



SIF Change Proposal: StudentAttendanceTimeList

Submitted by: NSIP Team
Version: v0.5
Date Submitted: May 2015

Table of Contents

Change Proposal	2
Rationale for Change	2
Business Case	2
Time Line	3
Potential Object Changes	3
Change Plan	3
Object Dependencies and Relation Map	3
Changes to Other Objects	3
Infrastructure Changes	3
Object Definitions	3
StudentAttendanceTimeList	3
.....	4

Draft Specification Document Version Control			
Version	Date:	Author/Organization:	Comments
V0.1	30/04/2015	Nick Nicholas/NSIP	Initial Document
V0.2	19/5/2015	Linda Marshall	Updated after Attendance Data Focus Group meetings
V0.3	20/5/2015	Linda Marshall	Added Absence Value
V0.4	01/07/2015	Nick Nicholas/NSIP	Privacy Impact
V0.5	08/07/2015	Nick Nicholas/NSIP	AbsenceValue renamed to DurationValue
V0.6	13/07/2015	Nick Nicholas/NSIP	DurationValue > 1.0

Change Proposal

Rationale for Change

This Object is proposed to support the NSW Use Case of recording more granular absence and attendance information to the Policy Unit.

If a student is only absent for a single contiguous block of time during the day, and only absences are recorded, then the StudentDailyAttendance object can be used as is, with DayValue = "Partial", and only one object needs to be reported per student per day: the time for which the student was absent is recorded between TimeIn and TimeOut.

If however the student is absent for two or more discontinuous blocks of time during the day, or reporting includes both presences and absences, then a single StudentDailyAttendance object cannot track the student's movements during the day. Multiple instances of the StudentDailyAttendance need to be sent to describe the student's attendance, one for each time span (TimeIn to TimeOut) being tracked. For example, if a student is absent from 9:30 to 10:00, and again from 14:00 to 14:30 in the same day:

Absences Only Reported:

RefId	StudentPersonal RefId	Date	DayValue	TimeIn	TimeOut	AttendanceCode/Code
....555CB	....1652	2002-11-01	Partial	09:30:00	10:00:00	101
....555CB	....1652	2002-11-01	Partial	14:00:00	14:30:00	101

Absences and Presences Reported:

RefId	StudentPersonal RefId	Date	DayValue	TimeIn	TimeOut	AttendanceCode/Code
....555CB	....1652	2002-11-01	Partial	09:00:00	9:30:00	100
....555CB	....1652	2002-11-01	Partial	09:30:00	10:00:00	101
....555CB	....1652	2002-11-01	Partial	10:00:00	14:00:00	100
....555CB	....1652	2002-11-01	Partial	14:00:00	14:30:00	101
....555CB	....1652	2002-11-01	Partial	14:30:00	15:00:00	100

However, this means that the daily attendance records for a student become much harder to manage. There can be multiple objects for a day, and the number of objects needed for a day can change, as the timespans that the student was present are updated. The object provider cannot issue a single update request to add a new partial absence to the day: they need to update all the partial objects impacted. For example, adding an absence between 12:00 and 12:30 above would require deleting the 10:00 to 14:00 object, and creating three new objects, 10:00–12:00, 12:00–12:30, and 12:30–14:00; alternatively the deletion of 10:00–14:00 is replaced by an update to 10:00–12:00, with two objects created, 12:00–12:30, and 12:30–14:00. Tracking state for these kinds of changes is very difficult, and it imposes a serious burden on object providers.

To deal with this challenge, we propose avoiding the StudentDailyAttendance object, which was designed for attendance information with granularity of a day or half day. The StudentPeriodAttendance object is also not an option, since its granularity is fixed to a period, and can drastically increase object traffic with an object per student per period. Instead, we propose using a distinct object, which covers a single day per student, but which can track multiple times in and out within a day.

Business Case

The requirement has arisen as a matter of urgency in the NSW DEC Data Hub integration project around attendance reporting from third party attendance package vendors. However the shift in national reporting granularity means this change is desirable for others wanting to use more granular attendance reporting.

StudentPeriodAttendance already provides a model for setting attendance granularity to the period. However period attendance is not provided universally and for both primary and secondary schooling; it is desirable to decouple partial daily attendance from school periods.

Time Line

This change will be in the SIF Implementation Specification (Australia) 1.4 timeline.

Potential Object Changes

Proposed Data Object Changes			
Object	Element	Attribute	Reason for including
StudentAttendanceTimeList	New object	O	Allows multiple time spans for the same day to be reported on in a single object

Change Plan

Object Dependencies and Relation Map

There are no changes in object dependencies

Changes to Other Objects

There are no anticipated changes to other objects.

Infrastructure Changes

There are no anticipated infrastructure changes

Object Definitions

StudentAttendanceTimeList

The StudentAttendanceTimeList object is proposed to provide more detail about the student attendance spans during the day: it provides more detailed information than the single TimeIn and TimeOut elements in StudentDailyAttendance.

3.3.50 StudentAttendanceTimeList

This object provides more detail about the attendance spans for a single student during the day: it provides more detailed information than the single TimeIn and TimeOut elements in StudentDailyAttendance.

SIF_Events are reported for this object.

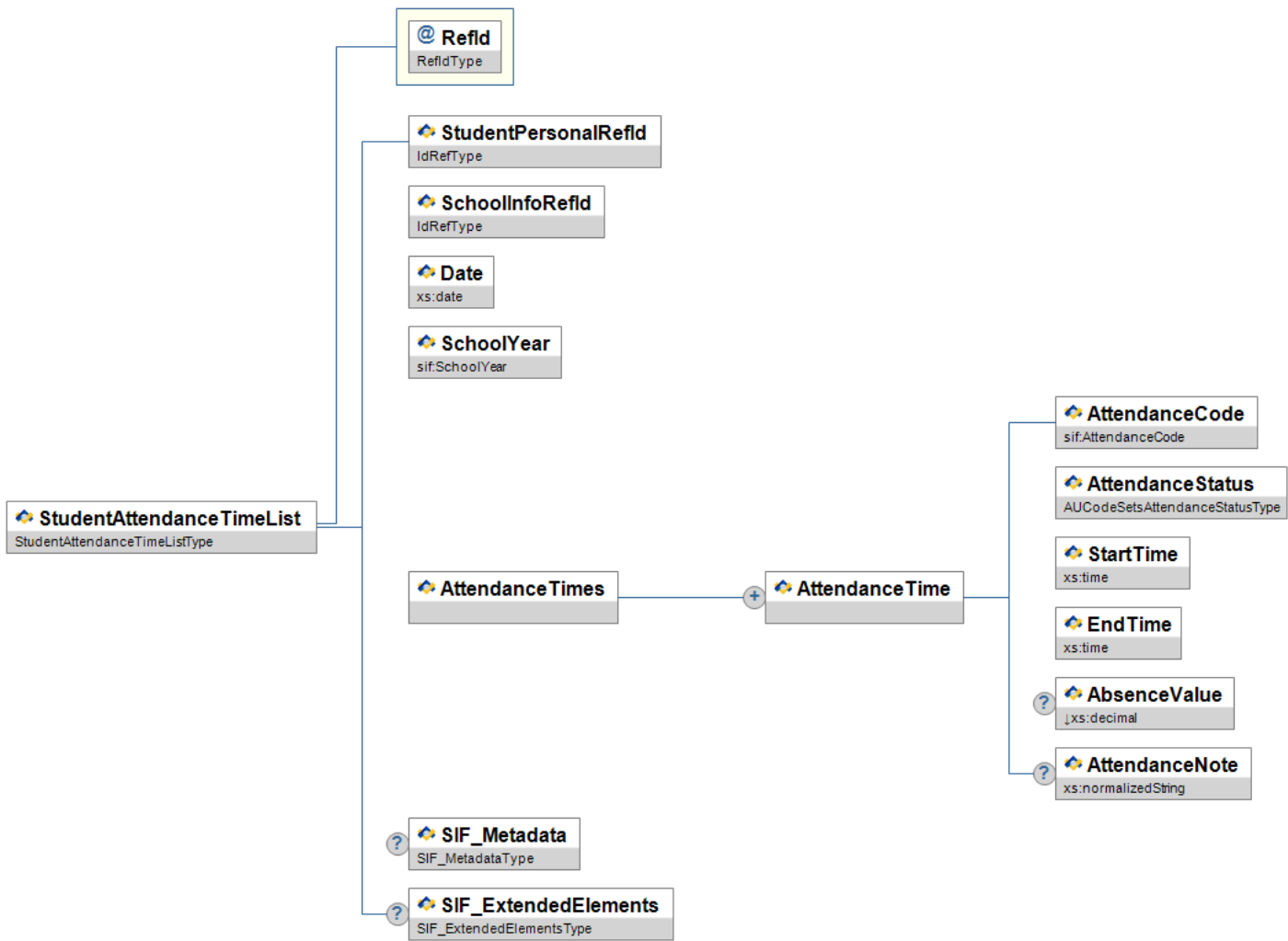


Figure 3.3.50-1: StudentAttendanceTimeList

Element/@Attribute	Char	Description	Type
StudentAttendanceTimeList		This object provides more detail about the attendance spans for a single student during the day: it provides more detailed information than the single TimeIn and TimeOut elements in	

Element/@Attribute	Char	Description	Type
		StudentDailyAttendance.	
@ Key RefId	M	The ID (GUID) assigned to uniquely identify this attendance record.	RefIdType
StudentPersonalRefId	M	The ID (GUID) of the student for whom this attendance information is being reported.	IdRefType
SchoolInfoRefId	M	The ID (GUID) of the school for which this attendance information is being reported.	IdRefType
Date	M	The calendar date to which this attendance information relates.	xs:date
SchoolYear	M	School year for which this enrollment is applicable, expressed as the four-digit year in which the school year ends (e.g. 2007).	SchoolYear
AttendanceTimes	M	Breakdown of times that the student entered or returned to school.	List
AttendanceTimes/AttendanceTime	MR		
AttendanceTimes/AttendanceTime/AttendanceCode	M	Locally defined code for attendance.	AttendanceCode
AttendanceTimes/AttendanceTime/AttendanceStatus	M	Approved or Unapproved status of this attendance code.	AUCodeSetsAttendanceStatusType

Element/@Attribute	Char	Description	Type
AttendanceTimes/AttendanceTime/StartTime	M	The start of this particular time span.	xs:time
AttendanceTimes/AttendanceTime/EndTime	M	The end of this particular time span.	xs:time
AttendanceTimes/AttendanceTime/DurationValue	O	The amount of absence represented by AttendanceCode, up to three decimal places. May be greater than 1.0.	xs:decimal <div> <div>xs:minInclusive</div> <div>0</div> </div>
AttendanceTimes/AttendanceTime/AttendanceNote	O	Note related to this particular time span.	xs:normalizedString
SIF_Metadata	O		SIF_Metadata
SIF_ExtendedElements	O		SIF_ExtendedElements

Table 3.3.50-1: StudentAttendanceTimeList

Privacy Impact

- The object is treated analogously to StudentDailyAttendance for the purposes of sensitivity.
- RefId is flagged LOW
- StudentPersonalRefId is flagged MEDIUM
- SchoolInfoRefId is flagged LOW
- Date is flagged HIGH
- SchoolYear is flagged LOW
- AttendanceTimes/AttendanceTime/AttendanceCode is flagged EXTREME
- AttendanceTimes/AttendanceTime/AttendanceStatus is flagged EXTREME
- AttendanceTimes/AttendanceTime/StartTime is flagged LOW
- AttendanceTimes/AttendanceTime/EndTime is flagged LOW
- AttendanceTimes/AttendanceTime/AbsenceValue is flagged LOW
- AttendanceTimes/AttendanceTime/AttendanceNote is flagged EXTREME
- The object overall is flagged EXTREME

XML Example

```
<StudentAttendanceTimeList RefId="2FFB63B4CFEF48208501E7D1E54555CB">
  <StudentPersonalRefId>D3E34B359D75101A8C3D00AA001A1652</StudentPersonalRefId>
  <SchoolInfoRefId>CA285746359D75101A8C36432A901A16</SchoolInfoRefId>
  <Date>2002-11-01</Date>
  <SchoolYear>2003</SchoolYear>
  <AttendanceTimes>
    <AttendanceTime>
```

```

    <AttendanceCode>
      <Code>200</Code>
      <OtherCodeList>
        <OtherCode Codeset="Local">S</OtherCode>
        <OtherCode Codeset="Text">C</OtherCode>
      </OtherCodeList>
    </AttendanceCode>
    <AttendanceStatus>01</AttendanceStatus>
    <StartTime>11:00:00</StartTime>
    <EndTime>12:05:00</EndTime>
    <DurationValue>0.167</DurationValue>
    <AttendanceNote>Left for Orthodontist appt. and returned to school
afterward</AttendanceNote>
  </AttendanceTime>
  <AttendanceTime>
    <AttendanceCode>
      <Code>100</Code>
    </AttendanceCode>
    <AttendanceStatus>01</AttendanceStatus>
    <StartTime>09:00:00</StartTime>
    <EndTime>11:00:00</EndTime>
    <AttendanceNote />
  </AttendanceTime>
  <AttendanceTime>
    <AttendanceCode>
      <Code>100</Code>
    </AttendanceCode>
    <AttendanceStatus>01</AttendanceStatus>
    <StartTime>12:05:00</StartTime>
    <EndTime>15:30:00</EndTime>
    <AttendanceNote />
  </AttendanceTime>
</AttendanceTimes>
</StudentAttendanceTimeList>

```

Example 3.3.50-1: StudentAttendanceTimeList Issues

- The object is intended for use instead of StudentDailyAttendance. Unlike StudentDailyAttendance, this object does not provide attendance applicable to the entire day (DayValue, AttendanceCode, AttendanceStatus, TimeIn, TimeOut, DurationValue, AttendanceNote). It is expected that the receiver of this object will calculate overall attendance data over the day, and then in turn calculate overall attendance data over a time period, which can be captured in StudentAttendanceSummary.

Codesets

Proposed new additions to SIF Validation Codes: AUCodeSetsAttendanceCodeType

NSW Code	SIF Code	Description	Comment
A	102	Absent – unjustified	New Code proposed
H	613	Shared enrolment	New Code proposed