

TimeControl[®] and Oracle-Primavera

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Project management is more than project planning and everyone who's been in the project management industry for any length of time will tell you so. Yet when we look at how to collect progress information, we often just talk about the plan and not the tracking of the plan.

One of the most common tools that we think of when we think of updating project information is the venerable timesheet. Even Primavera has had timesheet interfaces in the past. There are similar tools attached to most project scheduling packages on the market. These tools are designed for situations where resource leveling will be done to the individual level. The expectation of the software vendor is clear:

1. Planning is done from the top down.
2. Individuals are assigned to tasks.
3. These individuals will go to their desks and open up their own license of Oracle Primavera and then update the week's assignments with the hours and the progress they've accomplished for that week.
4. Results are then returned to the activities in question and, presto, the schedule advances.

As lovely as that sounds, it doesn't seem so easy when you try to apply the same paradigm to an industrial situation.

What do you do to collect hours and progress when the project resources aren't sitting at desks at all? What if they're welders and carpenters and electricians? What if they're working on a crew outdoors in inclement weather and have no intention of using a computer?

What do you do when the resource planning isn't managed down to the individual level. Instead, as it often is for EPC, for Heavy Construction or for Shutdowns, managed at a skill or trade level? How do we update the information from the field then?

We'll take a look at how to apply 3rd party field data collection to this challenge over the next few pages.

HMS and Primavera have worked together since 1997

HMS is an Oracle Partner. Our history with Oracle dates to 1997 when HMS became an Oracle Partner in order to better support Oracle Financials and the Oracle Database. That same year, HMS also

ORACLE

Partner

became a Primavera Alliance Partner in order to create the link with Primavera Project Planner. In 2008 those two partnerships combined with Oracle purchased Primavera. Now HMS and Oracle are able to partner together to ensure that our joint customers are best served with TimeControl and Oracle products working in harmony to create a comprehensive timesheet environment.

The Oracle/HMS partnership is extensive and runs deep. HMS and Oracle personnel are able to work at multiple touch-points between the firms. When there is a new version of an Oracle system such as Primavera, HMS gets early access to that system and to Oracle technical personnel, so we can ensure that our products work together. If there are technical questions for Oracle or HMS we work together to get the questions resolved quickly and efficiently. The end result for clients is more efficiency and being more effective. TimeControl and Oracle data move back and forth with a single-entry point and auditable tracking so you can always know where data was updated, by whom and when.

TimeControl now links directly with both Primavera Professional and Primavera EPPM. There are multiple options for the link including the use of Primavera's Web Services when using EPPM or direct database-to-database connection with using Primavera Pro or EPPM. Users can select the link option that is most appropriate for them.

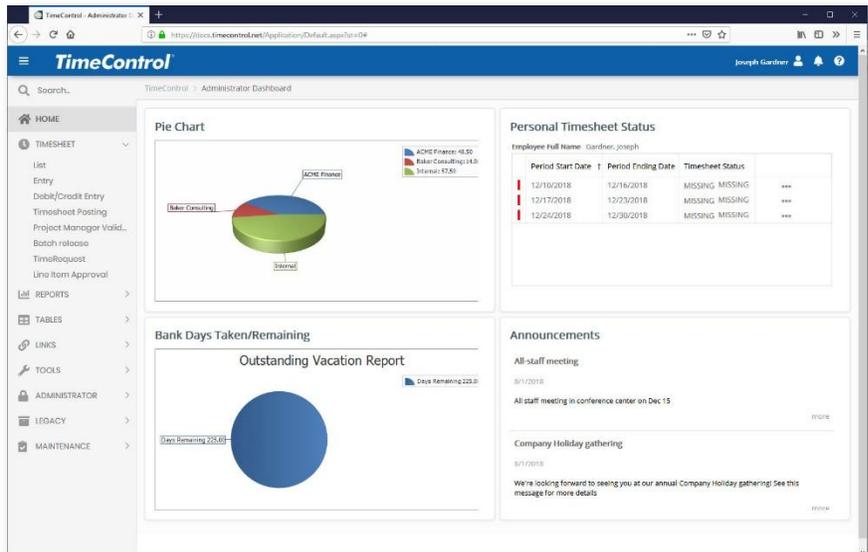
TimeControl is a multi-purpose timesheet system which includes a pre-configured integration to Oracle-Primavera since 1997.

Released originally in 1994, TimeControl was designed as timesheet which could fulfill the needs of Project Management and Finance simultaneously. Features such as Matrix Approvals, Unlimited Rates and, Business Validation Rules

combine have made TimeControl a popular choice with Primavera users for over 25 years. TimeControl is a browser-based system available both as a subscription in the cloud or for purchase for on-premise deployment. It includes a pre-configured integration for both Primavera-EPPM and Primavera Professional.

TimeControl includes a Web Services link to Primavera EPPM using Primavera Web Services, a RESTful link to the Primavera EPPM system API and a database-to-database direct link which can be used for Primavera EPPM or Primavera Professional.

TimeControl is also designed to be integrated with your Finance, ERP, Payroll, HR and Billing systems. The TimeControl Links Module includes the ability to create or consume transaction files with multiple such systems simultaneously and the TimeControl API gives clients the ability to create even more intimate integrations between these systems.



Why consider TimeControl for an Oracle-Primavera timesheet?

Oracle-Primavera EPPM includes a timesheet which is designed to collect labor progress. Yet, there are numerous business scenarios where a 3rd party timesheet will be attractive. Here are just a few:

A need for unlimited rates

Primavera's rate functionality is designed more for planning than accounting. So, when you have a scenario for example for billing where a resource might be billed at one rate on one project and another rate on another project, that can become complicated. It's even more challenging when we have one resource on the same project, fulfilling one role in the morning and another role in the afternoon. TimeControl has unlimited rates per resource category or per person and within each rate there can be many values. So, with TimeControl, at the same time you are calculating job costing to send back to Primavera, you might also be calculating payroll costs, billing costs and R&D tax credit values. TimeControl lets you define what values to return to Primavera at the task or assignment level and whether to move that data into Financial Periods. For more information on TimeControl rates, see:

TimeControl.com/features/rates.

A requirement to link to both Primavera EPPM and Primavera Pro

TimeControl includes both a Web Services link which can be used to link to Primavera EPPM and a direct database-to-database link which could be used to link to Primavera EPPM or Primavera Pro. You can link to Primavera EPPM or Primavera Pro or even to both simultaneously. TimeControl also includes links to other products such as Microsoft Project, Project Server and Project Online. You could support multiple project management integrations at the same time from one system.

A need to apply Payroll level validations to the timesheets

TimeControl is designed to validate timesheets with payroll style validation rules. So, you can create a rule that says, "No overtime on a weekend unless you are a wage-type employee and you are working a schedule that includes Saturdays and Sundays." You can make as many validation rules as you wish and test the timesheet before it's even submitted for approval.

Matrix Approvals

Sometimes just line-by-line approvals are insufficient. There is often a need in an organization to approve the timesheet from the organizational perspective as well as the project perspective. TimeControl includes a revolutionary method of handling approvals for matrix organizations so that both Project Management line-item-approvals and organizational timesheet in context approvals can be handled at the same time. This functionality is the primary reason that organizations are able to shift from multiple timesheet systems to a single

entry timesheet with TimeControl. HMS provides many free resources on how to establish Matrix Approvals which can be found at: [TimeControl.com/use-cases/matrix-approvals](https://www.timecontrol.com/use-cases/matrix-approvals).

A need for DCAA (Defense Contract Audit Agency) compliance

TimeControl's auditable timesheet environment can be used for payroll-level control but this same auditability is what makes TimeControl an ideal companion for Oracle-Primavera environments where compliance with the DCAA is required. HMS has numerous resources for those interested in DCAA compliance with TimeControl which can be found at: [TimeControl.com/use-cases/dcaa](https://www.timecontrol.com/use-cases/dcaa).

This same auditable functionality found in TimeControl becomes key when Primavera clients need to comply with Sarbanes Oxley, Research and Development Tax Credits and numerous other government compliance requirements.

Our auditing requirements require that we track all changes to timesheets

TimeControl's Adjustment tracking is called Debit/Credit as all changes to the timesheet are tracked once the initial timesheet is posted. This means you can be confident that any changes to the timesheet are identified by user, date and time so you can re-create the timesheet as it was originally entered and see who was responsible for any edits to the timesheet data.

We Need to Track Expense Costs along with our Labor Costs

TimeControl allows you to collect both timesheet and non-labor costs at the same time. So, if you have resource costs for your project in Primavera or you need to collect expense costs for billing or job costing, TimeControl has you covered.

We need to track both Project and Non-Project time

TimeControl is designed as a multi-function timesheet so not only the project time can be collected, you can also collect vacation, sick leave, personal time off or any other category of time within the same system.

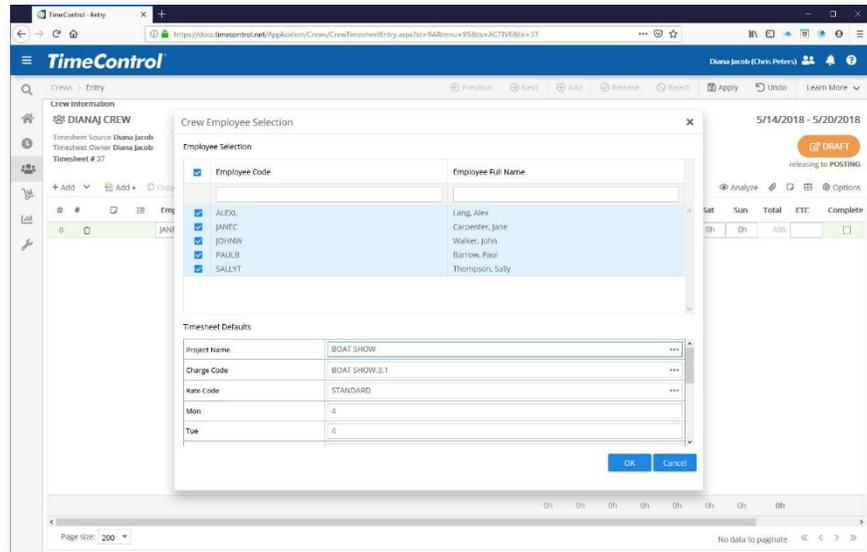
We to support users in multiple time-zones and multiple languages

TimeControl has functionality to support multiple languages with many language translations already included and a Language Module included that allows you to adjust existing translations or even create your own. Need to adjust the system to your own terminology? TimeControl's Language Module was designed to do exactly that. For organizations that are not co-located, language may not be the only challenge. TimeControl's multiple period definitions allow you to create timesheet schedules and workweeks that are different for different groups. Perhaps one group works Monday to Friday and another works Sunday to Thursday. TimeControl handles that within its normal configuration.

Need Crew Timesheets for Field Data Collection

TimeControl Industrial is our field-data collection version of TimeControl which includes all TimeControl functionality and adds Crew Timesheets, Material Consumption and Equipment Usage entry as well as Extended Labor Rates and Material Rates.

You can find out more about this edition of TimeControl at: Industrial.TimeControl.com.



Material / Equipment data collection

TimeControl Industrial includes not just Crew Timesheets but also entries for non-labor project information such as material consumption, equipment usage and progress completed. This is all possible in TimeControl's material data entry which can be associated to a crew timesheet and released and approved along with the labor entries or entered completely distinctly from the labor and collected separately. Once collected and approved, non-labor resource usage can go back to Primavera just the way Labor does.

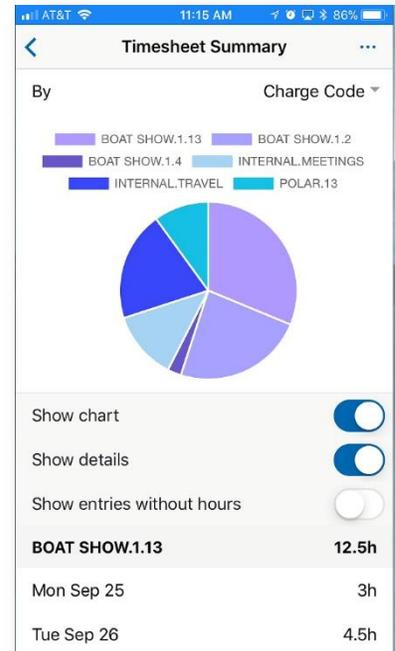
Material approvals follow the same approval types found in TimeControl's labor approvals including approval for the entire entry sheet then line-by-line approvals for each entry.

Mobile App data entry for iOS and Android

TimeControl includes a free Mobile App available on Google Play for Android phones and tablets and on the Apple Store for iOS devices. Whatever your mobile device, you can access your TimeControl from wherever you are.

Functionality in the TimeControl Mobile App includes creating a new timesheet, editing an existing timesheet (regardless of whether it was created on the App or on the web), timesheet approvals, business validation rules, management adjustments to the timesheet after approval and views of the timesheet by project, charge or category. When using TimeControl Industrial, Crew Timesheets as well as Material/Equipment field data collection can also be entered in the Mobile App which is optimized for both phone and tablet use.

For more information on the TimeControl Mobile App, visit: mobile.TimeControl.com.



Requirements for management approval of vacation time

Included in TimeControl is the TimeRequest™ module which allows users to make a request for certain types of times to be approved for entry in future timesheets. The most common application of this module may be for requesting Vacation time off. Once approved, the time is then automatically entered by *TimeControl* into the appropriate future timesheet.

The TimeRequest module is, however, not restricted to just Vacation requests. Any category of time can be exposed to the module. This allows an infinite number of applications such as for travel time, training time, offsite or onsite time or any other type of time category where the organization wishes it to be approved in advance.

The TimeControl-Primavera Integration

Once data has been updated and approved in TimeControl, it is ready to transfer back to the Oracle Primavera schedule. TimeControl includes both a Web Services integration to Primavera EPPM and a database-to-database integration for either Primavera EPPM or Primavera Professional.

The entire cycle originates from the Oracle Primavera schedule originally transferring information into TimeControl directly from database to database in the background between the two servers. This ensures that the information entered in TimeControl Industrial will find a home for that information when it's returned to Oracle Primavera.

Information that comes from Oracle Primavera includes the task and assignments and optionally, resource definitions. Tasks codes can be transferred as well so that the charge codes in TimeControl have the same meta data as the activities in Oracle Primavera. Status of tasks can be moved also which can be useful if we wish to hide completed or unstarted tasks.

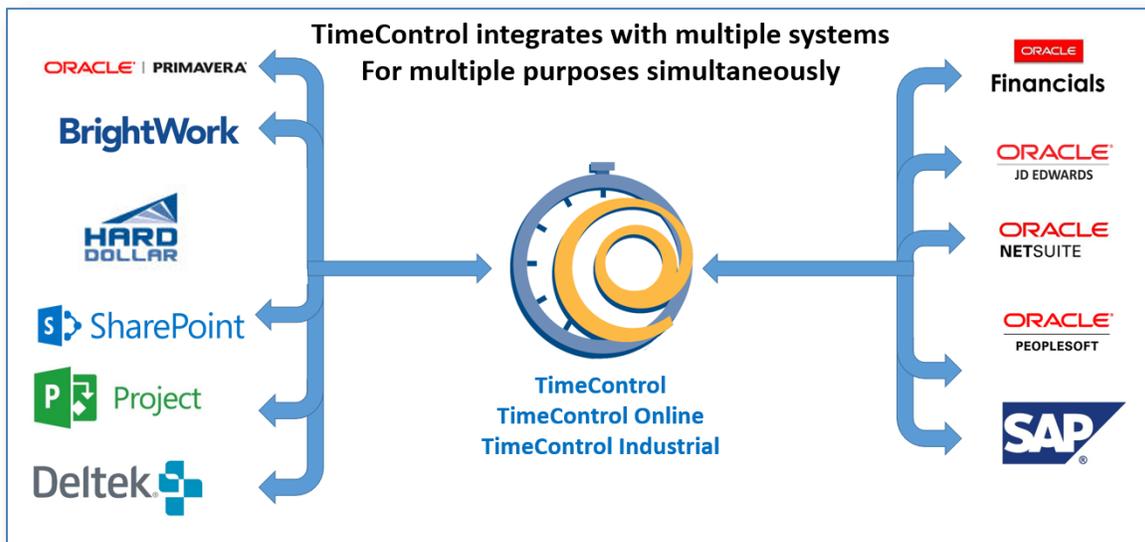
Approved data can be pushed back to the Oracle Primavera schedule unattended on a scheduled basis or, more commonly, the project manager can pull the data into the Oracle Primavera schedule when he or she is ready to receive it.

The project manager has several options available in terms of what data to move from TimeControl Industrial to Oracle Primavera including:

- Hours from the individual and crew timesheets
- The associated labor costs to the task, the assignment or Financial Periods
- Material/Equipment Usage
- The associated material/equipment costs
- Estimate to complete by resource
- Estimate to complete for the entire task
- Transfer to Financial Periods
- Oracle Primavera Steps

TimeControl Integrates with multiple systems simultaneously

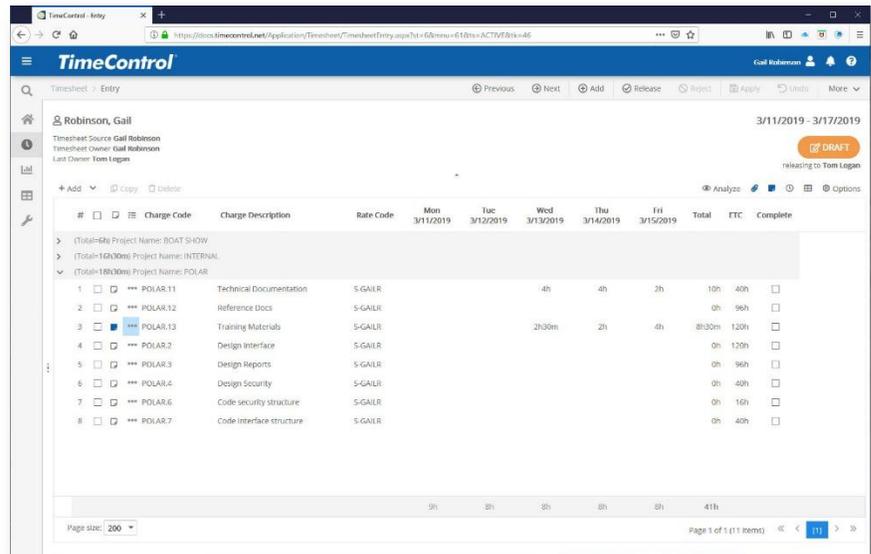
TimeControl was designed from the beginning to be a single point of entry to create timesheet data that would be consumed by multiple external systems. A single timesheet line in TimeControl might be used by Primavera EPPM or Primavera Pro to progress a task. That same line might be used by the ERP for billing, for Payroll. A vacation timesheet entry might be used by HR to keep track of remaining vacation for that employee. The next line in that same timesheet might be consumed by Microsoft Project for a separate project.



The flexibility of TimeControl and its extensive configuration options make all of this possible and helps avoid a situation where multiple timesheet systems must be implemented to serve multiple needs. After all, who wants to fill in more than one timesheet each week?

TimeControl, the Multi-Purpose Timesheet

In today's challenging economy, tracking productivity is more important than ever. It is no longer enough to know only how much time has been spent. Now management demands that you know what was done with the time. Many organizations are turning to project and task based management as a way of being more effective. One of the most difficult aspects of implementing project control is the capture and approval of labor actuals. *TimeControl* provides an electronic timesheet system designed to serve both Finance and Project Management



#	Charge Code	Charge Description	Rate Code	Mon 3/11/2019	Tue 3/12/2019	Wed 3/13/2019	Thu 3/14/2019	Fri 3/15/2019	Total	ETC	Complete
1	POLAR.11	Technical Documentation	S-GA/R			4h	4h	2h	10h	40h	<input type="checkbox"/>
2	POLAR.12	Reference Docs	S-GA/R						0h	96h	<input type="checkbox"/>
3	POLAR.13	Training Materials	S-GA/R			2h30m	2h	4h	8h30m	120h	<input type="checkbox"/>
4	POLAR.2	Design Interface	S-GA/R						0h	120h	<input type="checkbox"/>
5	POLAR.3	Design Reports	S-GA/R						0h	96h	<input type="checkbox"/>
6	POLAR.4	Design Security	S-GA/R						0h	40h	<input type="checkbox"/>
7	POLAR.6	Code security structure	S-GA/R						0h	10h	<input type="checkbox"/>
8	POLAR.7	Code interface structure	S-GA/R						0h	40h	<input type="checkbox"/>

Subscribe in the Cloud online or install on-premises

TimeControl is available both as a purchasable license to be installed on your premises or in a subscription model with our Timesheet as a Service *TimeControlOnline*. You can find out more about our online subscription options at www.timecontrol.net.

Open Architecture

TimeControl is an open architecture system with a complete bi-directional API for both on-premise licenses and our online subscription service in the cloud. *TimeControl* supports a variety of databases for on premise installation including Microsoft SQL Server, Oracle, MySQL and SQLite which is often used for local installations of Primavera Pro. Customizable user profiles allow the *TimeControl* interface to be tailored to each user's requirements.

Easy to use web interface

TimeControl's interface is browser-based and user-intuitive. User Profiles determines what the user will be presented with and the user can define where *TimeControl* should start and what defaults they wish. End users can use a variety of browsers such as Firefox, Chrome, Edge, or Safari.

The free TimeControl Mobile App included

TimeControl includes both a browser-based web interface and a free Mobile App available on Google Play for Android phones and tablets and on the Apple Store for iOS devices. Whatever your mobile device, you can access your TimeControl from wherever you are.

Multi-lingual

We know that not every user speaks English as their first language. TimeControl comes with numerous languages already in the system and every label and message is open to the TimeControl Manage Languages module so you can change the existing translations or even add your own. This is a great feature for adjusting terminology in the system to match your organization's (The only word you can't change is: "TimeControl").

Timesheet Approvals

TimeControl supports HMS Software's unique Matrix Approval Process for Labor Actuals which allows for quick authorization of project data. This process resolves the inherent conflict that is found when both the financial and project management hierarchies must approve timesheet data simultaneously. Automated validation of timesheet data is handled by TimeControl's remarkable Validation Rules . Additional approvals can be done manually with a simple Approve/Reject or Approve/Update process. The Project Manager Validation screen displays an easy-to-view hierarchical interface for managing project approvals.

Total Flexibility with User Profiles

TimeControl's User Profiles allows the Administrator to determine which menu choices, reports and fields are accessible by each user. The entire interface can be tailored to the user's individual needs. No other system on the market today offers this much flexibility. Field level security ensures that only the information which is important to each user, is displayed. Fields can be made read-only or invisible, removing them from view entirely. This makes *TimeControl* at once a secure, deployable system and an easy-to-use one as well.

Links to Project Management Systems

TimeControl includes direct links to project management systems including Oracle-Primavera EPPM and Oracle-Primavera Professional. TimeControl also include links to Microsoft Project, Project Server and Project Online, Deltek's EPM products, BrightWork, SharePoint, VersionOne and InEight's Hard Dollar. In fact, multiple products and versions can be supported simultaneously.

Integrating with a project management system drastically reduces timesheet errors as only valid tasks will be available in which to charge time. Hours entered in *TimeControl* are returned directly to the project management system as activity and resource progress.

Links to Hard Dollar Estimating/Cost Control System

TimeControl Industrial includes a direct bi-directional link to the Hard Dollar estimating and cost control system and charges in *TimeControl* can be linked simultaneously to Oracle-Primavera tasks and Hard Dollar cost items.

Vacation Approvals with TimeRequest™

The *TimeRequest* module allows users to make a request for certain types of times to be approved for entry in future timesheets. The most common application of this module may be for requesting Vacation time off. Once approved, the time is then automatically entered by *TimeControl* into the appropriate future timesheet.

The *TimeRequest* module is, however, not restricted to just Vacation requests. Any category of time can be exposed to the module. This allows an infinite number of applications such as for travel time, training time, offsite or onsite time or any other type of time category where the organization wishes it to be approved in advance.

E-mail Enabled

TimeControl allows email notifications to be sent for various events such as missing timesheets, incomplete or non-approved timesheets as well as timesheets that were rejected or re-released for approval.

Expense Reports

TimeControl includes extensive expense report functionality. Users can enter an unlimited number of expense report items for each timesheet line.

Links to Payroll, HR and ERP/Finance

TimeControl is designed with a Links module that lets you define links to corporate systems and software including Payroll software or online services, Human Resources systems and ERP/Finance systems.

Using *TimeControl* to fulfill the requirements of not only project management but also Finance, HR and Payroll means you can eliminate the costs and inefficiency of multiple timesheets.

Reporting

TimeControl includes a full-service Report Writer which allows existing reports to be edited or new reports to be created. Reports can include tabular, graphic and chart information. Once they are generated, reports can be saved in Excel, PDF, Word, CSV or image formats.

TimeControl's Reporting Wizards make report generation easy. *TimeControl's* field-level security is always active so only the fields which a user has permission for will be shown.

Predefined reports are available in a variety of formats which include posted timesheet data, table lists, printouts of the timesheets themselves and missing timesheet reports.

About HMS Software

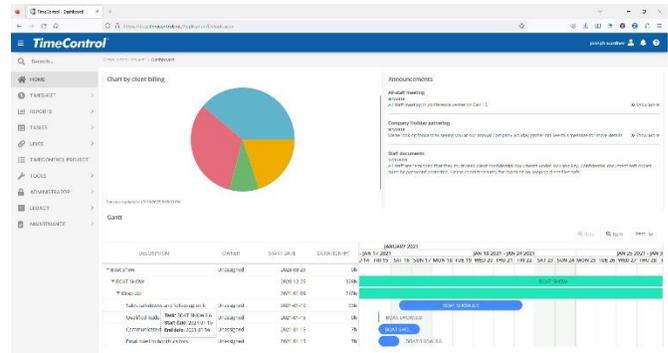
Based in Montreal, Canada with offices in Toronto, HMS Software has been a leading provider of project management and enterprise timesheet systems and services since 1984. HMS Software's first customized timesheet application was written in 1984. With the launch of TimeControl as a commercial application in 1994, HMS Software began servicing clients worldwide.



HMS Software's client list reads like a who's who of business. It includes AMD, Azuria, CANAM, CAE, EXFO, Foster Wheeler, Interpol, Kelly Services, the Government of Quebec, Pontoon Solutions, Progress Rail, Reebok-CCM, Rolls Royce, Sandoz, SEFA, Volvo Novabus, Zoetis and hundreds of others. For further information about HMS Software, please visit the HMS website at: <https://www.hms.ca/> or contact us at info@hms.ca.

About TimeControl

TimeControl was originally released in 1994. It was immediately successful in the project management sector and today is recognized not only as a project management solution, but also as an enterprise timesheet solution in use by companies worldwide. TimeControl is designed as a multipurpose timesheet able to serve the needs of both Finance and Project Management simultaneously. It includes features such as a multi-browser, multi-device interface, a PC and mobile interface, vacation approvals, executive dashboards, extensive approval functionality, flexible reporting and links to project management and corporate systems which makes the timesheet product ideally suited for integration with existing systems in any organization.



TimeControl's flexibility allows it to be deployed for use as a time and attendance, time and billing, project tracking and flex-time system. TimeControl and TimeControl Industrial are available both as an on-line subscription in the Cloud and for purchase for an on-premises installation. TimeControl Project is a premium version of the TimeControl Online and TimeControl Industrial Online subscription service in the cloud.

For more information about TimeControl, TimeControl Industrial and TimeControl Project, monitor the TimeControl blog at blog.timecontrol.com, or the main TimeControl website at <https://www.timecontrol.com>.