PERCEPTION®

Accounting Functions

Time Charges

A Training Tutorial

SPAR
ASSOCIATES, INC.

This training tutorial outlines the basic features for interfacing the *PERCEPTION* system with financial and accounting systems.

It is a supplement to the user manual entitled "*PERCEPTION Accounting Functions & Interface Manual,*" which provides more details for the user.

Before using this tutorial, the user should first view the preliminary training tutorial, "Getting Started With *PERCEPTION.*"

Other related training tutorials for accounting functions are the following:

1. ***PERCEPTION*** **Accounting – Managing Customer Billings**
2. ***PERCEPTION*** **Accounting – Managing Vendor Invoices**
3. ***PERCEPTION*** **Accounting Interface Setup**
4. ***PERCEPTION*** **Accounting Project Interface Setup**

Training Directory

- **Continue**
- **Defining Labor Types for Time Charges**
- **Defining Employee File**
- **Entering Time Charges**
- **Imported Time Charge Transactions**
- **Validation**
- **Posting**
- **Project Rollup**
- **Editing Time Charges**
- **Transaction Reporting**
- **Interface with Payroll and G/L**
- **Bar Code Systems**

The recording of time charges against authorized work orders is of major importance to the shipyard.

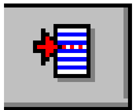
Correct and complete time charging against contracts is often the basis by which the shipyard bills its customers.

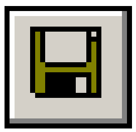
Without accurate and timely information, billings can be incomplete or late causing considerable problems with the ability of the shipyard to make a profit.

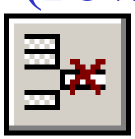
Before time charges can be entered into the system, the following tables must first be defined:

1. **Time Charge Type table**
2. **Employee table**
3. **Finally, before time charges can be entered, project work orders must be defined on the database and they must be authorized for time charge entries.**

<u>Special Note:</u>

To add new records in any worksheet, click on the *Add* button  **on the toolbar or the <u>down-arrow</u> on your keyboard.**

To save data entered into any worksheet, click on the *Save* button  **on the toolbar.**

To delete records from any worksheet, highlight those records (rows) to be deleted, then click on the *Delete* button  **on the toolbar.**

Defining Labor Types for Time Charges

The time charging function (*Environment/Accounting/ Timecards*) requires that a Labor Type table be defined <u>prior to entering time charges</u>.

This table identifies all of the types of time charges that can be processed against valid work orders.

Click on *Environment/Accounting/Labor Types* to open the worksheet for defining these types of labor charges:

Charge Type Information

	Charge Type	Labor Type	Description	Multiplier	Rate Plus	Flat Rate	Acct Charge Type
1	D	Double	Double Time	2.00	0		
2	O	Overtime	Overtime	1.50	0		
3	R	Regular	Regular	1.00	0		
4	S	Regular	Second Shift Regular	1.00	0		
5	X	Dirty	Dirty Time	1.25	0		

The data required to define each of the types of labor charges are the following:

<u>Charge Type</u>: A user defined code that can be included on the timecard that identifies the type labor charge. The Charge Type is limited to 2-characters and is <u>not</u> case sensitive ("ab" is considered the same as "AB").

<u>Labor Type</u>: Choose from regular, overtime (time-and-half), double, and dirty. These four categories are used to summarize all types of charges for work orders. They have no bearing whatsoever upon the actual payroll calculations derived from the other options and specifications.

<u>Description</u>: Describes the type of labor charge.

<u>Multiplier</u>: Used by the system to compute the labor cost of the time charged.

<u>Rate Plus</u>: An additional amount of hourly labor rate earned by the employee in addition to the basic Labor Cost.

<u>Flat Rate</u>: A fixed amount of hourly rate earned by the employee in addition to the basic Labor Cost.

<u>Account Charge Type</u>: The General Ledger account for the time charge used by the Payroll system.

The Labor Cost calculations performed by the system when time charges are entered are as follows:

Labor Cost = Charged Hours x

[(Employee Labor Rate+ Rate Plus) x Multiplier+ Flat Rate]

Where the

- ***Charged Hours* are entered in the time charging process (*Environment/Accounting/Timecards*) and**
- **The Employee Labor Rate is defined for the employee on the employee file (*Environment/Accounting/Employees*).**

Defining Employee File

The employee file must be set up to identify all valid employees who are authorized to charge time against projects.

Click on *Environment/Accounting/Employees* to open the employee worksheet.

Employee Information

	Employee ID	Name	Home Trade	Home Center	Department	Shift	Rate	Location	Status	Allow Time Entry
10	12	M. Yeaks	12	W06			12.00		Active	Yes
11	13	T. Smith	13	W02			10.00		Active	Yes
12	14	J. Lenman	13	W03			10.00		Active	Yes
13	15	G. Carter	15	W06			10.00		InActive	No
14	16	F. Cunningham	15	W01			0.00		Active	Yes

SPAR ASSOCIATES, INC.

The following information is available for each employee:

1. **Employee ID: Limited to 8 characters**

2. **Employee Name**

3. **Home Trade: This is the default trade number for the employee when the employee charges time to a work order. The timecard process will permit the time charge to be cataloged against an alternative trade number. This situation can occur when an employee performs multi-trade assignments. The Home Trade must be defined on the Resource/Trade file (*Library/Trades/Resources*).**

4. **Home Center: This is the default work center number for the employee when the employee charges time to a work order. The timecard process will permit the time charge to be cataloged against an alternative work center, depending on the work order. The Home Center must be defined on the Work Center file (*Library/Work Centers*).**

5. **Department: Employee's department (typically required by payroll interface).**

6. **<u>Shift</u>: Used to determine shift differential wage earnings (typically required by payroll interface).**

7. **<u>Rate</u>: Normal (regular time) hourly labor rate for the employee (typically required by payroll interface).**

8. **<u>Location</u>: Display purposes only.**

9. **<u>Status</u>: "Active" or "Inactive." Inactive employees cannot charge time to work orders. These charges will be rejected by the system.**

10. **<u>Allow Time Entry</u>: "Yes" or "No."**

11. **<u>Employee Badge Number</u>. This may be the same as the Employee ID. However, if time charges and tool room functions use bar coded swipes of the employee badge, the system will accommodate a separate badge number for these automated functions.**

Entering Time Charges

The time charging processes are accessed by selecting *Environment/Accounting/Timecards* from the main menu.

This opens the *Time Cards* worksheet window:

Time Cards

	Date Of Charge	Employee ID	Trade ID	Contract	Department	Shift	Project	Center	Work Order	Rework Charge	Type	Hou
1	10/10/1998	A	Demo1	B-DEMO			01	0	Demo		Regular	
2	10/10/1998	A	Demo2	B-DEMO			01	0	Demo		Regular	
3	10/10/1998	A	Demo1	B-DEMO			01	0	Demo2		Regular	
4	10/10/1998	A	Demo1	B-DEMO			01	0	Demo3		Regular	
5	10/10/1998	A	Demo1	B-DEMO			01	0	Demo4		Regular	

The procedures for retrieving, adding, changing and deleting time charges are the same as those outlined in "Getting Started With *PERCEPTION*."

Each time charge entry requires the following information:

1. Date Of Charge
2. Employee ID
3. Trade ID
4. Contract
5. Project
6. Center
7. Work Order
8. Hours Charged
9. Type Work (regular, overtime, etc.)
10. Rework Charge
11. Comments – Optional
12. Approved (yes/no)
13. Approved By
14. Approval Date

Time charges must identify not only the work center & work order number, but also the work order contract and project.

This requirement allows the same project number to be used under different contracts.

However, the user's system administrator can turn off the business rule that requires the contract number to be identified directly.

For this change to be valid, however, each and every project number must be unique on the database, regardless of the contract. This includes overhead projects as well.

To turn off this business rule:

1. **Click on *System/System Administration*.**
2. **Click on the *Manage Business Rules* icon.**
3. **Locate the business rule identified as "Projects-Project Is Contract," and turn it off.**

Once the business rule requiring direct reference to the contract number has been turned off, only the project number needs to be identified on the timesheet.

The system then will assume that the contract number is the same as the project number.

NOTE: for contracts that hold more than one project, the system will not necessarily find a contract number that has a number that matches the project number.

In this case, the system will search the database unsuccessfully for any contract number where the desired project number can be found for the time charge.

SPAR ASSOCIATES, INC.

Employee ID

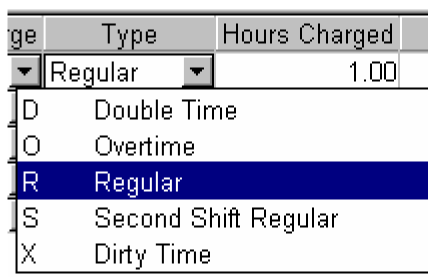
The employee record on the Employee data file provides the trade ID automatically.

However, the employee may also charge time to another trade and as long as the alternate trade is valid, the system will accept the time charges and catalog it against the alternate trade.

Type Time Charge

The default type time charge is Regular Hours.

However, the user may select other defined options from the drop-down window:



Rework

Even if the work order has not been flagged as a rework work order, time charges flagged on the time card as rework will cause the system to mark only these charges as rework for the work order.

Other charges not marked here will be processed as non-rework for the work order.

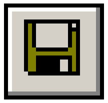
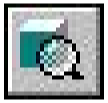
Work orders defined during the planning process as for rework only do not require the rework flag to be used for time charges.

Imported Time Charge Transactions

Time charges may also be imported from an external data source. For instructions on this process, refer to Importing and Exporting Data.

Time Charge Transaction Validation

When all of the time charges have been entered,

1. **Click on the *Save* button**  **on the toolbar.**
2. **Click on the *Check Time Charges***  **button on the toolbar, or**
3. **Select *Edit/Check Time Charges* from the main menu.**

The system then will check these records and validate them for possible errors and/or exceptions.

The user can view the progress of the checking process at the bottom left corner of the Worksheet window.

Time Charge Validation

The time charge validation process displays a *Time Charge Validation Report*.

This report can be printed in the format that is displayed (click the *Print This* button), or a report can be printed which lists all time charges with the processing errors and/or exceptions (click the *Print Charges* button).

The *Time Charge Validation Report* will not include previously posted charges.

Time Charge Validation Report

Time Charge Validation Report

Errors: Charges that have errors are denoted with red row numbers

13	charges to Work Order that do not exist
2	charges to unauthorizied Work Order
1	charges to Trades that do not exist
0	charges to Employees that do not exist

Exceptions: Charges that have exceptions are denoted with yellow row numbers

15	charges to a Trade that does not exist for the specified Work Order (The Trade will be added to the Work Order and then charged the specified time)
0	charges to late Work Orders
5	charges to early Work Orders
0	charges to closed Work Orders

Summary:

62.00	hours will not be charged due to errors
0.00	hours will be charged without exception
0.00	hours will be charged but are in exception
62.00	hours entered to be charged

Post Charges | Print This | Print Charges | Cancel | Help

SPAR ASSOCIATES, INC.

If the system detects any problems, errors or exceptions, it will provide its analysis in the time card's Validation Information data field:

Hours Charged	Charge Cost	Validation Information	Comments	Approval
1.00	10.00	<Early Charge>		
1.00	10.00	<Early Charge>		
1.00	0.00	<Unplanned Trade> <Invalid Timephased Subtask> <Early Charge>		
1.00	10.00	<Unplanned Trade> <Early Charge>		
1.00	0.00	<Unplanned Trade> <Invalid Incremental W/O Subtask> <Early Cha		
0.00	0.00	<Unplanned Trade> <Invalid Work Order>		No

Time Card Validation Information

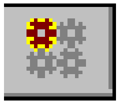
The time charge validation has two categories that are flagged: errors and exceptions.

Errors cannot be posted to the work orders without correcting the data.

Exceptions will be posted to the work order, although the system flags these as possible problems. This gives the user an opportunity to re-check irregular entries (exceptions), to verify the accuracy, prior to posting.

Time Charge Transaction Posting

If there are no errors reported on the *Time Charge Validation Report*, and the user wishes the system to proceed with posting all accepted time charges (including exceptions that were flagged on the validation report),

1. **Click on the *Post Time Charges* button**  **or**
2. **Select *Edit/Post Time Charges* from the main menu.**

Exceptions are warnings and will post to the work orders. Errors will not.

The user can view the progress of the posting process at the bottom left corner of the worksheet window.

Special Note for Time Charging Distributed Work Orders

If the primary work order has no budget, the system will distribute the hours charged equally among all the subtasks.

If changes to budgets are made after time charges have been posted, the system rollup window provides an option to re-roll all time charges. The system will then redistribute the charges to the subtasks according to the ratios of the revised subtask budgets to the work order budgets.

However, it must be understood that re-rolling the time charges for a project will re-roll all time charges to that project.

The longer the project has been underway, the more time charges will exist. The process of re-rolling all charges will become lengthy as the project progresses.

Effective Date

The Effective Date is the latest posted time charge date and is stored on the database for each project. The effective date is displayed on all status and progress reports.

After time charges have been posted, the system will update the effective date on the project table with the latest date of the newly posted time charges, unless the new time charges are dated earlier than the current effective date.

The system will also update the actual start and/or last charge date on the work order. If subtasks are involved, the same dates will be updated as well.

Time charges that are not posted can be modified and checked again.

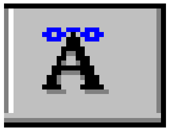
Approving Time Charge Transactions For Accounting Systems

After time charges have been posted, they may be exported to an accounting system for payroll processing.

However, to do so, the user must first approve these time charges by setting the Approved field to "Yes."

When the time card record is approved, the system will set the "Approved By" as the name of user from log-on and set the approval date to the current date.

Multiple time charge records can be approved at one time by

1. **Selecting them and**
2. **Clicking on the *Approve/Un-Approve* button**  **on the toolbar.**

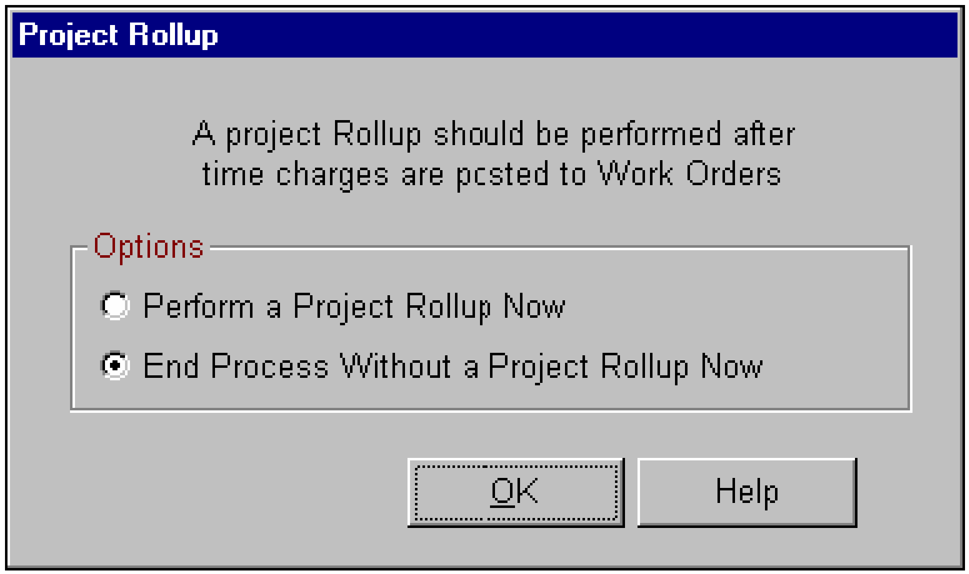
Project Rollup

Once transactions have been posted, the system will offer the user the opportunity to "Rollup" the projects.

This process rolls up the newly posted time charges from the work orders up through the entire project WBS as well as to the contract.

The rollup also re-computes progress, schedule variance, budget earned values, and estimates at completion.

To perform the rollup, click on the *Perform a Project Rollup Now* radio button and then on the *OK* button.



If the user wishes to delay this process (there may be work orders to close first), click the *End Process Without a Project Rollup Now* radio button and *OK*.

The Rollup process can be executed at any time by selecting the *Environment/Production Engineering/ Rollup* option from the main menu and choosing the *Production Labor Rollup*.

Editing Time Charges

After the posting process has been completed, or if the posting has been canceled, the system returns the user back to the time charge worksheet.

At the far right of this window is a colored column containing the system generated "Validation Information."

Each time charge transaction with an error or exception will have an explanation noted in this column.

To aid the user further, the system automatically color codes the row number column for each transaction to indicate the following:

- **Red: un-posted transactions noted with errors that must be corrected**
- **Yellow: un-posted transactions noted with exceptions**
- **Green: posted transactions, including those noted with exceptions**
- **Gray: un-posted and non-validated transactions**

SPAR ASSOCIATES, INC.

All <u>non-posted</u> transactions can be edited, correcting errors and exceptions, if necessary.

Posted transactions cannot be edited. To make any modifications to these, the user must back out the posted transaction as described in the topic, "Backing Out Time Charges."

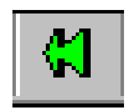
Once transactions have been posted, they will not be re-posted again by the system.

If posted transactions (flagged green) are included in the list of time charge transactions displayed in the Time Charge worksheet, and if the user clicks on the *Post Time Charges* button, the system will ignore all of these previously posted transactions.

The Time Charge Validation Report will not include previously posted charges.

Backing Out Time Charges

To back out one or more time charges,

1. **Highlight the time charges (rows) in the time charge Worksheet and**
2. **Click on *Edit/Back Out Time Charges* from the main menu, or**
3. **Click on the *Back Out* button  on the toolbar**

The *Back Out* process will cause the system to create copies of the selected rows, but with negative hours and actual labor cost values of the original selected rows.

- **Once this is done, the user must post these new charges for them to take effect.**
- **This process does not delete any data or the earlier time charge transactions.**
- **Only posted time charges can be backed out.**

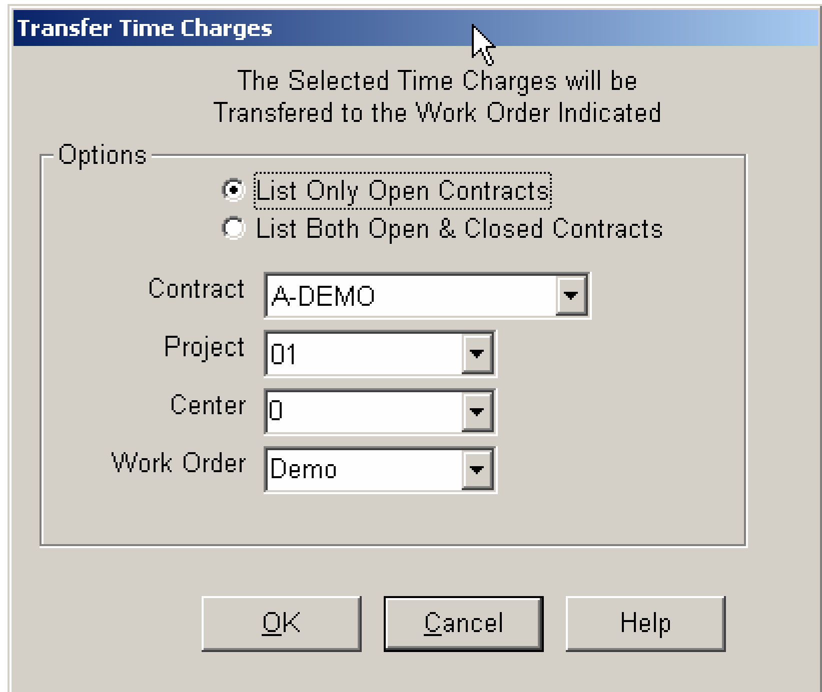
<u>Warning</u>: The system will not prevent the user from backing out the same time charge more than once.

Transferring Time Charges

If the user finds a <u>time charge logged against an incorrect work order</u>, and if the time charge has not yet been posted, the user may simply edit the time charge with corrections.

However, if the work order has been posted, the posted time charge entry cannot be edited. Instead,

1. Highlight the time charge to be transferred, and
2. Then click on the *Transfer Time Charge* button  on the tool bar.



The system will display the transfer window that allows the user to identify what work order is to receive the charges:

Once the correct work order has been identified,

1. **The system automatically will generate a back-out transaction for the incorrect work order and**
2. **Generate another transaction for the correct work order.**

Time Charge Transaction Reporting

It is often useful to be able to generate historical reports of specific time charges. Such reports can be generated by clicking on the *Print Charges* button in the *Time Charge Validation Report*, although these transactions will not include any posted transactions.

To produce a time charge transaction listing, including posted transactions, select from the main menu *Environment/Accounting/Reports/Time Charge Report*.

This will open a retrieval selection window that allows the user to limit the report to ranges of employee ID, project, charge dates, etc.

The selections also can be limited to specific types of transactions (unprocessed, posted, transactions with errors and/or exceptions).

Timecharge Report

06/19/2001 13:53:23

(Date format: MM/DD/YYYY)

Page 1 of 1

Chesapeake Marine Industries

Timecharge Report

Employee ID:	**0 to ZZZZZZZZ**	**Work Order:**	**0 to ZZZZZZZZ**	**Trade:**	**0 to ZZZZZZZZ**
Project:	**0 to ZZZZZZZZ**	**Center:**	**0 to ZZZZZZZZ**	**Charge Date:**	**00/00/0000 to 00/00/0000**

Employee ID	Date of Charge	Contract	Project	Center	Work Order	Trade ID	Hours Charged	Cost Charged	Type	Rewk	Validation Information
A	10/10/1998	B-DEMO	01	0	Demo	Demo1	1.00	10.00	R		<Early Charge>
A	10/10/1998	B-DEMO	01	0	Demo	Demo2	1.00	10.00	R		<Early Charge>
A	10/10/1998	B-DEMO	01	0	Demo2	Demo1	1.00	0.00	R		<Unplanned Trade> <Invalid Timephased Subtask> <Early Charge>
A	10/10/1998	B-DEMO	01	0	Demo3	Demo1	1.00	10.00	R		<Unplanned Trade> <Early Charge>
A	10/10/1998	B-DEMO	01	0	Demo4	Demo1	1.00	0.00	R		<Unplanned Trade> <Invalid Incremental W/O Subtask> <Early Charge>
					Employee Totals		**5.00**	**30.00**			
					Report Totals		**5.00**	**30.00**			

Time Charge Report

SPAR ASSOCIATES, INC.

Interface With Payroll And General Ledger Systems

Interfaces are available for electronically linking *PERCEPTION* time charge data to payroll and general ledger systems.

The interface requires an interface setup. Refer to the tutorial “Setting Up Accounting Systems Interface.”

Then, posted time charges in *PERCEPTION* can be transferred to the correct accounts of the General Ledger system.

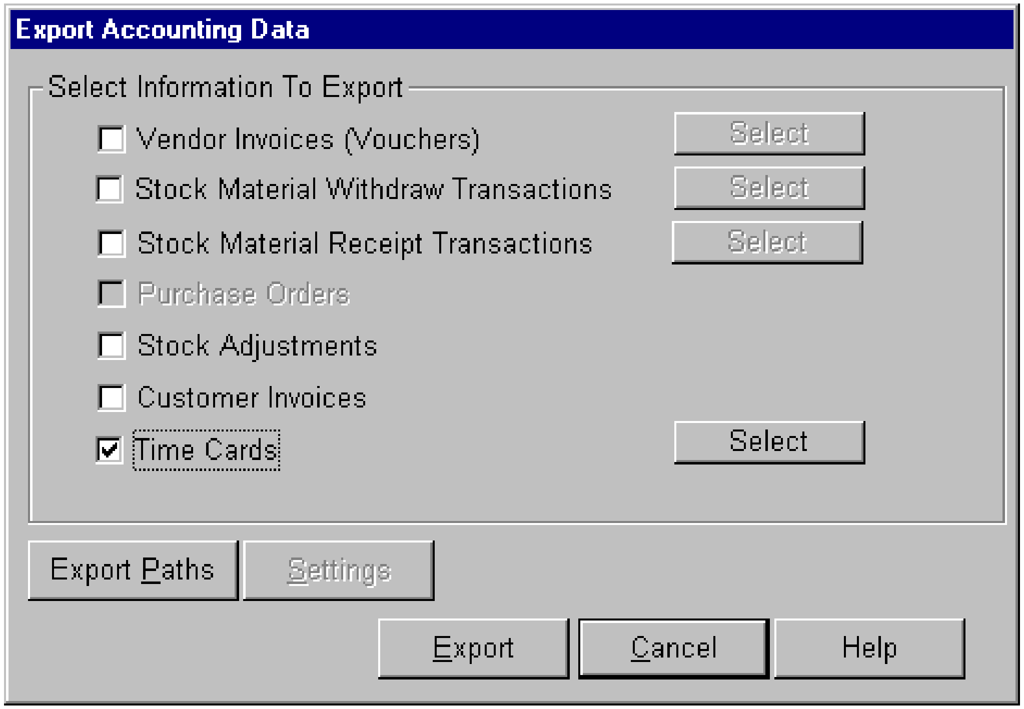
Sending <u>Posted & Approved</u> *PERCEPTION* Transactions To Payroll & General Ledger

To export time charge transactions to payroll and general ledger accounting systems,

1. **The time charge transactions first must be <u>both</u> posted and approved.**
2. **Once done, click on *Environment/Accounting/ Transfer to Accounting System.***

The system will display the export choices

1. Select *Time Charges*, and then
2. Click on the *Export* button.



The exported transactions are put onto the file described in the accounting interface setup.

This file may be imported into the designated accounting payroll system.

An alternative for processing payroll is to have this same file of transactions sent to an out-sourced payroll servicing company.

Time Sheets

Many shipyards use daily timecards or weekly timesheets.

For larger operations, daily processing of time charges is strongly recommended.

Time charge questions and errors are difficult to address as time goes by.

The following slides illustrate a sample weekly time sheet and a sample daily timecard.

Production foremen and supervisors typically fill these documents out for the employees they supervise.

Management staffers, however, typically fill out their own time sheets.

PERCEPTION **will accommodate a mix of daily and weekly time charge entries.**

WEEKLY TIME SHEET

Chesapeake Marine Industries, Inc.

Employee Name: ____________________

Employee Number: __________

Contract Hull No.	Work Center	Work Order Code	Description	Mon 31-Dec	Tue 01-Jan	Wed 02-Jan	Thu 03-Jan	Fri 04-Jan	Sat 05-Jan	Sun 06-Jan	Weekly Totals
			Daily Totals:								

Approval: ____________________ Week Total: ______

Sample Weekly Time Sheet

Sample Daily Time Card

Chesapeake Marine Industries, Inc.

DAILY TIME CARD

Employee Name: ____________________

Employee Number: ____________________ Date: ____________

Contract Hull No.	Work Center	Work Order Code	Description	Reg. Hours	OT Hours	Dbl Hours	Dirty Hours
			Daily Totals:				

Approval: ____________________

Time And Attendance Systems

Many shipyards are using bar code or magnetic strip data collection (swipe) systems to measure work time and attendance. This process typically operates at the shipyard front gate and requires workers to "swipe" a bar-coded badge.

The system records the time in and out and this information verifies worker attendance for payroll purposes. It also can be used to ensure that only authorized personnel are entering the shipyard.

Most time and attendance systems typically do not record employee time on and off work orders.

However, *PERCEPTION*'s time charge data can be cross-verified electronically with a swipe system to ensure all employee labor hours are correctly accounted for.

Bar Code Time Charge Systems

PERCEPTION **can be configured to accept time charges using bar code data collection devices.**

These devices can be hand-held devices that are either

1. **Passive and require an uploading process to the *PERCEPTION* database, or**
2. **Active and automatically load data real-time into the database using radio frequency transmissions.**

05/13/2002 16:02:35

(Date format: MM/DD/YYYY)

Chesapeake Marine Industries

Bar Code Work Order Listing Report (BAR02)

Work Center/WO Planned Start Date Sort

Contract:	**Ship Repair to Ship Repair**	**Project:**	**0 to ZZZZZZZZ**	**Division**	**0 to ZZZZZZZZ**
Work Center:	**0 to ZZZZZZZZ**	**Outfit/Zone:**	**0 to ZZZZZZZZ**	**Department**	**0 to ZZZZZZZZ**
Work Order:	**0 to ZZZZZZZZ**	**Unit:**	**0 to ZZZZZZZZ**	**Process**	**0 to ZZZZZZZZ**
Group:	**0 to ZZZZZZZZ**	**Assembly:**	**0 to ZZZZZZZZ**	**Planned Date:**	**01/01/1950 to 01/01/2050**
Account:	**0 to ZZZZZZZZ**	**Sub Assembly:**	**0 to ZZZZZZZZ**	**Actual Date:**	**01/01/1950 to 01/01/2050**
Zone:	**0 to ZZZZZZZZ**	**Part:**	**0 to ZZZZZZZZ**	**Drawing:**	**0 to ZZZZZZZZZZZZZZZZZZZZ**

Work Center: 0

Work Order	Heading	Start Date	Finish Date	
506001	Remove & replace sea grids	00/00/0000	00/00/0000	*23354*
102002	U.T. emergency room bhd	09/29/1998	10/09/1998	*23333*
700001	Dock preparation	09/29/1998	10/09/1998	*23362*
102001	U.T. hull	09/29/1998	10/09/1998	*23332*
112001	Remove manhole covers	09/29/1998	10/09/1998	*23336*
112002	Replace manhole covers	09/29/1998	10/09/1998	*23337*

Work Center: 0

Work Order	Heading	Start Date	Finish Date	
120006	Top coat alkyd	09/29/1998	10/09/1998	*23342*
127001	Paint ships name	09/29/1998	10/09/1998	*23343*
129001	Paint draft marks	09/29/1998	10/09/1998	*23344*
201001	Rivets & seams	09/29/1998	10/09/1998	*23345*
112003	Repairs to covers	09/29/1998	10/09/1998	*23338*
500001	Tailshaft readings - Revised	09/29/1998	10/09/1998	*23347*

Sample Bar Coded Work Order List

05/13/2002 16:01:55
(Date format: MM/DD/YYYY)

Chesapeake Marine Industries
Employee Bar Code Listing (BAR02)

Employee ID: 0 to ZZZZZZZZ **Work Center:** 0 to ZZZZZZZZ **Trade:** 0 to ZZZZZZZZ

Employee ID	Name	Employee ID	Name
1	J. Thompson	15	G. Carter
2	G. Lane	16	F. Cunningham
3	R. Stevens	17	F. Thompson
4	G. Morrison	18	M. Moriatio
5	D. Edwards	19	G. Klein
6	D. Marshall	20	J. Carter
7	B. Davis	21	J. Carter Jr.
8	J. Davis	22	A. Manley
9	W. Jackson	23	P. Trepley

Sample Bar Coded Employee Listing