

Figure 1

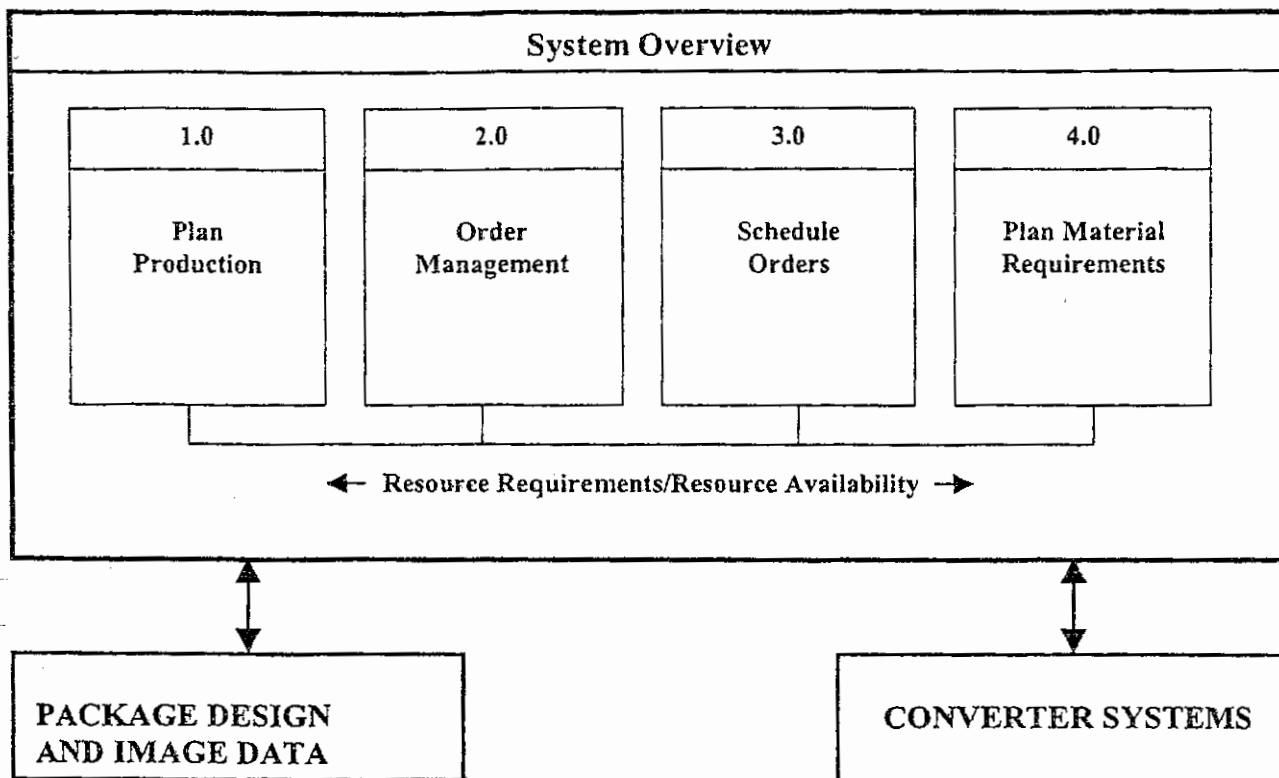


Figure 2

Production Planning Functional Overview

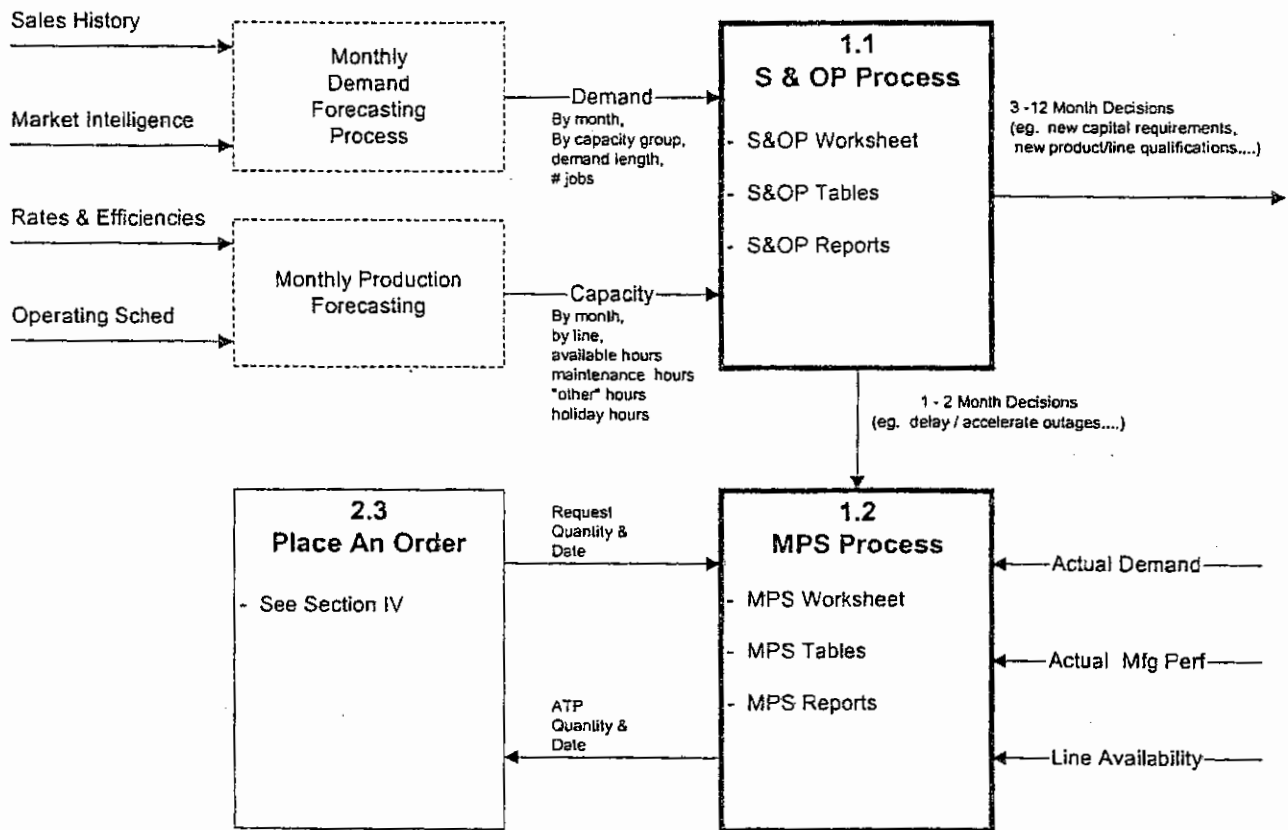


Figure 3

Sales And Operations Planning (Process 1.1)

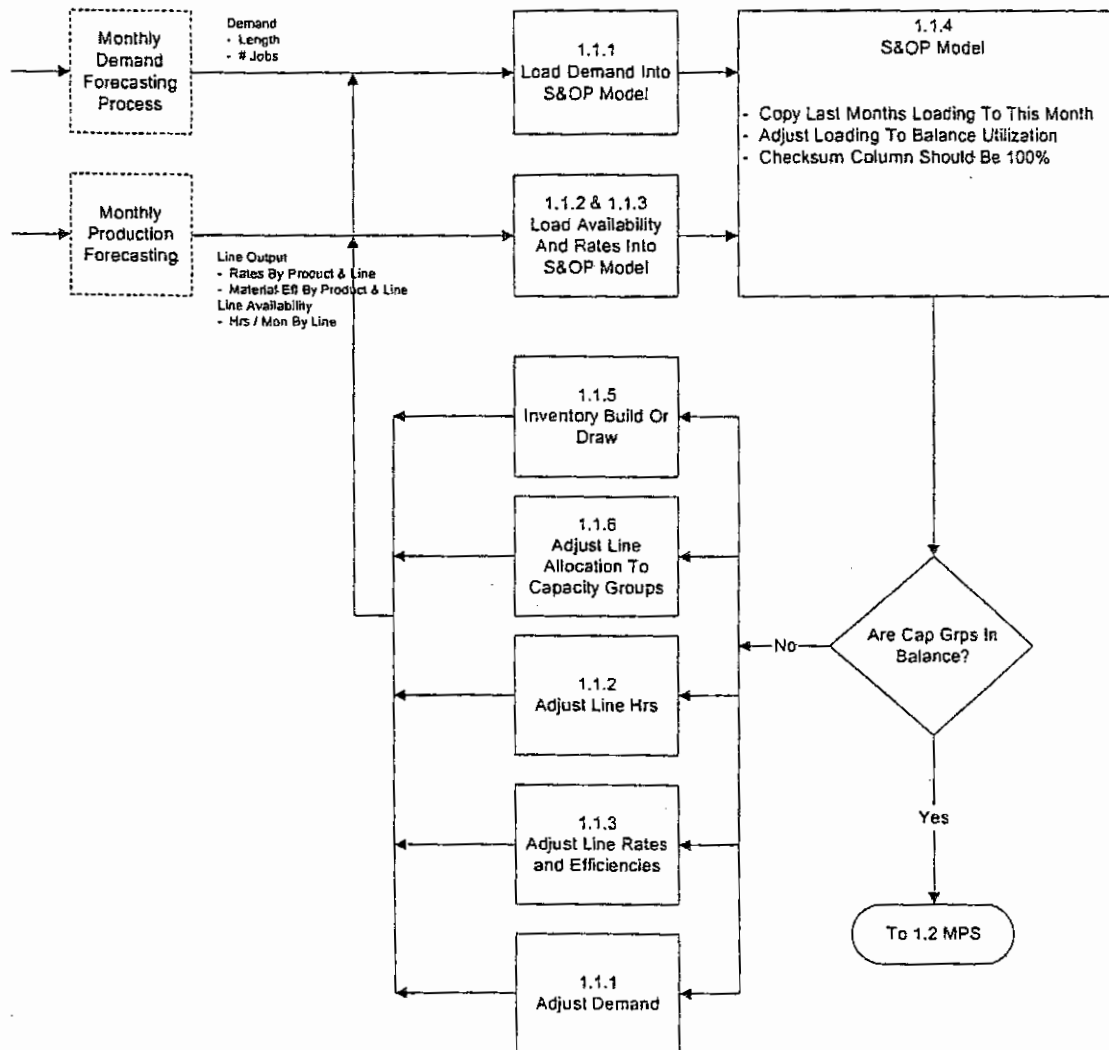
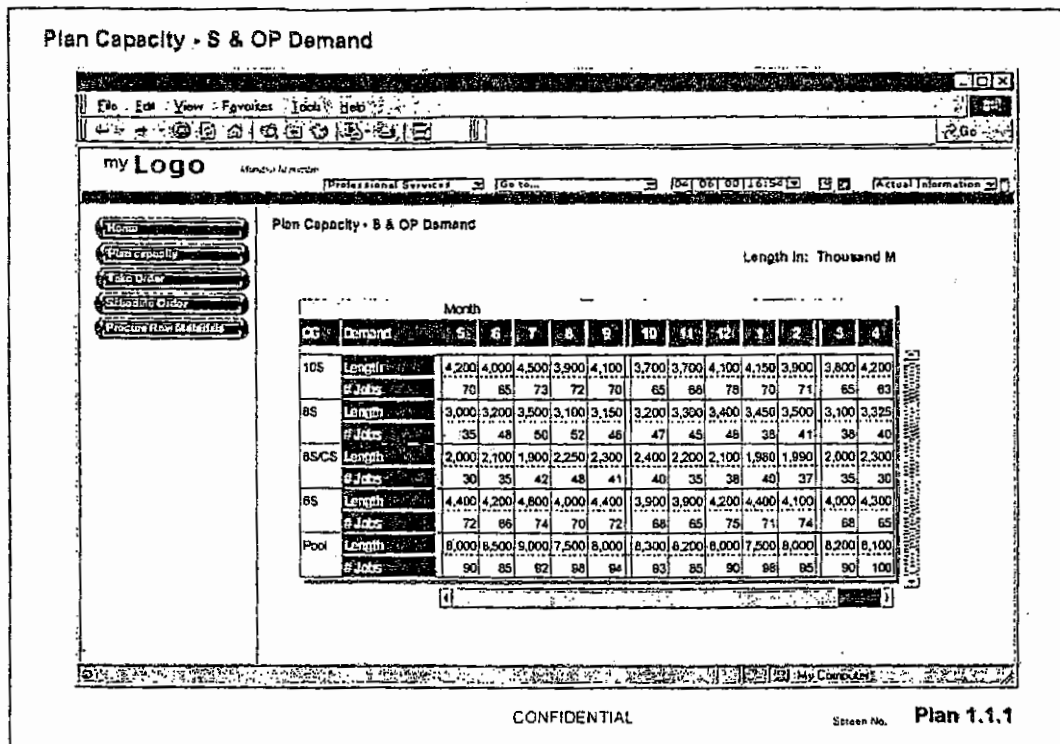


Figure 3A
Transaction Summary – S&OP Demand (Process 1.1.1)



Initial Processing

- Lookup all records on Table 1.1.1 using converter_no from login
- Setup display to include 12 months of data starting with the current month
- Create any records that do not exist and fill with zero's
- Lookup converter demand length unit of measure on the converter_db using converter_no

User Workflow & Resultant Processing

- Typical
 - Place cursor on the first capacity group (row) of the month (column) for which you want to enter data
 - Enter demand length for the capacity group
 - <Enter> or <Tab> to the next field and enter value
 - Continue down the column or across row entering length and # of jobs for each capacity group
- Exceptional
 - Point and click to select individual cell
 - Change value in cell

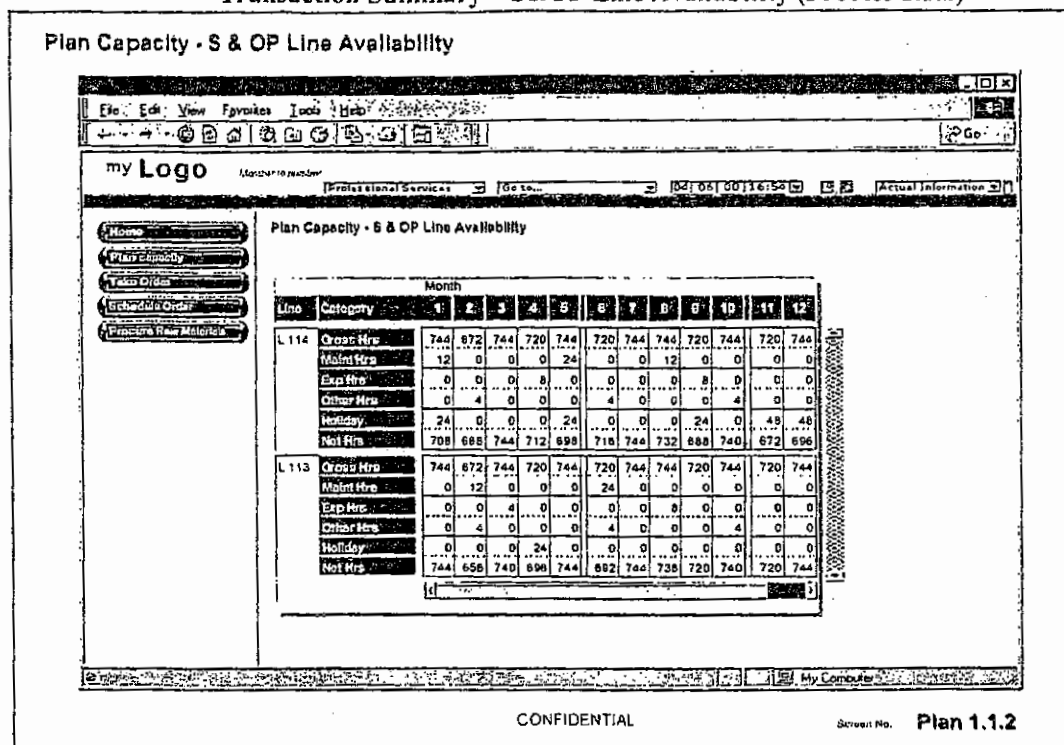
Notes:

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

Notes:

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

Figure 3B
Transaction Summary – S&OP Line Availability (Process 1.1.2)



Initial Processing

- Lookup all records on Table 1.1.2 using converter_no from login
- Setup display to include 12 months of data starting with the current month
- Lookup gross hours and holiday hours in the month_db using month and year
- Create any records that do not exist and fill Maintenance hours, Exp hours, Other Hrs, with zero's
- Calculate Net Hrs = Gross Hrs – Maint Hrs – Exp Hrs – Other Hrs – Holiday Hrs

User Workflow & Resultant Processing

- Typical
 - Place cursor on the Maint Hrs for the first production line (row) of the month (column) for which you want to enter data
 - Enter Maint Hrs <enter>
 - Cursor moves to the next field in this column (Exp Hrs)
 - Enter Exp Hrs <enter>
 - Cursor moves to the next field in this column (Other Hrs)
 - Enter Other Hrs <enter>
 - Calculate Net Hrs = Gross Hrs – Maint Hrs – Exp Hrs – Other Hrs – Holiday Hrs
 - Continue down column to next line
- Exceptional
 - Point and click to select individual cell
 - Change value in cell

Notes:

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

Figure 3C
Transaction Summary – S&OP Line Rates And Efficiencies (Process 1.1.3)

Plan Capacity - S & OP Line Rates And Efficiencies

my Logo

Professional Services | 04/06/00 16:54 | Actual Information

Month: May
Year: 2000

Class of Demand	L112			L113			L114		
	LS	ME	CO	LS	ME	CO	LS	ME	CO
10S	325	88%	2	350	88%	1.75	0	0%	0
BS	350	88%	1.5	0	0%	0	325	88%	1.5
BS/CS	0	0%	0	250	85%	2.25	0	0%	0
BS/PS	400	90%	1.25	0	0%	0	375	90%	1.25
Pool	375	88%	1.25	400	88%	1.25	350	88%	1.25

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Screen No. Plan 1.1.3

Initial Processing

- Default month and year to current month and year
- Lookup all records on Table 1.1.3 using converter_no from login and current month and year

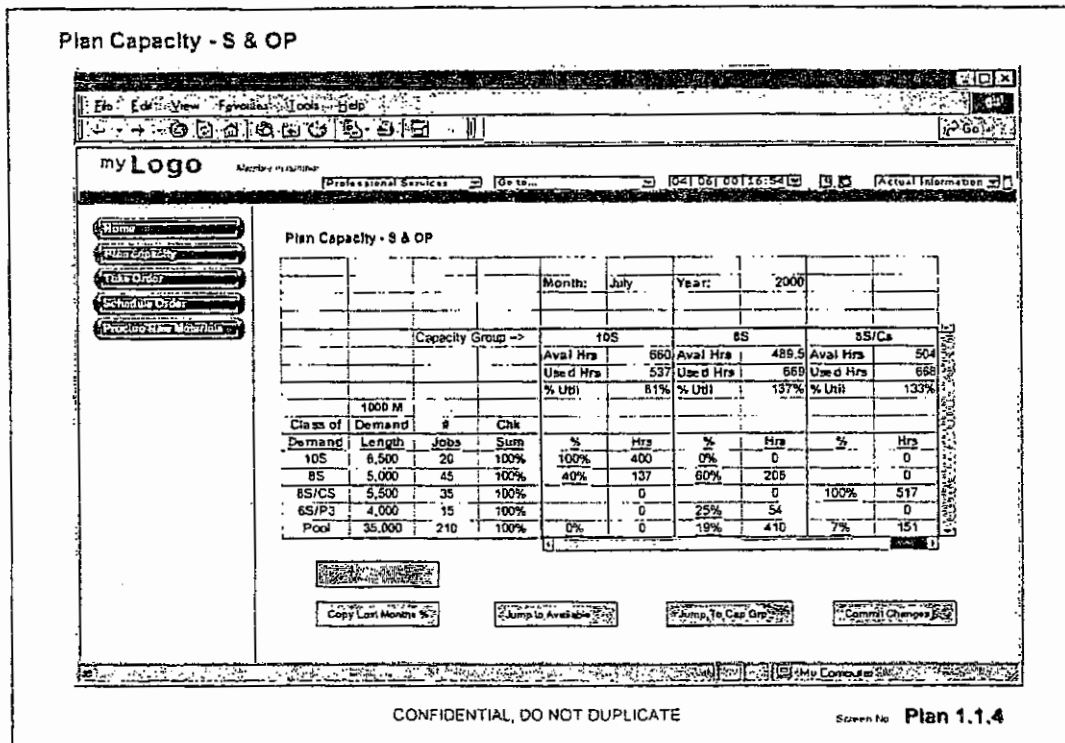
User Workflow & Resultant Processing

- Typical
 - Enter month, enter year
 - Place cursor on cell you want to change
 - Enter new data

Notes:

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable
- "LS" = Line Speed, "ME" = Material Efficiency, "CO" = Changeover Downtime (Average Per Job)

Figure 3D
Transaction Summary – S&OP Model (Process 1.1.4)



Initial Processing

- Lookup Average Material Efficiency(ME), Line Speed (LS) and Changover Time (CO) for each class of demand in Table 1.1.7 using Converter_no, Month, Year, Class of Demand
- Lookup and display percent demand in table 1.1.4 using Converter_no, Month, Year, Capacity Group
- Lookup demand and # of jobs in table 1.1.1 using Converter_no, Month and Year
- Lookup inventory draw and build from Table 1.1.5 using converter_no, month, year.
- Use inventory build or draw to adjust demand from Table 1.1.1 lookup.
Adjusted demand = demand (table 1.1.1) + demand build (table 1.1.5) – demand draw (table 1.1.5).
- Display adjusted demand and # of jobs.
Demand = Demand (table 1.1.1) + Demand build (table 1.1.5) – Demand draw (table 1.1.5).
- Lookup and display Avail Hrs in Table 1.1.6 using Month, Year and Capacity Group
- Calc and display Hrs = $(D \cdot 1000 \cdot P / (ME \cdot LS \cdot 60)) + (\#Jobs \cdot P \cdot CO)$
(D=Demand, P=Percent)
- Calc and display Used Hrs = Sum of Hrs In Each Capacity Group
- Calc and display Utilization = Demand / Capacity

User Workflow & Resultant Processing

- Typical
 - Copy forward percentages from last month
 - Adjust percent demand to balance capacity
 - Commit Changes

Figure 3D (Continued)
Transaction Summary – S&OP Model (Process 1.1.4)

Notes:

- Screen should be horizontally and vertically scrollable
- Action button to copy last months %'s
- Screen should have easy links back to Availability Detail, and Capacity Group Data
- Screen should have a commit button

Figure 3E
Transaction Summary – S&OP Inventory Draw Or Build (Process 1.1.5)

Plan Capacity - S & OP Inventory Build Or Draw

Class of Demand	Draw		Build		Comments
	Time (Hrs)	Length	Time (Hrs)	Length	
10S	20	405,240			Draw from last months Mem Day Build
8S					
8S/CS			15	225,000	Build for Back To School
8S/PS					
Pool					

CONFIDENTIAL Screen No. **Plan 1.1.5**

- Initial Processing**
- Set month and year to current month and year unless access from 1.1.4. If access from 1.1.4 set month and year to month and year used at the time of the call from 1.1.4.
 - Lookup all records on Table 1.1.7 using converter_no from login and current month and year for all capacity groups
 - Lookup all records on Table 1.1.5 using converter_no from login and current month and year
- User Workflow & Resultant Processing**
- Typical
 - Enter month, enter year
 - Place cursor on cell you want to change
 - Enter new data
 - System calculates length
 $\text{Length} = (\text{time} * 60) * \text{Average LS for this capacity group}$
- Notes:**
- None

Figure 3F

Transaction Summary – S&OP Adjust Line Allocation To Capacity Groups (Process 1.1.6)

Plan Capacity - S & OP Line Allocation To Capacity Groups

my Logo

Professional Services [Go to...] [02/06/00] [15:54] [Actual Information]

Month: May
Year: 2000

Class of Demand	Total Hrs	L112 %	L112 Hrs	L113 %	L113 Hrs	L114 %	L114 Hrs
Check		100%		100%		100%	
10S	880	50%	324	50%	336	0%	0
18S	489.5	50%	324	0%	0	25%	185.5
18S/CS	504	0%	0	25%	168	0%	0
18S/PS	331	0%	0	0%	0	50%	331
Pool	1341.5	0%	0	25%	168	25%	165.5

Cap Group Aves Line Rates Done

CONFIDENTIAL Screen No. Plan 1.1.6

Initial Processing

- Default and display month and year to current month and year
- For converter-no from login and current month and year, lookup:
 - Table 1.1.2 (available hours for each line)
 - Table 1.1.3 (LS, ME, CO by line by capacity group)
 - Table 1.1.6 (all existing entries)
 - Table 1.1.7 (Total Hrs by class of demand)
- Display all Table 1.1.6 records
- Display Total Hrs for each class of demand (from Table 1.1.7)

User Workflow & Resultant Processing

- Typical
 - Enter month, enter year
 - Place cursor on the % cell you want to change
 - Enter new data
 - System will calculate:
 - Hrs = % entered * available hours for that line
 - Check = column sum of % for that line
 - Total Hrs (Table 1.1.7) = Row sum of hours for each capacity group
 - When all changes have been entered, click "DONE"
 - The system checks to insure all lines are 100% allocated. If not, hard error

Figure 3F (Continued)

Transaction Summary – S&OP Adjust Line Allocation To Capacity Groups (Process 1.1.6)

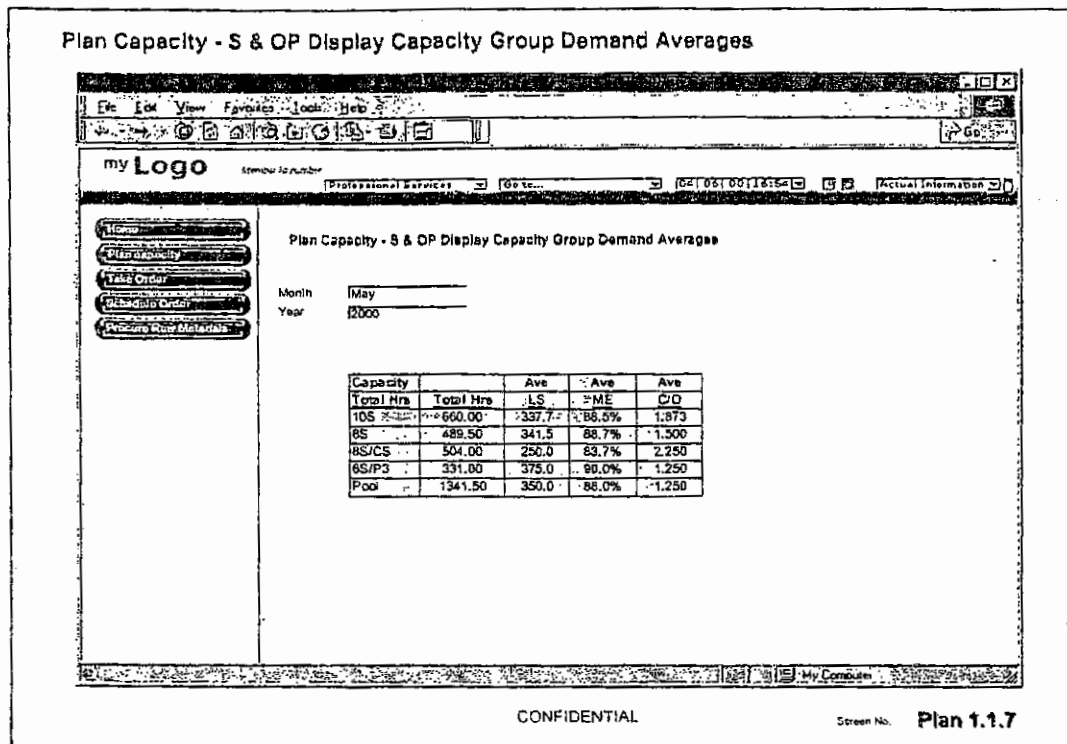
User Workflow & Resultant Processing

- The system generates a table of LS, ME, CO all of the average values for table 1.1.7
 - LS Average = Σ All lines
(line Hrs for CGD/Total Hrs for CGD) * Line LS for CGD
 - ME Average = Σ All lines
(line Hrs for CGD/Total Hrs for CGD) * Line ME for CGD
 - CO Average = Σ All lines
(line Hrs for CGD/Total Hrs for CGD) * Line CO for CGD
- Save Table 1.1.7 value
- Exceptional
 - Point and click to the % cell to be changed
 - Change value in cell

Notes:

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

Figure 3G
Transaction Summary – S&OP Display Capacity Group Averages (Process 1.1.7)



- Initial Processing**
- Default month and year to current month and year
 - Lookup all records on Table 1.1.7 using converter_no from login and current month and year
- User Workflow & Resultant Processing**
- Typical
 - Enter month, enter year
 - Lookup and display all records for the Month and Year
- Notes:**
- Display Only

Figure 4

MPS Process – Weekly Process (Process 1.2)

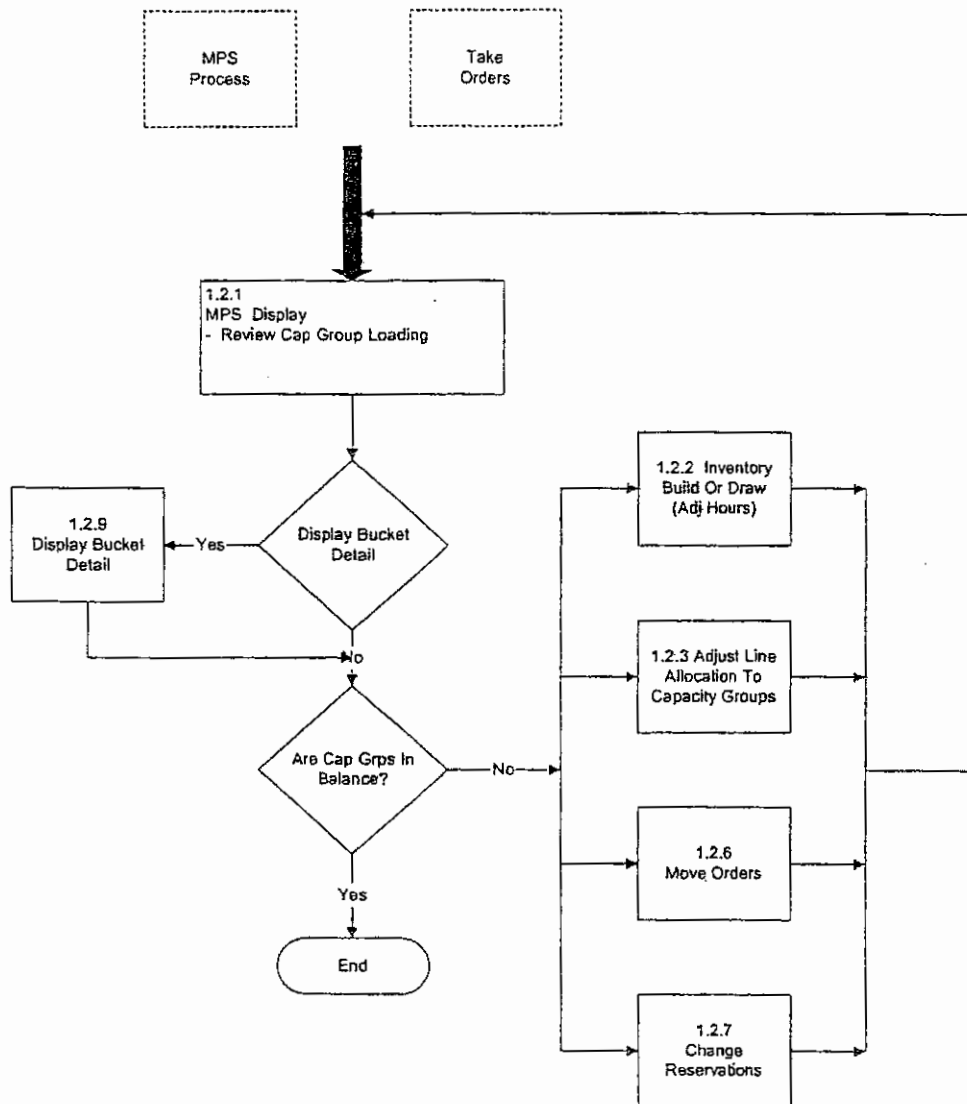
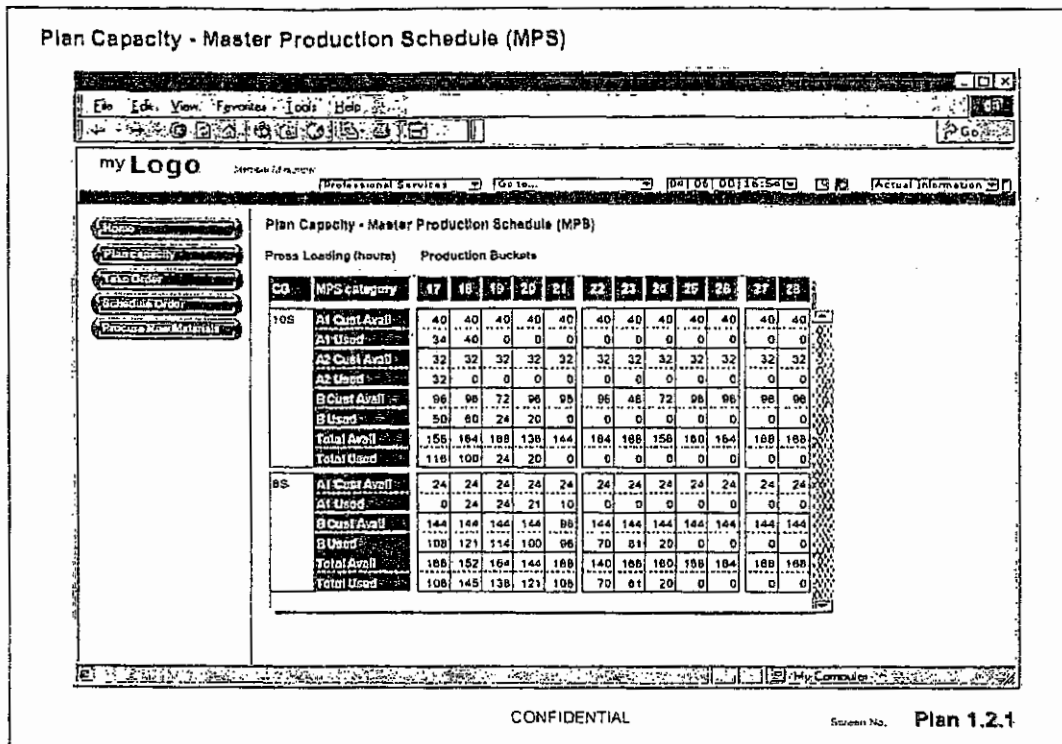


Figure 4A
Transaction Summary – Plan Capacity – MPS Display (Process 1.2.1)



- Initial Processing**
- Lookup all records on Table 1.2.1 using converter number from login
 - Display all records
- User Workflow & Resultant Processing**
- Typical
 - User may click on Production Bucket # (at top of column, ie// 18) and control should transfer to transaction PLAN1.2.9, Display Bucket Detail.
- Notes:**
- Display Only

Figure 4B

Transaction Summary – Plan Capacity – MPS Inventory Draw Or Build (Process 1.2.2)

Plan Capacity - MPS Inventory Build Or Draw

Capacity Group	Bucket #	Comment	Bucket #	Comment	Bucket #	Comment
10S	20	Build Inv for Frito	20	Build Inv for Frito	10	Build Inv for Frito
6S						
6S/CS	-15	Draw Inv for Nestle				
6SP3						
POOL						

CONFIDENTIAL

Screen No. Plan 1.2.2

Initial Processing

- Lookup all records on Table 1.2.2 using converter number from login
- Calculate "todays" bucket – see algorithm Bucket Calc
- Set display such that initial production bucket is "todays" bucket
- Display all records

User Workflow & Resultant Processing

- Typical
 - Use horizontal scrolling to get to the bucket to display
 - Enter an inventory build or draw (in hours for that bucket) for a specific capacity group . Move to comment field and add a comment on the build or draw.

Notes:

- None

Figure 4C
Transaction Summary – Plan Capacity – MPS Adjust Line
Allocation to Capacity Group (Process 1.2.3)

Plan Capacity - MPS Line Allocation To Capacity Groups

myLogo

Professional Services | No to...

Actual Information

Home
Plan Capacity
Info Only
Schedule Order
Production Rate Material

Plan Capacity - MPS Line Allocation To Capacity Groups

Year: 2000
Bucket #: 17

Class of	L112	L113	L114
Demand	Total Hrs	%	Hrs
Check	100%	100%	100%
10S	680.00	50%	324.00
8S	489.50	50%	324.00
8S/CS	504.00	0%	0.00
8S/PS	331.00	0%	0.00
Pool	1341.50	0%	0.00

Cap Group Aves Line Rates Done

CONFIDENTIAL Screen No Plan 1.2.3

- Initial Processing
 - Lookup and display all records on Table 1.2.3 using converter-no, year, and bucket #.
- User Workflow & Resultant Processing
 - Typical
 - User will select a cell and change the percentage.
 - Prior to exiting the screen, all check sum's must be 100% or error.
- Notes:
 - None

Figure 5

MPS Process – Supporting Processes (Process 1.2)

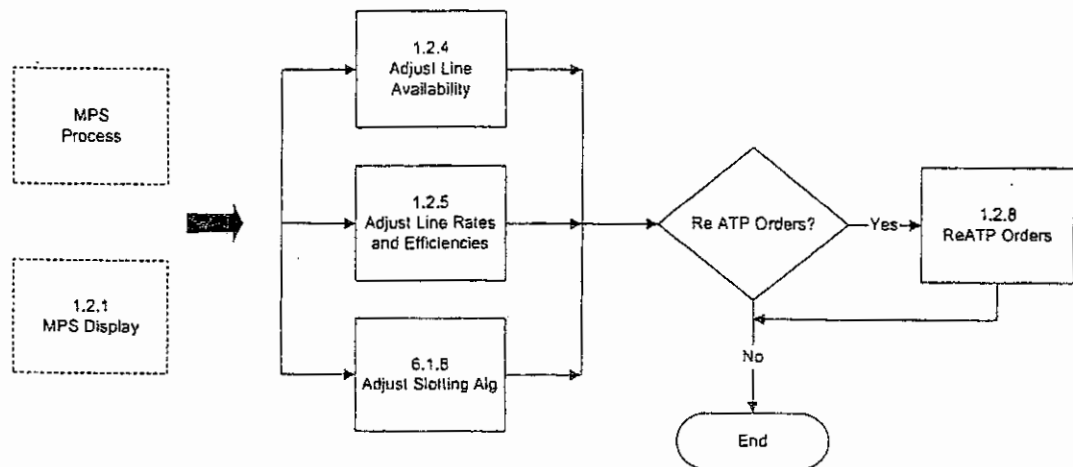
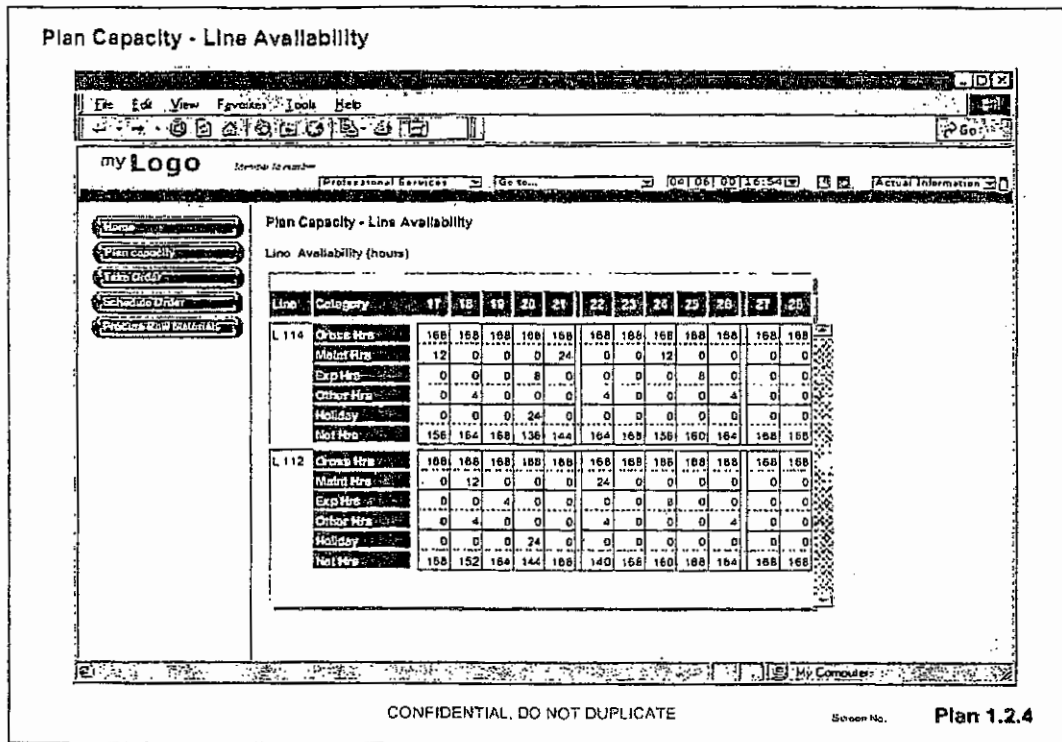


Figure 5A
Transaction Summary – Plan Capacity – MPS Display (Process 1.2.4)



- | | |
|--------------------------------------|---|
| Initial Processing | <ul style="list-style-type: none"> • Lookup all records on Table 1.2.4 using converter number from login • Display all records |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> – User will click on a cell and change value – System should recalculate totals and update the screen |
| Notes: | <ul style="list-style-type: none"> • None |

Figure 5B
Transaction Summary – Plan Capacity – Adjust Line Rates and Efficiencies (Process 1.2.5)

Plan Capacity - MPS

my Logo

Professional Services

Get to...

04/05/00 16:54

Actual Information

Plan Capacity

Take Order

Scheduling Order

Procure Raw Materials

Plan Capacity - MPS, Rates and Efficiencies, Averages

Process Step

Bucket

Year

Printing...

17

2000

Class of	Ave	Ave	Ave
Demand	LS	ME	C/O
10S	337.73	0.885	1.873
8S	342	0.887	1.500
8S/CS	250	0.837	2.250
6S/P3	375	0.900	1.250
Pool	350	0.880	1.250

Capacity Group

Line Rates & Effic

CONFIDENTIAL, DO NOT DUPLICATE

Screen No. Plan 1.2.5

- Initial Processing
 - Lookup and display all records on Table 1.2.5, using converter-no, process step, year, and bucket.
- User Workflow & Resultant Processing
 - Typical
 - User may change process step, bucket, or year.
- Notes:
 - Average data should be display only.

Figure 5C
Transaction Summary – Plan Capacity – Adjust Slotting Algorithm (Process 6.1.8)

Plan Capacity - Capacity Group Setup

myLogo Professional Services Go to... 02/05/00 16:54 Actual Information

Home Plan capacity Take Order Schedule Order Processing Rule Manager

Plan Capacity - Capacity Group Setup

Process Step:

Capacity Group Abbreviation:

Capacity Group Description:

Capacity Groups

Priority	Capacity Group	Cylinder Width	Max Stations	Extrusion Lam	Adhesive Lam	Max Process	Max Bounce	Cold Seal
1	Pool	1600	6	N	N	3	3	N
2	BS	1600	6	N	N	2	3	N
3	GSP3	1600	6	Y	Y	3	3	Y
4	BS	1600	6	N	Y	2	3	Y
5	10S	1700	10	Y	Y	3	3	N

Commit

CONFIDENTIAL, DO NOT DUPLICATE

Screen No. SU 6.1.8

- Initial Processing**
- Lookup and display all data on the capacity group DB using converter-no, and process step.
- User Workflow & Resultant Processing**
- Typical
 - User will add a new capacity group (row) to the matrix.
 - System should check that the priority numbers are unique.
- Notes:**
- None

Figure 6

Order Management Functional Overview

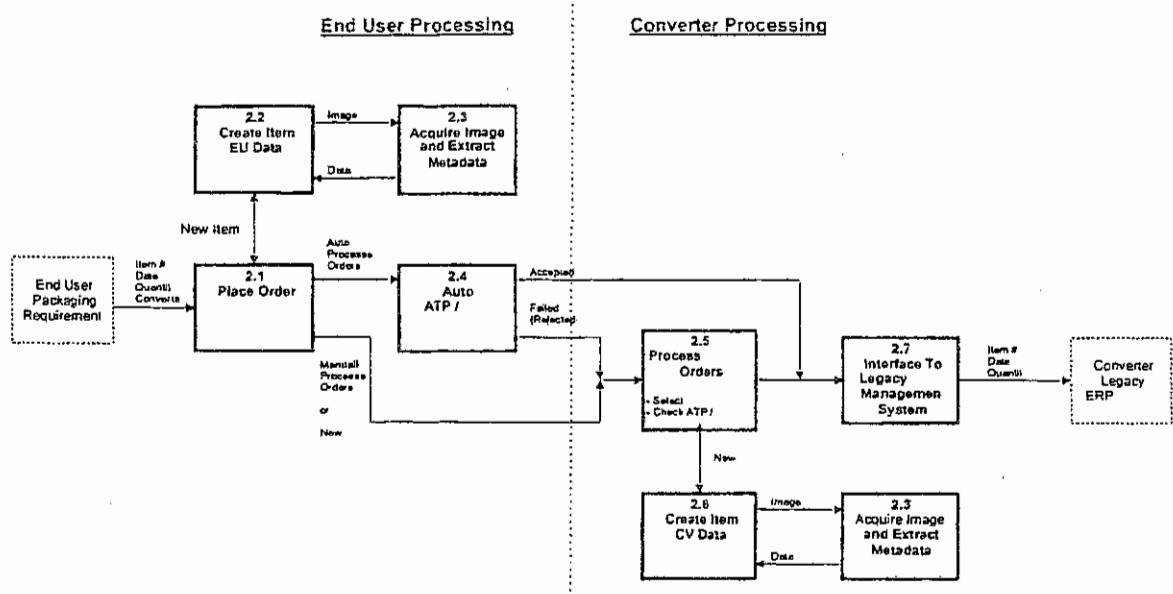
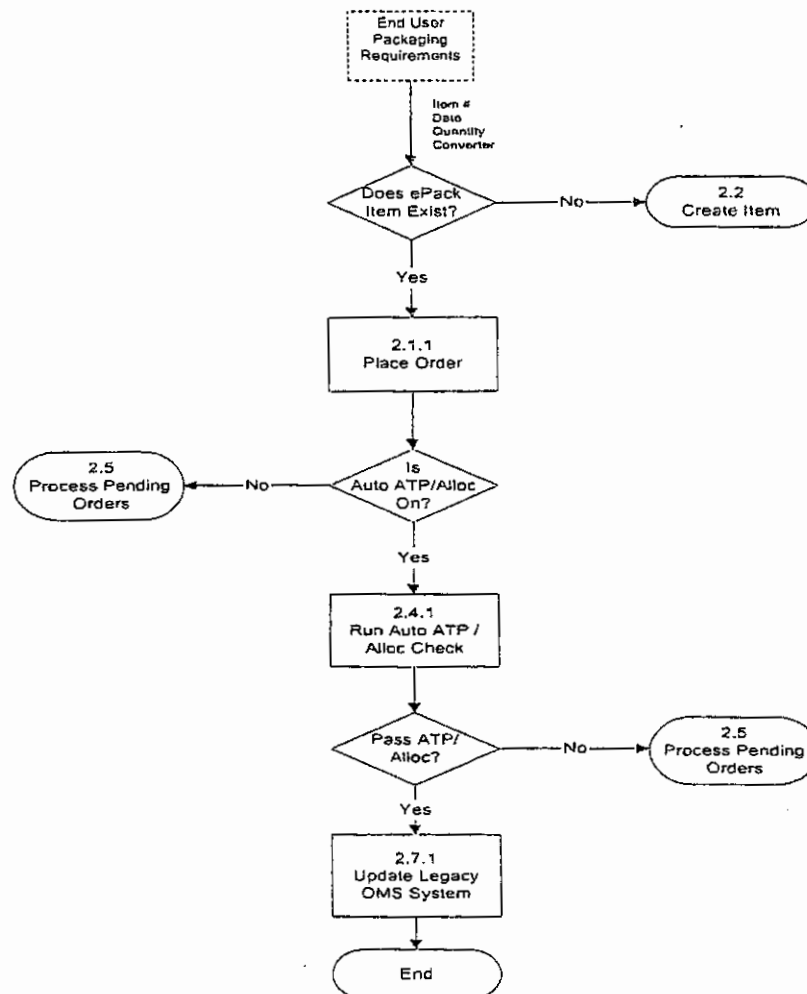


Figure 7
Place Order and Auto ATP / Allocation (Processes 2.1, 2.4, 2.7)



- Place Order (Process 2.1.1). The end user places an order. This is done by specifying the item number, quantity required, date required and converter to produce a given order. If the item does not already exist, the end user can create it.
- Auto ATP / Allocation Check (Process 2.4.1). If the specified converter's automatic ATP/Allocation check is turned on then ATP/Allocation will be run automatically. If the order passes, it will be accepted and transmitted to the converter's Order Management System. Otherwise, the order is placed in a pending order queue.

Figure 7A
Transaction Summary – Place/Change An Order (Process 2.1.1)

Place Order - End User

Place Order - End User		Sold To Customer #
PO No	18-2258	58874123
Item No	187887-001	Wise
	Wise	152 rue de Cambrancy
	8 Oz Regular Potato Chips	B-8282 Selingen
		Belgium
Date Req	04may00	Ship To Customer #
Quantity	478,000 Imps	111523
Quantity	83,487 M	Wise
Quantity	2,557 Kg	Strada Per Pandr, 4
Status	Pending	Zona Industriale
		Via Polymer
		72100 Brindisi, Italy
		Target Converter #
		225858
		MIPA
		via Ferro, 28
		81100 Pesaro (Italia)
		Auto Processing
		On

CONFIDENTIAL Screen No. OM 2.1.1

Initial Processing • None

User Workflow & Resultant Processing • Typical

- Enter purchase order number from legacy Purchasing system
 - Enter Item No
 - Lookup on Item DB using Item #: item description, end user #, target converter #, yield, cutoff, width
 - Set sold to customer number to end user #
 - Lookup on converter DB using target converter #: converter name, address, and auto processing field
 - Lookup on end user DB using sold to #: customer name, customer address, default ship to customer number
 - Set ship to # to default ship to customer number
 - Lookup on end user DB using ship to #: customer name and address
 - Enter the date required
 - Enter quantity
 - Enter quantity unit of measure
 - Calculate alternative units of measure
- $$\text{Imps to Mass} = ((\text{cutoff} * \text{width} * \# \text{imps}) / (\text{yield})) / \text{uom1}$$

$$\text{Imps to Length} = ((\# \text{impressions} / \# \text{up}) * \text{cutoff}) / \text{uom2}$$

$$\text{Mass to Imps} = \text{uom3} * (\text{mass} * \text{Yield}) / (\text{cutoff} * \text{width})$$

$$\text{Mass to Length} = \text{uom4} * (\text{mass} * \text{Yield}) / (\text{width} * \# \text{across})$$

$$\text{Length to Imps} = \text{uom2} * (\text{Length} / \text{cutoff}) * \# \text{across}$$

$$\text{Length to Mass} = (\text{Length} * \# \text{across} * \text{width}) / \text{Yield} / \text{uom4}$$
- Note: uom# factors are needed because commercial unit of measure conventions in metric and english units of measure are inconsistent.

Figure 7A (Continued)
Transaction Summary – Place/Change An Order (Process 2.1.1)

User Workflow &
Resultant Processing

- Press Submit Order Key
- If AutoATP = "ON" Then
 - Slot order to capacity group (See Algorithms)
 - Calculate production bucket (See Algorithms)
 - Lookup on Capacity group DB using capacity group: average changeover time, average line speed, average material efficiency
 - Slot order to laminator (if applicable) (See Algorithms)
 - Lookup on Equipment DB using laminator line #: average changeover time, average line speed, average material efficiency
 - Calculate estimated quantity = quantity / (capacity group me * laminator me * standard slitter me)
 - Calculate estimated production hours

Press:

#Across = Integer(Max width Capacity Group / Image Width)

Length = Imps Orders / #Across

Length = (# Length * Cutoff) / (1000)

AdjLength = Length / Material Eff of Cap Group

Press Hrs = (Length / Average Line Speed Capacity Group) +

Average Change Over Time for CG

Laminator:

Laminator Hrs = (Length / Material Eff of Laminator / Average Line Speed Laminator) +
Average Change Over Time for Laminator

Send Order No, Press Hrs, Lam Hrs, Item No, Press Bucket, Lam Bucket, Capacity Group to AutoATP Check 2.4.1.

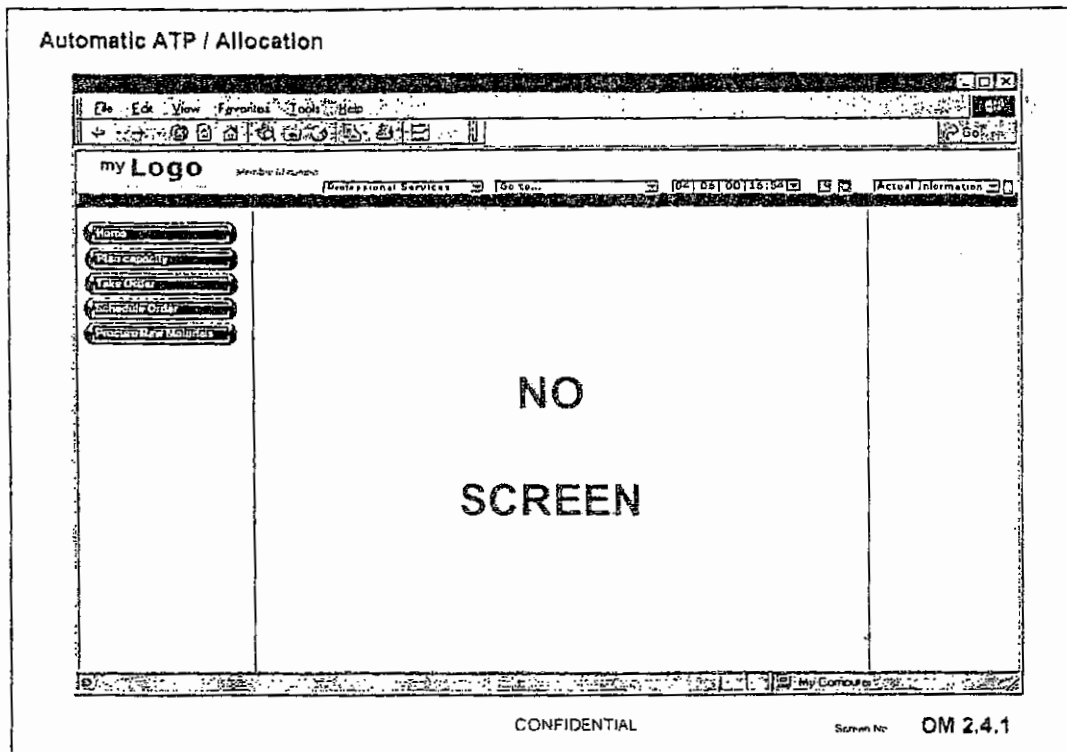
- ELSE (AutoATP = "OFF")
- Change Order Status To "PendingConv"
- End

- Exceptional
 - Change Target converter number
 - Lookup on converter DB using converter # and get converter name and address
 - Change ship to customer number
 - Lookup on customer DB using ship to # and get customer name and address
 - Change ship to address
 - Change and reATP order
 - Retrieve existing order, display current values, and allow user to reATP the order with or without changes to date and/or quantity.

Notes:

- There should be drop down buttons on the following fields so that the user can do a lookup: Item No, Sold To Customer #, Ship To Customer #, Target Converter, Quantity Unit of Measure

Figure 7B
Transaction Summary – Automatic ATP / Allocation (Process 2.4.1)



Initial Processing

- Send:
 - Order number
 - Press bucket #
 - Laminator bucket #
 - Required press hours
 - Required laminator hours
 - End user number
 - Item number
- Return:
 - ATP Status
 - Allocation Status
 - Film Status
 - Cylinder Status

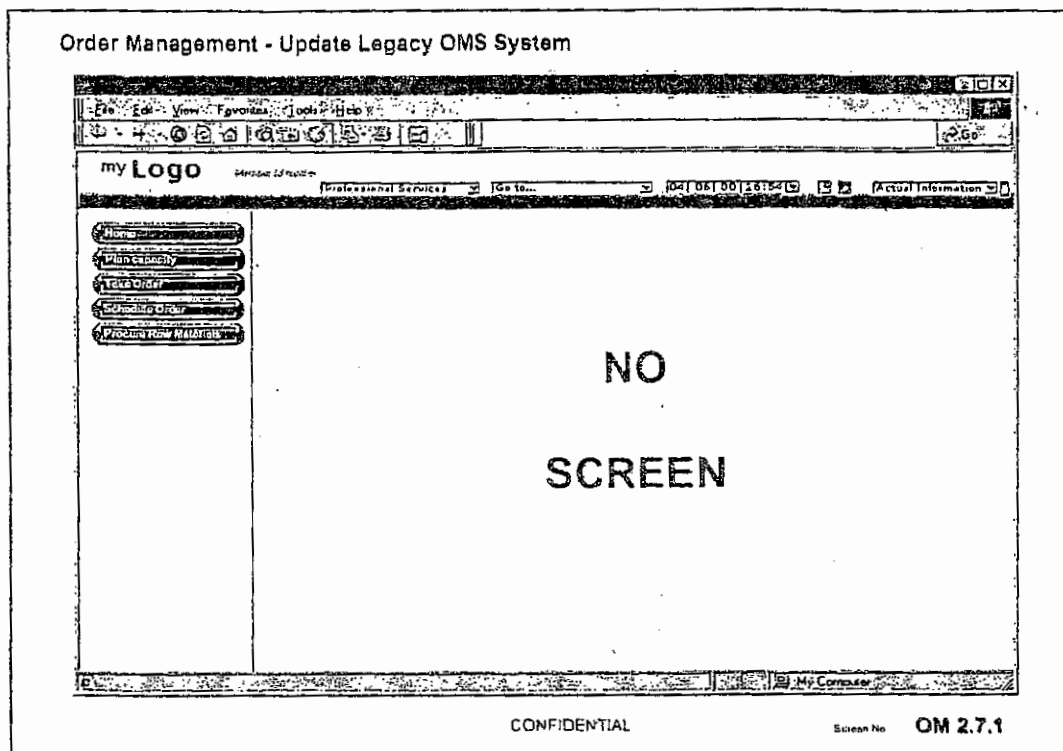
**User Workflow &
Resultant Processing**

- None

Notes:

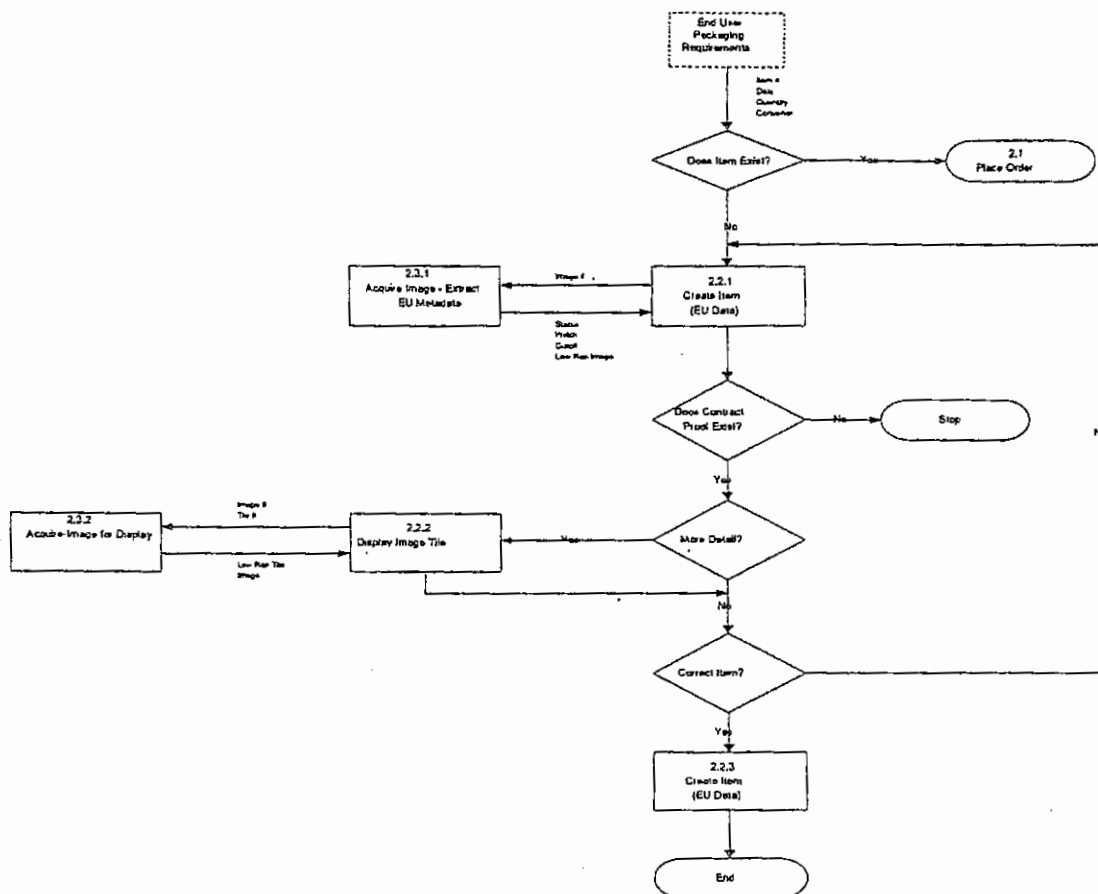
- See Alg AutoATP for detailed calculations

Figure 7C
Transaction Summary – Update Legacy OMS System (Process 2.7.1)



- | | |
|---|--|
| Initial Processing | <ul style="list-style-type: none"> • Send: <ul style="list-style-type: none"> - CV Item # - EU Item # - End User # - End User PO # - Quantity requested - Quantity unit of measure - Date requested • Return: <ul style="list-style-type: none"> - Order # |
| User Workflow &
Resultant Processing | <ul style="list-style-type: none"> • None |
| Notes: | <ul style="list-style-type: none"> • None |

Figure 8
IVC. Process Detail – Item Setup End User (EU), Acquire Image-Extract EU
Metadata (Process 2.2, 2.3)



- Create Item (Process 2.2.1). Create Item, Image Data. The end user creates an item in system. The user enters an item number and an image number. The system interfaces with the Image Acquisition and Metadata Extraction Module to retrieve image status, width, cutoff, and a low resolution image display.
- Acquire Image - Extract EU Metadata (Process 2.3.1). Acquire Image - Extract EU Metadata. The system requests a specific image from any suitable digital workflow. Once the image is retrieved, the system processes the image file to extract image status, width, cutoff, and a low resolution image display. If there is no approved contract proof in response to the system's request, the create item process is stopped.

Figure 8 (Continued)

IVC. Process Detail – Item Setup End User (EU), Acquire Image-Extract EU Metadata (Process 2.2, 2.3)

- Display Image Tile (Process 2.2.2). The low resolution image display will be segmented into “tiles.” The user can click on a tile and the system will request and display a low resolution image of that tile.
- Acquire Image For Display (Process 2.3.2). Acquire Image For Display. The system makes a specific image and tile # request to the Image Acquisition and Display module. The module returns a low resolution tile image display. If this is not the correct image, the user will can jump back to Create Item (Process 2.2.1) and can enter a different image number.
- Create Item (Process 2.2.3). Create Item, Packaging Structure. The user can enter the package structure.

Figure 8A
Transaction Summary – Item Definition, Image (Process 2.2.1)

Item Definition - Image

myLogo

Professional Services

Go to...

06/06/2011 16:54

Actual Information

Home

Plan Capacity

Take Order

Check Order

Print & View Materials

Item Definition - Image

Item #

107687-001

Customer #

4588910

Wiss

Image #

1890ci-54878v1

8 Oz Regular Potato Chips

Status

Approved

Width

300 mm

Cutoff

560 mm



Set Up Pkg Structure

More Image Detail

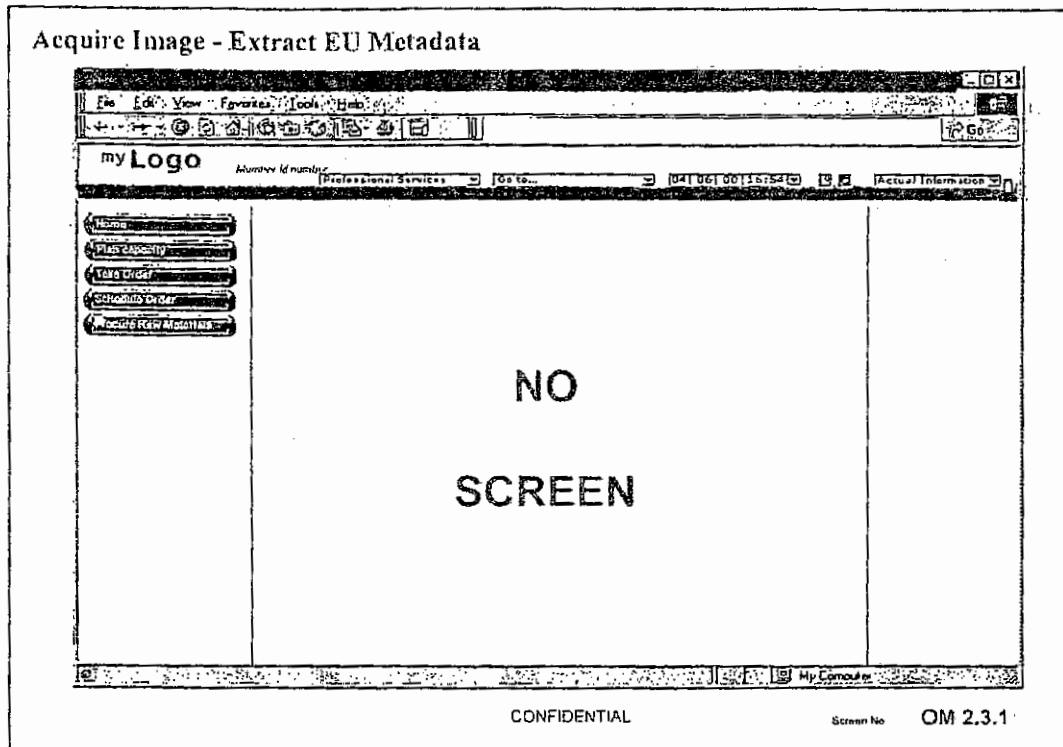
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Screen No. OM 2.2.1

- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> • Lookup all records on Table 2.2.1 using enduser_no from login • Default Customer to customer name from login |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> – Enter Item # – Enter Image # – Interface with the Image Acquisition and Metadata extraction module. Send image number. Receive image status, width, cutoff, and a low resolution image for display. – User clicks on the “Set Up Pkg Structure” button and is transferred to transaction 2.2.3. • Exceptional <ul style="list-style-type: none"> – User clicks on the “More Image Detail” button and is transferred to transaction 2.2.2. |
| Notes: | <ul style="list-style-type: none"> • None |

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Figure 8B
Transaction Summary – Acquire Image - Extract EU Metadata (Process 2.3.1)



Initial Processing

- Send:
 - Image number
- Return:
 - Image Status
 - Image width
 - Image cutoff
 - Low Resolution Image Display file
- Calculations
 - None Required

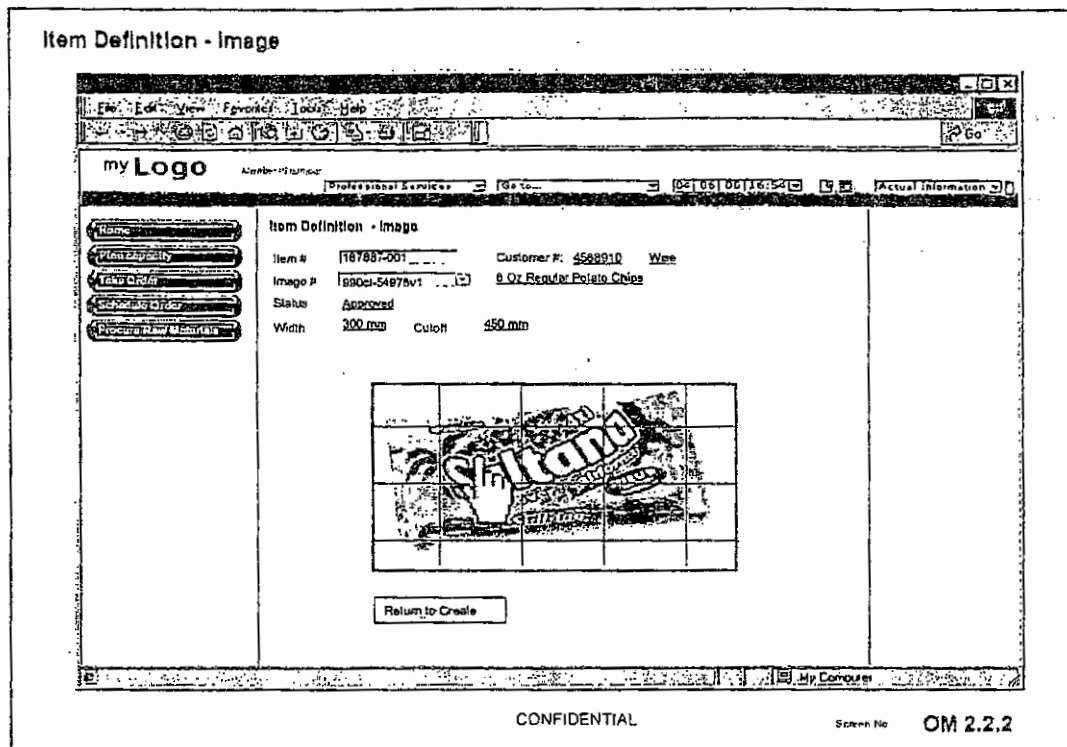
**User Workflow &
Resultant Processing**

- None

Notes:

- None

Figure 8C
Transaction Summary – Item Definition, Display Image Tile (Process 2.2.2)



- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> • Display image with tile grid lines |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> – User clicks on one of the “tiles” – The system requests the specified tile from the Image Acquisition and Display Module by sending the image number and the tile number. The module returns a low resolution, full screen image of the tile (Process 2.3.2). – User clicks on “Return to Create” button • Exceptional • None |
| Notes: | |

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Figure 8D
Transaction Summary – Item Definition, Package Structure (Process 2.2.3)

Item Definition - Package Structure, End User

my Logo

Item Definition - Package Structure

Item # 1167867-001 Customer # 4559910 Wise
Image # 290ct-54978v1 8.0x Regular Ponto Chips

Package Structure

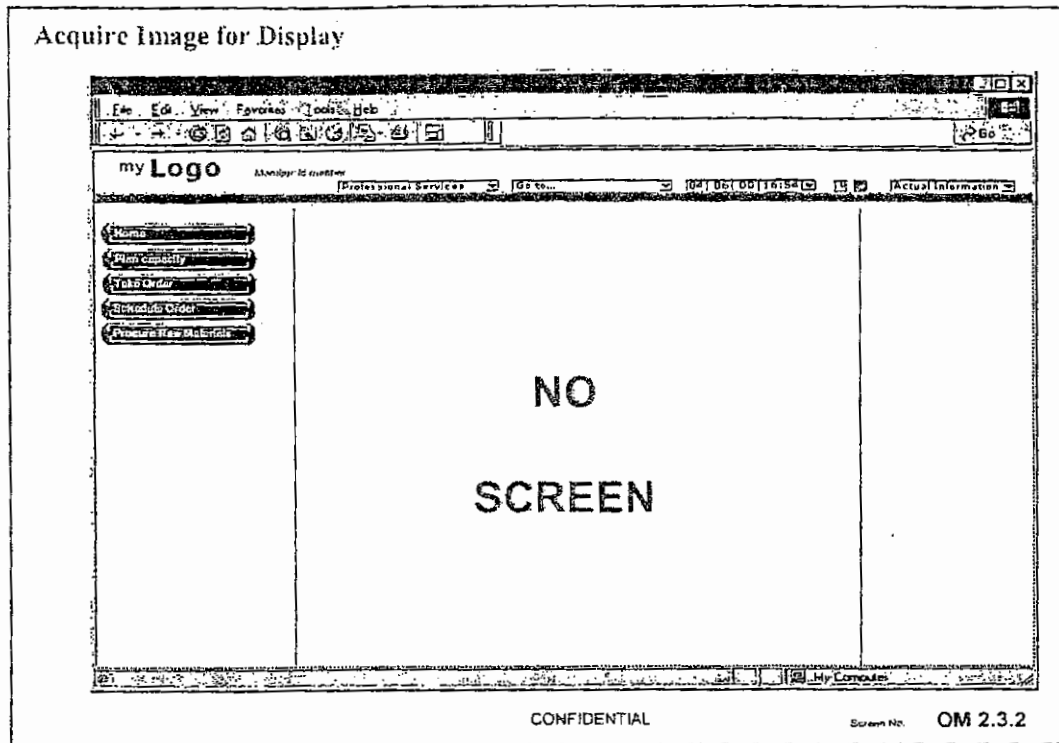
Layer	Description	Supplier	Material
Substrate	1.400000	Not Spec	1.400000
Print	1.400000	Not Spec	1.400000
Adh Lam	ADH	Not Spec	
Substrate	1.400000	Not Spec	1.400000

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Screen No: OM 2.2.3

- Initial Processing
- Lookup allowable items for layer on Table "Layers"
- User Workflow & Resultant Processing
- Typical
 - Pick layer off list
 - Enter all other fields
 - Exceptional
 - Point and click to select individual cell
 - Change value in cell
- Notes:
- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
 - Screen should be vertically scrollable

Figure 8E
Transaction Summary – Acquire Image for Display (Process 2.3.2)



Initial Processing

- Send:
 - Image number
 - Tile number
- Return:
 - Full Screen Low Resolution Image Display of tile
- Calculations
 - None Required

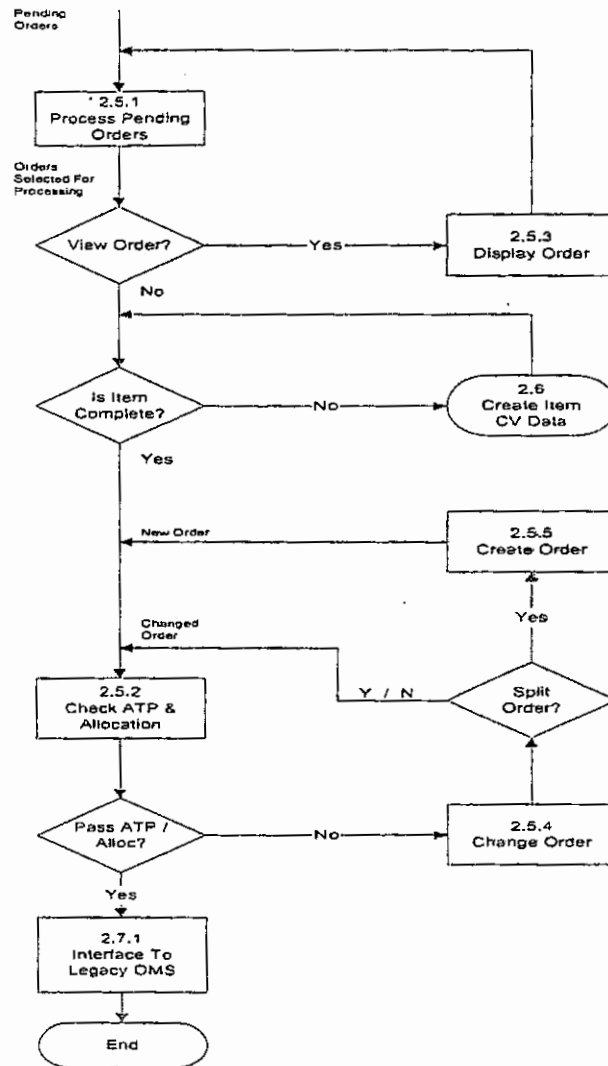
**User Workflow &
Resultant Processing**

- None

Notes:

- None

Figure 9
Process Pending Orders (Processes 2.5, 2.7)



- Process Pending Orders (Process 2.5.1). The first step in processing orders is viewing the list of pending orders. The pending orders may be the result of failed automatic processing, or the result of disabled auto processing. The user may wish to select an order(s) and "View" the order(s) in detail. The next step is to determine if the item definition is complete. This can be determined by looking in column #4 of the Pending Orders que. If this column is blank, then the converter must fill in additional data to complete the item definition by going to Process 2.6.

Figure 9 (Continued)
Process Pending Orders (Processes 2.5, 2.7)

- ATP Allocation Check (Process 2.5.2). Both ATP and allocation are checked. If either item fails to pass the check, the system will provide an explanation via a recommended change to the data such that it will pass. For example, if the original order were for 476,000 impressions on July 10th, a failure would trigger ePack to display what items could be produced and when (380,000 impressions on July 10th or 476,000 impressions on July 15th).
- Change / Create Order (Process 2.5.3). If ATP or allocation fails, the converter will have to change the quantity or request date on the order.
- Change / Create Order (Process 2.5.3). If there is a significant change to quantity or request date, the end user may require an additional order be entered to ensure they do not run out of material. The converter will enter the new order.
- Interface To Legacy OMS (Process 2.7). Once an order (s) passes ATP and allocation, it is accepted and passed to the Legacy OMS system.

Figure 9A

Transaction Summary – Order Management, Process Pending Orders (Process 2.5.1)

Process Pending Orders - Pending Orders

End User	Order #	Bu PO #	CV Item #	Item Description	Quantity	Request Date	Order Taken
Beltrich	P02523	122300		17 Oz Mercaloid PC	3,350	15-Jun-00	25-Apr-00
Beltrich	P02524	122311	217783-002	14 Oz Mercaloid PC	8,000	8-Jun-00	25-Apr-00
Jays	P02517	PC321	187113-005	8.5 Oz Light Salt PC	3,250	15-Jun-00	25-Apr-00
Jays	P02521	PC322		8 Oz Potato Chops	3,200	14-Jun-00	25-Apr-00
Jays	P02522	PC431	187852-001	5.5 Oz Salt & Vinegar	1,900	14-Jun-00	25-Apr-00
Jays	P02525	PC440	187853-002	14 Oz Sea PC	3,100	15-Jun-00	25-Apr-00
Old Dutch	P02518	V3712		1.5 Oz Sour Cream	1,000	15-Jun-00	25-Apr-00
Old Dutch	P02528	V3725	187853-003	1.5 Oz Salt & Vinegar	2,000	12-Jun-00	25-Apr-00
Old Dutch	P02527	V3750		14 Oz BBQ Chops	8,500	15-Jun-00	125-Apr-00
Waco	P02514	PO6723		9 Oz Original PC	10,000	15-Jun-00	25-Apr-00
Waco	P02515	PO6724	165888-006	6 Oz BBQ PC	2,000	11-Jun-00	25-Apr-00
Waco	P02516	PO6780		14 Oz Original PC	5,000	11-Jun-00	25-Apr-00
Waco	P02519	PO6801	187853-001	20 Oz PC Promotion	7,500	12-Jun-00	25-Apr-00
Waco	P02520	PO6805	187853-001	5.5 Oz On & Gar PC	1,850	10-Jun-00	25-Apr-00
Waco	P02523	PO6807	187853-002	1.5 Oz Original PC	3,000	10-Jun-00	25-Apr-00
Waco	P02529	PO6810	307453-001	1.5 Oz BBQ PC	4,000	11-Jun-00	25-Apr-00

Display Order Setup Item Process Order

CONFIDENTIAL Screen No. OM 2.5.1

Initial Processing

- Lookup on the "Orders" database, using converter number, all orders with a "Pending" status

User Workflow & Resultant Processing

- Typical
 - The user will check off a group of orders
 - The user will click on the "Process Orders" button
 - List of checked orders and corresponding data will be sent to Transaction 2.5.2 (Check ATP/Allocation)
- Exception
 - The user will check off a group of orders
 - The user will click on the "Display Orders" button
 - List of checked orders and corresponding data will be sent to Transaction 2.5.3 (Display Order)
- Exception
 - The user will check off a group of orders that do not have CV Item numbers listed in column #4
 - The user will click on the "Setup Item" button
 - List of checked orders and corresponding data will be sent to Transaction 2.6.1 (Create Item, CV data)

Notes:

- No data can be changed on this screen
- The user may only check off orders and push the setup item or process orders buttons

Figure 9B

Transaction Summary – Order Management, ATP / Allocation Check (Process 2.5.2)

Take Order - Check ATP / Alloc

myLogo

Take Order - Check ATP / Alloc

Order No.: P32514 [Fetch]

Order No. P32514 Customer Wise
Item No. 167687001 Description 6.0z Regular Potato Chips

Original Request
Date Requested 04may00
Quantity Requested 478,000 Imps

System Response
Cylinders Film ATP Alloc
No No No No

	Best Proposal Full Quantity	Alternate Proposal Partial Quantity
Date Requested	10may00	04may00
Quantity Requested	478,000 Imps	394,000 Imps
Impact	+ 9 days	82.8 %
Pricing	\$3.00 / Kg	\$3.80 / Kg

Accept Accept

CONFIDENTIAL Screen No. OM 2.5.2

Initial Processing

- Lookup on order DB using order #: date requested, quantity requested, uom requested, enduser number
- Send order data to ATP/Allocation check
- Display ATP / Allocation results

User Workflow & Resultant Processing

- Typical
 - User will look at the results of ATP / Allocation, if cylinder or film is red, the user will "click" on the film or cylinder button to get more detail. Display Film Detail – Sch 3.1.4, Display Cylinder Detail – Sch 3.1.3
 - If ATP is "NO" find alternate proposals, see algorithms ATP / Allocation Check.
 - User will look at the "proposed" solutions and accept one of them.
- Exception
 - If any one of the indicators is No (red) the user will click on one of the "display detail" buttons and goto the detail screens.
Display Film Detail – Sch 3.1.4
Display Cylinder Detail – Sch 3.1.3
Display ATP Detail –
Display Alloc Detail -

Notes:

- This screen is only displayed if the order fails for 1 or more of the checks: cylinders, film, ATP, allocation.

Figure 9C

Transaction Summary – Order Management, Display Order (Process 2.5.3)

Display Order

myLogo

Professional Services

Go to...

08/06/00 16:54

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Previous New Materials

Display Order

CV Order No.: OR516-2345 EU Order No. ... Get Order: 2223

Converter Data

Order No. OR516-2345 End User Data Order No. P32145

Item No. 167887-001 Item No. 86-1632-conv1

Date Req. 04may00 Customer Wise

Quantity 478,000 Imps 8 Oz Regular Polysty Chips

Quantity 2,557 Kg 83,487 M

	Color	Color #	Ink Sys	Cylinder #
1		2707	PA	Y2400005
2		340	PA	Y2400006
3		406	PA	Y2400123
4		470	PA	Y2400456
5		220	PA	Y2400114
6		1489	PA	Y2400306
7		3248	PA	Y2400269
8				
9				
10				

Print Grev

Process L3

Bounce L1

Package Structure

Bill of Material

Image

Cylinder Width 1180. mm

My Computer

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Screen No. OM 2.5.3

- Initial Processing
- Lookup on Order DB using order #: all order data
 - Display order
- User Workflow & Resultant Processing
- Typical
 - User will look at order details
 - Exception
 - User may click on buttons to look at package structure or bill of material or image details
- Notes:
- This is a read only screen

Figure 9D
Transaction Summary – Order Management, Change Order (Process 2.5.4)

Change Order

CV
 Order No.: OR516-2345

EU
 Order No. **Get Order**

Converter Data

Conv # 229889

Order No. OR516-2345

Item No. 187887-001

Date Req 04/may/00

Quantity 576,000 Imps

Quantity 2,587 Kg 83,487 M

End User Data

Order No. P32145

Item No. 195-1632-conv1

Customer Wise

1, 8 Oz, Regular Potato, Chips

	Color	Color #	Ink Sys	Cylinder #
1	☐	2707	IPA	Y2400005
2	☐	346	IPA	Y2400005
3	☐	405	IPA	Y2400123
4	☐	470	IPA	Y2400456
5	☐	220	IPA	Y2400114
6	☐	1489	IPA	Y2400368
7	☐	3246	IPA	Y2400295
8	☐			
9	☐			
10	☐			

Cylinder Width 1180 mm

Print **Grow**

Process **L3**

Source **L1**

Packaging Structure

Est. of Material

Image

Save Order

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Screen No. **OM 2.5.4**

Initial Processing

- Lookup on Order DB using order #: all order data
- Display order.

User Workflow & Resultant Processing

- - Typical
 - User will change order quantity or request date
- Exception
 -

Notes:

- None

Figure 9E
Transaction Summary – Order Management, Create Order (Process 2.5.5)

Create Order

CV
Order No. [OR516-2772] Copy From Order No. [OR516-2345]

Converter Data
Order No. [OR516-2772]
Item No. [187887-001]
Date Req. [30May00]
Quantity [238,000] [Imps]
Quantity [1,278 Kg] [31,733 M]

End User Data
Order No. [P32145]
Item No. [99-1632-conv1]
Customer [Wise]
[8 Oz Regular Potato Chips]

	Color	Color #	Ink Sys	Cylinder #
1	[Black]	[2707]	[PA]	[Y2400005]
2	[Black]	[340]	[PA]	[Y2400006]
3	[Black]	[405]	[PA]	[Y2400123]
4	[Black]	[470]	[PA]	[Y2400456]
5	[Black]	[220]	[PA]	[Y2400114]
6	[Black]	[1489]	[PA]	[Y2400388]
7	[Black]	[3248]	[PA]	[Y2400298]
8				
9				
10				

Print [Gray]
Process [L3]
Bounce [L1]

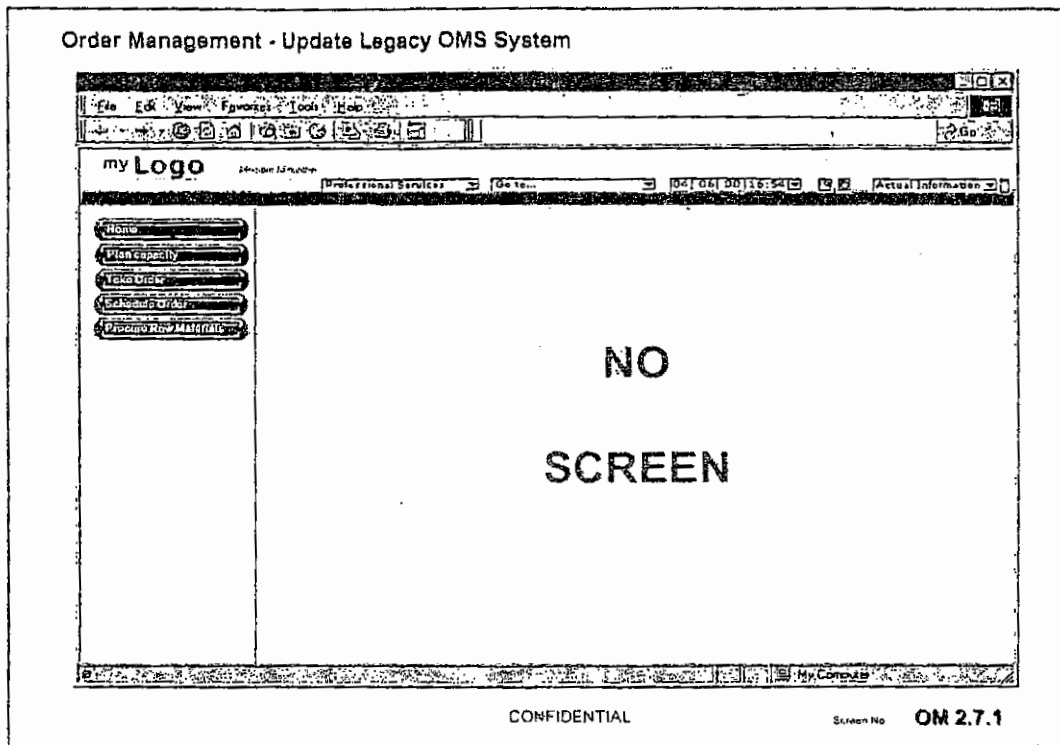
Cylinder Width [1180] mm

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Screen No. **OM 2.5.5**

- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> • Lookup on Order DB using order #: all order data • Display order |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> – User will fill in a new order number and an order number to copy from – User will push copy button – System will copy order and display copy on screen – User will change date requested and quantity • Exception |
| Notes: | None |

Figure 9F
Transaction Summary – Update Legacy OMS System (Process 2.7.1)



Initial Processing

- Send:
 - CV Item #
 - EU Item #
 - End User #
 - End User PO #
 - Quantity requested
 - Quantity unit of measure
 - Date requested
- Return:
 - Order #

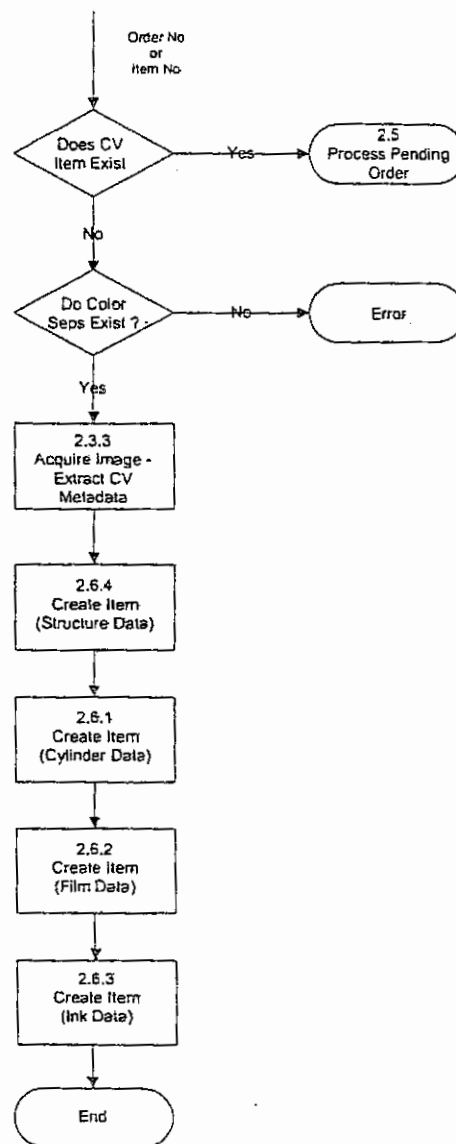
**User Workflow &
Resultant Processing**

- None

Notes:

- None

Figure 10
Item Setup Converter (CV), Acquire Image and Extract Metadata
(Processes 2.3, 2.6)

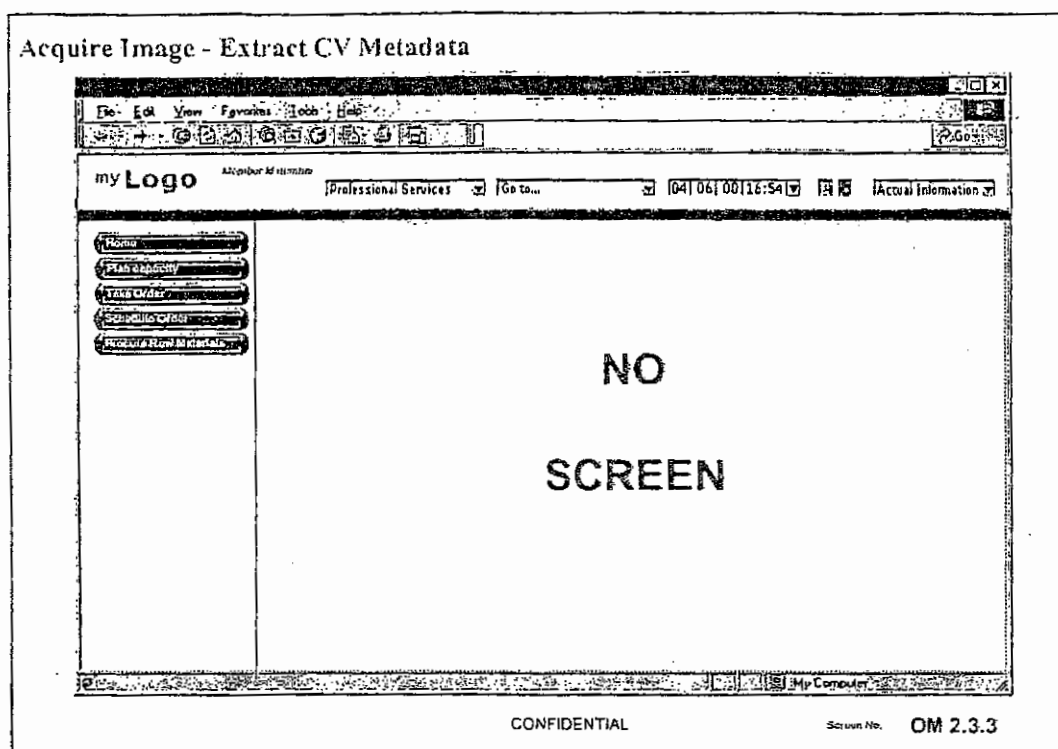


- Acquire Image - Extract CV Metadata (Process 2.3.3). Get Item # from Order DB using order #. Get Image # from Item DB using Item #. Interface with the Image Acquisition and Metadata Extraction Module using Image # and get all converting data.
- Create Item (Process 2.6.4). The converter adds structure data to the item. Some of the data elements for this transaction have already been entered by the end user.

Figure 10 (Continued)
Item Setup Converter (CV), Acquire Image and Extract Metadata
(Processes 2.3, 2.6)

- Create Item (Process 2.6.1). The converter adds cylinder data to the item.
- Create Item (Process 2.6.2). The converter adds film data to the item bill of material.
- Create Item (Process 2.6.3). The converter adds ink data to the item bill of material.

Figure 10A
Transaction Summary – Acquire Image - Extract CV Metadata (Process 2.3.3)



Initial Processing

- Send:
 - Image number
- Return:
 - Image description
 - Customer number
 - Customer name
 - # Across
 - # Around
 - Bounce level of difficulty
 - Color # for each cylinder
 - % ink coverage for each cylinder (color)
- Calculations
 - None Required

**User Workflow &
Resultant Processing**

- None

Notes:

- None

Figure 10B
Transaction Summary – Create Item (Structure Data) (Process 2.6.4)

Item Definition - Package Structure, Converter Data

myLogo

Professional Services

Go to...

04/05 00:16:54

Actual Information

Home

Print capacity

Take Order

Schedule Order

Process the Materials

Item Definition - Package Structure

Item # 167887-001 Customer #: 4588910 Web

Image # 990ct-54978v1 6 Oz Regular Potato Chips

Package Structure

Layer	Routing	General Description	Supplier	Supplier Material	Cost WL	Cost Units
Substrate	103	20 Coex	Not Spec			
Print	103	Print				
Adh Lam	202	ADH	Not Spec	PU	2.3	g/sq M
Substrate	202	18 MET	ExxonMobil	18VIM332		

Lamination Type ☒ Out of Line

Print ☒ 20 Coex Inside ☒ Outside ☐

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Screen No OM 2.6.4

- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> Lookup and display data elements from Table 2.2.3(Item Definition, Package Structure) using item_no |
| User Workflow & Resultant Processing | <p>Typical</p> <ul style="list-style-type: none"> Enter routing Enter coating weight (if applicable) Enter coating units (if applicable) Enter Print film and side |
| Notes: | <ul style="list-style-type: none"> None |

Figure 10C
Transaction Summary – Create Item (Cylinder Data) (Process 2.6.1)

Item Definition - Enter / Change Item

my Logo

Professional Services [Go To...] [04/06/00] 15:54 [Actual Information]

Item Definition - Enter / Change Item

Item: Item No.: 187887-001 Customer Item No.: 12345-1000

Item # 187887-001

Customer Wise

Description 18 Qt Original Polio Chips

Image # 1890cl-54576v1

Width 380 mm # Across 3 1140 mm Cylinder Width 1180 mm

Cutoff 400 mm # Around 1 400 mm

	Color	Color #	Ink Sys	Cylinder #	Converter Data
1		2707	IPA	Y2400006	Print Conv
2		340	IPA	Y2400006	Process LA
3		406	IPA	Y2400123	Bounce LI
4		470	IPA	Y2400456	Package Structure
5		220	IPA	Y2400134	Bill of Materials
6		1469	IPA	Y2400398	Item Image
7		3246	IPA	Y2400209	
8					
9					
10					

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Screen No. QM 2.6.1

Initial Processing

- ~ Calculate width across = # across * width
- Calculate width around = # around * cutoff

User Workflow & Resultant Processing

Typical

- Enter ink system for each cylinder
- Enter cylinder # for each cylinder
- On first cylinder, lookup cylinder width on the cylinderDB using converter-no and cylinder number.
- Fill in cylinder width field
- For all subsequent cylinders, lookup cylinder width on the cylinderDB using convert-no and cylinder number and check it against the cylinder width field. If there IS NOT a match, error
- Enter Print
- Enter process level of difficulty
- Click on Package Structure button

Notes:

- None

Figure 10D
Transaction Summary – Create Item (Film Data) (Process 2.6.2)

Item Definition - Bill Of Materials

Item Definition - Bill Of Materials

Item: Item No.: 167887-001 Customer: Wise
 Description: 16 Oz Regular Potato Chips
 Image #: 1950ci-54978v1

Basis: 500,000 IMPS

	Material #	Description	Material	Width	Gauge	Qty
Substrate 1	F-20C-1145	20 Coax	1145	20	1521	
Substrate 2	F-18M-1140	18 Me	1140	18	1371	
Substrate 3						
	Material #	Description	Material	Coating Weight	Coating Units	Qty
Top Coat						
Lam 1/2	A-1234-Sun	ADH	PU	2.3	g/sq M	182
Lam 2/3						
Bottom Coat						

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Screen 140, OM 2.6.2

Initial Processing • None

User Workflow & Typical

Resultant Processing • Enter basis quantity
 • Enter basis unit of measure
 • If basis unit of measure is not impressions, calculate basis impressions (required for ink calculations)

$$\text{Kg to Imps} = \text{Kg} * \text{Yield} / (1000^2) / \text{cutoff mm} / \text{width mm}$$

$$\text{Sqm to Imps} = \text{Sqm} / \text{cutoff mm} / \text{width mm} / 1000^2$$

- For all materials
 - Enter material number
 - Lookup on Material DB using material #: material description
 - Enter material, width, gauge, quantity required to produce basis quantity
- For all coatings
 - Enter material number
 - Lookup on Material DB using material #: material description
 - Enter material, coating weight, coating units, quantity required to produce basis quantity
- Click on Ink Bill of Materials button

Notes:

- None

Figure 10E
Transaction Summary – Create Item (Ink Data) (Process 2.6.3)

Item Definition - Ink Bill Of Materials

my Logo Professional Services [Go to...] [64] [04] [00] [16] [54] [Actual Information]

Item Definition - Bill of Materials

Item: Item No.: 187587-001 Customer Item No.: 12345-1000

Item #: 187587-001
 Customer: Wise
 Description: 5 Oz Regular Potato Chips
 Image #: 980ct-54978v1

Color	E	Material #	Ctg Wght	% Cover	% Solids	Quantity
2707		11234-sum	1.16	30%	45%	11.80
340		13245-Zen	0.85	45%	55%	17.90
405		1222-mor	0.83	50%	65%	21.00
470		1444-oss	1	10%	50%	3.80
220		1333-l	1.05	15%	48%	5.39
1489		11111-unb	0.75	40%	49%	11.17
3248		18876-ik	0.8	5%	57%	1.95

CONFIDENTIAL Screen 720 OM 2.6.3

- Initial Processing • None
- User Workflow & Resultant Processing • Typical
- For all materials
 - Enter material number
 - Enter coating weight
 - Enter % solids
 - Calculate Quantity = (BasisImpressions * cutoff * width / 1000 / 1000) * coating weight * % coverage * % solids / 1000
- Notes: • None

Figure 11

Schedule Orders Functional Overview

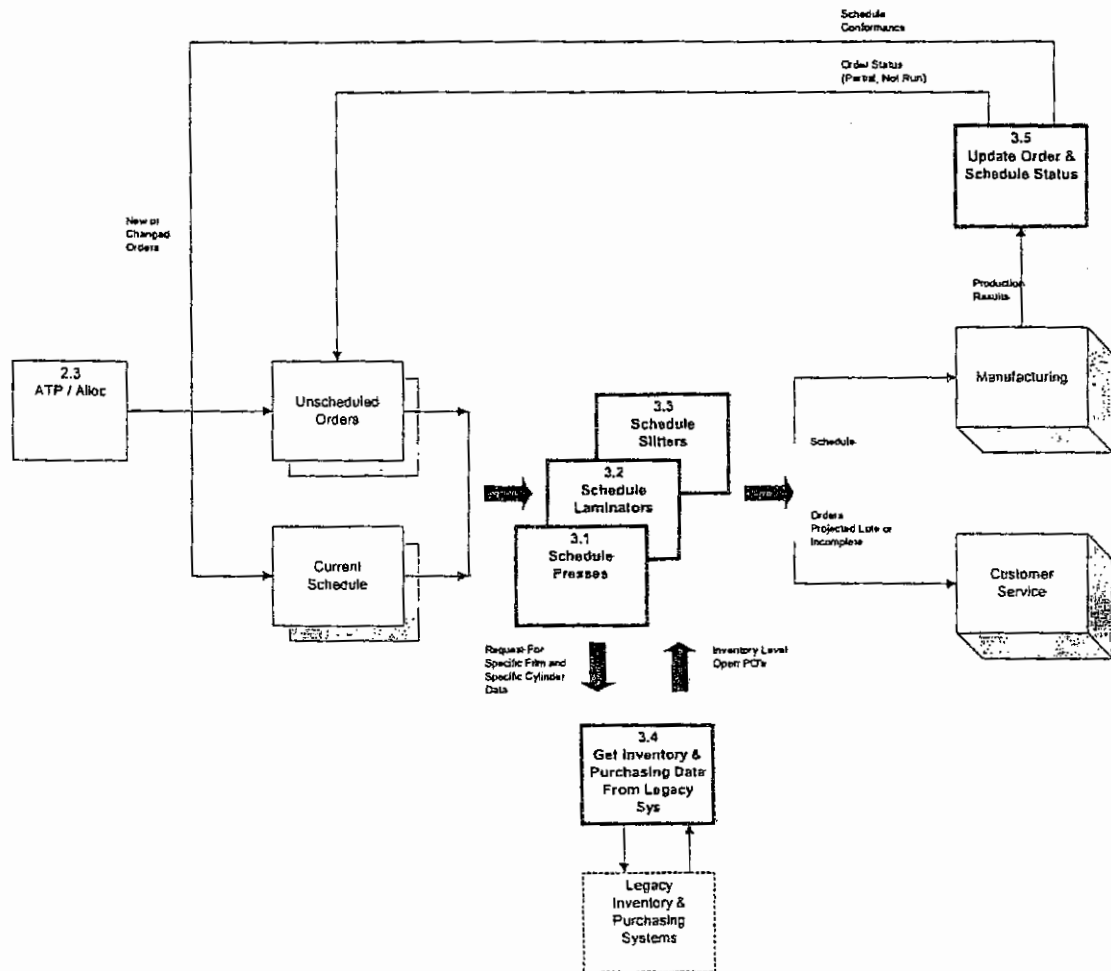
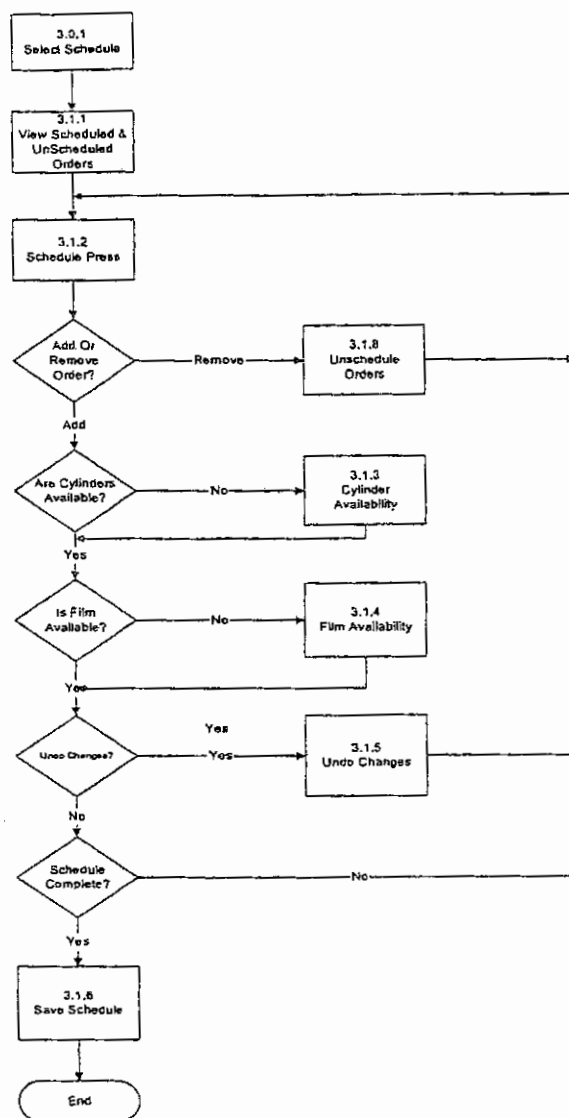


Figure 11A
Schedule Press (Process 3.1)



- Select a Schedule (Process 3.0.1). Gives the user the ability to select the schedule they would like to work on. A user may have several "versions" of a schedule.
- View Scheduled & Unscheduled Orders (Process 3.1.1). Gives the user split screen capability (of the schedule they have selected) to view a line schedule on one side and a specified group of unscheduled orders on the other side of the screen.

Figure 11A (Continued)
Schedule Press (Process 3.1)

- Schedule Press (Process 3.1.2). Gives the user the ability to schedule a press by selecting the job to schedule and dragging it onto the schedule in the desired position. The schedule is automatically adjusted. Scheduling statistics and job indicator lights are provided to help the user assess the impact of the change.
- Cylinder Availability (Process 3.1.3). When a job is scheduled there is an instantaneous check on available print cylinders. If any of the cylinders are not going to be ready then this transaction will show the user the status and projected complete dates on the cylinders.
- Film Availability (Process 3.1.4). When a job is scheduled there is an instantaneous check on film availability. If film is not going to be ready then this transaction will show the user a view of film inventory. The user can do a query on film sizes that are close to the desired size and may elect to "use" some of film for this job.

Figure 11B
Transaction Summary – Select Schedule (Process 3.0.1)

Schedule Order - Schedule Versions

Schedule Version	Date	Comment
A	8/15/2000	Active Schedule
V1	8/15/2000	Extra Jayes Orders
V2	8/15/2000	Extra Jayes Orders + Volume Split
V3	8/15/2000	No Extra Orders
V4		
V5		

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- | | |
|--------------------------------------|---|
| Initial Processing | <ul style="list-style-type: none"> • Default process step to printing • Lookup and display existing schedule version data on the schedule-version db using converter-no and process step |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> – Change process step – Lookup and display existing schedule version data on the schedule-version db using converter-no and process step – Click and highlight desired version – Click on the Get Schedule button |

To build version PVX (Print version X) scheduled orders for line L for the next screen

- Join Order DB and ScheduleDB (only records where schedule DB records exist)
- Select all orders with printstatus (OrderDB) = "unscheduled"
- Select all orders with schedule line (ScheduleDB) = "L" (default to lowest line number to build first tab on next screen)
- Select all orders with version (ScheduleDB) = "X"
- Sort orders on sequence #
- Get PVX start date and time from the schedule-timeDB using process-step = "Print", Version = "X", and Line-no = "L"
- Starting with first order (in sorted sequence) and continuing through the list, calculate start time, run time, and changeover time
- Build "Schedule PVX" pane for the default line, this will be the first display pane on the next screen.
- Build the other scheduled line panes in the background.

Figure 11B (Continued)
Transaction Summary – Select Schedule (Process 3.0.1)

- | | |
|---|--|
| User Workflow &
Resultant Processing | <p>To build version PVX (Print version X) unscheduled orders for the next screen</p> <ul style="list-style-type: none"> - Join order DB and schedule DB (using all order records) - Select all orders with Print-Status = "Unscheduled" - Select all orders with Version NOT= "X" (these should be all of the unscheduled orders for version X) - Sort the unscheduled orders based on capacity group, on customer on item description. - Default capacity group to the first alphabetical group and select those orders. Build the unscheduled PVX pane for that capacity group. This will be starting display pane for the unscheduled orders on the next screen. - Build the other unscheduled capacity group panes in the background. <p>• Exceptional</p> <p>Delete schedule button – The user highlights a schedule and presses the delete schedule button. Note: You are not allowed to delete the active schedule. If you want to get rid of the active schedule, you must pull it up (get schedule) and unschedule the orders.</p> <ul style="list-style-type: none"> - Get the ScheduleDB and get all of the records with schedule version = "X" (the version to delete). - Delete these records <p>Update production button – The user presses the update schedule button.</p> <ul style="list-style-type: none"> - Join the ScheduleDB and the OrdersDB - Select all records with Scheduleversion = "A" - Build the display for transaction UP 1.0.1 <p>Merge with Actual Schedule button – The user highlights a schedule and presses the merge with actual schedule button.</p> <ul style="list-style-type: none"> - Join the OrderDB and ScheduleDB (only records where ScheduleDB records exists). - Select all records with version = "A" or version = "X" - Sort on Line number on version on sequence number (this should segment by line, putting all active schedule jobs first, then VX jobs). - For each line number, renumber sequence from 1 to N. |
|---|--|

Figure 11C
Transaction Summary – Schedule Press, View Schedule (Process 3.1.1)

Schedule Order - View Scheduled And Unscheduled Orders

Schedule Version: V1 Extra Joyce Orders

Date	Time	Order No.	Location	Status
25-Apr	8:00	P02145	Wipe	4-May
167897-001	8 On Original PC	8	Rrva	
hA - PA / NC	h L1 / L3	3.5	Xhrs	
In Line	WPE / TS	Lam	114	

UnScheduled

Date	Time	Order No.	Location	Status
25-Apr	17:30	P02152	Wipe	6-May
167113-001	W On Original PC	6	Rrva	
hA - PA / NC	h L1 / L3 / CS	2	Xhrs	
In Line	WPE	Lam	114	

Click On Order To Jump To Scheduling Screen

Adj Start t Start Time: 4/26/00 9:00 SORT FIND

CONFIDENTIAL Screen No: Sch 3.1.1

Initial Processing

- See transaction SCH 3.0.1 for details on how to build the "tab panes" for this screen.
- Get start date and start time from the schedule-timeDB process-step = "Print", Version = "X", and Line-no = "L"

User Workflow & Resultant Processing

- Typical
 - Go to scheduled portion of the screen and click on the tab for the line # to be scheduled
 - Go to the unscheduled portion of the screen and click on the tab for the group of orders to be used as candidates for scheduling (this may be a capacity group, the pool, or all orders)
 - Scroll through both sections of the screen and find order to be scheduled and the location for it.
 - Click on the order to be scheduled
 - Transfer control to transaction Sch 3.1.2 passing line number for scheduled orders and line number and order number for unscheduled orders.
- Exceptional
 - Adj Start t button – The user will change the displayed start date and start time and click on the Adj Start t button.
 - Save the new start date and start time in the schedule time DB using process step, schedule V# and line-no.
 - Starting with first order (in sorted sequence) and continuing through the list, calculate new start times.
 - New start time = start time from last job + run time from last job + changeover time to this job.

Figure 11C (Continued)
Transaction Summary – Schedule Press, View Schedule (Process 3.1.1)

User Workflow & Resultant Processing

- Sort button** – The user will click on the sort button.
- Bring up a sort menu with all of the order characteristics. Allow the

user to pick "sort on" criteria and hit OK. Resort the unscheduled orders based on the sort criteria.

Find button – User will click on the find button

- Bring up a find dialog box so the user can key in an order number. Search the unscheduled list and adjust the display to show the "find" order in the middle of the unscheduled window.

Notes

- Initial processing for this screen should be done on transaction SCH 3.0.1. For performance reasons, it may make sense to build the default tabs in transaction SCH 3.0.1 and then build the subsequent tabs in the background.

Figure 11D
Transaction Summary – Schedule Press, View Schedule (Process 3.1.2)

Schedule Order - Schedule Press

myLogo

File Edit View Favorites Tools Help

Line: 114 Sch Version: V1 Extra Jays Orders

Unscheduled

Job That You Clicked On

Department Metrics	On	Time	Job	Late	Eff.
Before Last Change:	95 %	1.75 Hrs	3	96 %	
After Change:	97 %	1.65 Hrs	1	97 %	

UNDO SORT SAVE AS

CONFIDENTIAL

Screen No Sch 3.1.2

Initial Processing

- Use the datasets created in SCH3.1.1.
- Build the job bars using DB information from the orders DB.
- Indicator lights
 - Top light – Ontime light
 - = green if xworks date – ship date > 2,
 - = yellow if xworks ship date – xworks-date <= 2
 - = red if xworkds ship date – xworkds-date < 0
 - Next light – Film light
 - = green if film exists
 - = yellow if film arrives on production day
 - = red if no film
 - Next light – Cylinder
 - = green if cylinders exists
 - = yellow if cylinders arrives on production day
 - = red if no cylinders by production day
 - Next light – Next Step light
 - = green if xworks date for next step > this step
 - = yellow if xworks date for next step = this step
 - = red if xworks step for next step < this step

User Workflow & Resultant Processing

- Typical
 - User will scroll through the scheduled orders and look for a good position to schedule the order they are interested in
 - User will go to the unscheduled portion of the screen and click on the order they want to schedule.

Figure 11D (Continued)
Transaction Summary – Schedule Press, View Schedule (Process 3.1.2)

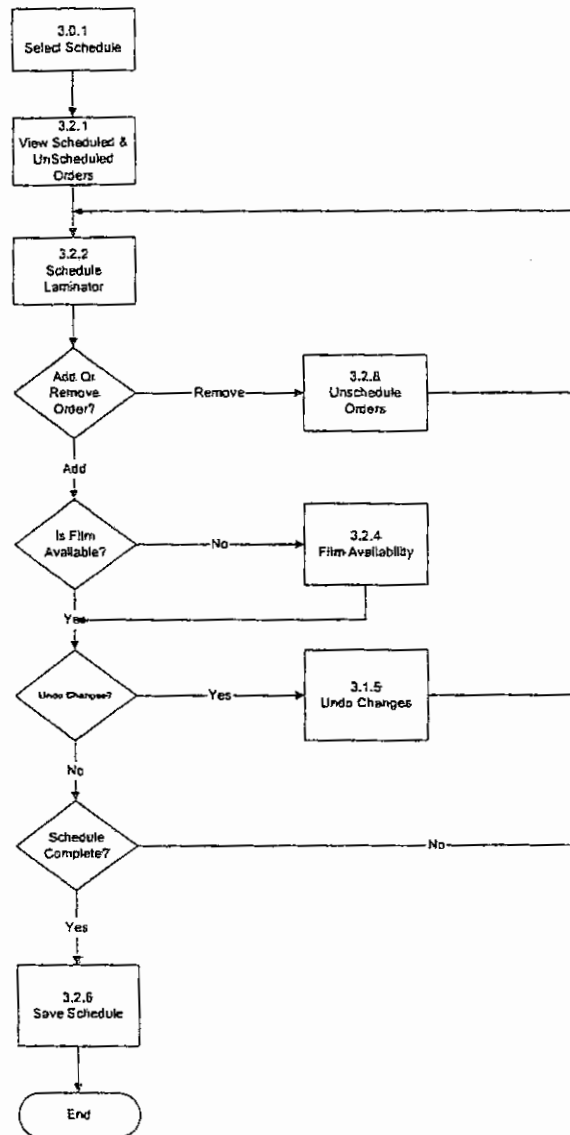
User Workflow &
Resultant Processing

- Typical (continued)
 - User will drag the order to the position on the scheduled portion of the screen that they want to schedule the order
 - Execute Alg Schedule Order
 - User will review the department metrics and schedule indicator lights
- Exceptional
 - Undo button – The user clicks on the “undo” button.
 - Remove (undo) the last order scheduled
 - Recalculate the changeover times
 - Recalculate the start times
 - Recalculate the department metrics
 - Sort button – The user will click on the sort button.
 - Bring up a sort menu with all of the order characteristics. Allow the user to pick “sort on” criteria and hit OK. Resort the unscheduled orders based on the sort criteria.
 - Save As button – The user will click on the Save As button.
 - Bring up a file save dialog box and allow the user to save the schedule as V1, V2, V3, V4, V5. If one of those already exists, ask the user if they want to overwrite it.
 - Take all of the scheduled orders and goto the scheduleDB and change the Version column to the Save as X version. For example, the user may have originally done a “get schedule” on version V1, made some changes and decided to save as V2.

Notes

- None

Figure 11E
Schedule Laminator (Process 3.2)

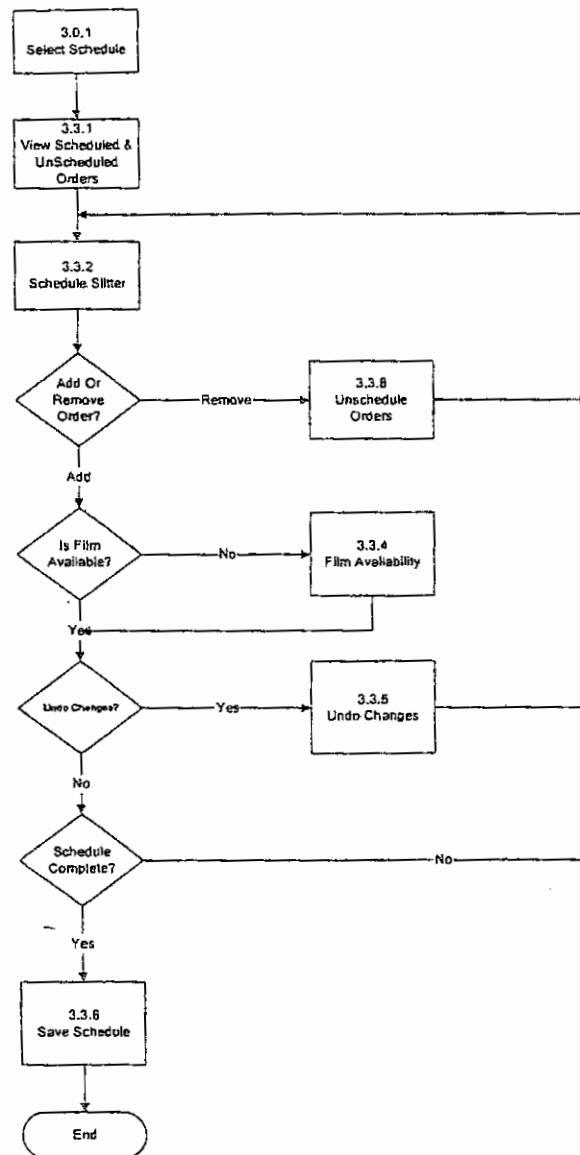


- Select a Schedule (Process 3.0.1). Gives the user the ability to select the schedule they would like to work on. A user may have several "versions" of a schedule.
- View Scheduled & Unscheduled Orders (Process 3.2.1). Gives the user split screen capability (of the schedule they have selected) to view a line schedule on one side and a specified group of unscheduled orders on the other side of the screen.

Figure 11E (Continued)
Schedule Laminator (Process 3.2)

- Schedule Laminator (Process 3.2.2). Gives the user the ability to schedule a laminator by selecting the job to schedule and dragging it onto the schedule in the desired position. The schedule is automatically adjusted. Scheduling statistics and job indicator lights are provided to help the user assess the impact of the change.
- Film Availability (Process 3.2.4). When a job is scheduled there is an instantaneous check on film availability. If film is not going to be ready then this transaction will show the user a view of film inventory. The user can do a query on film sizes that are close to the desired size and may elect to "use" some of film for this job.

Figure 11F
Schedule Slitter (Process 3.3)

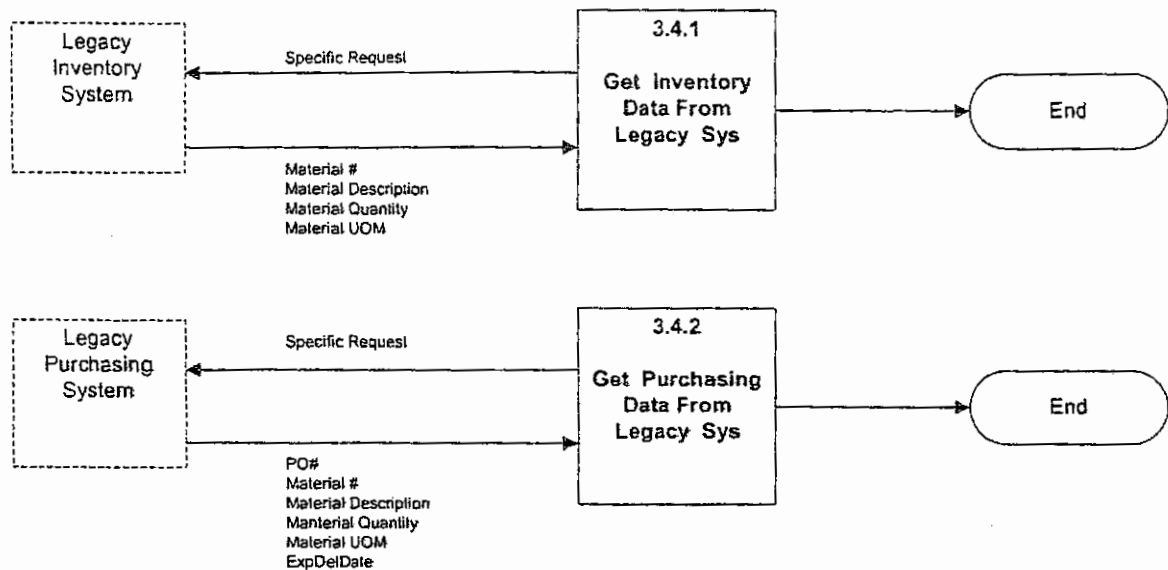


- Select a Schedule (Process 3.0.1). Gives the user the ability to select the schedule they would like to work on. A user may have several "versions" of a schedule.
- View Scheduled & Unscheduled Orders (Process 3.3.1). Gives the user split screen capability to select a line schedule on one side and a specified group of unscheduled orders on the other side of the screen.

Figure 11F (Continued)
Schedule Slitter (Process 3.3)

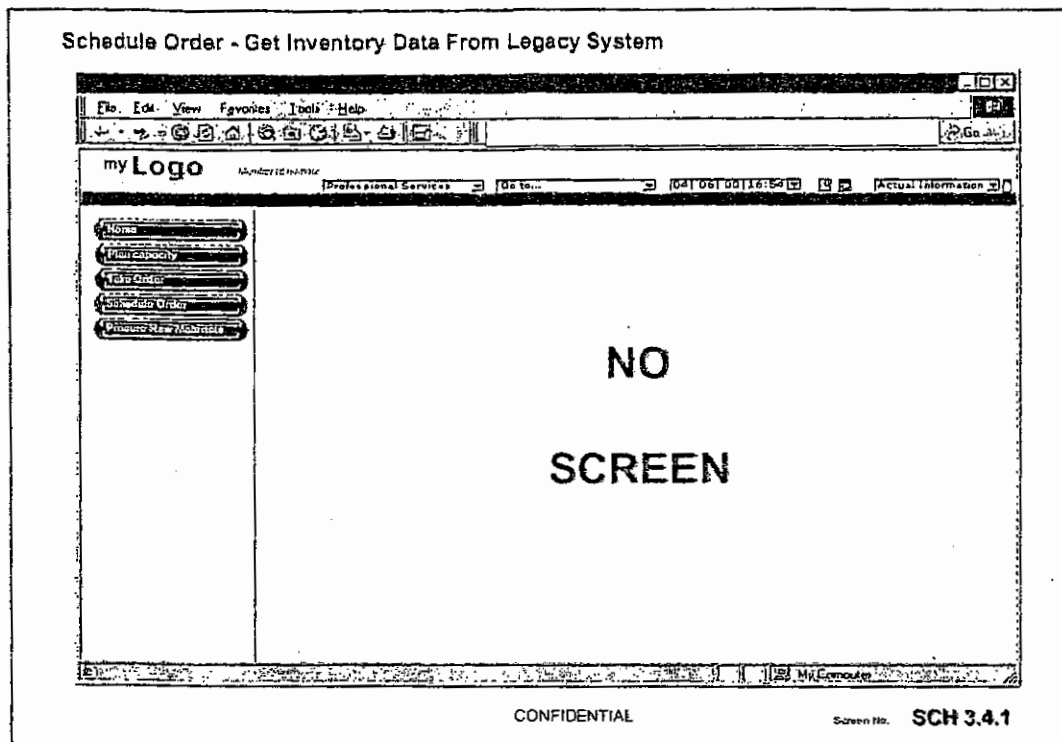
- Schedule Slitter (Process 3.3.2). Gives the user the ability to schedule a slitter by selecting the job to schedule and dragging it onto the schedule in the desired position. The schedule is automatically adjusted. Scheduling statistics and job indicator lights are provided to help the user assess the impact of the change.

Figure 11G
Inventory / Purchasing Interface (Process 3.4.1 & 3.4.2)



- Get Inventory Data From Legacy System (Process 3.4.1). As orders are scheduled, inventory data on the required film and cylinders is retrieved from the legacy system. This data is used for raw material availability checking.
- Get Purchasing Data From Legacy System (Process 3.4.2). As orders are scheduled, purchasing data on the required film and cylinders is retrieved from the legacy system. This data is used for raw material availability checking.

Figure 11H
Transaction Summary – Get Inventory Data From Legacy System (Process 3.4.1)



Initial Processing

- Receive order number and item number from SCH 3.1.2
- Get Bill of Material (BOM) items from BOM DB using Item number
- For each BOM item with class = "Film", send request to inventory legacy system
- Store returned inventory values
- For each BOM item with class = "Cylinder", send request to inventory legacy system
- Store returned inventory values

User Workflow & Resultant Processing

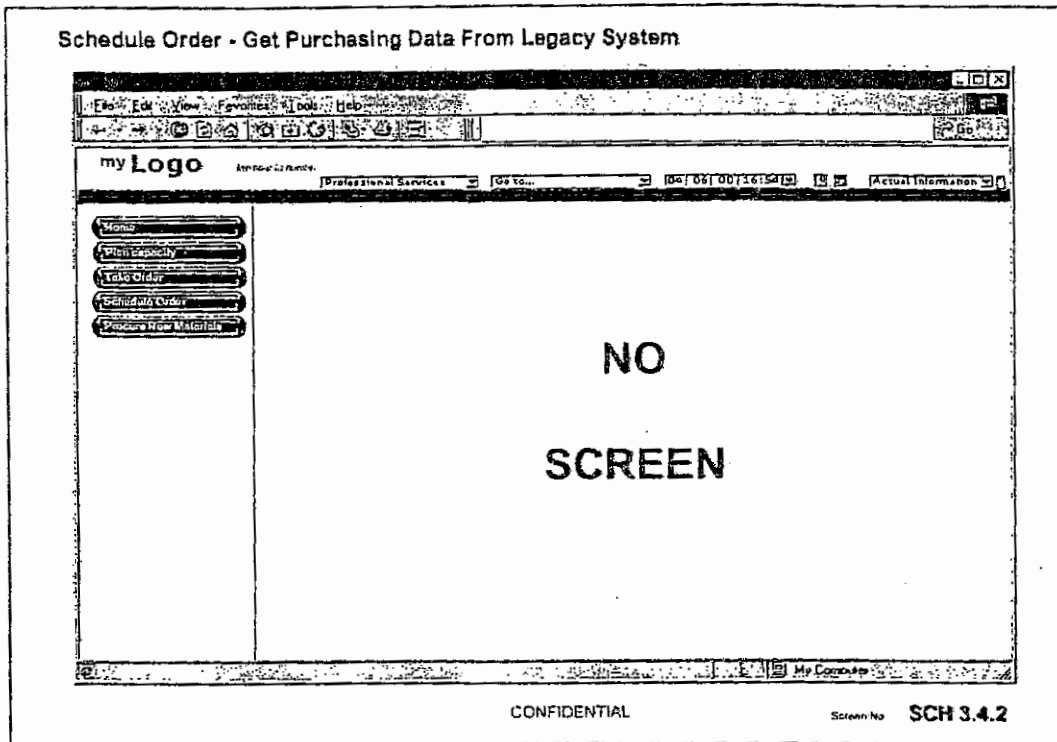
- Typical

Notes

- None

Figure 111

Transaction Summary – Get Purchasing Data From Legacy System (Process 3.4.2)



Initial Processing

- Receive order number and item number from SCH 3.1.2
- Get BOM items from Bom DB using Item number
- For each BOM item with class = "Film", send request to purchasing legacy system
- Store returned purchasing values
- For each BOM item with class = "Cylinder", send request to purchasing legacy system
- Store returned purchasing values

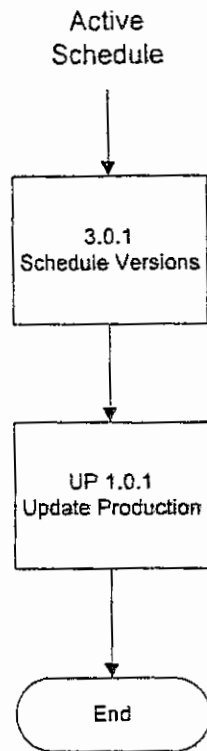
User Workflow & Resultant Processing

- Typical

Notes

- None

Figure 11J
Update Order And Schedule Status (Process 3.5)



- Schedule Versions (Process 3.0.1). The update production screen is accessed from the schedule versions screen. You may only update the active schedule from this screen. From the screen, push the "Update Production" button.
- Update Production (Process UP1.0.1) From this screen, the user can update the schedule and readjust the start time of the active job.

Figure 11K
Transaction Summary – Schedule Versions (Process 3.5.1)

Schedule Order - Schedule Versions

my Logo

Professional Services Go to... 06/06/00 16:54 Actual Information

Home Plan Capacity Take Order Schedule Order Purchase Raw Materials

Schedule Versions

Process Step: Printing

Version	Date	Comment
A	8/15/2000	Active Schedule
V1	8/15/2000	Extra Jayes Orders
V2	8/15/2000	Extra Jayes Orders + Volume Split
V3	8/15/2000	No Extra Orders
V4	8/15/2000	No Extra Orders

Get Schedule Delete Schedule Update Production Merge With Active Schedule

CONFIDENTIAL, DO NOT DUPLICATE Screen No. SCH 3.0.1

- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> • Default process step to printing • Lookup and display existing schedule version data on the schedule-version db using converter-no and process step. |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> - User will click on the "Update Production" button - System will lookup the Active schedule on the schedule DB and transfer control to UP1.0.1 Update Production. |
| Notes | <ul style="list-style-type: none"> • None |

Figure 11L
Transaction Summary – Update Production (Process UP1.0.1)

Update Production

Date	Time	Order #	Customer	Item	Description	Reg Q	Status	Prod Q	Cy	Film	Reason
28-Apr	8:00	P02145	Waa	187887-001	6 Oz Original PC	5,000					
28-Apr	17:30	P02153	Waa	187113-001	4 Oz Original PC	7,000					
28-Apr	3:30	P02167	Jayco	227893-001	10 Oz SBOT PC	1,000					
28-Apr	8:30	P02190	Jayco	189803-001	6 Oz Regular PC	10,000					
28-Apr	20:30	P02193	Jayco	227893-001	4 Oz Regular PC	4,500					
30-Apr	1:30	P02181	Old Dutch	185503-001	4 Oz New Cream PC	1,500					
30-Apr	6:30	P02180	Old Dutch	217893-001	4 Oz New Cream PC	2,500					
30-Apr	10:30	P02181	Old Dutch	217893-002	4 Oz New Cream PC	1,500					
30-Apr	14:30	P02182	Waa	187883-001	20 Oz PC - Premium	7,500					
1-May	0:30	P02212	Waa	187893-001	33 Oz On A Go PC	2,000					

Active Job (A):
 Start Date:
 Start Time:

CONFIDENTIAL, DO NOT DUPLICATE Screen No. UP 1.0.1

- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> • Display input screen with first six fields filled in from the active schedule. |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> - User will fill in the Status, Prod Q, Cy, Film, and Reason columns for all pertinent orders. See glossary section for a list of acceptable codes. - User will mark the active job in the status column with an "A" and put the actual start date and start time below in the Active Job section of the screen. - The system will resort and recalculate the start times for all of the active jobs left on the schedule. • Exceptional <ul style="list-style-type: none"> - User will highlight a row (order) and click on the "Split Order" button. - The system will split the order into two orders with a suffix of -A and -B. - The user will fill in the pertinent data columns for the split job. |
| Notes | <ul style="list-style-type: none"> • None |

Figure 12

Material Requirements Planning Functional Overview

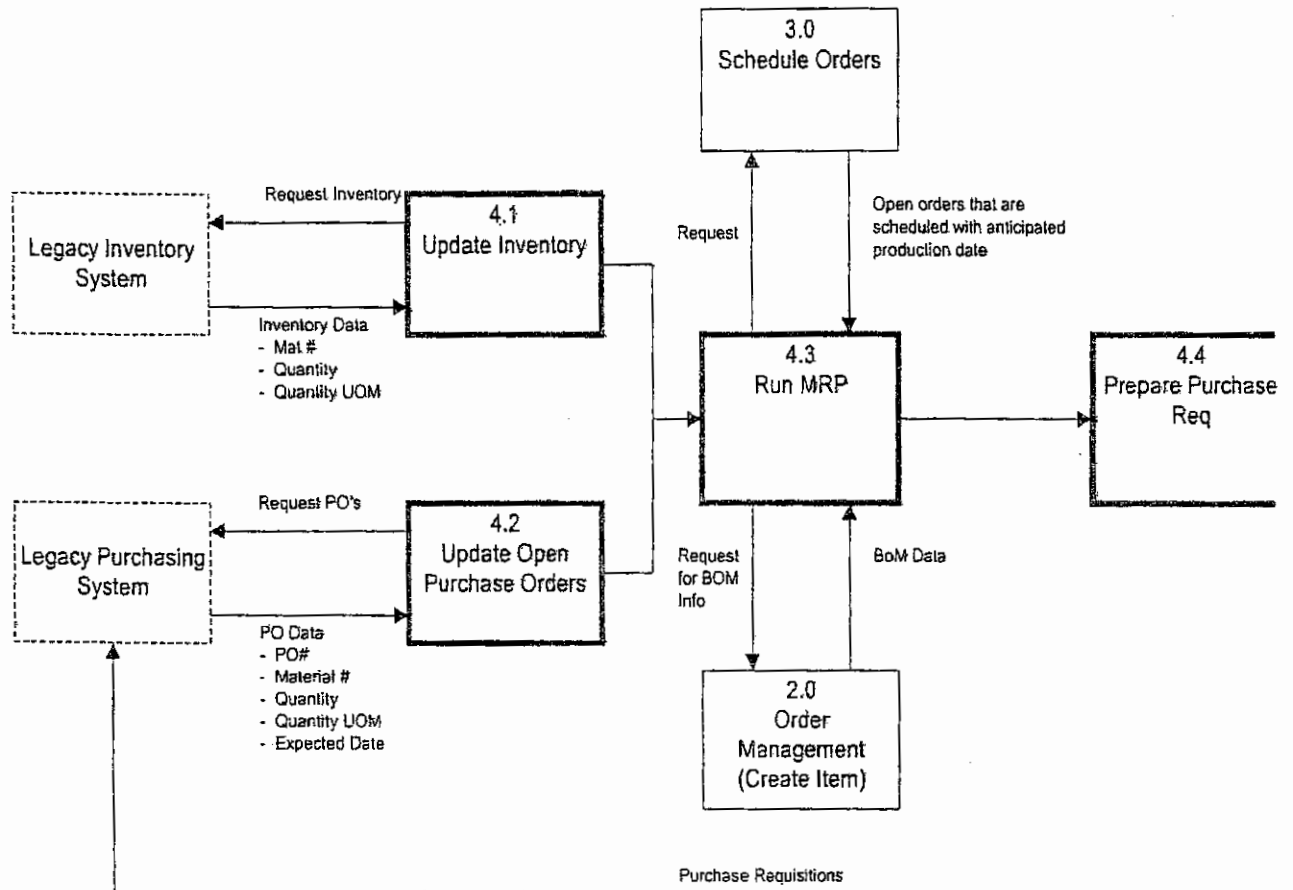
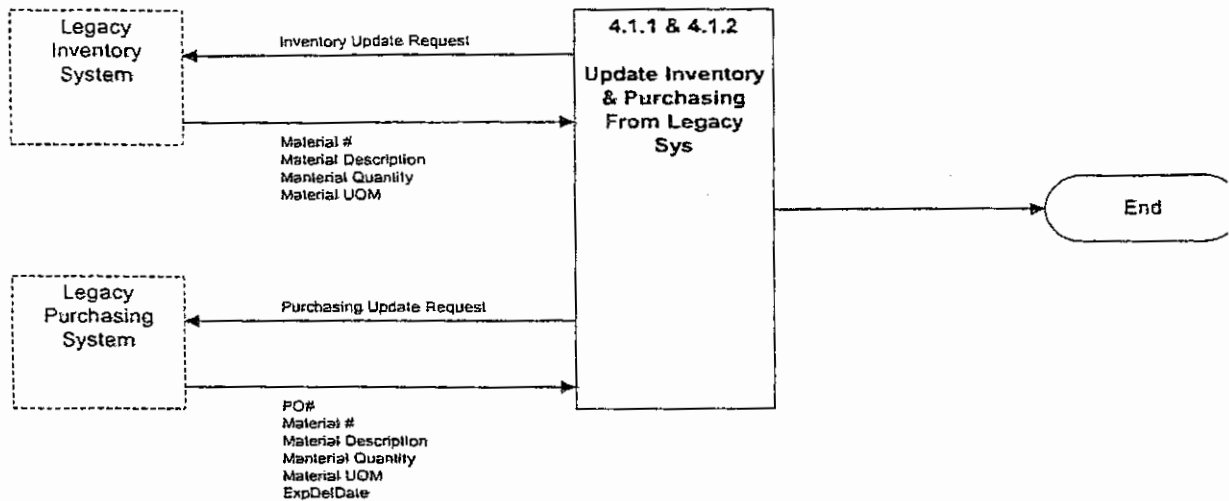


Figure 12A
Inventory / Purchasing Interface (Process 4.1, 4.2)



- Update Inventory & Purchasing From Legacy System (Processes 4.1.1 & 4.1.2). At the beginning of the MRP process it is critical to have an inventory load and PO load from the Legacy systems. Prior to the loading inventory and PO's will be cleared such that the Legacy load is a complete reload of data. This approach eliminates the problem of keeping 2 systems in synch. The legacy system is the master system and the present invention simply accepts the inventory and PO loads it is given.

The load is initiated via transactions 4.1.1 and 4.1.2, which request data from the Legacy system.

Inventory Request (4.1.1)

Legacy returns - For all raw materials

Material #, material description, material quantity and material unit of measure

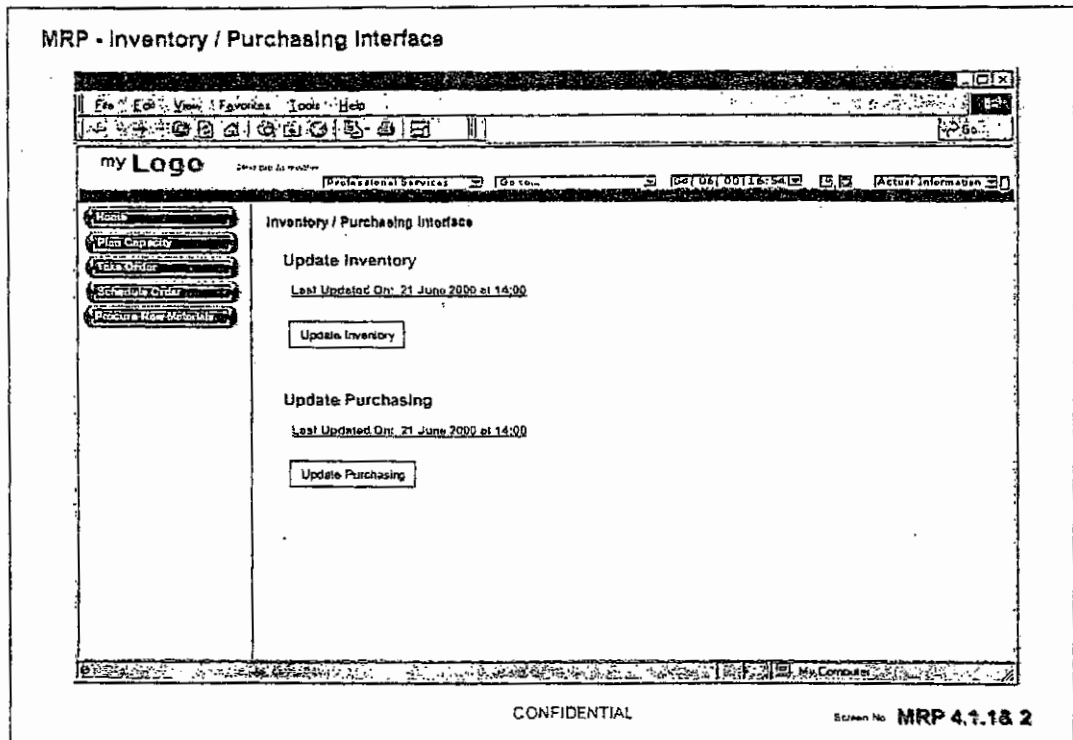
Purchasing Request (4.1.2)

Legacy returns - For all raw materials

PO#, material #, material description, material quantity, material unit of measure, and the expected delivery date

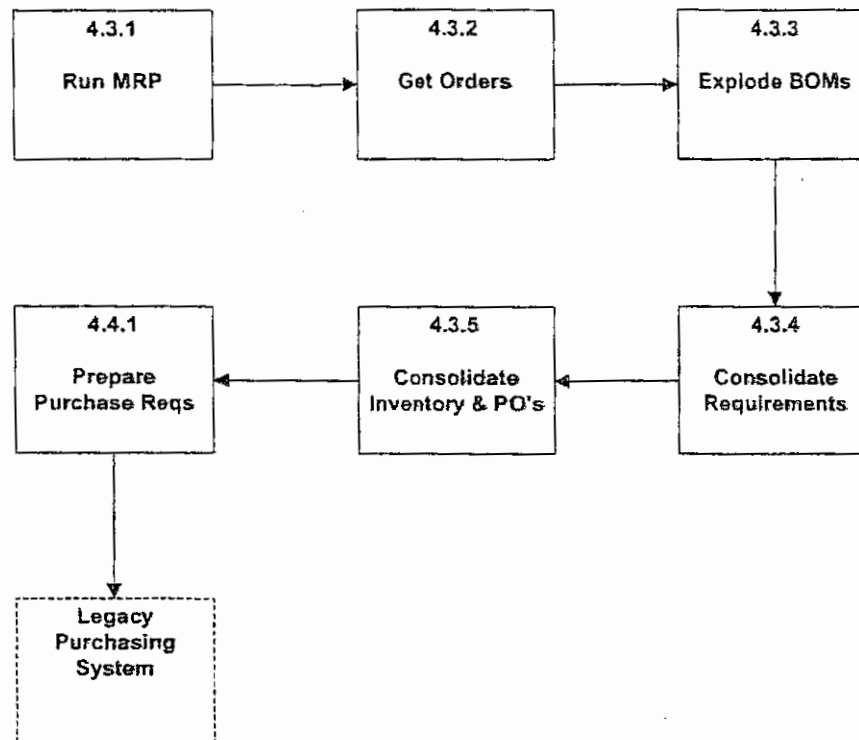
The material numbers in the bills of material should be identical to the material numbers being used in the legacy system.

Figure 12B
Update Inventory & Purchasing From Legacy System (Process 4.1.1 & 4.1.2)



- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> • Lookup date and time of previous download on Download DB |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical <ul style="list-style-type: none"> - User will click on Update Inventory - User will click on Update Purchasing |
| Notes | <ul style="list-style-type: none"> • None |

Figure 12C
Run MRP, Prepare Purchase Requirements (Process 4.3, 4.4)



- Run MRP (Process 4.3.1 - 4.4.1) MRP uses both scheduled and unscheduled orders to determine requirements. The Bills of Materials (BOMs) for these orders are exploded to create a list of requirements. This list is then consolidated by material by day. Once this is done, inventory and PO's are consolidated into a list by material by day of inventory. The two lists are compared to generate an overall purchase requisition list.

Figure 12D
Transaction Summary – Run MRP (Process 4.3.1)

Procure Raw Materials - Run MRP : Choose Parameters

my Logo Monitor your number Professional Services [Go to...] [04/04/00 15:54] [Actual Information]

Procure Raw Materials - Run MRP : Choose Parameters

Period : From To OR From To
 dd/mm/yy dd/mm/yy Week No. Week No.

Materials: ☒ All OR ☐ OPP Film
☐ OPET Film
☐ PP Film
☐ CPP Film
☐ Paper
☐ Foil
☐ Other Substrates
☐ Resin
☐ Adhesive
☐ Ink
☐ Raw Materials
☐ Engraving

[Run MRP]

CONFIDENTIAL Screen No. **MRP 4.3.1**

Initial Processing

- Look up the current week number on CalenderDB
- Default "From" to the current week and "To" to current week + 3

**User Workflow &
Resultant Processing**

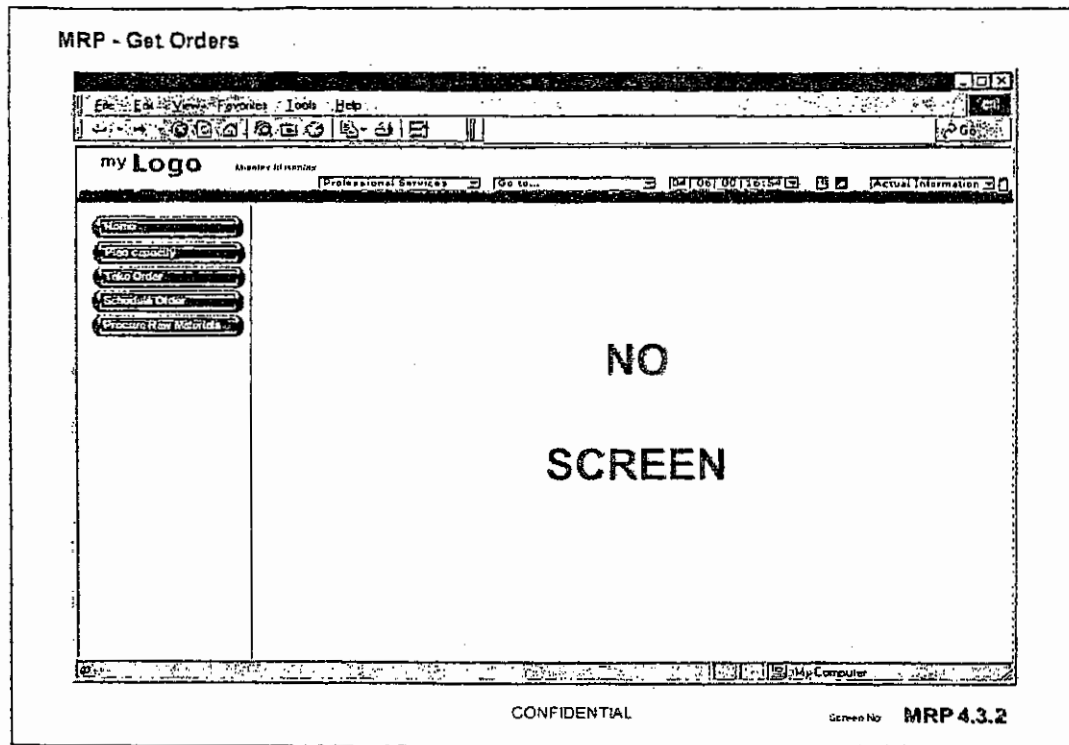
- Typical
 - User will edit the from and to weeks or dates
 - User will check off the materials that they would like to run MRP for
 - User will click on the "Run MPR" button
 - If user has filled in weeks, calculate the "from" and "to" dates using "from" and "to" weeks
 - Get all orders on the Orders DB that have date-xworks-print or date-xworks-lam between these two dates
 - For all of these orders, get all material #'s in the BOM by doing a lookup on BOM DB using Item #
 - Select only those materials where MaterialClass = one of the selected classes from the MRP screen
 - For each material, calculate a required order quantity
 - If BOM item UOM ≠ BOM basis UOM then convert BOM basis UOM
 Imps to kg = IMPs * (width * cutoff)/1000/1000 / yield
 Kg to Imps = KG * yield * 1000 * 1000 / (width * cutoff)
 - Required Order Quantity = (Gross Order Quantity / BOM Basis quantity) * item bom quantity
 - Sort all bom items, for all selected orders on item number and on date required, subtotal on required order quantity (by date)
 - For each item calculate an on hand quantity = Inventory - sum of all item quantities from earlier dates
 - For each item calculate an on order quantity = sum of all item po's from earlier dates, up to the "to" date

Figure 12D (Continued)
Transaction Summary – Run MRP (Process 4.3.1)

Notes

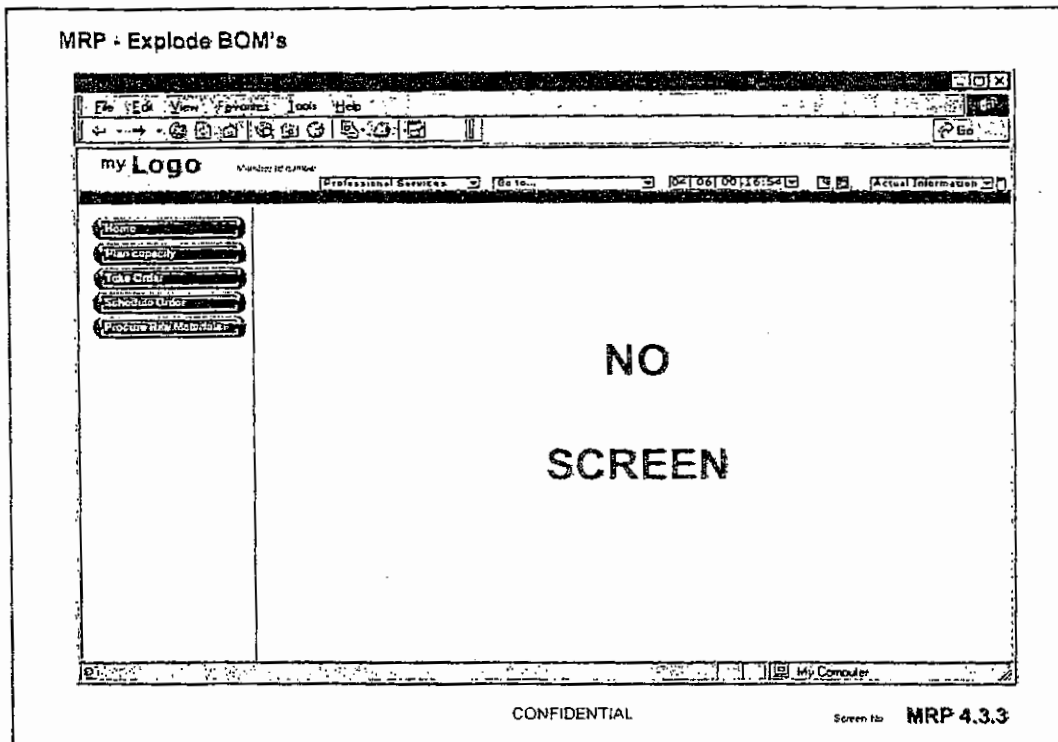
- None

Figure 12E
Transaction Summary – Get Orders (Process 4.3.2)



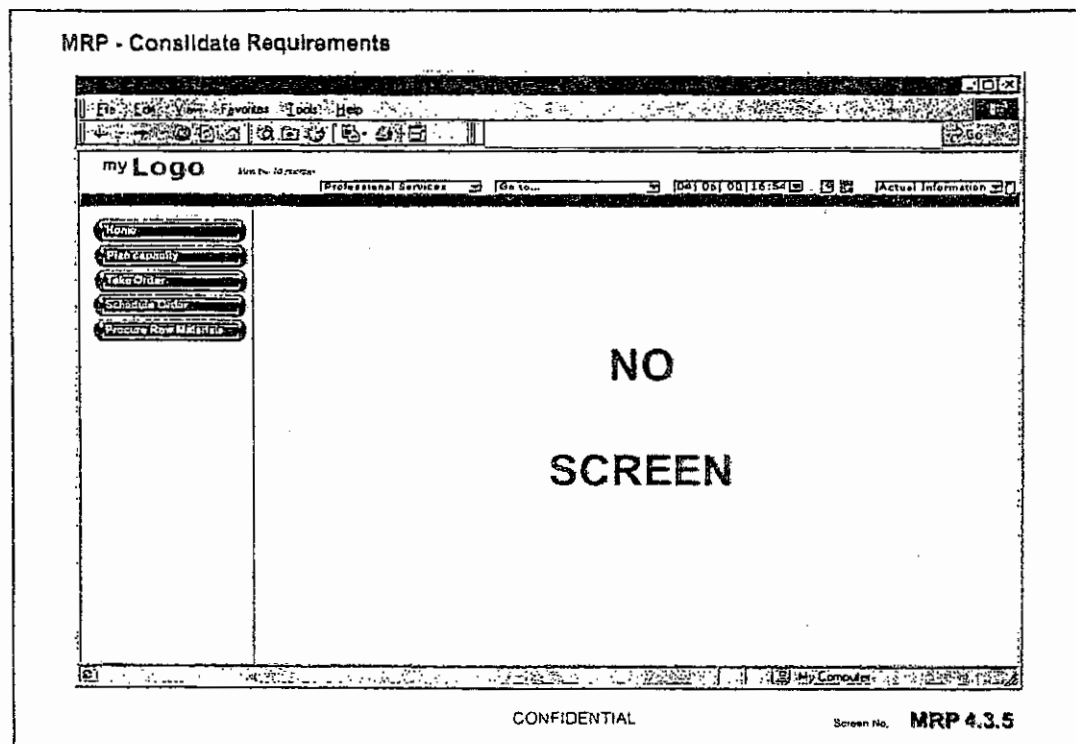
- | | |
|--------------------------------------|---|
| Initial Processing | <ul style="list-style-type: none"> • Receive "from" and "to" weeks from MRP transaction • Calculate from and to dates • Get all orders on the Orders DB that have Xworks dates between these two dates |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical |
| Notes | <ul style="list-style-type: none"> • None |

Figure 12 F
Transaction Summary – Explode BOM's (Process 4.3.3)



- | | |
|--------------------------------------|--|
| Initial Processing | <ul style="list-style-type: none"> • For each of the orders in 4.3.2 <ul style="list-style-type: none"> • Get list of bom items by doing a lookup on BOM db using Item # • For each item calculate a required quantity Required Quantity = (Gross Order Quantity/Bom Basis Q)*Item BOM Quantity |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> • Typical |
| Notes | <ul style="list-style-type: none"> • None |

Figure 12G
Transaction Summary – Explode BOM's (Process 4.3.4)



- | | |
|--------------------------------------|---|
| Initial Processing | • Sort BOM items on item number and on date |
| User Workflow & Resultant Processing | • Typical |
| Notes | • None |