



**TimeControl®**

# TimeControl Rates Tutorial

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# Introduction

One of the most powerful aspect of TimeControl is the remarkably flexible method by which rates are applied to timesheet hours. As a multi-purpose timesheet, TimeControl's rates may have to serve numerous purposes. In other timesheet systems, the designers typically think of rates only for the purpose or system for which the timesheet is designed. It is not uncommon in some systems to find limitations on rates or on how many costs can be calculated or on how many rate codes an employee might have.

TimeControl's flexibility allows it to be used for multiple purposes at once. In a scenario where the timesheet data is being used to link to more than one system, what the rates will do in that timesheet becomes a more important aspect of the design.

As you'll see in the coming pages, the TimeControl Rates environment is configured with many options and touches several aspects of the TimeControl timesheet system.

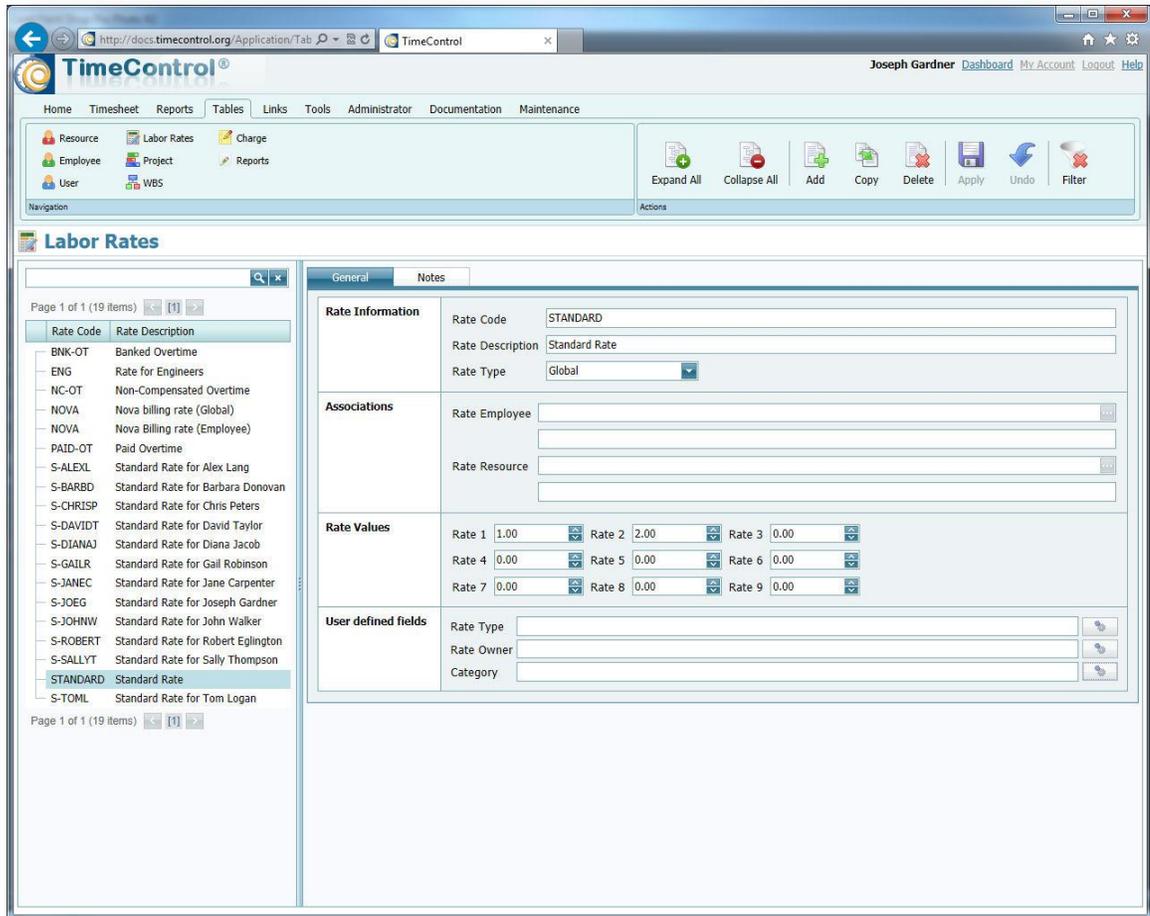
In this tutorial we'll look at the functionality and options for each TimeControl area of configuration or functionality and then go deeper to talk about some of these functions in context of different use-case scenarios.

# The Rates Table

## Rates Table Display

The story about TimeControl rates starts with the Rates Table. This is a rather simple table where the only required fields are the Code, Description and Rate Type. Rates are displayed in a list on the left hand side and the details of the selected record are displayed on the right.

Rates can be entered manually one at a time or imported in volume using the Links module.



There is no limit to the number of rate codes that can be entered and no limit to the number or rates an individual employee has access to. The only limits are those you create yourself using filtering.

The Rates detail view allows notes to be added for each rate record in a separate tab and, in the main tab, data is divided into four categories:

## Rate Information

## Rate Code:

Unlike other TimeControl tables, the Code does not need to be unique here. We can have many rates that have the code name "Standard". TimeControl adds several fields together to ensure a unique selectable value for the employee's timesheet. For Global Rates, TimeControl uses the Rate Code and Rate Type (Global) to be unique. For Resource-based rates, TimeControl combines the Rate Code, the Rate Type (Resource) and the Resource Code to be unique. For Employee-based rates, TimeControl uses the Rate Code, the Rate Type (Employee) and the Employee Code to be unique.

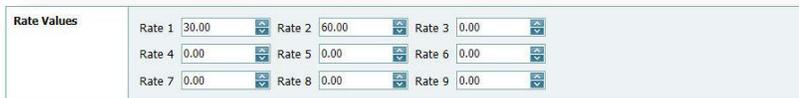
If in the timesheet selection TimeControl finds more than one rate code for the employee with the same code (e.g. A Global and a Resource) then it will only show the rate code which is most specific to that employee. For multiple rate codes with the same Rate code It will give preference to an employee-based Rate Code then to a resource-based Rate Code then finally to a global-based Rate Code.

## Associations

In the Associations area, TimeControl will activate the Employee Code/Description if the Rate Type is "Employee" or the Resource Code/Description if the Rate Type is "Resource".

## Multiple Rate Values

By default, TimeControl supports 9 values for each Rate Code. New users to TimeControl will sometimes confuse the Rate Value with a Rate Code. For each Code, you can enter 9 definitions of what that time should be priced at. The Rate Value is defined in hours.



Rate Values					
Rate 1	30.00	Rate 2	60.00	Rate 3	0.00
Rate 4	0.00	Rate 5	0.00	Rate 6	0.00
Rate 7	0.00	Rate 8	0.00	Rate 9	0.00

Some organizations will assign one of these values to the internal cost and another value to the invoice price. Then, each time a timesheet is posted, it will multiply each value times the number of hours (or fraction) and store the result in a cost field associated to the rate value. The Posted Detail table which contains the timesheet data after it's posted will have a Rate Value 1 that matches a Cost Value 1 and a Rate Value 2 matched with a Cost Value 2.

This simple concept results in a powerful combination of how costs are managed in TimeControl. An organization can simultaneously price the same hour of work in multiple ways. There could be an internal cost of that hour that would match payroll, an external price for that hour that would appear on invoicing and perhaps even an average value project cost that could be used to compare costs in a project management system.

With so many values available, an organization can use other values for other purposes. A separate currency could appear in one value so that an hour of work could appear in a local currency value and have an associated base-currency value. In a single TimeControl report, both US dollars and Euros could appear. Using calculated fields in the TimeControl Report Designer, you could show the profit by comparing the Cost Values of the Internal Cost with the Cost Values of the Invoice Price.

## User Defined Fields

Finally, as is the case in all TimeControl Tables, user defined fields can be used to further categorize the rate code. You'll see a specific example later in this paper on how to use user defined fields to make project-specific rates but rates can be categorized by almost anything and user defined fields are excellent for that.

User defined fields	Rate Type	<input type="text"/>	
	Rate Owner	<input type="text"/>	
	Category	<input type="text"/>	

## Rate Type: Global

The first type of rate that can be created is a Global rate. A Global rate will be available to all employees unless it is hidden by a Rate Filter in the Employee Table.

The screenshot shows the TimeControl web application interface. The main content area is titled "Labor Rates" and contains a list of rates on the left and a configuration form on the right. The configuration form has several sections:

- Rate Information:** Rate Code: STANDARD, Rate Description: Standard Rate, Rate Type: Global (selected).
- Associations:** Rate Employee, Rate Resource (both fields are greyed out).
- Rate Values:** Rate 1: 1.00, Rate 2: 2.00, Rate 3: 0.00, Rate 4: 0.00, Rate 5: 0.00, Rate 6: 0.00, Rate 7: 0.00, Rate 8: 0.00, Rate 9: 0.00.
- User defined fields:** Rate Type, Rate Owner, Category (all fields are greyed out).

When we select a Global Rate Type, the options in Associations are greyed out and unselectable.

## Rate Type: Resource

You can also define rates at the Resource Level. If a Rate Type of Resource is selected, the Association must be entered to select which Resource this Rate is linked to. If on the timesheet, TimeControl detects both a Global Rate Code and a Resource-specific Rate Code which are identical, it will select the Resource Rate Code as that is more specific to this employee.

The screenshot displays the TimeControl web application interface. The browser address bar shows <http://docs.timecontrol.org/Application/Tab>. The user is logged in as Joseph Gardner. The main navigation menu includes Home, Timesheet, Reports, Tables, Links, Tools, Administrator, Documentation, and Maintenance. A secondary navigation bar contains icons for Resource, Labor Rates, Charge, Employee, Project, Reports, User, and WBS. Action buttons include Expand All, Collapse All, Add, Copy, Delete, Apply, Undo, and Filter.

The **Labor Rates** section is active, showing a list of 19 items on the left. The selected item is **ENG - Rate for Engineers**. The right-hand pane displays the configuration details for this rate:

- Rate Information:** Rate Code: ENG; Rate Description: Rate for Engineers; Rate Type: Resource.
- Associations:** Rate Employee: (empty); Rate Resource: ENGINEER (Engineering).
- Rate Values:** Rate 1: 40.00; Rate 2: 95.00; Rate 3: 0.00; Rate 4: 0.00; Rate 5: 0.00; Rate 6: 0.00; Rate 7: 0.00; Rate 8: 0.00; Rate 9: 0.00.
- User defined fields:** Rate Type, Rate Owner, and Category (all empty).

## Rate Type: Employee

You can select an Employee Rate Code by choosing a Rate Type of Employee in which case you must complete the Employee selection in the Associations area. If on the timesheet TimeControl detects either a Global or Resource Rate code with the same Code name, it will show the Employee-based Rate code as that is more specific to this employee.

The screenshot displays the TimeControl web application interface. The browser address bar shows the URL <http://docs.timecontrol.org/Application/Tab>. The user is logged in as Joseph Gardner. The main navigation menu includes Home, Timesheet, Reports, Tables, Links, Tools, Administrator, Documentation, and Maintenance. The left sidebar contains icons for Resource, Employee, User, Labor Rates, Project, WBS, Charge, and Reports. The main content area is titled "Labor Rates" and shows a list of rate codes on the left and a detailed configuration form on the right.

**Rate Code List:**

Rate Code	Rate Description
BNK-OT	Banked Overtime
ENG	Rate for Engineers
NC-OT	Non-Compensated Overtime
NOVA	Nova billing rate (Global)
NOVA	Nova Billing rate (Employee)
PAID-OT	Paid Overtime
S-ALEXL	Standard Rate for Alex Lang
S-BARBD	Standard Rate for Barbara Donovan
S-CHRISP	Standard Rate for Chris Peters
S-DAVIDT	Standard Rate for David Taylor
S-DIANAJ	Standard Rate for Diana Jacob
S-GAILR	Standard Rate for Gail Robinson
S-JANEC	Standard Rate for Jane Carpenter
S-JOEG	Standard Rate for Joseph Gardner
S-JOHNW	Standard Rate for John Walker
S-ROBERT	Standard Rate for Robert Eglington
S-SALLYT	Standard Rate for Sally Thompson
STANDARD	Standard Rate
S-TOML	Standard Rate for Tom Logan

**Rate Code Configuration Form (S-GAILR):**

**Rate Information:**

- Rate Code: S-GAILR
- Rate Description: Standard Rate for Gail Robinson
- Rate Type: Employee

**Associations:**

- Rate Employee: GAILR
- Rate Resource: Robinson, Gail

**Rate Values:**

Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rate 6	Rate 7	Rate 8	Rate 9
30.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**User defined fields:**

- Rate Type: [ ]
- Rate Owner: [ ]
- Category: [ ]

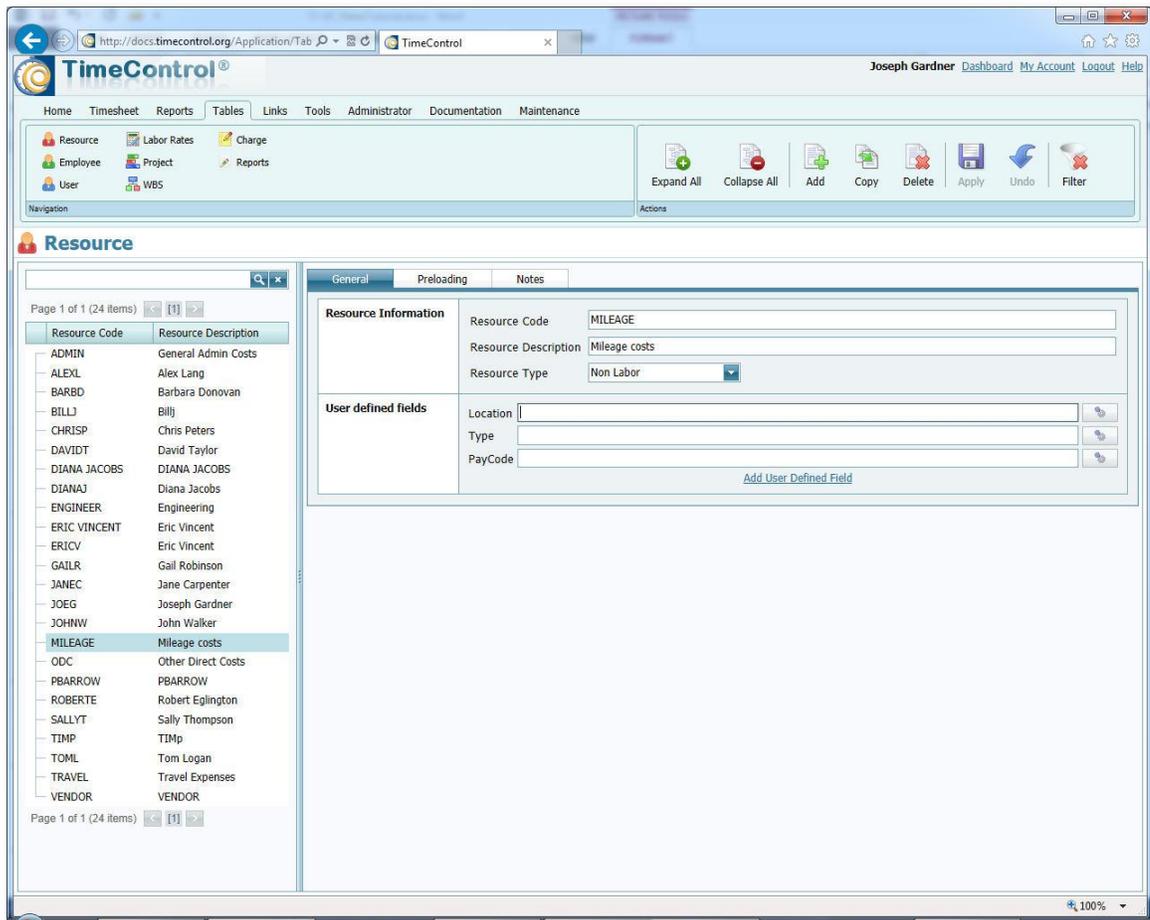
There is no limit to the number of rate codes that can be Employee specific. For example, it is not uncommon to have regular and overtime rates for each employee and each project. Then TimeControl would only show this employee's rate selections to them on the timesheet. If a filter further constrained this to show project-specific rates, an individual would only see two choices (regular and overtime) for each project line but in the background, TimeControl might be managing a table with thousands of Rate Codes in order to show only those two in that situation.

# Expense Rates associated in the timesheet

TimeControl can also associate rates to expense items. This will allow a predetermined value to populate the dialog in a timesheet expense item entry.

To do this we need to first set up a resource that will be referenced in an expense line item that is in a timesheet.

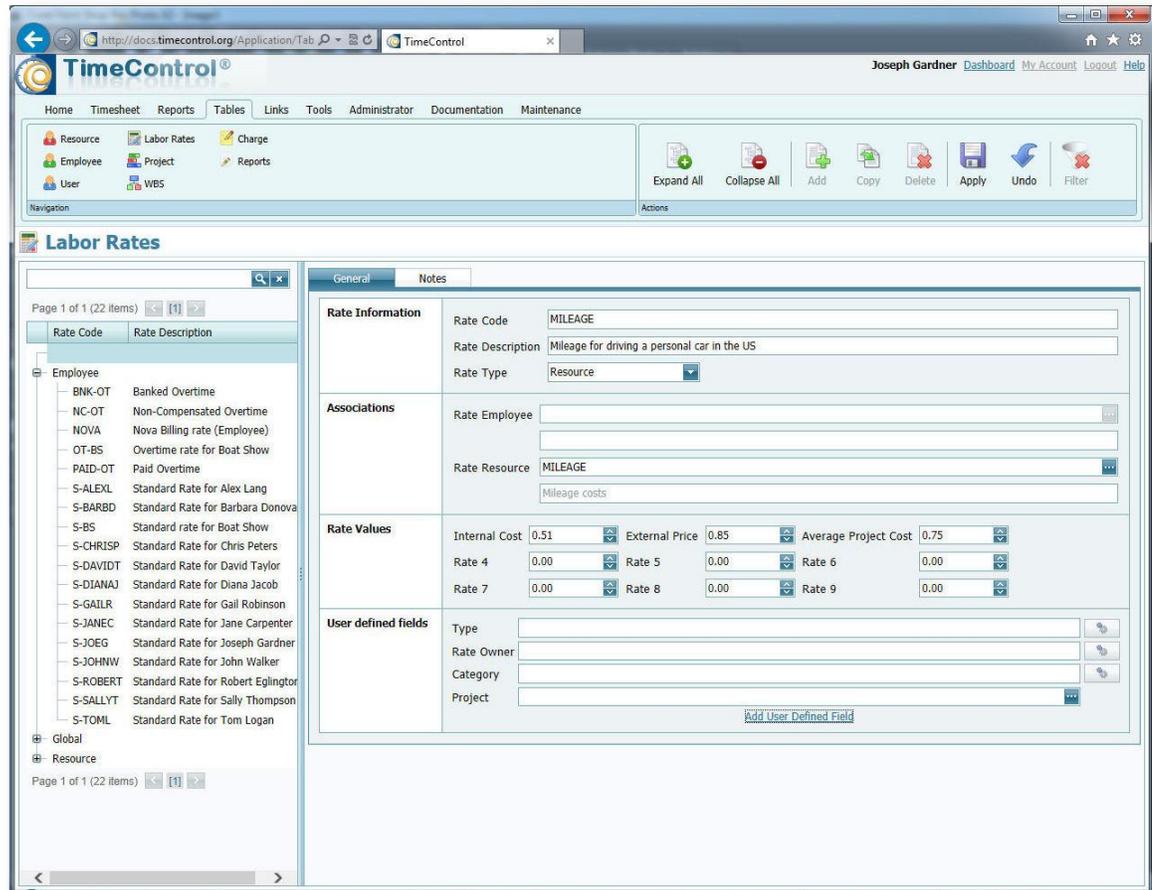
In this example we will add a resource for mileage. In the Resource Table we add the resource "MILEAGE" and declare it to be a "Non-Labor" type. TimeControl will display a list of Non-Labor resources when adding a resource entry.



Once the resource is present, we can now go to the Rate Table.

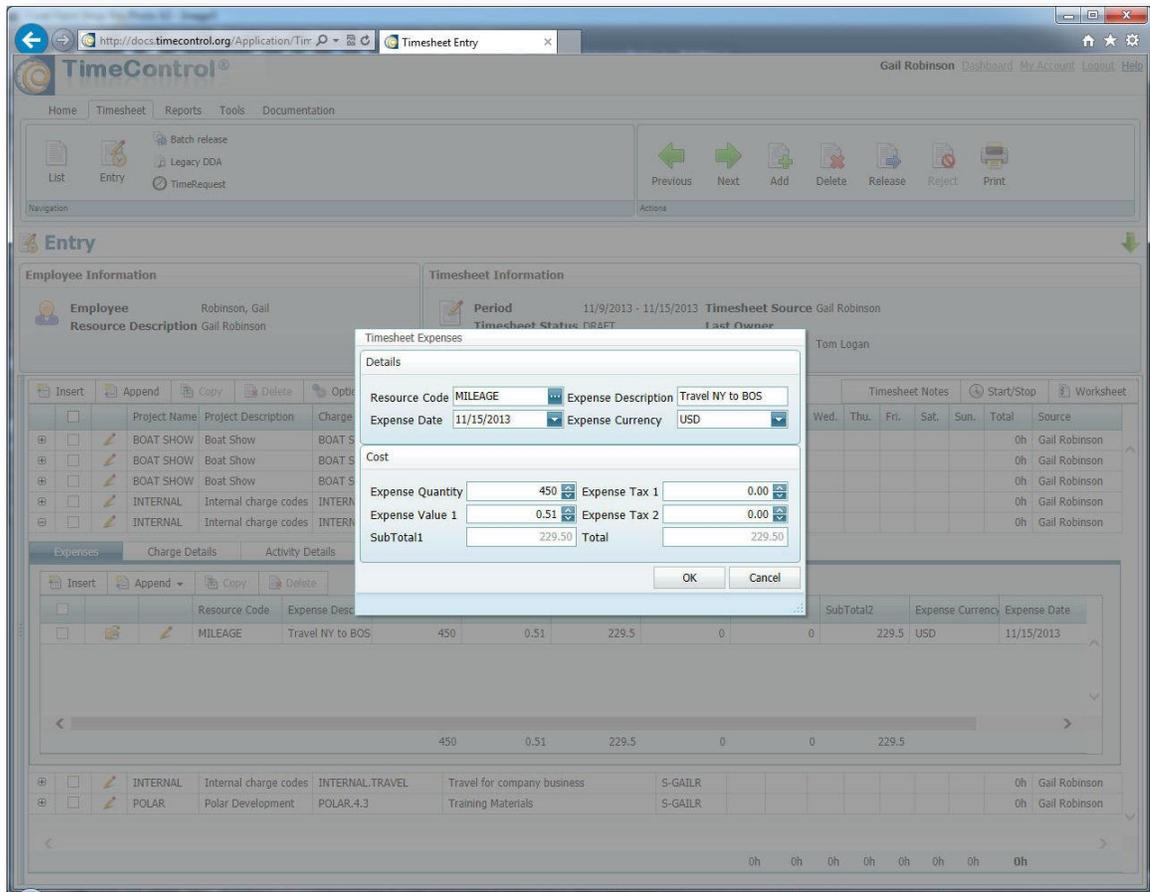
We will create a new rate and again call it "MILEAGE". We select "Resource" as the Rate Type. When we click in the Resource field, we will see a list of possible resources. We'll select the "MILEAGE" resource we just created.

In the Rate Values we'll add "\$0.51" for Internal Cost (Rate Value 1.



When we save this, it will now become available for expense entries as we'll see in the next screen.

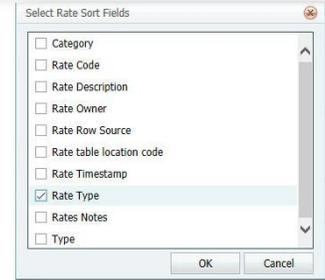
Now we go to a timesheet, add a line and click on the “+” button to expand the timesheet line to show Expenses. Add an expense entry either in the grid or, as we see below, by hovering over “Append” in the Expense grid to get the Expense dialog.



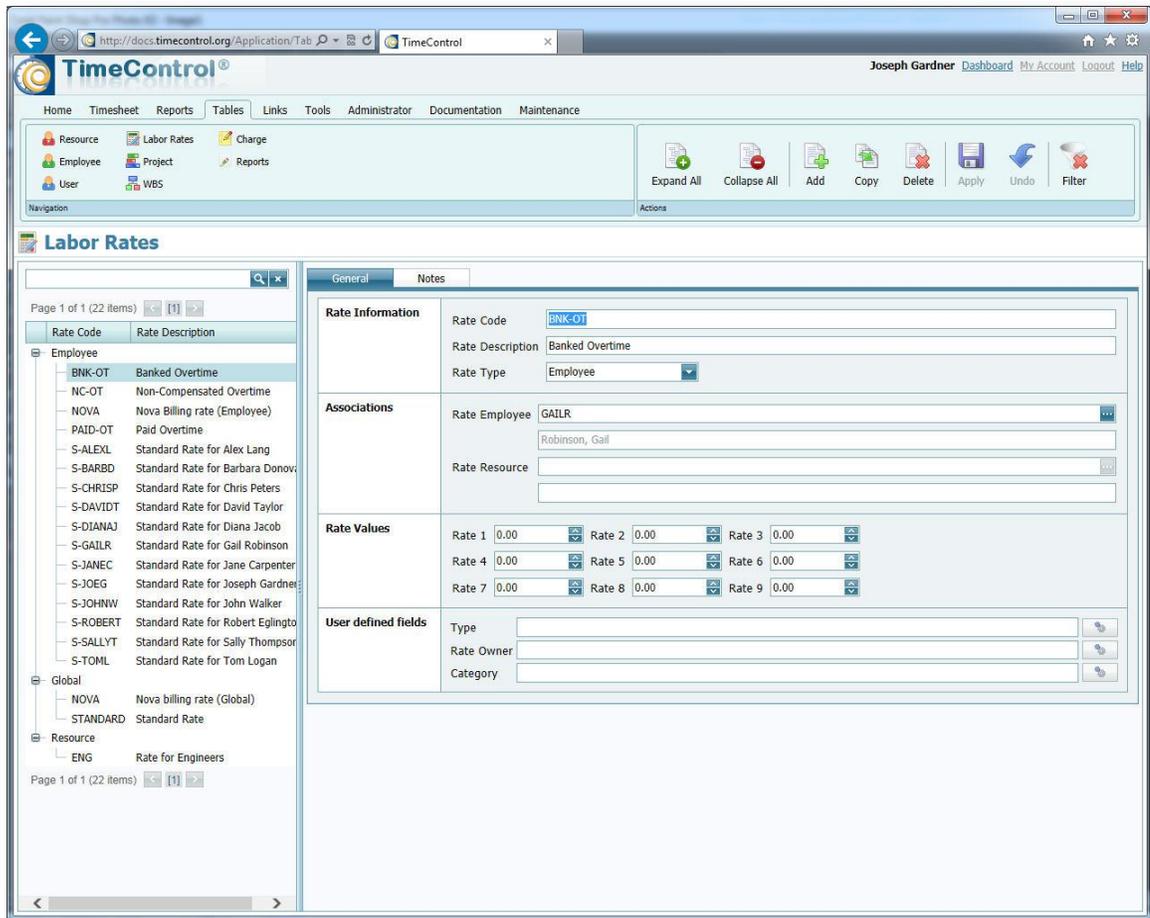
The user selects “MILEAGE” as their expense entry and then enters the quantity. When the quantity of 450 miles is entered, TimeControl automatically calculates this at \$0.51 per mile or \$229.50 as a Sub-Total. The user can then enter optional values for taxes and the grand total is calculated.

# Rate Hierarchy

In System Preferences, in the Tree View Fields selection, there is an option for how to display rate codes. You can select one or several fields in order and TimeControl will build a hierarchy with those fields each becoming a different level. If we select the Rate Type for example, the Rate Table view will change. If we now go back to the Rates Table we can see that the rates are now displaying in a hierarchy based on Rate type.

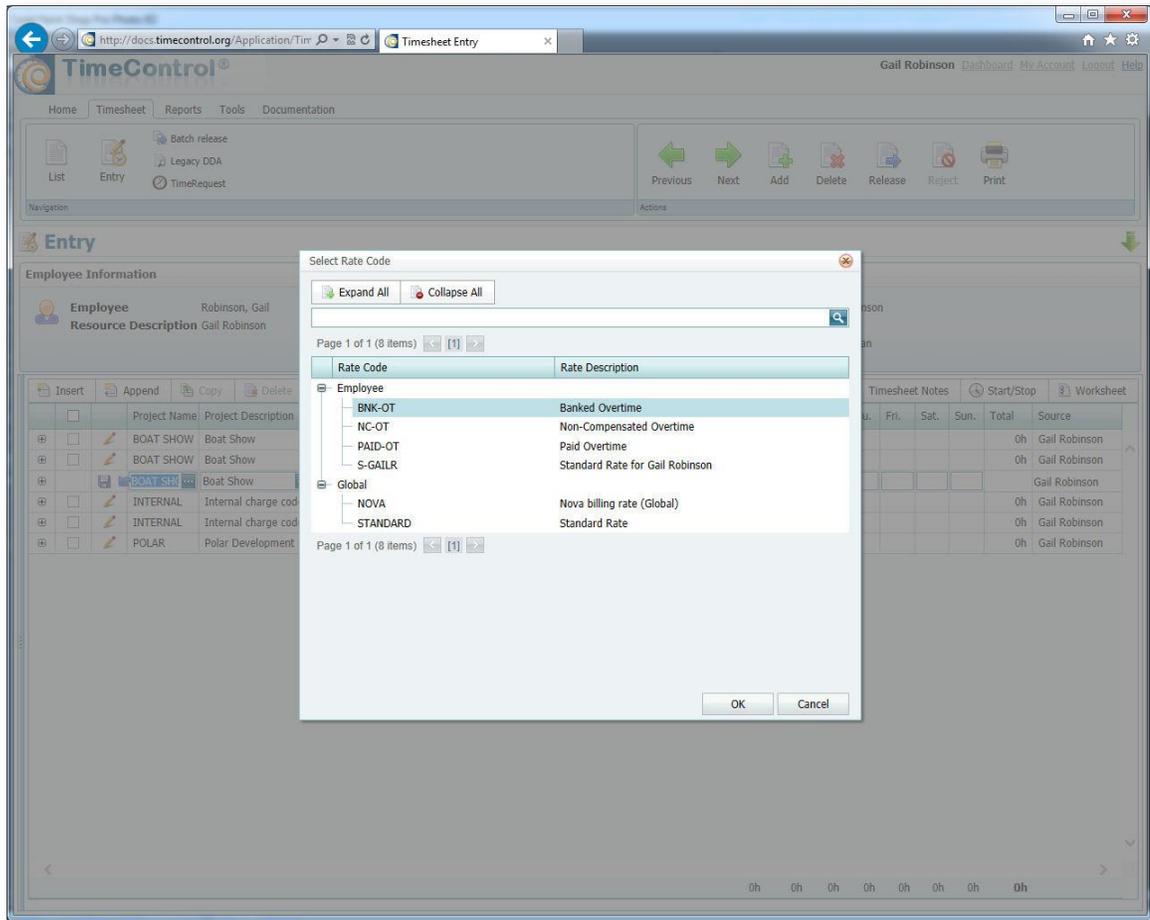


The hierarchy defined will appear anywhere rates are selected. In the screen below we can now see the hierarchy in the Rate Table. This same type of tree structure will be found also in the timesheet selection, the default rate selections and elsewhere.



If there is a filter that shows only some Rate Codes, the tree structure will appear only for those elements which have a Rate Code within them.

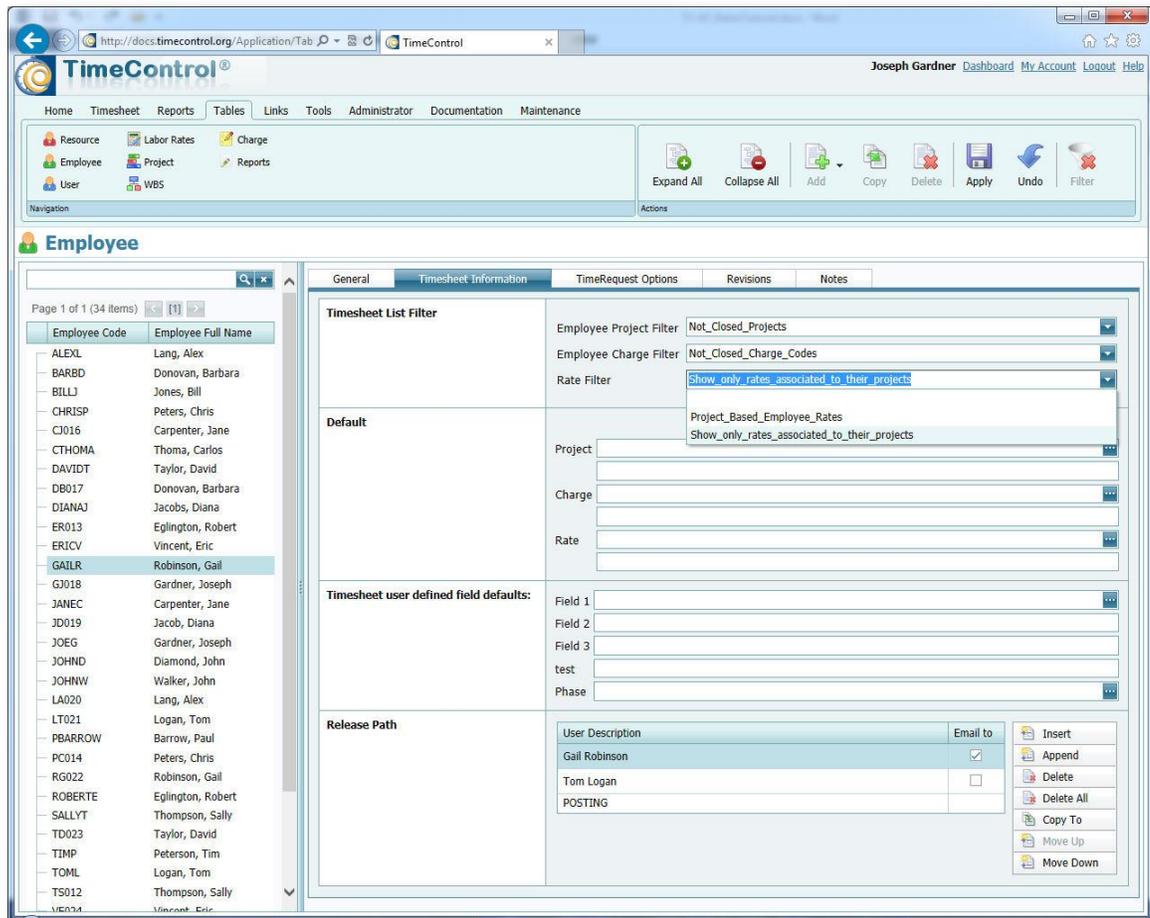
This is true also for anywhere else rates are displayed. Going to a user's timesheet and selecting the rate choices will show only their appropriate rate choices but will display them in the hierarchy defined in System Preferences.



# Rate Filters in the Employee Table

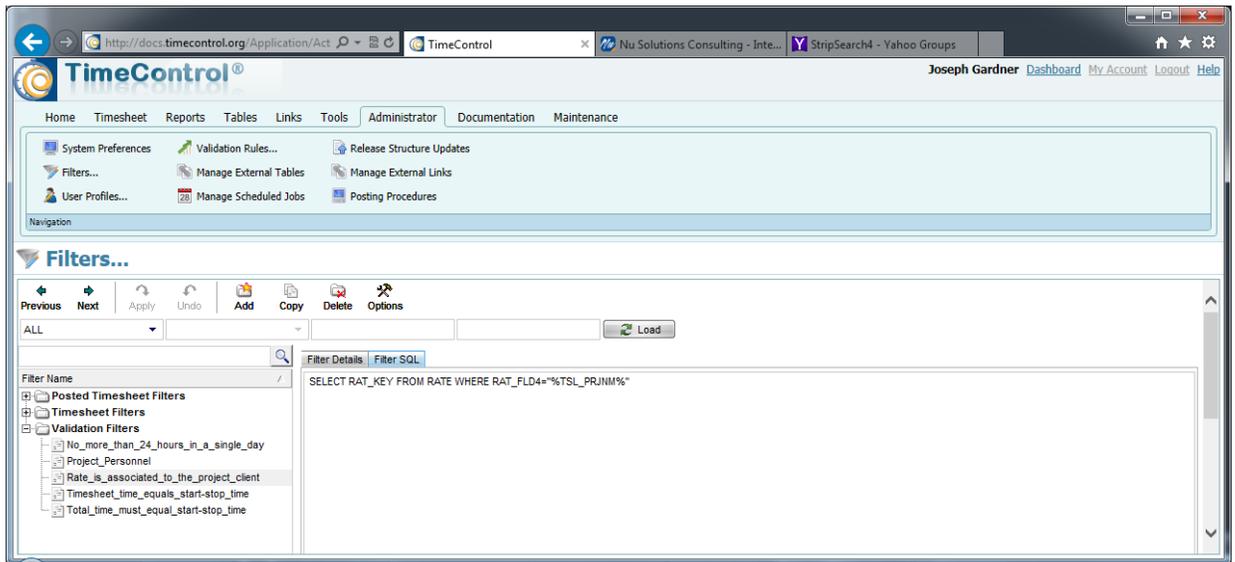
One powerful aspect of Rate management in TimeControl is to filter what Rate Codes will appear for a particular situation. You can filter rates by any dynamic selection you wish and have only those rates appear. For example, you might want to filter rates to show only the current year's rates and on the first of the year start showing only next year's rates. That enables escalated rate management. Or, you might have a situation where based on the client, project and role, different rates should be visible and that the employee must select only from those.

This is activated in the Employee Table view. As we can see here, for this employee, we are selecting a filter that says only rates associated to their project are shown.



Making such a filter is fairly straightforward in the TimeControl filter menu if you are familiar with TimeControl.

This particular example is in the following screen.



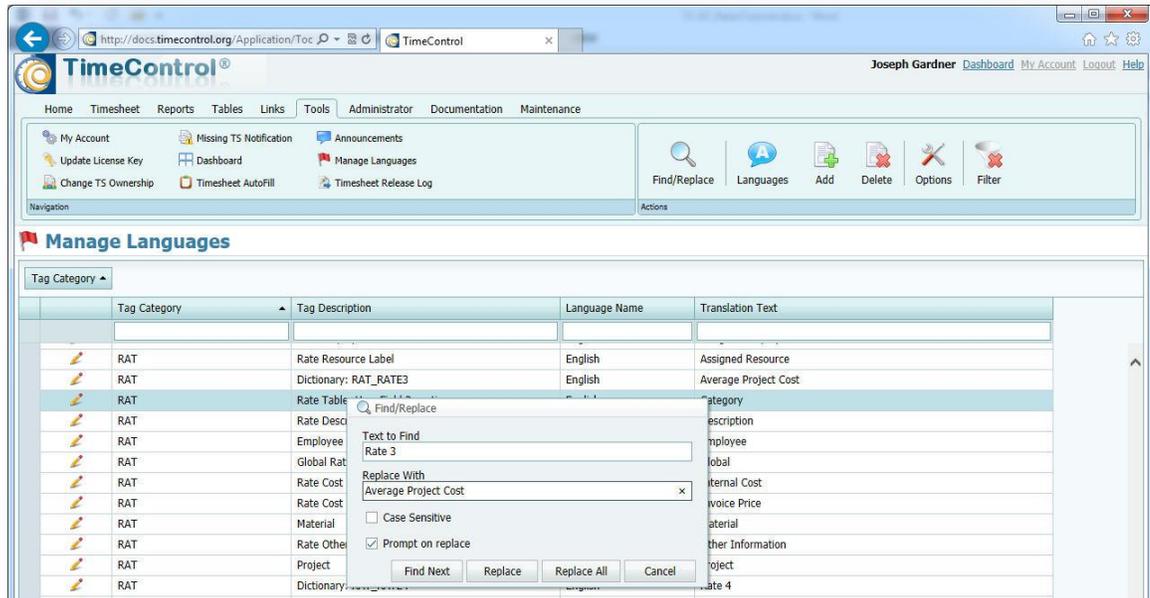
In this case we're using one of TimeControl's value macros for filters. The full expression is:

**SELECT RAT\_KEY FROM RATE WHERE RAT\_FLD4="%TSL\_PRJNM%"**

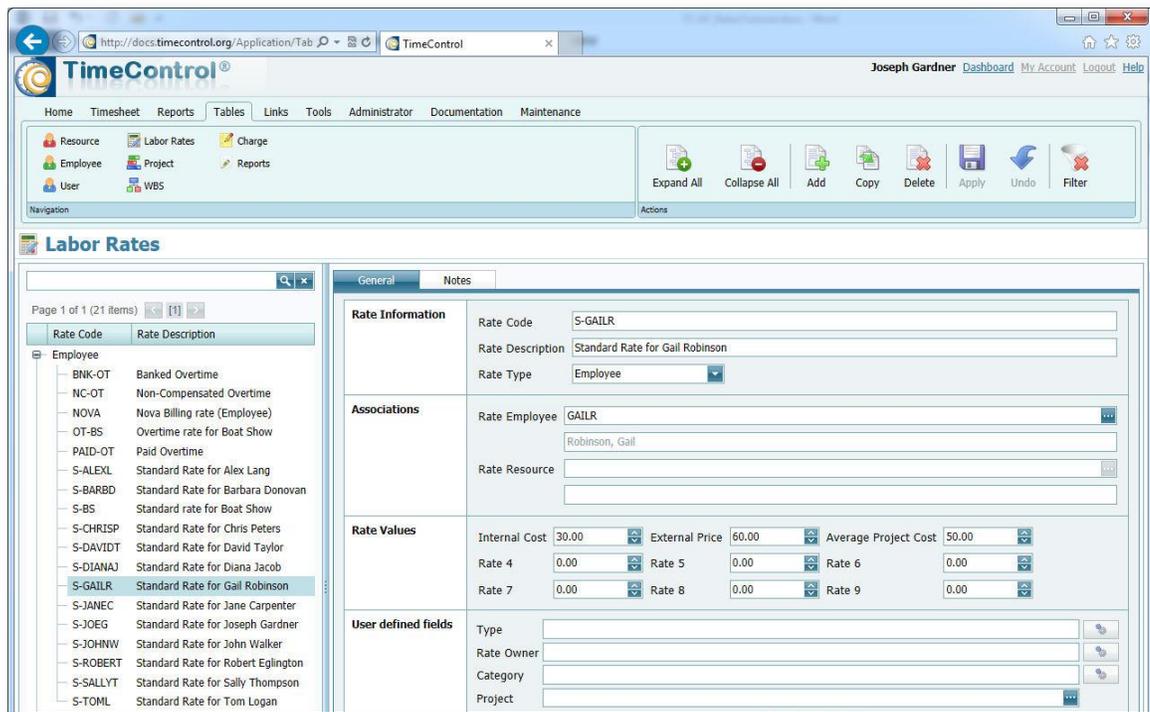
This expression says: Show only the rates where the value found in Rate Table User Defined Field #4 is equal to the project name of that timesheet line number (TSL\_PRJNM).

# Rate Labels in Manage Languages

TimeControl is a multi-language system but it also allows you to change the menu names, field names, messages and other terms in any of the existing languages. We can use this to make our Rates more clear. This next screen shows the Manage Languages function where we can find an existing term like “Rate 3” and change it to “Average Project Cost”

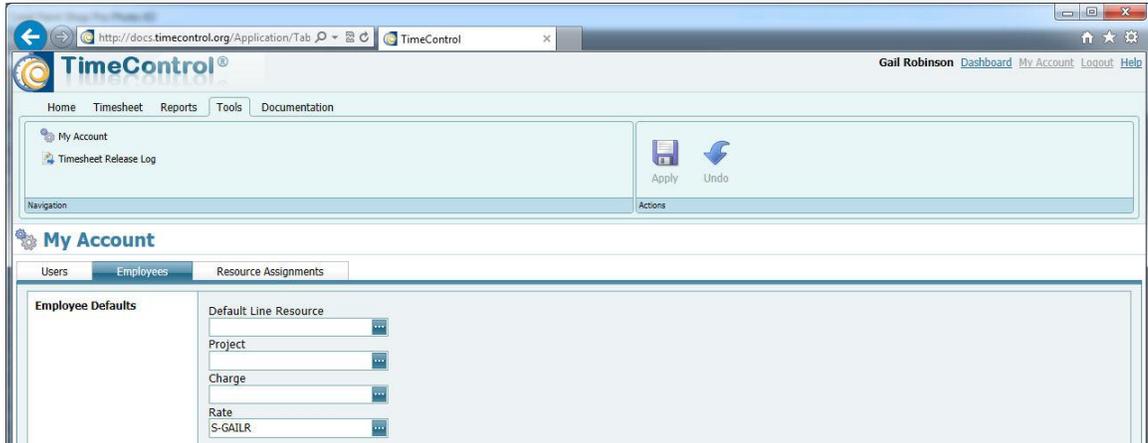


Back in the Rate Table, you can see that we now have Internal Cost, External Price and Average Project Cost replacing the labels “Rate 1”, “Rate 2” and “Rate 3”.

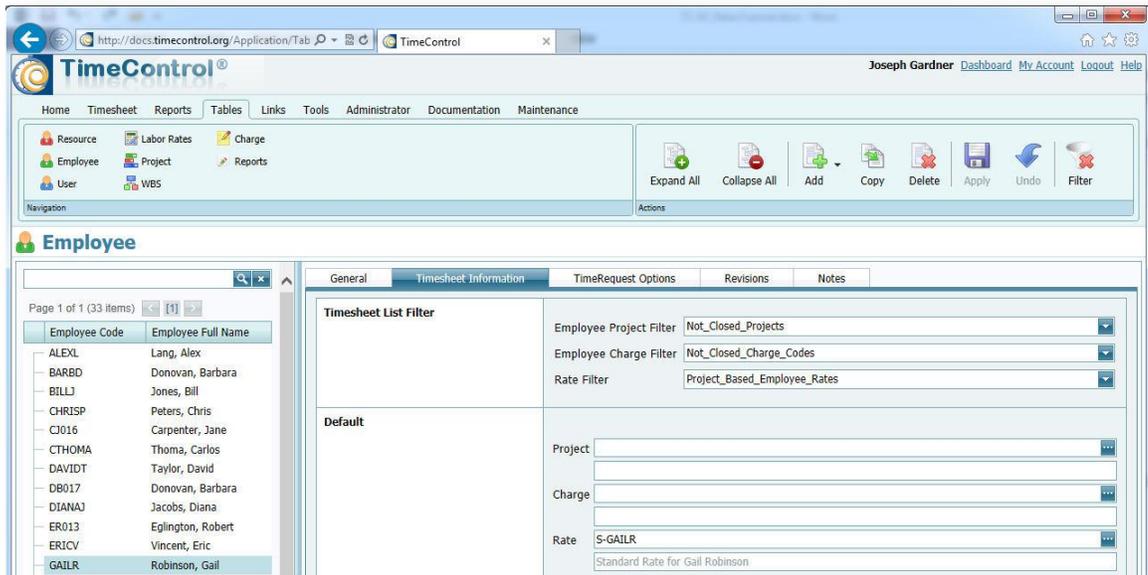


# Rate Defaults in MyAccount or Employee Table

Users can save time on their timesheets by selecting a rate code that they use most frequently. This can be done by the individual user on the Employee Tab of the MyAccount function. MyAccount is at the top right of the screen. The Employee is able to select any rate that is available to their view.



Administrators can set up default selections for employees in the Employee Table. The Timesheet Information Tab allows for the Default Rate Code to be selected.



A Default Rate is a requirement for TimeControl Pre-Loading of timesheets and it can save a lot of time.

## Rate Default in the Project Table

Some organizations will want to set a default rate for a project. If this is the case, a rate can be set up for each employee with the same name such as “NOVA” for all Nova projects. Each employee would have an Employee-based rate code of NOVA available. We’ll also need to create a Global rate of NOVA in order to make it the project default. In the project table as we see below, we’ve done a selection of a rate as the default. Only Global rates can be selected here as we don’t want the situation where a rate was selected but might not be available to a particular user.

The screenshot shows the TimeControl web application interface. The browser address bar displays <http://docs.timecontrol.org/Applicatio...>. The user is logged in as Joseph Gardner. The main navigation menu includes Home, Timesheet, Reports, Tables, Links, Tools, Administrator, Documentation, and Maintenance. A secondary menu contains Resource, Labor Rates, Charge, Employee, Project, Reports, User, and WBS. The main content area is titled 'Project' and shows a list of projects on the left and a detailed form on the right. The form is for the project 'EPM-PMO' and includes the following sections:

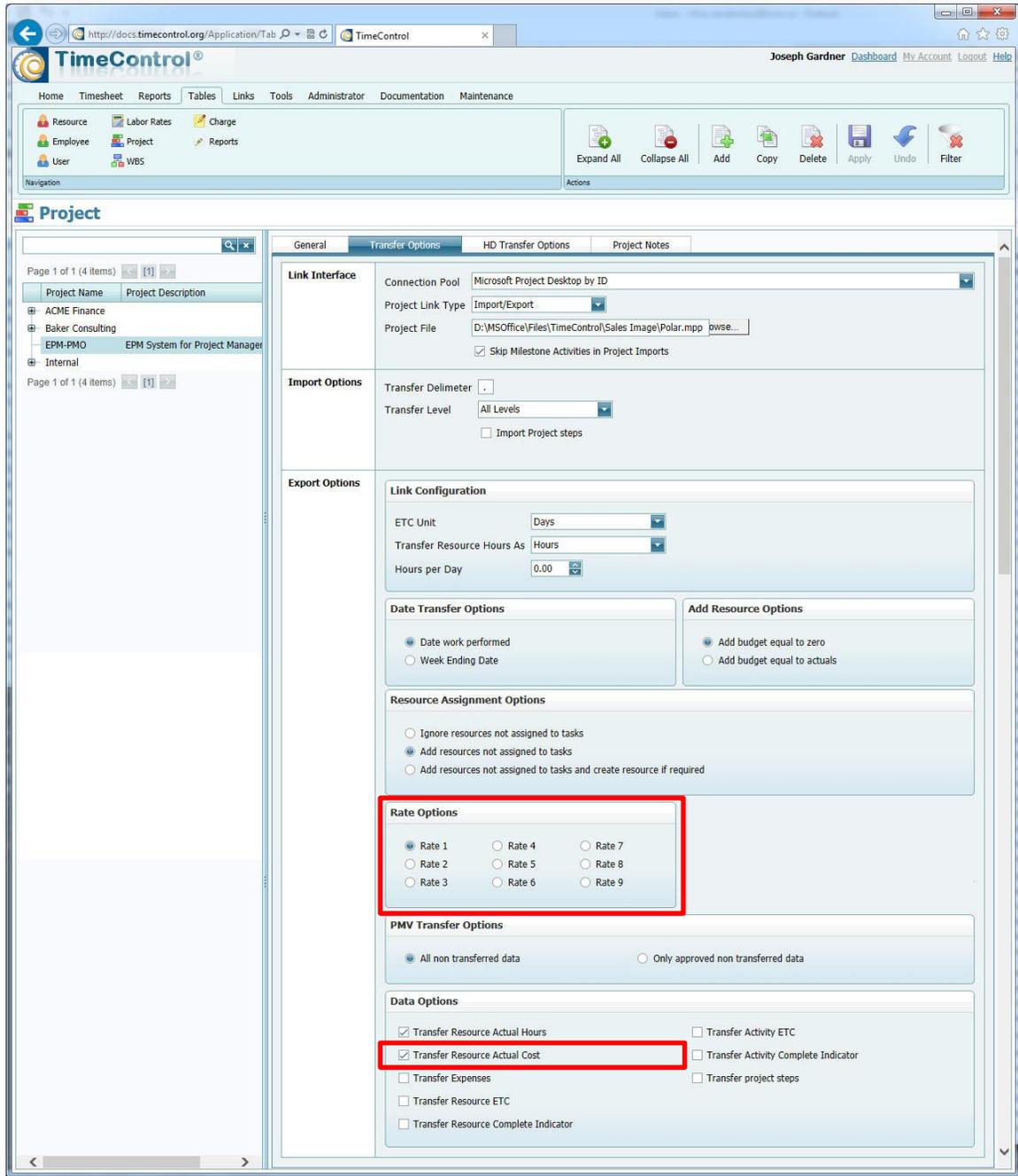
- Project Identification:** Project Name (EPM-PMO), Project Description (EPM System for Project Management Office).
- Project Information:** Project Status (Opened), Project Start Date (11/17/2013), Project Finish Date (11/30/2015), and an option for Allow Cross Charges.
- Associations:** Project Owner (blank), Rate (NOVA), and an option for Project Rate Required? (unchecked).
- User defined fields:** Client, Funding Type, and Contract Type (all blank).

With this rate now in the project table, whenever this project is selected in the timesheet or is part of a pre-load, this rate code will be the one that TimeControl inserts by default in the rate column. If there is an employee or resource-based code called Nova which is more specific to that employee, then that will be the particular “NOVA” that TimeControl uses during the Posting process.

The “Project Rate Required” option will force the selected Project Rate to be the one associated to that project so there is no mistake by the end user.

# Project Management Links

When sending data back to a project management system one of the options is to send back the costs. The Rate Value selected will be a key decision here.



In the Project Table or in the Links Wizard, two options are presented that reference the Rate Values. First, decide at the bottom of the page if you are going to transfer the actual costs at all. If not, there's no need to select the rate value. If you intend for the project management system to take the hours as uncosted data and do its own calculations with the rates it has

stored, then don't transfer the actual costs in order to avoid double counting or ending up with unsynchronized costs which don't match.

If the intent is to have TimeControl's costs match the project costs in the project management system, then select one of the 9 Rate Values to transfer. TimeControl will take the Posted Cost for that associated value and send that information to the project system.

Some organizations will want to send the internal cost. Some will want to send a billing value and others will want to use an average project cost value. This last concept is fairly common among those who have had to wrestle with managing restricted rate functionality in the project system and trying not to do too much accounting in the project system.

One thing to avoid here is to transfer the data to the project system and then use the project system to transfer it again for invoicing, payables, payroll tax reporting or any other auditable purpose. Given you already have the auditable data in TimeControl, it's unlikely that the project system will give any additional added value to the costing data. You can make a link instead directly from TimeControl to the financial system that needs it.

# How are costs calculated?

TimeControl posts the costs that are associated to each Rate Value during the Posting Process. For each of the 9 Rate Values, TimeControl will create a corresponding Cost on the Posted Detail record. Since this is done at the moment of Posting, if rates have changed during the week, the rate that is present at the moment of Posting will be the one used for the calculation.

In this next screen we can see the Drill-Down Analyzer showing data for a project with the hours, 2 Rate Values and the associated Costs:

The screenshot shows the TimeControl web application interface. The main content area is titled "Drill Down Analyzer" and displays a table of project costs. The table has columns for Employee Full Name, Charge Code, Posted Rate Code, Posted Date, Posted Hours, Posted Rate 1, Posted Rate 2, Posted Cost 1, Posted Cost 2, Work Code, R & D, and Capitalizable. The data is grouped by Project Name, with a total row at the bottom.

Employee Full Name	Charge Code	Posted Rate Code	Posted Date	Posted Hours	Posted Rate 1	Posted Rate 2	Posted Cost 1	Posted Cost 2	Work Code	R & D	Capitalizable
Project Name: BOAT SHOW											
Lang, Alex	BOAT SHOW.1.12	S-ALEXL	7/9/2010	2.00	30.00	60.00	60.00	120.00			
Lang, Alex	BOAT SHOW.1.13	S-ALEXL	7/9/2010	4.00	30.00	60.00	120.00	240.00			
Robinson, Gail	BOAT SHOW.1.13	STANDARD	8/13/2010	12.50	1.00	2.00	12.50	25.00			
Lang, Alex	BOAT SHOW.1.14	S-ALEXL	7/9/2010	4.00	30.00	60.00	120.00	240.00			
Carpenter, Jane	BOAT SHOW.2.2	S-JANEC	7/16/2010	35.50	30.00	60.00	1,065.00	2,130.00			
Carpenter, Jane	BOAT SHOW.2.3	S-JANEC	7/23/2010	6.00	30.00	60.00	180.00	360.00			
Carpenter, Jane	BOAT SHOW.2.4	S-JANEC	7/23/2010	15.00	30.00	60.00	450.00	900.00			
Carpenter, Jane	BOAT SHOW.2.5	S-JANEC	7/9/2010	36.00	30.00	60.00	1,080.00	2,160.00			
Carpenter, Jane	BOAT SHOW.2.8	S-JANEC	7/23/2010	14.00	30.00	60.00	420.00	840.00			
				129.00			3,507.50	7,015.00			
Project Name: DATA											
				229.50			6,667.50	14,350.00			
Project Name: INTERNAL											
				422.50			15,430.00	29,450.00			
Project Name: PMO											
				148.00			5,990.00	14,680.00			
Project Name: POLAR											
				460.50			15,618.75	34,407.50			
Project Name: RFP											
				98.00			3,753.75	6,512.50			
Project Name: TCDEPLOY											
				40.00			900.00	3,200.00			
				1,527.50			51,867.50	109,615.00			

Looking in a bit more detail, you can see that on the first line, there is an entry for 2 hours of time and based on the rate code selected for that timesheet, there was a Rate Value 1 of \$30.00. The Posted cost is 2 x \$30.00 or \$60.00. On the 4<sup>th</sup> line, there is an entry for 4 hours with a Rate Value 2 of \$60. The Posted Cost 2 for that entry is 4 x \$60 or \$240.

Posted Hours	Posted Rate 1	Posted Rate 2	Posted Cost 1	Posted Cost 2
2.00	30.00	60.00	60.00	120.00
4.00	30.00	60.00	120.00	240.00
12.50	1.00	2.00	12.50	25.00
4.00	30.00	60.00	120.00	240.00
35.50	30.00	60.00	1,065.00	2,130.00
6.00	30.00	60.00	180.00	360.00
15.00	30.00	60.00	450.00	900.00
36.00	30.00	60.00	1,080.00	2,160.00
14.00	30.00	60.00	420.00	840.00

So, for this entry we can see values that might have represented the Internal Cost and the External Billing value for the same timesheet entry. The end user doesn't ever see this of course. They simply chose the appropriate rate code based on the codes available to them. The values of these entries were never displayed to the end user.

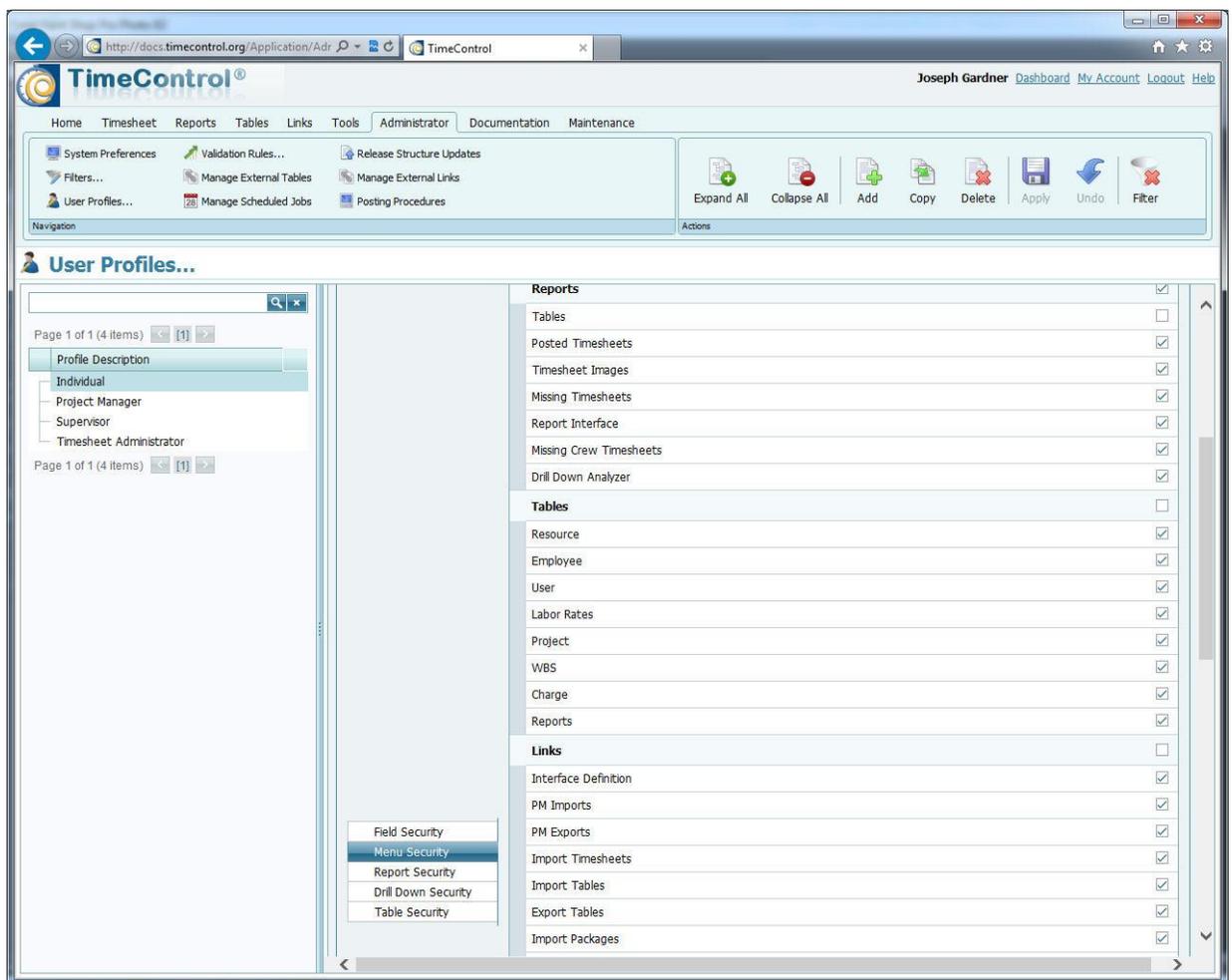
# Rate Security in User Profiles

Rates are considered very sensitive in most organization. If the rates include personnel salary or wage data there may be privacy issues that are mandated by law to ensure that the rate data is not displayed.

The main areas of User Profiles that can secure Rates data are in the User Profiles security screens.

In the menu area, you can turn off access to the entire Rate Table, thus hiding it from view. Most users will not require access to the table anyway and it is a basic tenet of security design to not give access when no access is needed.

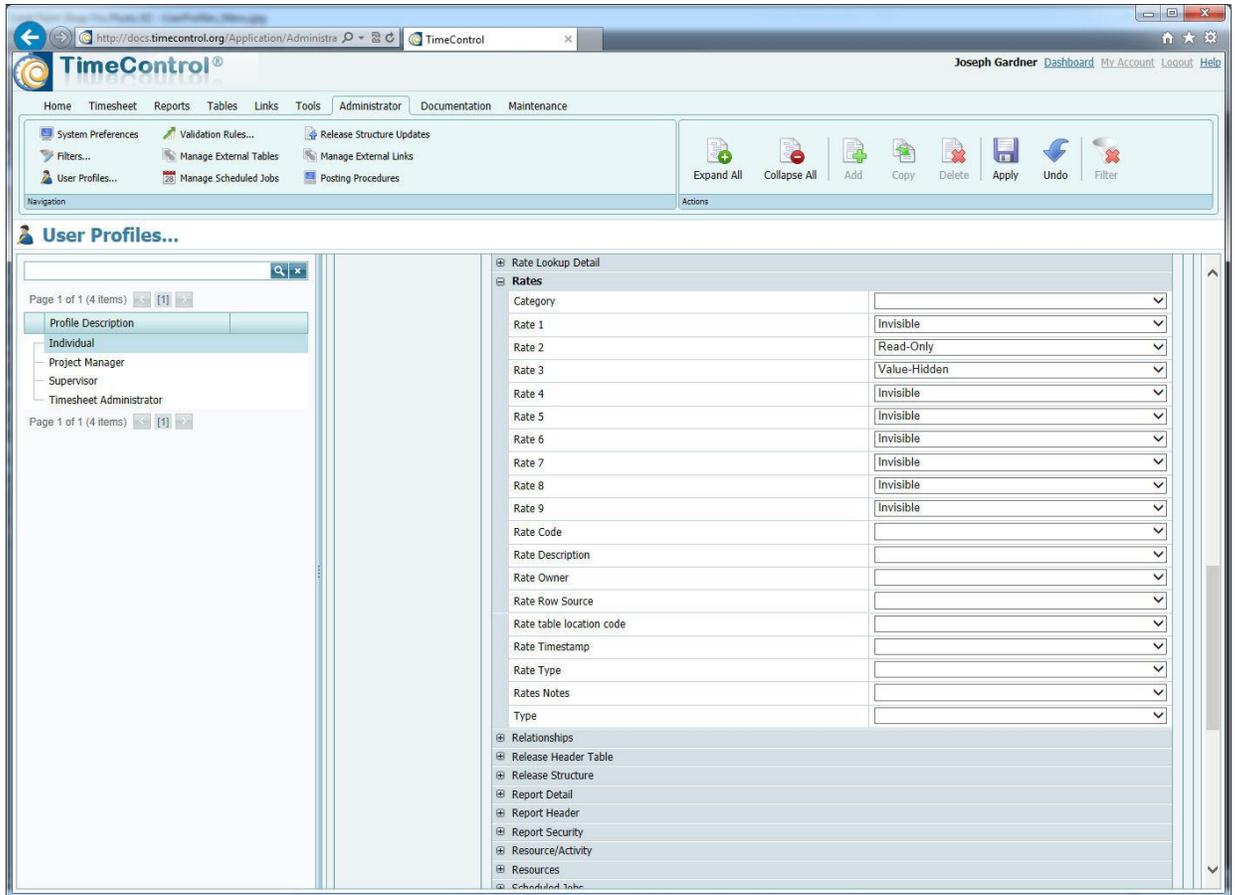
This screen shows the User Profiles menu page. You can remove access to just the Labor Rates menu selection or turn off the entire Tables Tab (as is done in this example) so users with the Individual User Profile will not see any table selections in their menu.



The User Profiles Field security screen allows you to define any field in any table as visible (blank = no constraint), Read-Only, Value Hidden or Invisible.

- A blank entry would mean the field label is visible and the field value is editable.
- An entry of read-only would mean the field label is visible and the field value is visible but not editable.
- An entry of value-hidden would mean the field label is visible but the field value is not visible and not editable.
- An entry of invisible would mean that the field label is invisible and the field value is not visible and not editable.

This next screen shows the Rate Value 1 as Invisible, Rate Value 2 as Read-Only and Rate Value 3 as Value Hidden.



When these selections are made, they are honored across the entire TimeControl system. For example, if you have made Rate Value 1 as invisible, then the Rate won't be visible in the Table view but it also won't be visible in reports, in exports or anywhere else. Remember, you may need to also secure the Posted Cost fields in the Posted Detail table.

A final place to think about security of the Rates Table is in User Profiles/Table Security.

There are several options for each table including the Rates Table that can be established in this area and are specific to that User Profile so that different rights can be associated to different groups of people.

Even if a role has access to the Rates Table, you can define whether a user with that role can:

- Add (Insert) a new record
- Edit (Update) an existing record
- Delete a record
- Add a new User Defined field (Structure) to the table
- Change the Links for the User Defined Fields (Linked Fields)
- Add Values to the pop-up list for a User Defined Field (Edit Links)

The last value on the right hand side of the security screen says “Filter”. This can be used to apply a filter from the Filter Table when accessing this table. This feature would allow an organization to have some Rate Administrators who could see one department and other Rate Administrators that would see any other department.

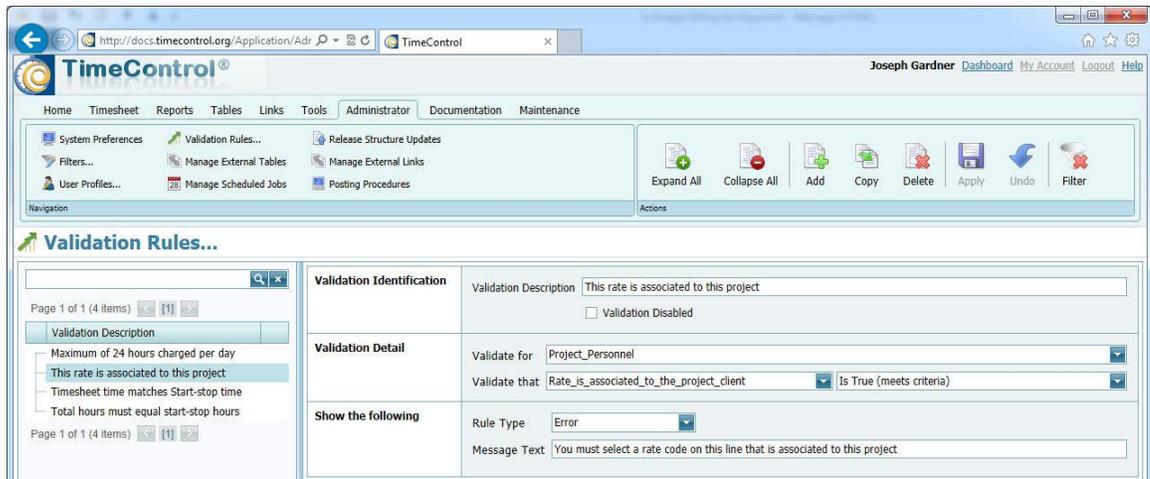
The screenshot shows the TimeControl application interface. The main content area is titled "User Profiles..." and contains a "Profile Details" section. Under "Profile Details", there are two tabs: "General Options" and "Profile Security". The "Profile Security" tab is active, showing a table with the following columns: "Table Name", "Insert", "Update", "Delete", "Structure", "Linked Fields", "Edit Links", and "Filter". The "Filter" column contains dropdown menus for each table.

Table Name	Insert	Update	Delete	Structure	Linked Fields	Edit Links	Filter
Activity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Alternate Users	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Archived Batch Header	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Posting Procedures	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Profile	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Projects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Rate Lookup Detail	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Rate Lookup Header	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Rate Premiums	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Rates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼
Report Detail	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Report Header	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Report Security	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Resources	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Table Security	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
TimeRequest Details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼
TimeRequests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼
Timesheet Detail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼
Timesheet Expenses	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼
Timesheet Lines	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼

# Using Validation Rules to check rate selections

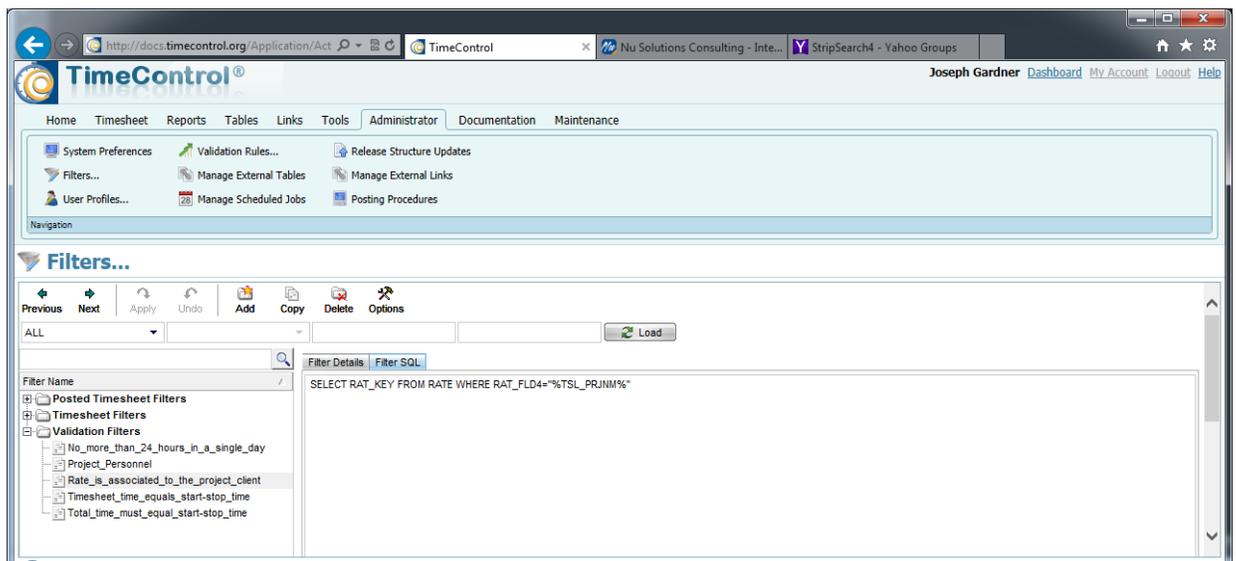
You can use TimeControl's extensive Validation Rules system to check for anything else that may be Rate related. You can use the Employee-level filter to only show certain rates for certain conditions but the Validation Rules would check and deliver either a warning or an error based on the rates selected.

For example, we could check timesheets for only project personnel to see if the Rate Code selected on a timesheet line was associated with the proper project such as was shown above in the "Project Specific Rates" example.



In this case the Detail section shows how we are applying this rule only to Project Personnel by selecting the Filter called "Project Personnel". Then in the next line we are validating for "Rate is Associated to the Project by selecting the filter for that.

Here's the example filter that would be used in such a validation rule.



In this case we're using one of TimeControl's value macros for filters. The full expression is:

```
SELECT RAT_KEY FROM RATE WHERE RAT_FLD4="%TSL_PRJNM%"
```

This expression says: Show only the rates where the value found in Rate Table User Defined Field #4 is equal to the project name of that timesheet line number (TSL\_PRJNM).

## Extended Rates in TimeControl Industrial

TimeControl Industrial includes all the remarkable Rates functionality we've seen above but goes one step further when entering Crew Timesheets. The Crew Timesheet Module of TimeControl is designed to enter a high volume of timesheet data in the field as part of Field Data Collection for Labor, Equipment and Materials. There may be hundreds of possible rate combinations and these have to be properly selected on the Crew Timesheet. TimeControl Industrial includes a function call "Extended Rates" which makes the proper rate selection based on the information in finds in each line. For example, if there is a premium for a particular project when working on the night shift and the shift number is on the timesheet line, TimeControl can automatically see both the project column entry and the shift column entry and then make the appropriate rate selection for that employee. Numerous columns can be matched in order to do this.

The Extended Rate table is very simple. It has a number of columns that are matched in the timesheet and then the Rate Values (1 through 9) for that Rate selection.

Timesheet Project Name	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Effective Date
ENGPROJ	27.57	38.43	2.25			01./01./2007
COMCONSTR	32.57	47.75	2.17			01./01./2007
HOMECONSTR	22.45	34.45	1.67			01./01./2007

The definition for this is made in the System Preferences area of TimeControl Industrial where the fields in the Extended Rate Table are matched to those in the Crew Timesheet.

Extended Rate Field	Timesheet Details Field	Visible
Field 1	Timesheet Project Name	<input checked="" type="checkbox"/>
Rate 1	..	<input checked="" type="checkbox"/>
Rate 2	..	<input checked="" type="checkbox"/>
Rate 3	..	<input checked="" type="checkbox"/>
Rate 4	..	<input checked="" type="checkbox"/>
Rate 5	..	<input checked="" type="checkbox"/>
Rate 6	..	<input type="checkbox"/>
Rate 7	..	<input type="checkbox"/>
Rate 8	..	<input type="checkbox"/>
Rate 9	..	<input type="checkbox"/>
Effective Date	..	<input checked="" type="checkbox"/>
EXR_FDATE	..	<input type="checkbox"/>

## Use-Case Scenarios

Since 1994 when TimeControl first appeared in the market, HMS has been asked to solve timesheet challenges that involved rates functionality. Here are several of the most common business situations and how you can overcome these challenges using the functionality we've described above.

### Time and Billing rates

If you are using TimeControl for time and billing, you'll need to use rates to track the billing price in order to make invoices from the TimeControl data. You may also need to track internal costs as the profit for each hour worked would be the difference between the billable price and the cost. So it's typical to use at least two Rate Values.

Billing rates are likely to have the complexity of being specific to a client or to a client and contract. In this case, use one of the user-defined fields to identify the client and/or the client's contract so those rates can be associated to the correct category.

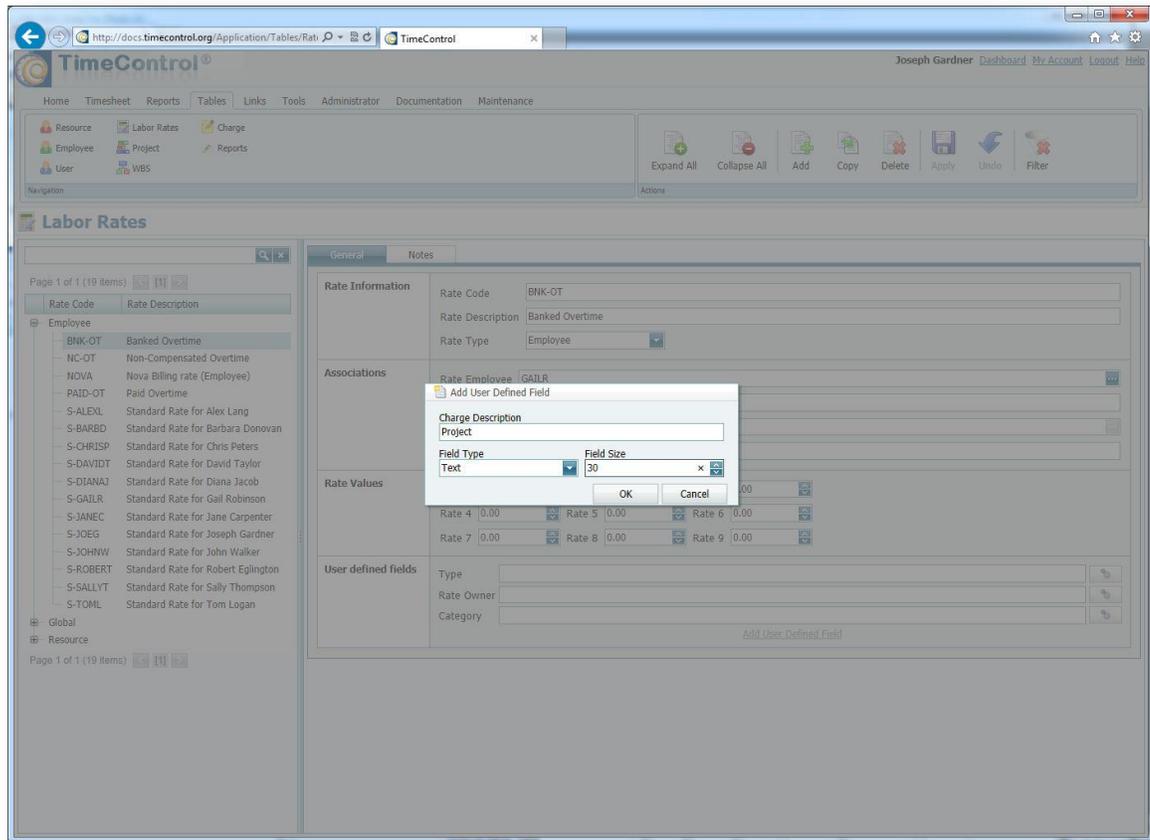
In some billing scenarios, the invoicing is done based on the role rather than the employee. This can be easily accomplished by using either resource rates or by making a rate code for each role/person. While this might result in a large volume of rates, you can use the Rate Filters in the Employee Table to reduce the number of rates to those specific to the employee and the line they are working on.

You can find out more about Time and Billing Rates on the TimeControl Website in the Time and Billing Solution area at: [www.timecontrol.com/solutions/timebilling/](http://www.timecontrol.com/solutions/timebilling/).

## Project Specific Rates

Some organizations have asked to have multiple rates associated to each project and then display only those rates on a timesheet line when that project is selected. We call this project specific rates.

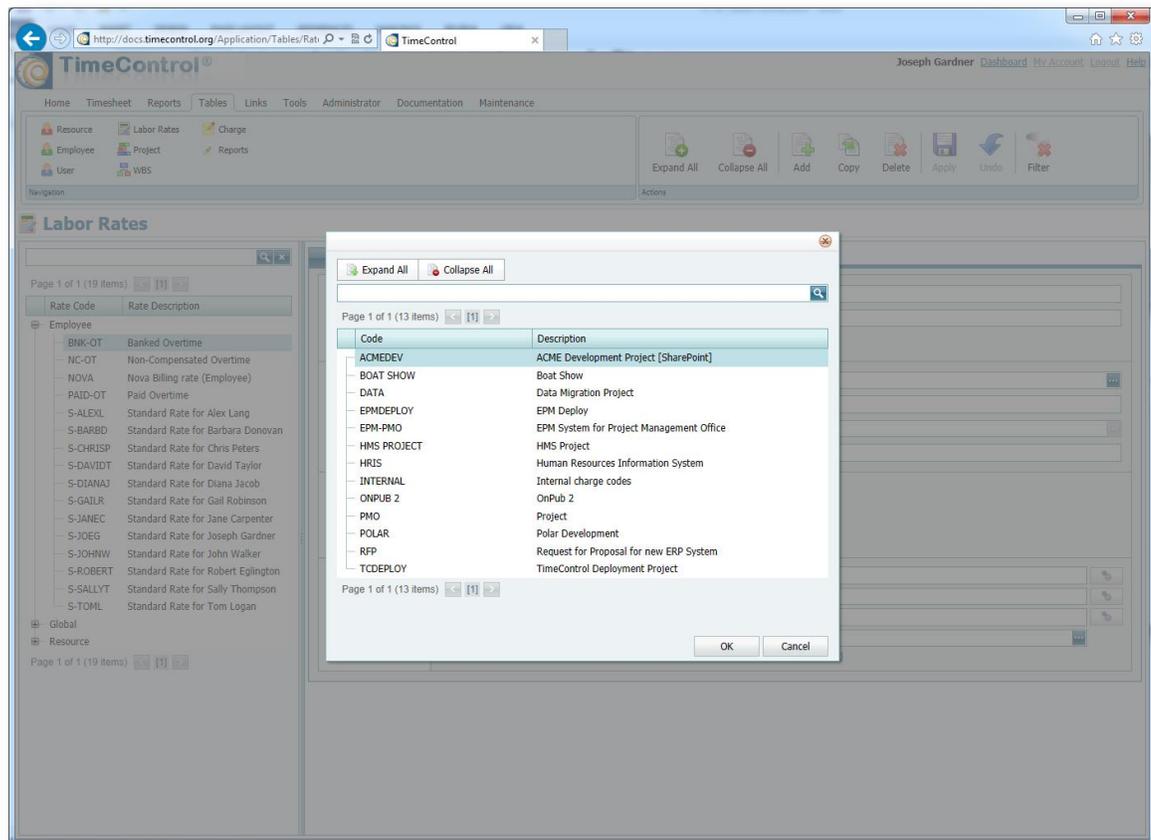
To do this, start with creating a user defined field on the Rates Table. You'll need rights to Change the "Structure" in User Profiles Security.



Once the field is created, go to Manage External Links / Manage External Tables and associate the new User Defined Field to the Project Name and Description files in the Project Table.

	Field Links	Field Links TimeControl Column Name	Field Links Column Required ?	Field Links Table Name	Field Links External Column Name	Field Links External Column	Popup Dialog	
<input type="checkbox"/>		CHR_FLD1 Work Code	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		CHR_FLD2 R & D	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		CHR_FLD3 Capitalizable	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		EMP_FLD1 Department	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		EMP_FLD2 Location	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		EMP_FLD3 Type	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		PRJ_FLD1 Client	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		RAT_FLD4 Project	<input type="checkbox"/>	Projects	Project Name	Project Description	<input checked="" type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		RPH_FLD1 Report Field 1	<input type="checkbox"/>	Linked Fields	Code	Description	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		TSL_FLD1 Field 1	<input checked="" type="checkbox"/>	Projects	Funding Type	Funding Type	<input type="checkbox"/>	<a href="#">View Links</a>
<input type="checkbox"/>		TSL_FLD5 Phase	<input checked="" type="checkbox"/>	Projects	Client	Client	<input type="checkbox"/>	<a href="#">View Links</a>

Now in the Rates Table we should be able to get a drop-down or pop-up list of Projects to which each rate code can be associated.



All that's left to do is create a filter that will only show the appropriate rate that is associated to the project in the timesheet line. We've described that example in the Rate Filters in the Employee Table earlier in this document.

## Rates when linked to Project Management

When linking to a project management system, there are a couple of things to think about. First, do you want to send only the hours and keep the actual and billable costs in TimeControl or do you want to send the fully costed information to the project system? If you have decided to send the fully costed information to the project system, the next decision is what value do you want to cost at? Will you manage your project costs at an internal cost value, external pricing value or, and this is quite popular, an average project cost value. Once you've decided which Rate Value will be used for linking to project management, it's best to lock that in place so that there is no confusion by transferring with a different Rate Value in the middle of the project.

## Rates when linking to an ERP

When linking to a Finance System or ERP, the first question to be asked is what will be done with the information. It is common, for example, to use TimeControl for Time and Attendance data for the Payroll system. If this is the case, then it is likely that the payroll cost won't be required. All payroll systems typically do their own calculations. What may be critical however, is that the rate codes might require some user defined fields to be established to

deliver certain codes to payroll. It might be critically important for example to have a code that identifies each Rate Code as a regular or overtime code or a Payable or Non-payable code for payroll.

If the data will be used for Invoicing then the same logic applies. Will we need the pricing values from TimeControl or just the hours.

When we are linking to multiple systems such as both Payroll and Invoicing then using the User Defined Fields in the Rate Table and the Rate Values in each Rate Code will allow you to distinguish which information is transferred to which system.

The beauty of the TimeControl system is the manner in which multiple systems can be serviced simultaneously.

## Managing hourly rates when salary cost must be calculated

You can do both hourly billing and salaried cost in TimeControl. The simplest way to do this is to have a “regular time” rate in which the annual salaried cost is divided by the number of working hours per year. For example, a 40 hour workweek will give us 2080 hours per year of workable time. Divide this into a \$65,000 per year salary and we know we need to account for exactly \$31.50 per hour. We can then make a validation rule to insist that every timesheet have exactly 40 hours using the “regular time” rate. Any other time such as overtime for example, would have to use a different rate. In the overtime rate, the internal cost would be zero and the billable cost would be the billable price value.

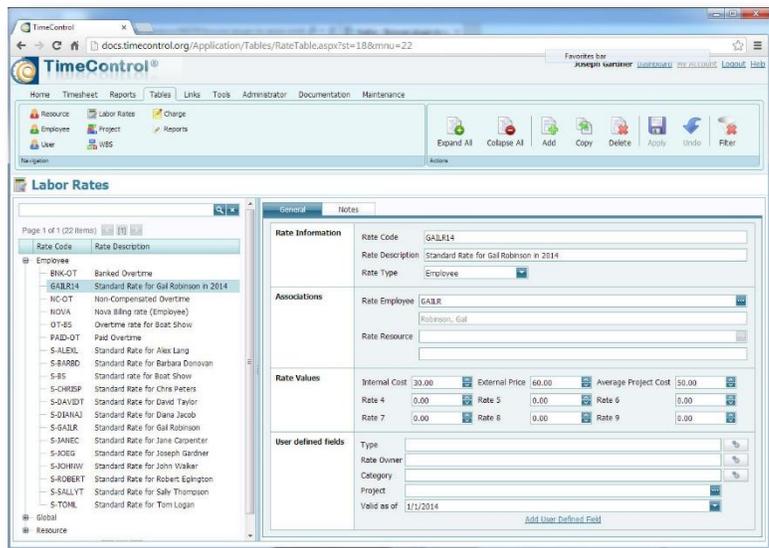
## Escalated Rates

Some organizations have a rate situation where rates will change automatically on a given date. If, for example, an organization will have rates after January 1<sup>st</sup> reflect the next year’s billing values, TimeControl can use Rate Filters and a user-defined field to support this.

To accomplish this, first create a field in the Rates Table to hold a date. This will be the “Valid as of” date to use in escalation. You’ll need to go to new rates and add the value in each rate for the New Year.

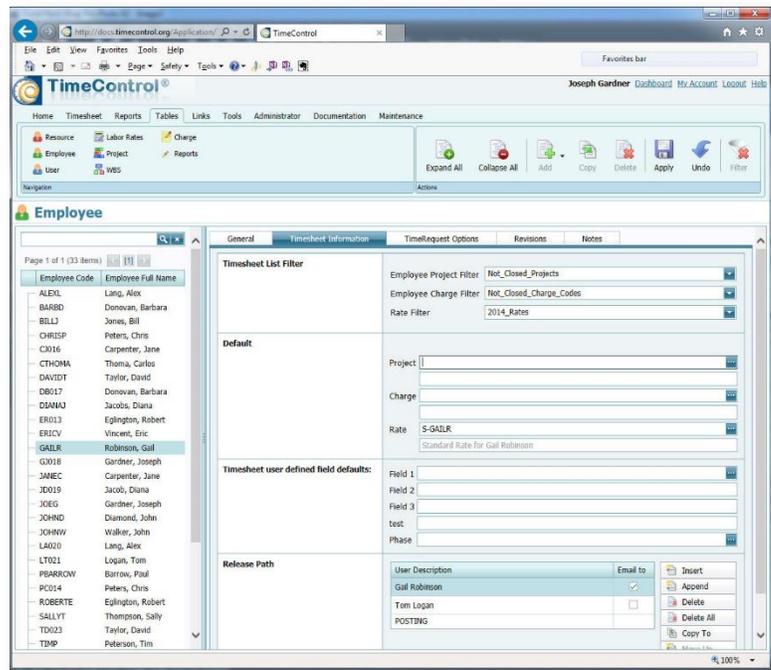
Now you’ll need to create a Rates filter which refers to that field and says to show only those rates with a value higher than that field.

Finally, you’ll need to reference this filter in the Employee Table in the Rates Filter area of the Timesheet tab.



This example will ensure that as of the first of January 2014 only those rates which are 2014 rates will appear and will be selectable on the timesheet. The definition could be set up months in advance and would not be visible to end users until the New Year occurred.

There is one additional challenge which might occur when the New Year (as is the case for 2014) or the escalation date falls in the middle of the week. If this must be accommodated, then use partial posting (which is described in the TimeControl Reference Guide) to post the first part of the week with the earlier rates and then do the regular posting which will catch the remainder of the lines at the end of the week.



## Multi-currency Rate Issues

While TimeControl does not automatically convert multiple currencies, the enormous capacity of the Rates system does allow for several ways to manage multiple currencies and report on them at the same time.

You could, for example, use one of the 9 Rate Values for each rate code to have a foreign currency value. Then at posting time, this value could be used to translate to a base currency in a TimeControl Post-Posting procedure in which a list of currency exchange values is polled either internally or on a service on the Internet.

There is more information on this subject on the TimeControl blog at: <http://blog.timecontrol.org/2009/05/multiple-currencies-in-time-control.html>

# Questions and Answers

**Question:** How many rates can an employee have?

**Answer:** There is no limit to the number of rates that can be selected by an employee.

**Question:** How many rates can be put on a single timesheet?

**Answer:** One per line

**Question:** What if I want to track burdens on a rate?

**Answer:** You can use one or more of the 9 Rate Values or one or more of an unlimited number of user defined fields to record the burdens. If the Rate Values are used, the values will be multiplied by the number of hours in an associated cost field during Posting. You can then report on these costs in the Reporting system.

**Question:** If a Debit/Credit is used to adjust a timesheet later and the rate has changed, will the new rate be used or the old one?

**Answer:** If the rate has been changed, then the Debit/Credit will be calculated at the new rate. In order to do an adjustment which would reflect both the old and new rate, a new rate could be created and the Debit done with the old rate code and the Credit done with the new rate code.

**Question:** How could we do escalated rates?

**Answer:** Create rates for the escalation date and use Rate Filters to show the old rate code up until the escalation date and the new rate codes after the escalation date.

**Question:** Our rates will be changing on the first of the year which is mid-week. How do I have rates change in the middle of a timesheet period?

**Answer:** Use Partial Posting to post the first part of the week at the old rate values, then change the rates to the new values and post the rest of the week normally at week's end.

**Question:** Can we just take the rates from an external system?

**Answer:** Sure. The Links module allows you to import rates that have been exported from another system to an Excel or CSV file.

**Question:** Can we transfer the rate codes from TimeControl to Microsoft Project, Primavera or some other system?

**Answer:** This is a question for the publishers of the systems you are thinking about but for any transfer to work, the destination system must be able to accommodate the data. TimeControl's rates can have 9 values. If the destination system does not have such capabilities, the data will have nowhere to be accommodated. TimeControl can have an unlimited number of rates per employee. If the destination system does not support this, the transfer had nowhere to put that data.

**Question:** Are rates required on every timesheet line?

**Answer:** Yes. A rate code must be selected on each timesheet line

**Question:** We don't use rates and I don't want users to have to see them or select them. Is there any way to turn rates off?

**Answer:** You can hide rates rather easily. If each user has a default rate value (such as "S" for standard), then hiding the field in User Profiles Field Security will have that column disappear from the timesheet and, even though it will be populated with the default value, no user ever needs to look at the rate codes again.

**Question:** At what level of time resolution is the Rate Code calculated into a Cost Value?

**Answer:** At the minute. All TimeControl times are stored internally as minutes. During the Posting process, the cost values are defined as the number of minutes times the (Rate Value/60).