HR-XML Consortium

3.2.1 TimeCard

Specification

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TimeCard Specification Overview

This document describes approaches to using HR-XML's TimeCard noun. HR-XML's TimeCard allows the capture of time-worked data as well as information about associated expenses and allowances.

Note: "TimeCardConfiguration" schema has been deprecated and is no longer included.

It is recommended that implementers use HR-XML's IndicativeData or HRMasterData nouns to provision time and attendance systems with information about individuals who will be reporting time and expenses. Provisioning a time and attendance system with the proper set of accounting IDs and classification codes is something that can be accomplished using the "oa:Fields" noun within the Open Applications Integration Specification (OAGIS). For example, the oa:SyncFields BOD combining the sync verb with the oa:Fields noun could provide a means to synchronize account IDs and code values among systems.

Actors

A wide variety of actors might participate in collaborations involving the communication of time card data. However, some of the common system actors involved in these collaborations are:

- **Time and Attendance System.** A time and attendance system encapsulates such functionality as time card entry and capture, activity tracking, overtime tracking and management, classification and allocation of working hours, time card review and approval, and integration with payroll, billing, and other systems relying on time-worked data.
- **Time Capture Devices.** A time capture device includes a wide variety of technology designed to accurately track and record work start and end times and other significant events in recording time worked. A "time clock" or "time punch" is likely the most familiar type of time capture device, but a variety of other devices and technology may service a similar function. Capabilities among time-capture devices vary. However, a simple time-capture device may not itself hold or apply complex business logic, but merely capture and transmit "raw" time event data (for example "clock-in" and "clock out" times).
- **Billing Systems.** A system that prepares invoices. In the context of HR collaborations, these are typically invoices for services. In the context of staffing transactions, the amounts for which a staffing supplier invoices customers are calculated from time-card data and data pertaining to particular assignments or contracts with customers.
- **Vendor Management System (VMS).** The system, generically known as an eProcurement Tool, which supports several different business models: Vendor Managed Services, Managed Services Provider (MSP), Master Vendor (MV), etc. The use of the system should not imply the exact transactional business model in place.

Trigger / Precondition

Time-worked reporting processes vary significantly. Event triggers can vary significantly depending on a particular organization's time capture, time card review, correction, and approval processes. Consider

that some time capture devices might integrate data in real-time whereas others may do so at regular intervals (daily, weekly). Common events triggering the preparation of time cards include:

- **End of Payroll Period.** The end of a work period upon which payroll is calcuated would trigger such events as time card submission.
- **End of Temporary Assignment.** The end of a temporary assignment would trigger a variety of processes, including the suspension of certain access and de-provisioning of accounts or privileges created for fulfillment of the temporary assignment. For an individual placed by a staffing agency, the end of an assignment would trigger notifications relating to the assignment termination as well as tasks such as preparation and submission of final time cards and final invoice preparation.
- **Staffed Project Completion.** In the case of projects staffed with outside resources, project completion might trigger tasks as termination of the completed assignment, reassignment, and such events as preparation and submission of final time cards and associated final invoice preparation.

Supported Processes

A wide variety of integration scenarios can be supported. The sections below describe some basic implementation patterns.

Broadly speaking the HR-XML TimeCard is intended to support the communication of both "raw" and "consolidated" time-worked data.

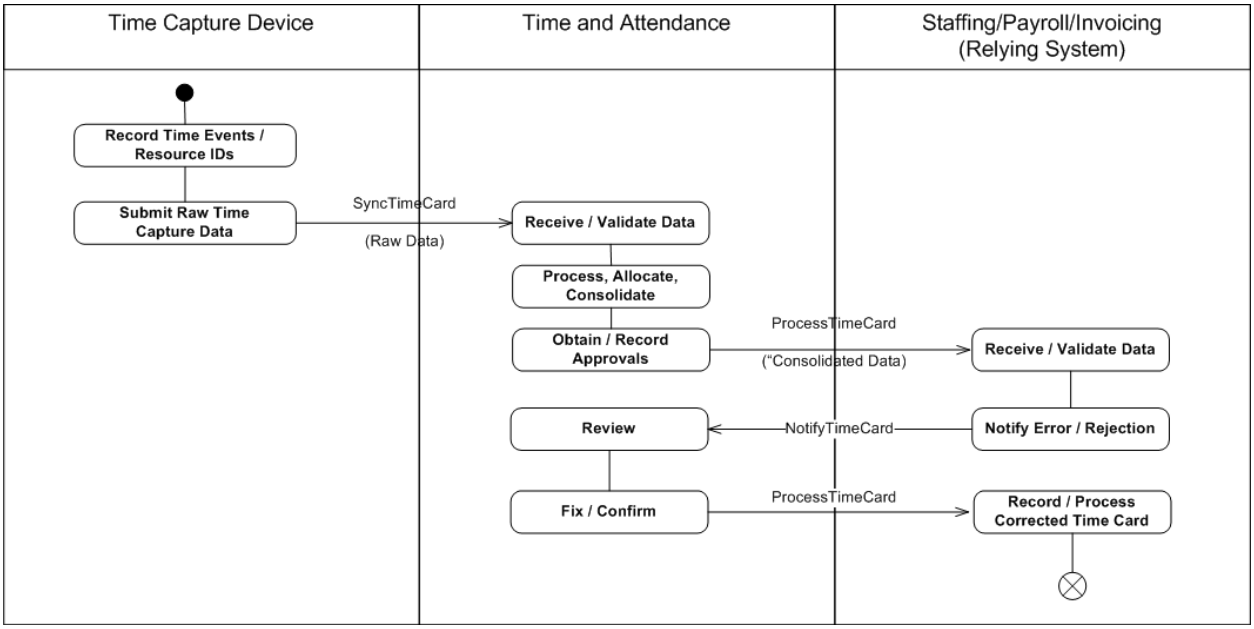
- **Raw.** Simple time-capture devices may collect little more than the time-stamp data for associated events. For example, a device may collect "clock-in" and "clock-out" timestamps and associate such times with the particular employee.
- **Consolidated.** This describes the situation where calculations are applied to raw time-capture data within a time and attendance application. The result might include time-worked totals for the day, week, or other relevant period. Business rules might be applied so that "regular" hours and "overtime" hours are broken out. Within the time and attendance system, hours might be further classified on the basis of cost center, project, department, etc. This processed, consolidated time-worked data might then be communicated from the time and attendance system to other systems, such as payroll and billing.

See the examples of how the HR-XML TimeCard can support reporting of both raw time-event data (clock-in and clock-out data) as well as data that has been consolidated according to rules, business logic, and interactions applied within a time and attendance system.

Time and Attendance Transaction

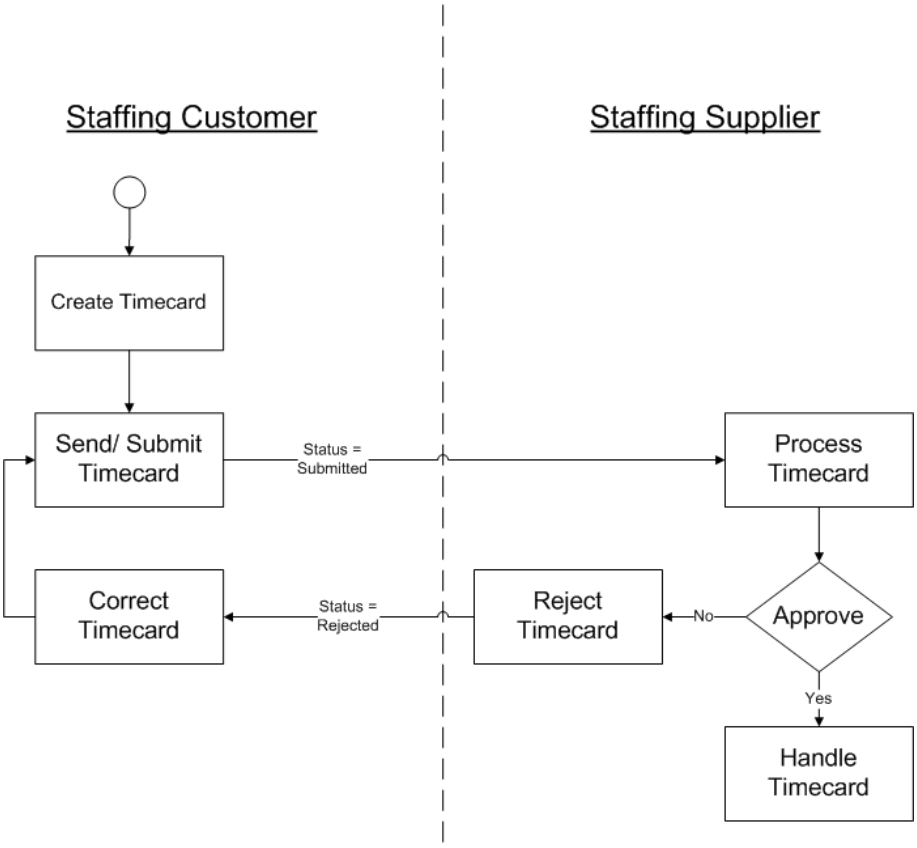
The diagram below depicts one of many possible scenarios. Most any arms-length exchange of time-worked data between trading partners can be supported.

The scenario shows the capture of time-event data by a time capture device and the transmission of the "raw" data to a time and attendance system. Within the time and attendance system, business logic is applied and input by supervisors and responsible persons captured such that the raw data is enhanced into a "consolidated" form that can be transferred to a relying system (for example, a staffing management system, billing system, or payroll system). In some cases, the relying system would report back errors or modifications to the time and attendance system (NotifyTimeCard in the diagram below).



Time without Intermediary

The diagram below illustrates the transaction between the Staffing Customer and Staffing Supplier without an Intermediary.



Implementation Considerations

Review, Approvals, and Modification

It is common for Time Cards to go through multiple levels of review and validation before they are paid or approved.

A common scenario might be for employees to enter time-worked data into a Web-based time and attendance system. The time-worked data typically would be reviewed by a supervisor (this would typically occur within the time and attendance system), before being communicated to a payroll and/or billing system. Additionally, in a staffing scenario, time cards of staffing resources might be subject to review by both managers at both the staffing supplier and staffing customer. Payroll and/or accounts payable also may perform validation and review of time cards for accuracy (For example, are allocations to cost centers valid? Do numbers total correctly). Thus, time worked reporting processes usually must provide the means to handle review, approval/rejection, as well as updates and modifications.

HR-XML doesn't limit implementers to a particular work flow or business process in terms of handling time card review and approvals. However, the data management capabilities provided by the HR-XML 3.X architecture will be very helpful to implementers wanting to create reliable review and approval processes. Broadly speaking, BODs such as ProcessTimeCard or SyncTimeCard would be used for the initial submission of a time card or time cards(s) to another party for review, approval, and processing. In the case of a ProcessTimeCard request, certain integrity and validation checks might be performed and reported back synchronously in an AcknowledgeTimeCard response. NotifyTimeCard would likely be used to report back asynchronously rejections or requested modifications with respect to issues/errors discovered within review processes.

Legal Considerations

Many jurisdictions have protective wage-hour laws that address topics such as record keeping, compensable hours, meal allowances, and the like. Likewise, there may be jurisdiction-specific tax rules regarding the reporting and substantiation of expenses and allowances. The Time Card specification is sufficiently flexible to be used within many jurisdictions, but does not contemplate nor enforce the legal requirements of specific jurisdictions. Please consult competent legal counsel on the wage-hour and tax laws applicable within your jurisdiction to learn how they may impact time and expense reporting and record keeping.

Major Components

While the HR-XML TimeCard has been significantly re-factored, the structure of the 3.X TimeCard is similar to the prior version. A summary of major TimeCard components are provided below:

ReportedResource. Identifies the individual to which the time-worked record applies.

TimeCardReportedItem. A repeatable component containing data about the period of work (a "time interval"), time event, expense, or allowance that is being reported:

TimeInterval. A period of time worked or leave or idle time reported on a time card.

TimeEvent. An event of significance in the reporting of time worked. Where the TimeCard is used to capture "raw" data from a time-capture device, a TimeEvent usually would be a "clock-in" or "clock-out" event. TimeEvent also could be used to capture information about events such as completion or the achievement of project milestones.

Expense. An expense associated with a period of time worked. This allows for the reporting of expenses for reimbursement or payment. HR-XML's TimeCard is not designed as an all-purpose expense-reporting format, but rather is intended to accommodate the type of expenses that are reported and reimbursed in the context of staffing assignments.

Allowance. A premium or allowance associated with a period of time worked. For example, some workers may be entitled to a "per diem" to cover certain expenses incurred during an assignment (for example, meals) or may be entitled to allowances based on the type of work performed (for example, a "dirty work" premium).

Approver. Contains information about the person approving the time card or reported item. This is available both at the top-level of the TimeCard (to cover approval of the entire time card) and at the level of each reported item.

Submitter. Contains information about the person submitting the time card or reported item. For example, a line supervisor may submit time cards on behalf of his or her department. This component, like Approver, is available both at the top-level of the TimeCard card and at the level of a reported item.

Attachment. This allows for the inclusion or referencing of supporting documents (for example, spreadsheets or scanned receipts) related to time and expense reporting.

Appendix A: Examples

Examples for each of these components can be found in the Instances folder.

Intervals with Cost Allocations

The following is a simple example of a time card that reports one week of 8-hour work days. This example demonstrates how reported items can be allocated to appropriate accounts.

ProcessTimeCardTime-Example-1.xml

Notification of Correction

This is intended as a follow-on notification from the receiver of the above message (Example 1). This follow-on message notifies the originator that an incorrect account ID has been corrected. Note the following:

- This example follows the "incremental" data management style where only the "delta" or modified data is communicated. This same notification also might have been accomplished using a full-file (a so-called "snapshot") approach.
  The XPATH /ProcessTimeCard/DataArea/TimeCard/TimeCardReportedItem[ID="1"] is used to identify the specific TimeCardReportedItem (the one where ID = "1") that was replaced with corrected information.
- This is a request sent by the receiver of the original time card communication (a relying system). So this relates to a web service hosted by the originating system.

NotifyTimeCard-Example-1.xml

Vacation, Sickness, and Meal Expense

Example of time reporting likely for a staffing resource. Shows reporting of periods of vacation and sickness and the reporting of a meal expense.

ProcessTimeCard-Example-2.xml

Raw Time Event Reporting

The following example shows the communication of raw "clock-in" and "clock-out" time events such as might be recorded by a simple time capture device.

ProcessTimeCard-Example-3.xml

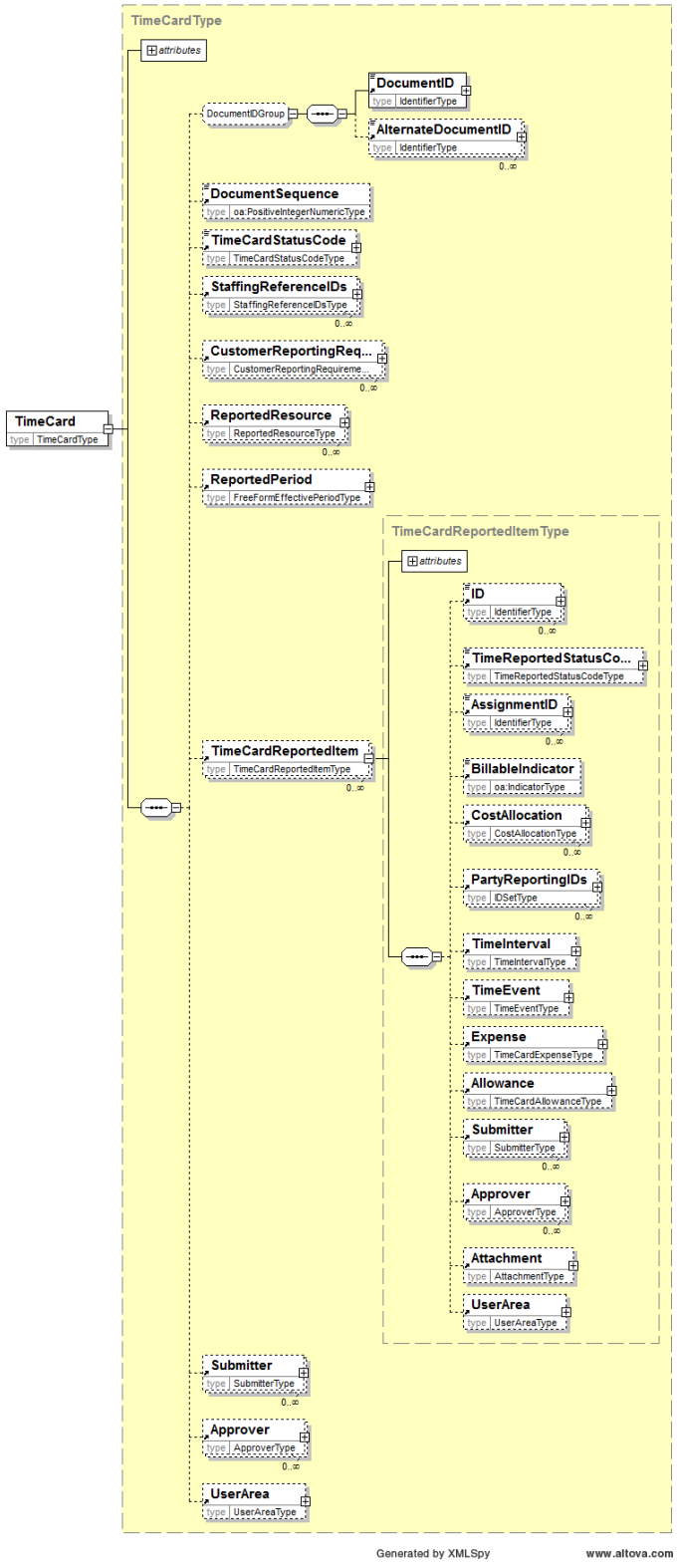
Time Interval Reporting

This example shows the reporting of several time-worked intervals as well as periods of vacation and sickness. The reporting of a period of premium-eligible work (work eligible for a dirty-work premium) is shown as well as overtime hours.

ProcessTimeCard-Example-4.xml

Appendix B: Noun Layouts

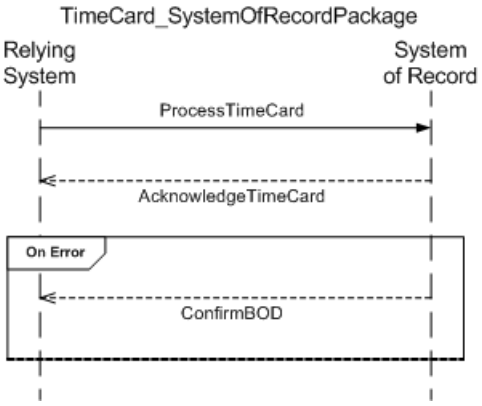
TimeCard



Appendix C: Business Object Document Diagrams

TimeCard

A service that a system of record would host (one that owns or serves as the authoritative source of time card data).



A service that a relying system would host (one that did not own or serve as the authoritative source of time card data) to sync time card data with the time card data system of record.