and migration impacts are left until Phase II.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Template Section** | **Draft Completed**  **(Owner / Date)** | **Reviewed (R) or Accepted (A)**  **(Owner / Date)** | **Comments** |
| Rational and Business Case | Champion  **Date:???** | Tech Board (A)  **Date:???** | Assign to relevant Project Team(s) |
| Use Case(s) | Champion / Project Team  **Date:???** | Project Team (R)  **Date:???** |  |
| Proposal approval | Project Team  **Date:???** | Tech Board (A)  **Date:???** | Placed in Fast Track or Object Pipeline |

# **2. Proposal**

*This section should be completed by the “Proposal Champion”. A champion is usually one of the authors of the business case (although it may be SIF staff). This individual is responsible for driving the proposal through the qualification and acceptance cycle.*

*The following two subsections must be completed before the process can begin.*

## 2.1 Rationale for Extension

*Explain the rationale for the proposed extension to the SIF Data Model:*

* *What are the problems/limitations to be addressed?*
* *What is the additional information required?*

This proposal allows for the Teacher of Record (TOR) as well some related elements to come into the Specification. Teacher of Record is needed to be able to assign responsibility or credit for a portion of a student's learning to a particular teacher or set of teachers. It could also be used to track how and how much a student comes into contact with a teacher or teachers. This is a “junction object” which links Staff to Section, and contains information about that relationship.

## 2.2 Business Case

*Provide a specific example of an example where the additional information defined in this proposal will be used in one or more educational processes*

*It should focus exclusively on the business problem to be solved and avoid proposing solutions.*

Beside the instructional benefits of having this information, many teacher accountability systems will need this kind of information in order to evaluate the effectiveness of teachers within the context of the subject being taught and the assessments used to measure student progress. TOR will be used in Race to the Top and APPR regulations from the states.

# **3. Use Cases**

*The proposal champion or the assigned project team must provide one or more high-level use cases illustrating the interactions between “actors” (typically applications) that become possible if this proposal is adopted and successfully implemented. Use one copy of the form below for each.*

**Use Case Title: TOR Data is added to the SIS**

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | 2.6 |
| **Summary Description** | This use case shows how Teacher of Record (TOR) how a vertical reporting system could use this data. |
| **Actors:** | SIS  SLDS |
| **Preconditions** | Teacher is in the SIS as a StaffPersonal object.  Courses are created.  Students and sections are created and assigned.  Teacher is assigned to the sections of the courses that they are teaching  State already has the above information from previous SIF Requests |
| **Main Sequence of Events / Action Steps** | 1. A state vertical reporting system requests Staff Section Assignment to determine the roles and responsibilities within one section of instruction 2. The SIS issues a response to the StaffSectionAssignment object. 3. The ZIS routes the information to the vertical reporting system. 4. Vertical reporting system will consume and put in their system the right roles and responsibilities of each staff member in each section. |
| **Alternative Sequence of Events / Action Steps** | * LEA would like to see how teachers are doing on assessments based on the courses for which they are the Teacher of Record (TOR) * LEA issues a request to the SIS from the local Data Warehouse   Response is sent to the local DW |
| **Post Conditions** | The teacher is assigned a specific role for a single section of a course. This can be the Teacher of Record or any other role. State has the information at the end of the use case |
| **SIF Mandatory Objects** | Staff Personal, CourseInfo, Section Info, Student Personal, Student School Enrollment, Student Section Info |
| **SIF Optional Objects** |  |
| **Open Issues** | This design does NOT deal with inclusion classes (Special Ed. Students in a regular classroom ). SIFA is looking to add this piece once federal and state regulations are more secure on how they would like this information passed |

**Status Tracker Phase 2: Execution of Proposed Changes**

*At this point the initial Data Model extension proposal has been accepted by the Tech Board and is either in the object pipeline, or being fast-tracked. The following sections have to be completed and (where indicated) reviewed and approved before this proposal can be reflected in the SIF specification.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Template Section** | **Draft Completed**  **(Owner / Date)** | **Reviewed (R) or Accepted (A)**  **(Owner / Date)** | **Comments** |
| Dependencies | Project Team / Staff  Vince Paredes  **Date:7/27/2011** | Internal Project Team review |  |
| Object Definition Table | Project Team  **Date:???** | Tech Board (R)  **Date:???** |  |
| Migration Plan | Staff / Project Team  **Date:** | Tech Board (A)  **Date:** | TB Approval is part of SIF Release cycle |
| Sample XML | Staff / Project Team  **Date:** | Optional | Generally provided as part of published specification |

# **4. Impact Assessment**

*This section is the first to consider the actual implementation which will address the use cases previously identified. It requires assessing the impacts to both the existing objects and infrastructure, and to previously deployed applications. It would normally be produced by the Project Team (new or existing) assigned to this data model extension by the Tech Board at the time this proposal was approved.*

*In cases where a legacy object (one with no owning Project Team), is being changed, the task of assessing impact may be assigned to a Staff member to drive its completion.*

*The following two subsections must be completed.*

## 4.1 External Object Dependencies and Relation Map

*Identify any dependencies on existing XML entities in other SIF objects*

|  |  |  |
| --- | --- | --- |
| **Proposed new Element or Attribute** | **Object & XML Entity dependency**  **(Element, Attribute, Type)** | **Relationship / Reason** |
| StaffPersonalRefId | Staff Personal Ref ID | To get the REF ID to tie the right staff record to this object |
| SectionInfoRefId | SectionInfoREF ID | This will allow the section to be tied to the right section |
|  |  |  |
|  |  |  |

## 4.2 Infrastructure / International Dependencies and Relation Map

*Identify any dependencies on infrastructure technologies and / or deliverables from the International Technical Board (ITB) which are planned for a future release.*

*This could include requiring or relying on specific functionality from one or more of the following:*

* *Transport (ex: SOAP conventions)*
* *SIS Functional Profiles*
* *Identity Management Profiles*
* *Global Data Model Metadata*
* *Central Administration or Smart Zone*
* *Zone Services (ex: Assessment)*

|  |  |  |
| --- | --- | --- |
| **Proposed new Object, Element or Attribute** | **Infrastructure or International technology dependency** | **Specifics of dependency** |
|  |  |  |
|  |  |  |
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# **5 Detailed Design**

*Place the detailed element by element, attribute by attribute breakdown of the Data Model Extension here. This work is normally done by members of the assigned Project Team.*

*The possible values of the “Char” column include*

*One of the following characteristics:*

* ***M – Mandatory****. Item must appear in every Add Event and Response message for the object*
* ***Q – ReQuired****. Item must either appear in an Add Event or eventually be included in a Change Event.*
* ***S – Supported****. Item may or may not appear in any message relating to the object. However if its value is supplied / available, it must be included by the sender in Event and Response messages.*
* ***C******– Conditional.*** *Item is required if the included conditions are satisfied*
* ***O – Optional****. Item may or may not appear in any message relating to the object. It need not be supported by the sender*

Plus one or more of the following characteristics if applicable:

* ***I –******Immutable.*** *Item value cannot be changed once supplied.*
* ***U –******Unique.*** *Item value is unique from all other objects containing that item (ex: RefId)*
* ***N –******Non-Queryable****. Item may not be used in a Request message. This would be true for elements which might be calculated by the object provider (ex: aggregates)*

Plus the following characteristic if applicable:

* ***R ­– Repeatable.*** *Item may appear more than one time.*

*The “type” of each item is either an XML type (ex: integer) or a named SIF Global Type.*

*XML Facets can help to further define the value of an item. These can include length, range, and per-type value restrictions. They should be specified if known.*

*Fill out a separate copy of the following table for each affected new or existing SIF object.*

*Events are not reported. This is only for Requests. Will need Other objects to work (see dependency table)*

**Object Name: StaffSectionAssignment**

|  |  |  |  |
| --- | --- | --- | --- |
| **Element (E) or Attribute (A)** | **Char** | **Description (including type and associated XML facets)** | **Type** |
| StaffPersonalRefId | MI | The Id (GUID) of the teacher or educational staff to whom the assignment information applies. |  |
| SectionInfoRefId | MI | The Id (GUID) of the section in which this staff (teacher) is assigned |  |
| AssignmentStartDate | M | Date from when this section assignment is effective and should be inclusive of the start and end date of the section coming Term Info | Standard Date Time |
| AssignmentEndDate | C | Date when this section assignment comes to an end. effective and should be inclusive of the start and end date of the section coming from Term Info | Standard Date Time |
| IsTeacherOfRecord | M | Indicates if the staff is the Teacher of Record during this assignment | Boolean  Yes/No |
| Roles | M | List of one or more Roles |  |
| Roles/Role | OR | One of a set of possible enumerated Role values | CEDS 2.0 Teaching Assignment Role: One of:  LeadTeacher: Lead teacher with the primary responsibility for student learning in the assigned class section  TeamTeacher Team teacher with shared responsibility for student learning within the assigned class section  ContributingProfessional Contributing professional who has been assigned the responsibility to provide additional services that support and increase a student learning |
| PercentResponsible | M | Percentage of Responsibility of the Teacher of Record | Decimal 5,3 0 - 100 |

# **6 Migration Plan (for proposed changes to existing objects only)**

*One of the mandatory components of every Data Model Change proposal is the Migration Plan. This section describes the impact of the proposed change to legacy SIF Zones and the techniques, best practices and deployment guidelines designed to minimize that impact. It is normally filled out in coordination with SIF Staff or an experienced SIF Data Modeler.*

*All migration plans have the same overarching goal: allow an existing SIF Zone to migrate to the new change incrementally ... by changing only one component at a time while maintaining at least the previous level of functionality, and “breaking” nothing in the process.*

*Several common strategies (in order of desirability) are:*

***1. Add new elements rather than modify old ones***

*This places a requirement on new agents to support duplicate entries in order to maintain backwards compatibility with agents conforming to earlier versions of the standard. To use this strategy, there must be a clear mapping provided for agent writers to utilize. This would include mapping any new code set values to the collection of previously existing ones.*

***2. Constrain the impact to the ZIS***

*In this case the ZIS will transparently “bridge” between agents supporting this change and earlier versions. To use this strategy, there must be a clear mapping provided for ZIS vendors to utilize, and at least two vendors must “sign off” on this section of the proposal.*

***3. Reduce the impact***

*This approach is effective for changing only those parts of the SIF specification which have been minimally adopted. Start by mapping the set of changed elements against the CSQ matrices to determine the number of existing SIF-certified applications that will be affected. Work with SIF Staff to alert impacted vendors (those with certified, and where known, uncertified products) and identify the number of sites which will be affected. Depending upon the size of the impact, the change may be accepted for a minor release.*

***4. Extended Elements***

*Use the extended element construct to add the new changes. This has the advantage that it standardizes how the functionality will be introduced, but suffers from the disadvantage that conformance to the changes cannot be easily verified, and a further change will be required when moving forward to the next major release. It is the least desirable way to introduce changes into a minor release, and a strong justification for this approach should be prepared.*

***5. Wait until the next major release***

*Defer the proposed change until the next major release because a clear incremental migration strategy for it cannot be constructed.*

**Migration Plan:**

*Using the above techniques or alternative ones, specify the recommended series of incremental component upgrades or deployments (of application, agent or ZIS) which must be performed before the data model changes introduced by this proposal can be successfully incorporated into an existing SIF Zone.*

|  |  |  |
| --- | --- | --- |
| **Component Replaced** | **Increased Functionality (if any)** | **Effect on Legacy components (if any)** |
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# **7 Issues**

*List any issues surrounding this proposal which the reviewers or approvers may need to consider.*

*Eventually, when the federal government and states understand how they are going to handle an inclusion class with more than one teacher, a new object may need to be done. We do have something that is designed but will NOT be part of 2.6 due to the unclear direction of this situation and how states will handle this situation.*

*http://community.sifinfo.org/sites/SpecDevelopment/Shared%20Documents/Current%20Documents/SIF%202.6%20Proposals/StaffSectionAssignment.docx*

# **8 XML Example(s)**

*One or more examples of XML instances representing the items in the proposed extension should be placed here, as part of work done during the detailed design process.*

<StaffSectionAssignment>

<StaffPersonalRefId>AB123CD98745234GG439023904NIJK34</StaffPersonalRefId>

<SectionInfoRefId>93765CDE826A83F7C20C765BB2869C1< /SectionInfoRefId>

< AssignmentStartDate>2011-09-15T09:30:00+06:00</ AssignmentStartDate>

< AssignmentEndDate> 2012-06-30T15:30:10+06:00</ AssignmentEndDate>

<TeacherOfRecord>Yes</TeacherOfRecord>

<Roles>

<Role>Lead Teacher</Role>

</Roles>

<PercentResponsible>80</PercentResponsible>

</StaffSectionAssignment>