CHAPTER 19

WEB Login

ERP2020 offers an interface via the 4D client as well as a standard web browser. This chapter covers options available while accessing ERP2020 via the web.

Since web pages are specific, though easily added, custom web pages are typically created during implementation. The menu-links explained in this chapter are not a complete list of options as may be available on your installation.

Web access to the ERP2020 is particularly convenient for external users such as customers and suppliers since there is no need to install additional programs. Using a Web -Browser of their choice, customers and suppliers may log into the ERP2020 system to query WIP status, to collaborate on a Lot Traveler, to enter orders or to release lots off hold.

Web access is also useful for employees since it allows them to retrieve data from computers outside the factory. No software needs be installed on client PCs and a different TCP/IP port (EG port 80) is used.

Concepts and Definitions

Architecture

When a user accesses the system via a browser, the data comes directly from the 4D Server running ERP2020. For more information, please visit: www.4d.com. The 4D Server acts as both the data and Web server and has its own webserver. No other software is required. The IP address of the 4D server is the same as that of the server plus the port-number used by ERP2020 to publish the web data: e.g. 192.168.1.101:8080.

Certain web-menus allow the web-user to obtain specific printouts in PDF format. For this facility to function properly the PDF Writer must have been properly registered with ERP2020 on the Server-side. When a PDF document is requested by the web-browser the ERP2020 server first creates a PDF document and then transmits it to the web-browser.

Security

When the web page address is entered, a log-in screen pops up. See figure 19.1 on page 19.2

FIGURE 19.1

The administrator creates a Web login account, for Customers and Suppliers, that allows ERP2020 to automatically generate a username and password. This information is stored in the User-attributes record that also holds security controls and configuration tools for the webpage data for each external user.

Once a user is successfully logged in, the Web interface shows menu-links that offer a variety of WIP data sources for an external user to view and analyze his production lots.

In figure 19.2 on page 19.3 a typical customer menu is shown. An employee, customer and supplier will have their own set of menu links as assigned by the administrator.

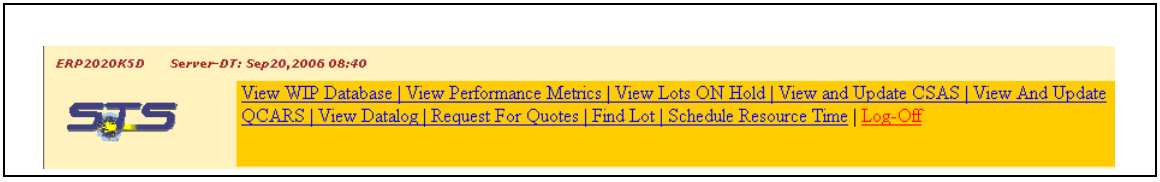


FIGURE 19.2

WEB Menu-Items

•Menu: View WIP Database:

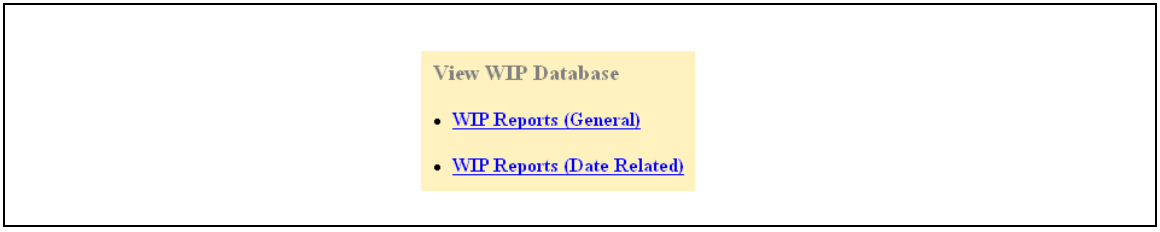


FIGURE 19.3

This menu gives the user two options as shown in figure 19.3. These are explained on the next page.

Menu-Item: *WIP Reports (General)*

Through this menu, the user can specify the search criteria by process, package type, resource, device/part # etc. A user can define the production stage at which the lot is at from the drop down 'Report List'. If the stage is unknown, the user may simply select 'Lots in Process' which will query all the WIP data. The search settings can be saved by checking the "Save Settings" button. See

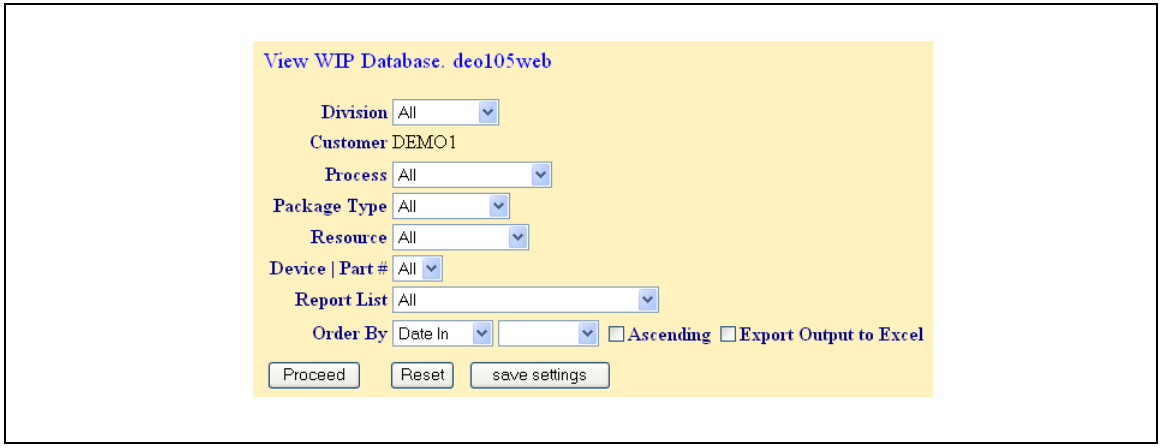
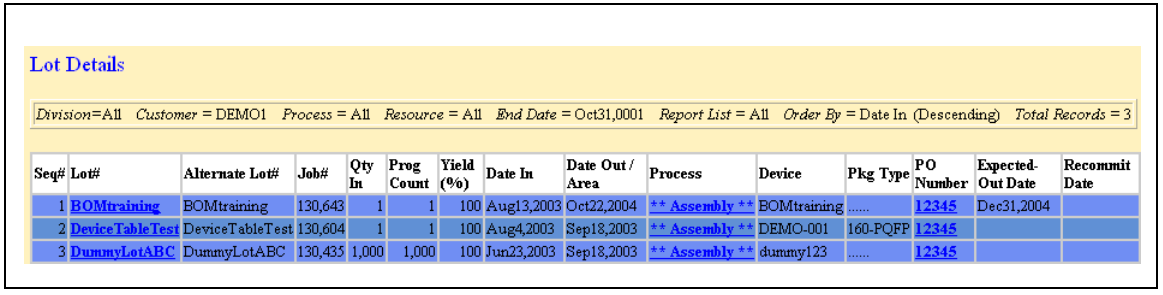


FIGURE 19.4

figure 19.4 on page 19.4

The search results can be exported to Excel (by setting the check-box "Export Output to Excel"). Alternatively, the results may also be displayed in the browser window, as shown in figure 19.5 on page 19.4.



Seq#	Lot#	Alternate Lot#	Job#	Qty In	Prog Count	Yield (%)	Date In	Date Out / Area	Process	Device	Pkg Type	PO Number	Expected-Out Date	Recommit Date
1	BOMtraining	BOMtraining	130,643	1	1	100	Aug13,2003	Oct22,2004	** Assembly **	BOMtraining	.....	12345	Dec31,2004	
2	DeviceTableTest	DeviceTableTest	130,604	1	1	100	Aug4,2003	Sep18,2003	** Assembly **	DEMO-001	160-PQFP	12345		
3	DummyLotABC	DummyLotABC	130,435	1,000	1,000	100	Jun23,2003	Sep18,2003	** Assembly **	dummy123	.....	12345		

FIGURE 19.5

Once the lot is displayed in the browser, the user has 3 query links: 1] The ‘Lot#’ can be clicked to give further details as explained below. 2] The ‘Process’ can be clicked to display the traveler in the browser. 3] The user can click the ‘PO#’ to view the accounting details pertaining to the purchase order.

Lot-Details and Traveler Download Options:

The user may zoom-in on a particular lot by clicking on the lot number. A detailed view of the lot is provided alongwith an option to display or download the traveler to an Excel file. See figure 19.6 on page 19.5

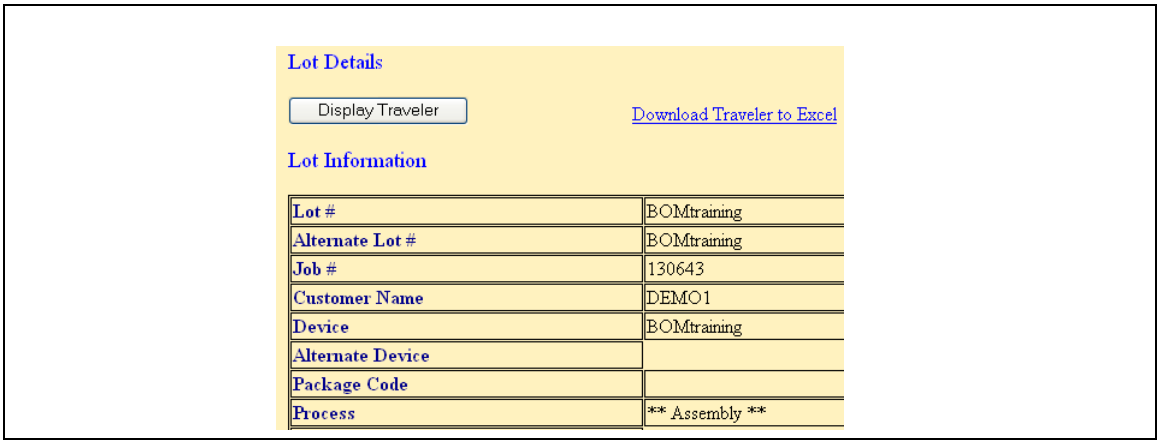


FIGURE 19.6

Please note that when the traveler is downloaded to Excel, one row is created for each step of the traveler. The data-row is preceded by a header row whenever the template-number of the traveler-step changes or whenever a Binning-Control record is specified in the traveler-step. The header line serves to provide the bin-names specified in the step-type template or the associated Binning-Control record.

If the user chooses to display the traveler data in the browser, the binning distribution data can be viewed by clicking on the ‘Step#’ numeric.

Menu-Item: *WIP Reports (Date Related)*

This sub-menu allows an additional option of choosing a time-window for the search. The user may select a particular date and set the number of days (prior to the date) to define the time-window. See figure 19.7 on page 19.6.

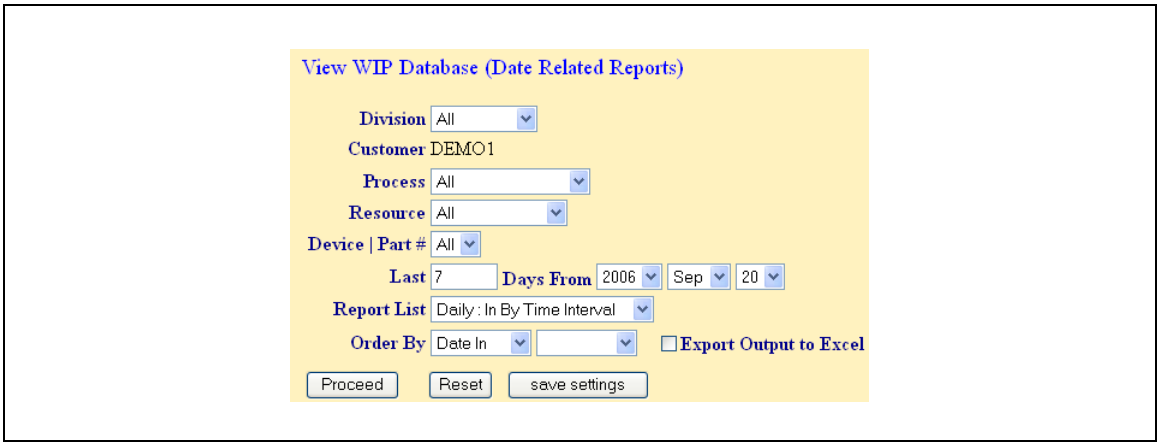


FIGURE 19.7

Here, the 'Report List' allows two options only: 'In by Time Interval' and 'Out by Time Interval'. When the user chooses the former option, any merged lots in the selection will show as "MERGED" in the date-out column. On the other hand when the user chooses the "Out By Interval" option, merged lots will be excluded from the list.

The WIP data can be ordered by Date-In, Lot#, Job#, Process, Customer and Device. The query links, when the traveler is displayed in the browser, remain the same as in the WIP Reports (General).

The "Export Output to Excel" option is available here as well if the user wants to forward the information or perform further caluclations using Excel Macro's.

•Menu: View Performance Metrics

ERP2020 offers analytical data in the form of Yield, Defects Per Million (PPM), Cycle Time, Hold Time, Quality etc. These metrices can be plotted for each lot using this menu. See figure 19.8 on page 19.7

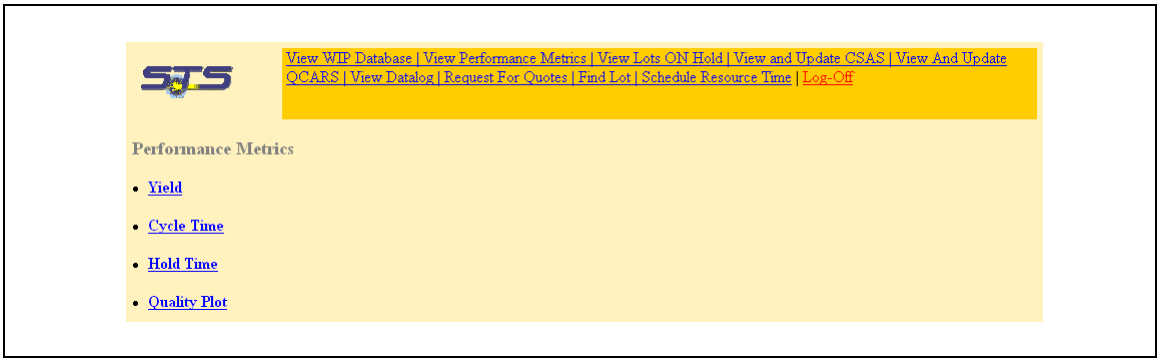


FIGURE 19.8

Menu-Item: *Yield*

The user can define the process, device and resource (equipment) to calculate the yield. There is an option to define a time window as well. The yield is plotted on the Y-axis. The X-axis represents the lots tested for a specified device. See figure 19.9 on page 19.8

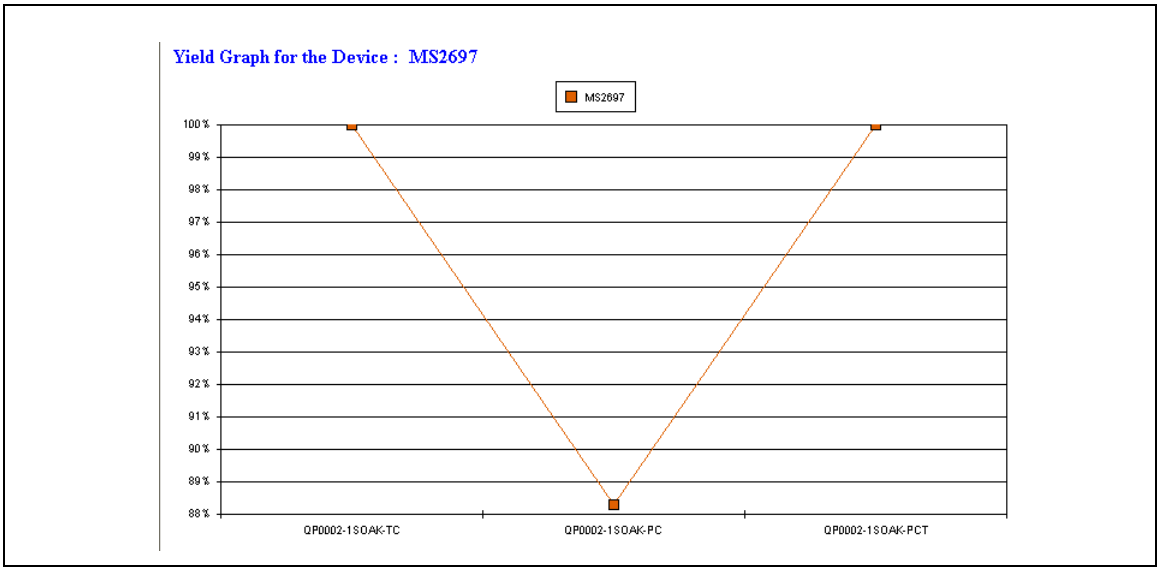


FIGURE 19.9

Menu-Item: *Defects per Million*

This menu item is only available to an employee. The user can define the start and end date to calculate the PPM. The data for this menu is captured from QCARS. So if there is no QCAR, there will be no defects on the plot. The X-axis plots the resource which may be one of the following: Machine1, Machine2, Operator1 and Operator2. See figure 19.10 on page 19.9

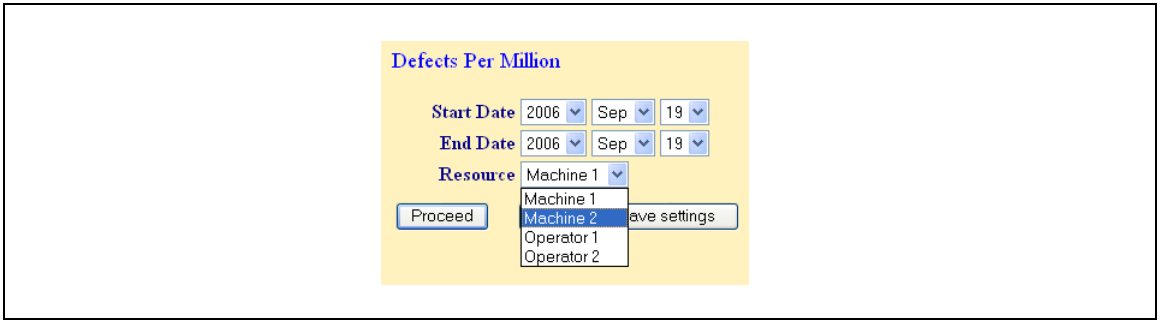


FIGURE 19.10

Menu-Item: *Cycle Time*

Shows the relationship between number of Lots and Cycle Time in Days. The Cycle Time is on the X-axis and number of Lots on the Y-axis.The resource selection allows data to be shown for a particular tester (which is entered at traveler creation). See figure 19.11 on page 19.10

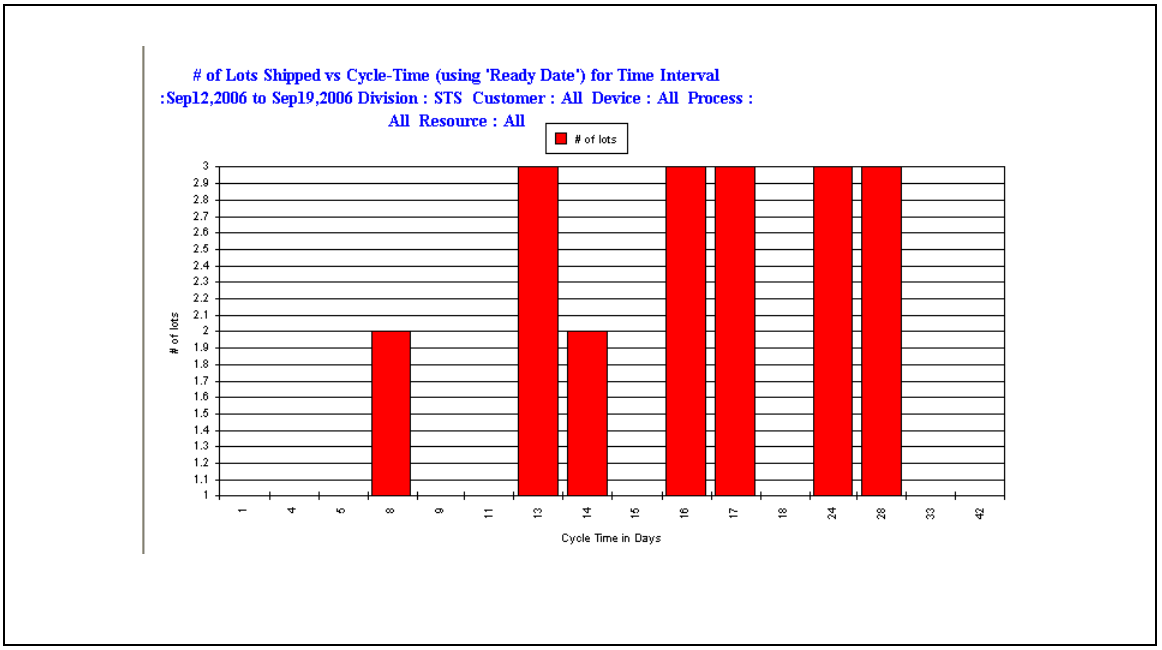


FIGURE 19.11

Menu-Item: *Hold Times*

Plot is generated between total hours on hold on the X-axis and number of lots on the Y-axis. The Device, Customer, Type of Process and Time-Window for the hold time report may be selected. An example of the resulting graph is shown in figure 19.12 on page 19.11.

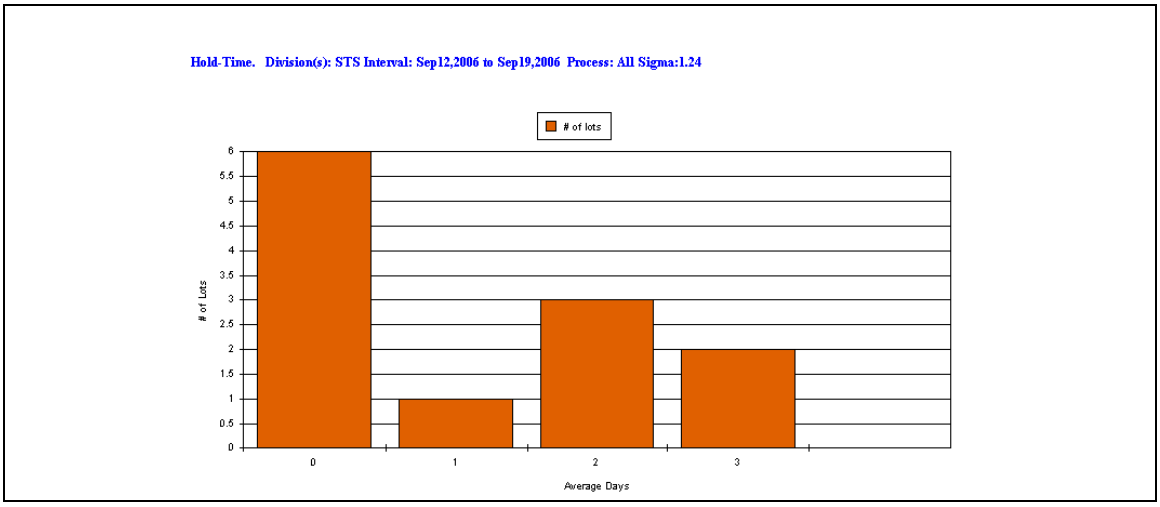


FIGURE 19.12

Menu-Item: *Quality Graph*

The quality plot has options as shown in figure 19.13 on page 19.11.

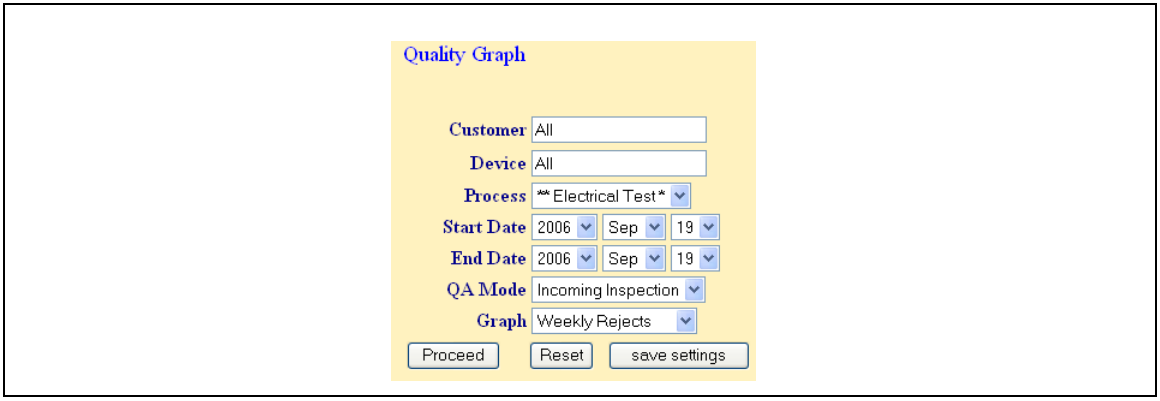


FIGURE 19.13

The QA mode gives options such as Factory, Incoming, CSI and Electrical QA. There are three graphs that may be selected using the “graph” pull-down tab: Weekly rejects, Rejects by code and Rejects per million.

•Menu: View Lots on Hold

This report shows lots on hold with information such as Lot number, customer name, location where it’s at, expected time to come out, hold time etc. See figure 19.14 on page 19.12

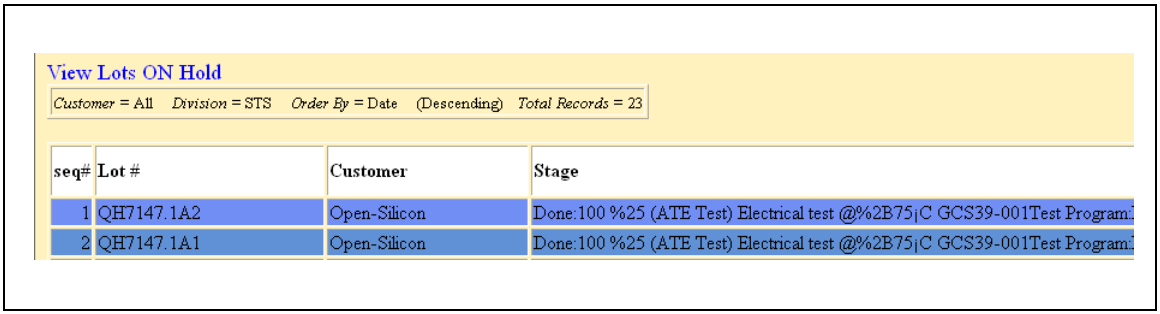


FIGURE 19.14

•Menu: View And Update QCARS

This menu allows a customer or supplier to view and update Quality Control Corrective Action Requests. See figure 19.15 on page 19.13

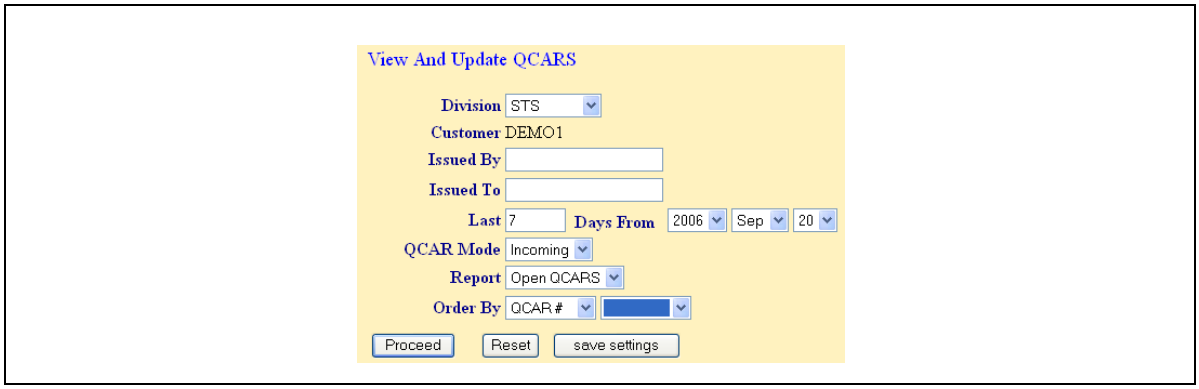


FIGURE 19.15

The user can select the QCAR by mode (whether the defect occured at incoming, in-line, at the supplier etc.).

•Menu: View Datalog

This option allows a customer to view a datalog file for a lot (if enabled).

See figure 19.16 on page 19.13

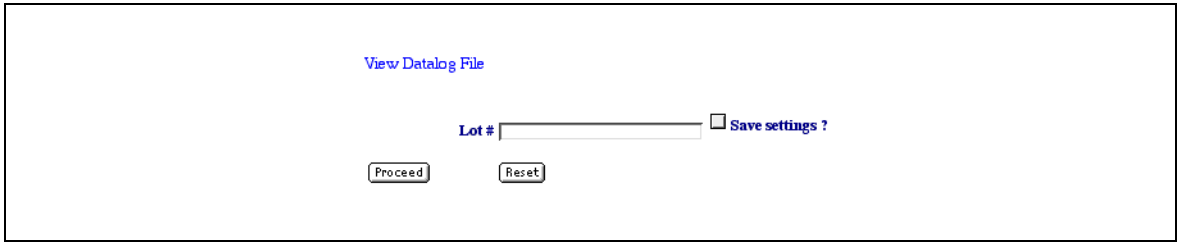


FIGURE 19.16

•Menu:Request For Quotes

This option allows a customer to enter an RFQ. See figure 19.17 on page 19.14

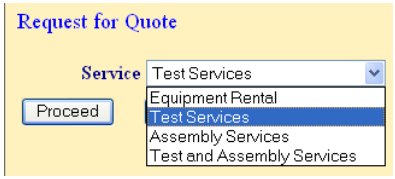


FIGURE 19.17

A quote for any of the services such as Equipment Rental, Test Services, Assembly Services, Test and Assembly Services can be requested using the above menu.The example in figure 19.18 on page 19.14 is a template for the Request for Quote on Reliability Test Services.

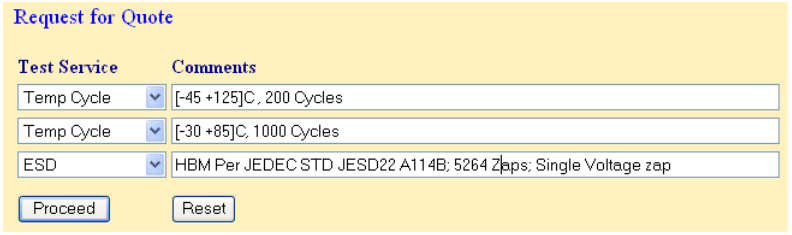


FIGURE 19.18

Once a service is chosen, the user is given 3 drop down tabs. These tabs either include the various services of Assembly and/or Test or a range of testers and handlers in case of Equipment Rental.

•Menu: View Floor By Tool Type

This menu is used to check the status of the equipment on the floor. The user is given the choice to narrow the search to a particular Tool Type. See figure 19.19 on page 19.15.

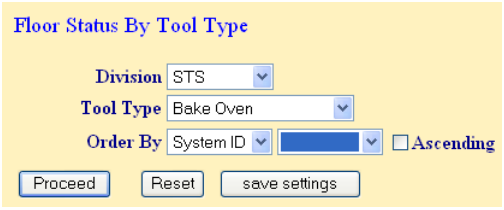
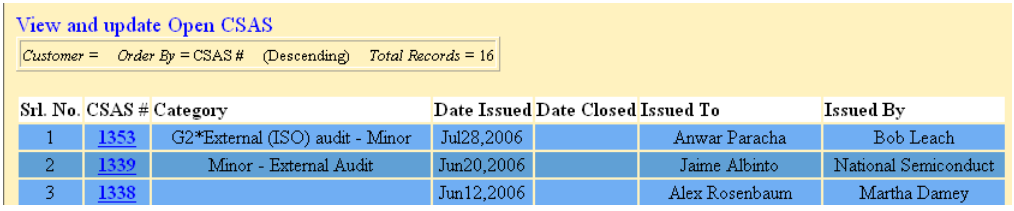


FIGURE 19.19

•Menu: View And Update CSAS

This menu lists the requests made from the user to the customer, the date issued, date closed, issued by, issued to etc. An example of a CSAS is shown in figure 19.20 on page 19.15.



Srl. No.	CSAS #	Category	Date Issued	Date Closed	Issued To	Issued By
1	1353	G2*External (ISO) audit - Minor	Jul28,2006		Anwar Paracha	Bob Leach
2	1339	Minor - External Audit	Jun20,2006		Jaime Albinto	National Semiconduct
3	1338		Jun12,2006		Alex Rosenbaum	Martha Damey

FIGURE 19.20

The user can click on the 'CSAS#' to view the details. The 'Reply' tab lies below the details that allows the customer to send their corrective action responses.

•Menu: View Buy Order

This menu allows the user to view a buy order. See figure 19.21 on page 19.16

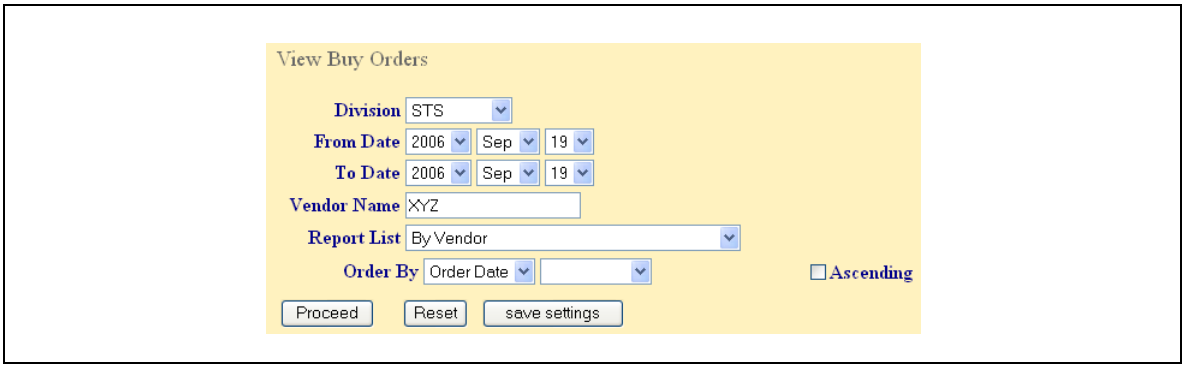


FIGURE 19.21

•Menu: Quote

This menu allows the user typically an employee to create a new quote, modify or email an existing quote. See figure 19.22 on page 19.16

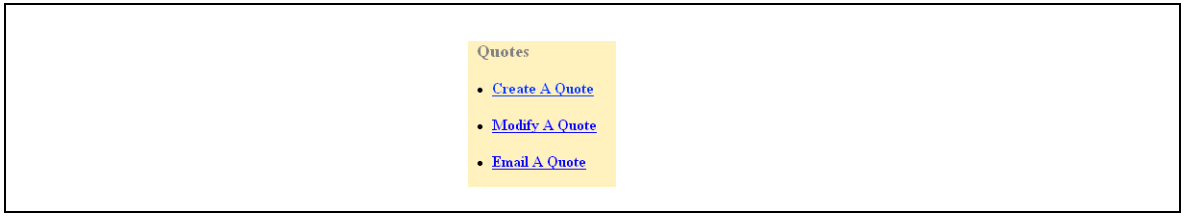


FIGURE 19.22

An example of a “Create Quote Template” is shown in figure 19.23 on page 19.17.

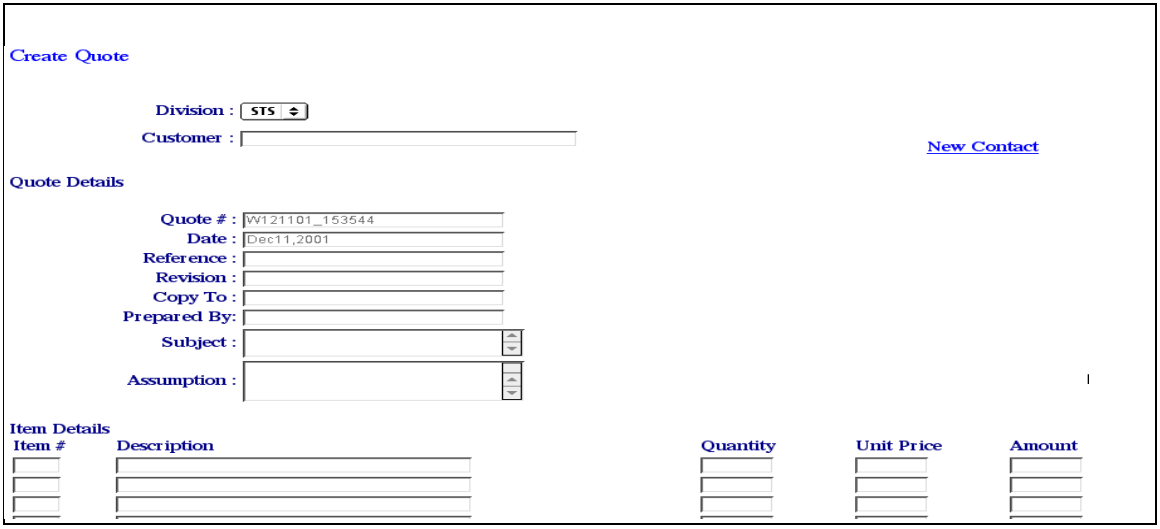


FIGURE 19.23

•Menu: See Specs

This menu lists all the available specifications. Clicking on the specification number will give the detail information to that specification. See figure 19.24 on page 19.17

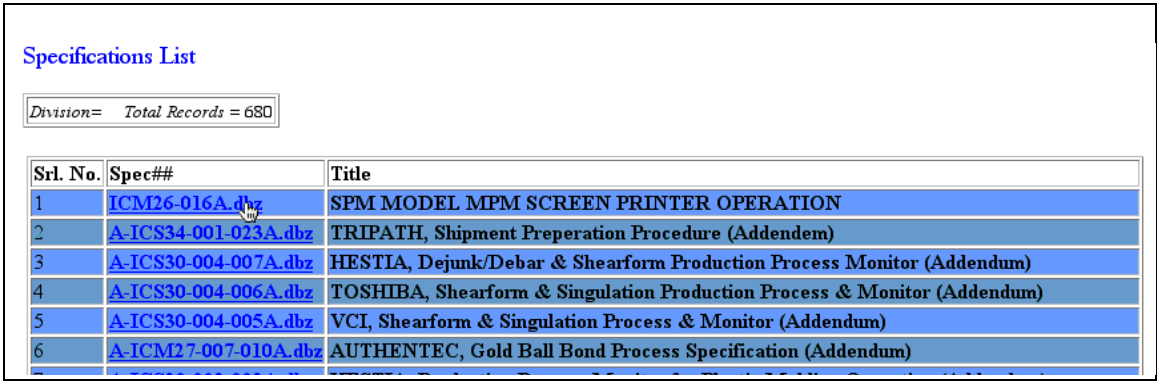


FIGURE 19.24

•Menu: Schedule Resource Time

A customer can reserve an equipment through the web as shown in figure 19.25 on page 19.18

FIGURE 19.25

The Show Schedule menu lists all the reservations made against a user selected time-interval. The reservations may also be filtered by the equipment-name. A sample of the reservation list is shown below in figure 19.26 on page 19.18

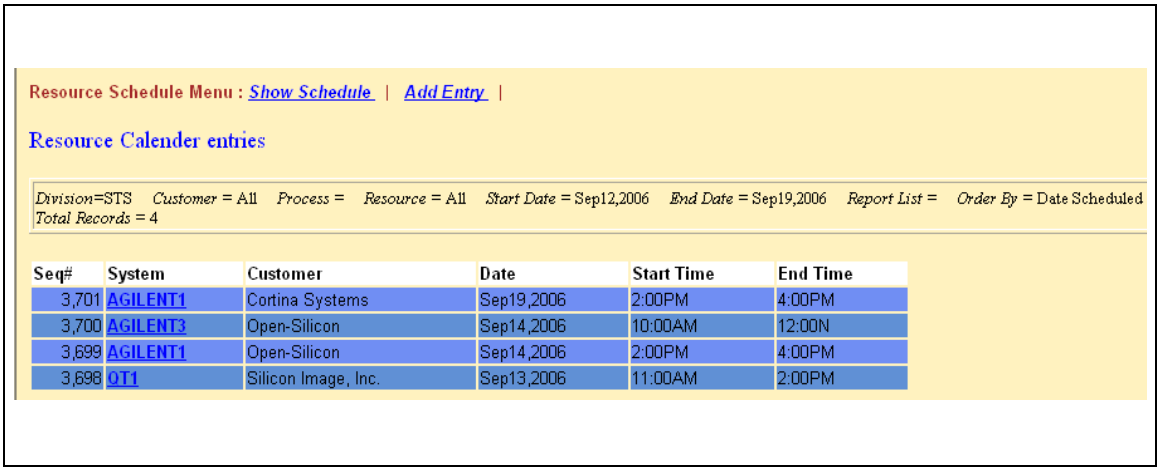


FIGURE 19.26

The user can click on each system to see further details alongwith the PO# utilized for the rental.

The Add-Entry menu allows the user to reserve a block of time on the selected resource. The customer must choose a valid sales-order number from the drop-down list of sales-orders logged in the ERP2020 database. The additional form is shown below figure 19.27 on page 19.19

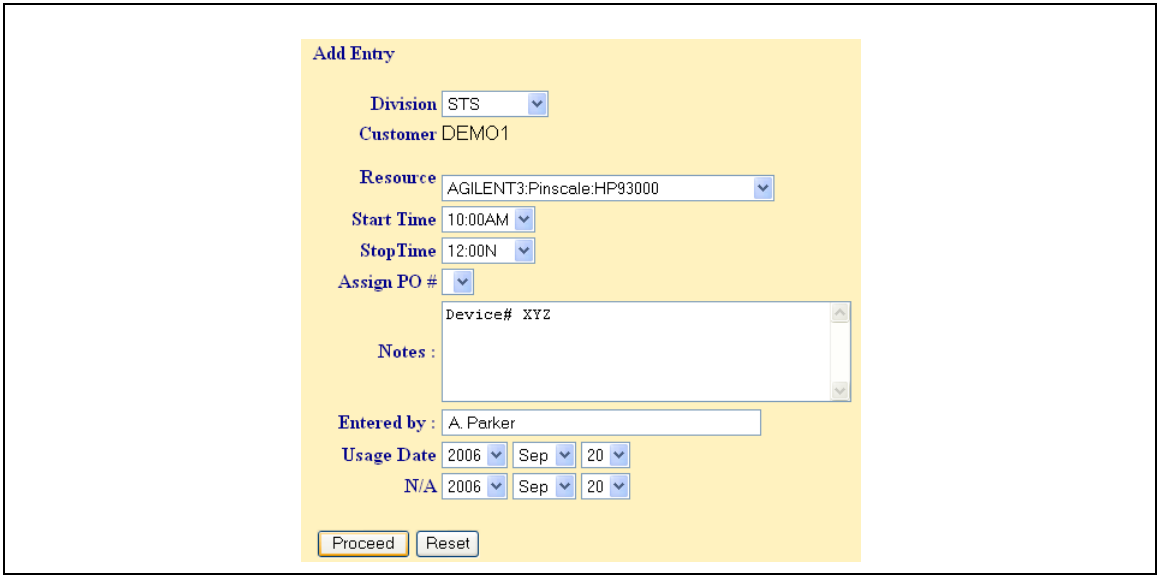


FIGURE 19.27

When the form is submitted, the ERP2020 server validates the entry and the availability of the time. If the time-slot has already been reserved then an availability chart is loaded with the form to allow the user to conveniently determine available time-slots. This chart breaks the time in half-hour slots and displays available time-slots in yellow. Time-slots taken by other customers will be shown as “un-available” without disclosing the actual name of the user. The availability chart is shown below in figure 19.28 on page 19.20.

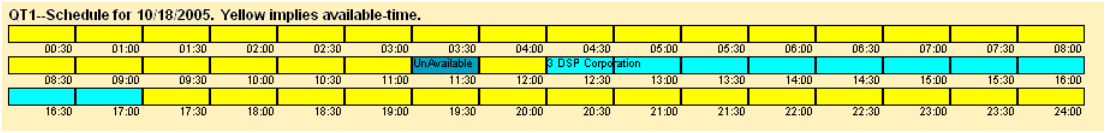

QT1--Schedule for 10/18/2005. Yellow implies available-time.
00:30 01:00 01:30 02:00 02:30 03:00 03:30 04:00 04:30 05:00 05:30 06:00 06:30 07:00 07:30 08:00
UnAvailable
3: DSP Corporation
08:30 09:00 09:30 10:00 10:30 11:00 11:30 12:00 12:30 13:00 13:30 14:00 14:30 15:00 15:30 16:00
16:30 17:00 17:30 18:00 18:30 19:00 19:30 20:00 20:30 21:00 21:30 22:00 22:30 23:00 23:30 24:00

FIGURE 19.28