



MD.060/70

FUNCTIONAL & TECHNICAL DESIGN DOCUMENT

Exempt Timecard 1



Daily Entry in Hours

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Last Updated By	Last Update	Description
Venu Bijumalla	November 28, 2006	Updated the Technical Sections.
Cheri McKenna	December 13, 2006	Updated screenshots
Cheri McKenna	December 20, 2006	Updating comments made in 12/19 subteammeeting
Cheri McKenna	December 21, 2006	Updating with Payroll answers

Document Control

All aspects of document control (Change History, Reviewers/Distribution, Approvers) will be managed in the BSPTA item for the specification



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Introduction

The **Error! Reference source not found.** was identified as required functionality during the gap analysis phase of the OTL implementation. This document is a living document that will follow the **Error! Reference source not found.** program through the entire development life cycle.

Design Principles

The purpose of this document will vary with the applicable phase in the lifecycle as indicated below:

Requirements – Technical and functional team members will contribute to both high level and detailed requirements in this document. The requirements will be used to design a solution.

Design – Technical team members will update the document with high level and detailed design specifications. All related modules will be included in the design including legacy programs, SQL*Loader scripts, PL/SQL scripts, and error reports. The high level design includes finalizing the process flow and corresponding narrative.

Coding – The developer will update the document if design changes are made during coding.

Testing Strategy – Testing strategy and test cases will be documented in the test case section.

Enhancements and Upgrade – After implementation, this document should be used to record and changes to the customization.

Topical Essay/Business Requirements

Short, high level description of the item that the document addresses

Basic Business Needs

REQUIREMENT	SOLUTION
Ability to enter time electronically	Standard Functionality
Ability for user to set default Project/Tasks displayed on time entry screen	Standard Functionality
System must be "User Friendly" – people have to want to do this. Fast, easy to use with the ability to enter time for 3-4 projects over the course of the month in under 10 minutes.	Custom Timecard
Ability to use multiple timecard layouts	Standard Functionality
Ability to check Home Code and Vacation Accrual Bank balance as of the last pay period on timecard	Custom Timecard
Default home codes from PeopleSoft are always displayed on the timesheet.	Custom Timecard
Customizable interface (at the department level) that allows capturing department dpecific information so that the user is presented with department specific activities, not project account tasks. Includes: <ul style="list-style-type: none">✓ Aliases/alternative task names✓ Entry of diverse types of numbering systems for activities: i.e., work orders, project numbers, R&G job codes, etc✓ Ability to setup relationships between work orders and project/tasks. Can be one to one or many (work orders) to one (project/task)✓ Project codes (like job numbers) and ability to attach one project code to multiple project/task numbers. Need to have definitions in the system for project codes	Custom Timecard
The Fermilab Standard timecard layout should have the following functionality: <ul style="list-style-type: none">✓ Elements – Filtered by Eligibility✓ Home Project✓ Home Task✓ Hours	Custom Timecard
Should be able to display the Projects based on employee eligibility	Application setup-Configuration
Must be able to enter time to specific hours on a 24 hour clock to identify overtime and shift premiums	Standard Functionality
Output format supports text, .xls, and xml	
H2 Transaction history for any changes in OTL to time reported after it has been submitted to payroll. Transaction history for any time that is entered or corrected by someone other than the person working the time. Provide a text comment when corrections are made.	Standard Functionality

Major Features

Ability to enter Payroll Data and Effort Data in one central system

Ability to validate vacation and sick time

Ability to calculate Effort Reporting from 'Hours' to 'Units'

Business Rules

ENFORCES RULE	AREA OF TIMECARD	BUSINESS RULE	NOTES:
TC	GENERAL	Time will be charged against Activities, Project-Tasks, or Default Home Codes	
TC	GENERAL	The current time periods timecard will open as a default when 'Creating' a new timecard (unless it has already been previously submitted)	
TC	GENERAL	Effort can be recorded for each day of the period.	
TC	TIME CARD HEADER	The time card time period will appear on the timecard entry screen	
TC	TIME CARD HEADER	Vacation and Floating Holiday accruals will display on the timecard for the period. (Sick hours will validate but will not be displayed)	
TC	TIME CARD HEADER	Vacation Accruals sent from PS will be Zero during an EE's probation period.	
TC	TIME CARD HEADER	EE's Home Project / Task(s) will be displayed (up to 5) along with the dist. % allocated to each Project / Task.	
WS Setup	TIME ENTRY	No Negative hours will be allowed	
TC	PAYROLL DETAILS / EFFORT DETAILS	Effort hours will be entered as total hours per day.	
TC	PAYROLL DETAILS	Only enter exceptions - Absence and additional Earning Codes.	
TC	EFFORT DETAILS	Work orders will be entered as 'Activities'	
TC	EFFORT DETAILS	The 'Description' field, will be a hyperlinked. The long task description in PA will be used to populate the description on the timecard. This hyperlink will open another frame to display the full description.	'Long Description' will most likely expand to a larger box when clicked on vs. calling another frame via a hyperlink
TC	EFFORT DETAILS	The 'Description' field will also be used to populate the description tied to the 'Activity'. This hyperlink will open another frame to display the full description.	At this time Development is not sure how this will work
TC	EFFORT DETAILS	An Activity (alternate name) table will contain the Activity name and its description. The description will populate in the 'description' field. This hyperlink will open another frame to display the full description.	
WS Setup	EFFORT DETAILS	Chargeback indicator will calculate when appropriate	
TC	SUMBITTAL	Time is submitted weekly for current pay periods or at anytime for future timecards	

Validation Rules and Warnings

ENFORCES RULE	AREA OF TIMECARD	VALIDATION RULES AND WARNINGS	NOTES:
	PAYROLL DETAILS	Vacation / FH / Sick - These will now be free form fields .. as part time exempt employees can take hours off based on their schedules	
WS Setup	VALIDATION	Transaction controls may be used to filter available Project / Task / Activities by employee	
WS Setup / Fast Formula	VALIDATION	At 'Submittal' The system will 'Warn' the employee that they are overspending their accruals and the timecard may not be 'Approvable'. A 'soft' warning will be give for submittals before accruals are updated. A 'hard' warning will be give once the accruals have been updated. The ability to correct the timecard within the same period will be offered.	
WS Setup / Fast Formula	VALIDATION	Absence codes for Vacation / Sick / Floating Holiday will not validate for future timecard period entries when the timecard is submitted. An employee will receive a 'soft' warning that the hours submitted will be validate against their accruals until the timecard is approved. The timecard will will either be rejected to the employee for correction or the group timekeeper will modify the rejected timecard to replace the invalid code with leave without pay so that the timecard can be approved.	

QUESTION: Will 'Approvers/Timekeepers w/ Approval Authority' be able to approve 'FUTURE' timecards (as long as the accrual rule kicks in) ?

Form Navigation

	Button		
TC	CANCEL	The 'Cancel' button will take the user back to the initial layout/screen (1 st screen after login). Will clear the screen from the last save.	
TC	Save for Later	The 'Save for Later' button will not take the user to any other layout/screen	
TC	Continue to Review	The 'Continue to Confirmation' button will take the user to the 1 st confirmation page	
TC	TrashCan Icon	The 'Clear' trashcan icon will delete at the 'row' level only	
TC	Save and Return to Tmecard Home	This button will navigate the employee to the 'Start / Home' screen (NOT the navigator)	

Definitions/Notes

Descriptions of new, confusing, or critical terms

Assumptions

This design assumes that the following statements are true:

ENFORCES RULE	ASSUMPTION	WHERE	NOTE:
WS	Home Codes will be stored in EBSHR vs. PeopleSoft	Oracle HR - DFF	
WS	An alert or Notification will be sent to the Employee if a change is made to a rejected timecard		
TC / OTLR	An employee can map to 5 Home Codes		
TC	Note to Approver / Reviewer is free form field that is at the 'week' level and is displayed at the header of the timecard		
TC	Timecard will Auto-Populate the Holidays via the Holiday Calendar. The default data will be modifiable.		

Functional Overview

Process Overview

Visio diagram that depicts the data flow from source to destination. Does not identify specific modules, platforms, etc, just the steps to move the data

Form/Report/Interface Description

Fermilab Exempt Custom Timecard – Daily Entry in Hours – TC Calculates Units

[Home](#) [Logout](#) [Preferences](#) **Time**

Time Entry | Timecard Search | Create Timecard

Time Entry: MCKENNA, CHERYL E, 10100N

Save and Return to Timecard Home

Cancel Save for Later Continue to Review

Accrual Balance
As of: September 18, 2006
Vacation Balance 30 days
Floating Holiday Balance 1 day

Default Home Task(s):

Project	Task	%
10	10.1.2	50%
11	11.1.3	50%

Period September 18, 2006 – September 24, 2006

Note to Approver / Reviewer:

Payroll Details

Hours Type	Details	Monday September 18 2006	Tuesday September 19 2006	Wednesday September 20 2006	Thursday September 21 2006	Friday September 22 2006	Saturday September 23 2006	Sunday September 24 2006	Total	Delete

Add Another Row

Effort Details

Project	Task	Activity	Description	Monday September 18 2006	Tuesday September 19 2006	Wednesday September 20 2006	Thursday September 21 2006	Friday September 22 2006	Saturday September 23 2006	Sunday September 24 2006	Total Hr's	Units	Del
Total Home Task Allocation													
TOTAL													

Calculate Hrs to Units Add Another Row

Cancel Save for Later Continue to Review

Save and Return to Timecard Home

This is a legal document. Note: The charge code data on this time sheet is subject to revision by completion of an effort report reflecting (on an annual basis) the actual effort distribution for the time worked during this time period.

[Time](#) | [Preferences](#) | [Close Window](#)
[Privacy Statement](#)

Copyright 2000-2005 Oracle Corporation. All rights reserved.

Accrual Balance**As of: September 18, 2006****Vacation Balance****30 days****Floating Holiday Balance****1 day****A****Default Home Task(s):****Project****Task****%****B****10****10.1.2****50%****11****11.1.3****50%****CUSTOMIZATION A– Display ‘Accrual Balance’**

CUSTOMIZATION MAINTAINED IN	LABEL	DISPLAY DATA	MAP FROM	STORE IT _____
TC	Accrual Balance	- none-	NA	
WS (FF)	As of:	Month Date, Year	Sunday prior to the update date TBD	
WS (FF)	Vacation Balance	Number (follow w/ label ‘ days ’)	PS Interface	
WS (FF)	Sick Balance	NO DISPLAY	PS Interface	
WS (FF)	Floating Holiday Balance	Number (follow w/ label ‘ days ’)	PS Interface	

NOTE:

- We will be receiving the ‘Sick’ accrual balance ... It will be validated against but will not be displayed.

-PS will send an accrual balance of ‘0’ for Vacation during an employee’s initial probation period.

CUSTOMIZATION B– Display ‘Labor Distribution’

CUSTOMIZATION MAINTAINED IN	LABEL	DISPLAY DATA	MAP FROM	STORE IT _____
	Default Home Task	- none-	NA	
	Project	Project Number	Oracle HR Employment Record	DFF
	Task	Task Number	Oracle HR Employment Record	DFF
	%	% allocated	Oracle HR Employment Record	DFF

CUSTOMIZATION C– Display of Period Drop Down and Comments blockPeriod **C****Note to Approver / Reviewer:**

-Renamed ‘Comments’ label for the free form data entry box to ‘Note to Approver / Reviewer’. This comment box will be displayed to the Approver / Reviewer once the timecard is submitted. This box is at the ‘week level’

CUSTOMIZATION MAINTAINED IN	LABEL	DISPLAY DATA	MAP FROM	STORE IT _____
	Period	No Drop Down should be made available		
	Note to Approver / Reviewer	Free From Field	NA	

CUSTOMIZATION D – Payroll Details

Payroll Details		Earnings / Absence Codes								Total	Delete
Hours Type	Details	Monday September 18 2006	Tuesday September 19 2006	Wednesday September 20 2006	Thursday September 21 2006	Friday September 22 2006	Saturday September 23 2006	Sunday September 24 2006			
<input type="text"/>	<input type="text"/>	Units	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	
D										Add Another Row	

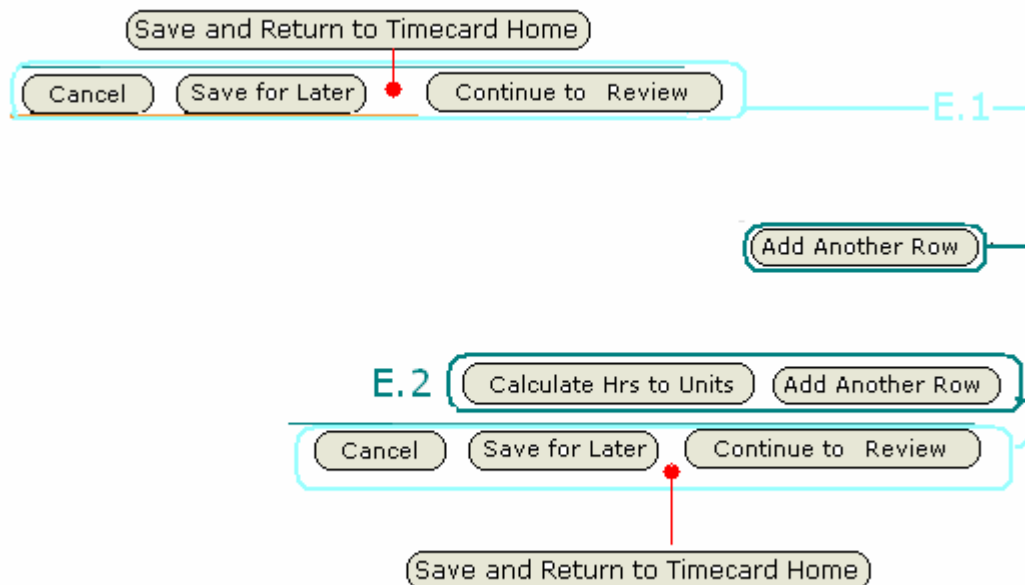
-Timecard will display Monday through Sunday

-Saturday/Sunday will not be editable

--Timecard will use the delete functionality (label renamed to 'Clear') to clear entries made in the start and stop fields

CUSTOMIZATION MAINTAINED IN	LABEL	DISPLAY DATA	MAP FROM	STORE IT _____
WS	Hours Type	Drop Down of Absence Elements	Drop down will default from employees assigned Preference Tree	
WS	Details	Drop Down of family members that correspond w/ DFS. No other lists have been identified	The drop down will populate with the appropriate choices	
	Units	Create a Pull down to only allow the choice of 4 or 8 or 5 or 10 hours – WF Payroll	NA	
	Delete	Trash Can icon	NA	
TC	TotalL	Calculated field based entries made Monday through Friday		

CUSTOMIZATION E.1 and E.2 – Buttons



Cancel – Close form take user back to 1st search page (do not close form w/out a warning that changes have not been saved .. do you want to .. yes/no)

Save for Later – Save/Store data entered. User will NOT be automatically linked to a different screen

'Save and Return to Timecard Home' - This button will navigate the employee to the 'Start / Home' screen (NOT the navigator)

Continue to Review – Save/Store data and continue to confirmation/submittal page

Calculate Hrs to Units – This button will calculate (weekly summary) using the following formula. The 'Total Units Available' is equal to 40 - # of units entered in the Payroll Details.

$$\frac{\text{Number of Hours Spent on a Task}}{\text{Total Hours Worked that Week}} \times \text{Total Units Available}$$

Add Another Row – Add a addition row for data entry

CUSTOMIZATION F – Static text

This is a legal document. Note: The charge code data on this time sheet is subject to revision by completion of an effort report reflecting (on an annual basis) the actual effort distribution for the time worked during this time period.

F

Include legal disclaimer statement: **Statement TBD**

CUSTOMIZATION G – Effort Details

Effort Details													
G				Monday September 18 2006	Tuesday September 19 2006	Wednesday September 20 2006	Thursday September 21 2006	Friday September 22 2006	Saturday September 23 2006	Sunday September 24 2006			
Project	Task	Activity	Description	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total Hr's	Units	Del
Total Home Task Allocation				<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
TOTAL													

Effort Details – DATA FIELDS

CUSTOMIZATION MAINTAINED IN	LABEL	DISPLAY DATA	MAP FROM	
	Total Home Task Allocation	Editable Fields Mon – Sun all numbers should round to the tenth		
	Project	LOV	DROP DOWN will default from employees assigned Preference Tree – PA original source	
	Task	LOV (view should be of task # and first X characters of the description)	DROP DOWN will default from employees assigned Preference Tree – PA original source Will the pulldown view include the task description ?	
	Activity	LOV	Hyperlink - DROP DOWN will default from employees assigned Preference Tree – Name	
	Description		Default from Alternate Names Description or Task Description (Task description will use the long task description in PA)	
Project / Task / Activity fields should all be available until the initial field is chosen. (If Project is chosen / Activity should not be available)				
	Total Hr's	Calculation off all hours entered Monday – Sunday by row		
	Total Units	Calculation by row using the following formula. $\frac{\text{Number of Hours Spent on a Task}}{\text{Total Hours Worked that Week}} \times \text{Total Units Available}$ The 'Total Units Available' is equal to 40 - # of units entered in the Payroll Details. Must round to the tenth		
	Daily Total	Calculation of all hours entered in a day Calculation of all hours entered in a week Calculation of Units calculated in a week - (cannot exceed 40, must round to the tenth)		

	Delete Row(s)	This button will delete the details for the rows chosen.		
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Example of a completed timecard

[Home](#)
[Logout](#)
[Preferences](#)
Time

[Time Entry](#)
[Timecard Search](#)
[Create Timecard](#)

Time Entry: MCKENNA, CHERYL E, 10100N

Cancel
Save for Later
Continue to Review

Accrual Balance
As of: September 18, 2006
Vacation Balance 30 days
Floating Holiday Balance 1 day

Default Home Task(s):

Project	Task	%
10	10.1.2	50%
11	11.1.3	50%

Period September 18, 2006 - September 24, 2006 ⓘ

Note to Approver / Reviewer:

Payroll Details
Earnings / Absence Codes

Hours Type	Details	Monday September 18 2006	Tuesday September 19 2006	Wednesday September 20 2006	Thursday September 21 2006	Friday September 22 2006	Saturday September 23 2006	Sunday September 24 2006	Total	Delete
Sick		Units 4								

Add Another Row

Effort Details

Project	Task	Activity	Description	Monday September 18 2006	Tuesday September 19 2006	Wednesday September 20 2006	Thursday September 21 2006	Friday September 22 2006	Saturday September 23 2006	Sunday September 24 2006	Total Hr's	Units	Del
Total Home Task Allocation				5	5	8	8		3	3	32	23.0	
50	50.1.5		Drop Stuff	1		1		1			3	2.2	
		Excavate	Excavate	5	5			5			15	10.8	
				11	10	9	8	6	3	3	50	36	

Calculate Hrs to Units
Add Another Row

Cancel
Save for Later
Continue to Review

Validation Rules and Warnings

Rules that will be specifically addressed by this specification

Navigation

If user interaction is required – may only be needed for forms/screens

Performance and Volume Expectations

Number of expected transactions and response time requirements

Unit Test Cases

Test cases that will validate of the requirements have been satisfied. The individual unit test cases need to be listed within the table below. The Comment column should be utilized as a status of the test case (i.e. This test failed and the test is being re-executed after a code change...). The Developer and the Analyst should put their initials in the appropriate column once they have verified that the test has been successful

Test Case	Comment	Developer Tested	Analyst Tested

User Procedures

Outline of the user procedures that will need to be created/updated because of this customization.

Technical Overview

File/Table/Object Details

Object Name	Object Type	Purpose
fnal_custom_home_codes_pkg	Database Package	This is a custom package. The gethomecodes procedure of this package will be used to populate the Home Project/Tasks details in the Section B.
per_accrual_calc_functions	Database Package	The get_net_accrual procedure of this package will be used to get the Accrual Balances.
hxc_deposit_wrapper_utilities	Database Package	The timecard_hours_type_list function of this package will be used to fill the Hours Type field on the Payroll Details section.
hxc_timecard_utilities	Database Package	The get_time_periods procedure of this package will be used to populate the Periods field in the Section C.
hxc_timecard	Database Package	The create_timecard procedure of this package will be used to store the timecard details into the Self Service tables.
hxc_self_service_timecard	Database Package	The fetch_blocks_and_attributes procedure of this package will be used to retrieve the existing timecard data from the database and store it into the Java view objects.
hxc_lock_api	Database Package	The release_lock procedure of this package will be used to release the locks from the hxc_locks table.
fnal_otl_custom_pkg	Database Package	This is a custom package. The getAltNamesWhere procedure will be used to filter the rows for Project and Task fields.

Program Overview

Oracle Applications Framework (OA Framework) is the Oracle Applications development and deployment platform for HTML based business applications. The Exempt Timecard Daily Entry in Hours page will be designed and developed using Oracle 9i JDeveloper with OA Extension.

The Exempt Timecard Daily entry in Hours screen will be invoked from the search screen. This screen can be used for entering a new timecard or modifying an existing timecard. This screen can be used to report the time against the Payroll elements (Sick, Jury Duty etc) or Effort details (Projects/Tasks) or both. The payroll elements data and effort details will be stored for each day as per the user input.

The Section A and Section B data is static i.e., display only. The Section A has the Accrual balance information which will be extracted from the seeded database package. The Section B has Home Projects/Tasks allocation information which will be extracted from the Employee Assignments DFF.

The Section C contains the Period dropdown which has the list of the Timecard Periods entered, empty and archived. The timecard periods will be extracted from the seeded database package.

The Hours Type in the Payroll Details Section will be populated from the Alternate Names assigned to the Employee/Group. The employee should select the units from the dropdown box. This section has "Add Another Row" and "Recalculate" buttons. By clicking the Add Another Row, a new empty row will be created for entry. The Recalculate button is used to calculate the Units entered for the payroll details. The "Delete (Trash can)" icon is used to delete the selected payroll detail row.

The employee can either report time to a project/task or Activity (which is tied back to a project and task). In the Effort Details Section, the Project, Task and Activity values will be extracted from the Alternate Names assigned to the employee/group. This section has "Add Another Row" and "Calculate Hrs to Units" buttons. The "Add Another Row" button is used to add an empty row in the effort details section. The "Calculate Hrs to Units" button calculates the total hours entered and also converts the hours to units in the Effort Details section. The "Delete (Trash can)" icon is used to delete the selected effort detail row.

The page has three buttons "Cancel", "Save for Later" and "Continue to Review". When the user clicks the "Cancel" button, the control will be taken back to "Search page". When the user clicks the "Save for Later" button, the data entered will be stored into the Time Store. When the user clicks the "Continue to Review", the control will be changed to Review page.

Process Flow Diagram

Detailed Visio that identifies every step/module in the process

Program Modules

Name	Type	Purpose	Location	Execution Method
FNALExHoDyTimeCardPG.xml	XML	This file will contain the Exempt Timecard Daily Entry in Hours Page definition in XML format.	/fnal/oracle/apps/hxc/otl/webui	This page will be invoked from the Timecard Search screen.
ProjectLOVRN.xml	XML	This file contains the Project LOV region definition in XML format. This region can be shared across different pages.	/fnal/oracle/apps/hxc/otl/lov/webui	This region will be invoked when the user clicks on the Flash Light Icon on the project field.
TaskLOVRN.xml	XML	This file contains the Task LOV	/fnal/oracle/apps/hxc/otl/lov/webui	This region will be invoked when the user clicks on the Flash Light Icon on the task field.

		region definition in XML format. This region can be shared across different pages.		
FNALExHoDyTimeCardCO.java	Java	Java Controller file associated with the Exempt Timecard Daily Entry in Hours Page. This file will have the java code which controls the UI, responds to the user actions and directs the flow on the page.	/fnal/oracle/apps/hxc/otl/webui	The controller code will be executed at the page rendering time.
ProjectLOVCO.java	Java	Java Controller file associated with the Project LOV region.	/fnal/oracle/apps/hxc/otl/lov/webui	The controller code will be executed at the project region rendering time.
TaskLOVCO.java	Java	Java Controller file associated with the Task LOV region.	/fnal/oracle/apps/hxc/otl/lov/webui	The controller code will be executed at the task region rendering time.
TBBExHoDyVO.xml	XML	The Timecard Building Blocks View definition in XML format.	/fnal/oracle/apps/hxc/otl/server	In the controller code any reference to this view object, the query will be retrieved from the xml definition.
TimeAttributesExHoDyVO.xml	XML	The	/fnal/oracle/apps/hxc/otl/server	In the controller code any

		Timecard Attributes View definition in XML format.		reference to this view object, the query will be retrieved from the xml definition.
TimecardPeriodVO.xml	XML	A non-query based view object for the timecard periods definition in XML format.	/fnal/oracle/apps/hxc/otl/server	This view is independent of the query and this view will be referred in FNALExHoDyTimecardCO.java to fill the Periods field.
HoursTypeVO.xml	XML	Hours Type View definition in XML format.	/fnal/oracle/apps/hxc/otl/server	This view will be referred in FNALExHoDyTimecardCO.java to populate the Hours Type Field in the Payroll Details section.

Prerequisites

This screen will be invoked from the Timecard Search Page.

Process Details

Development Estimates

The development and unit test will take minimum 160 hours.