

PI and SAP... The Eastman Experience

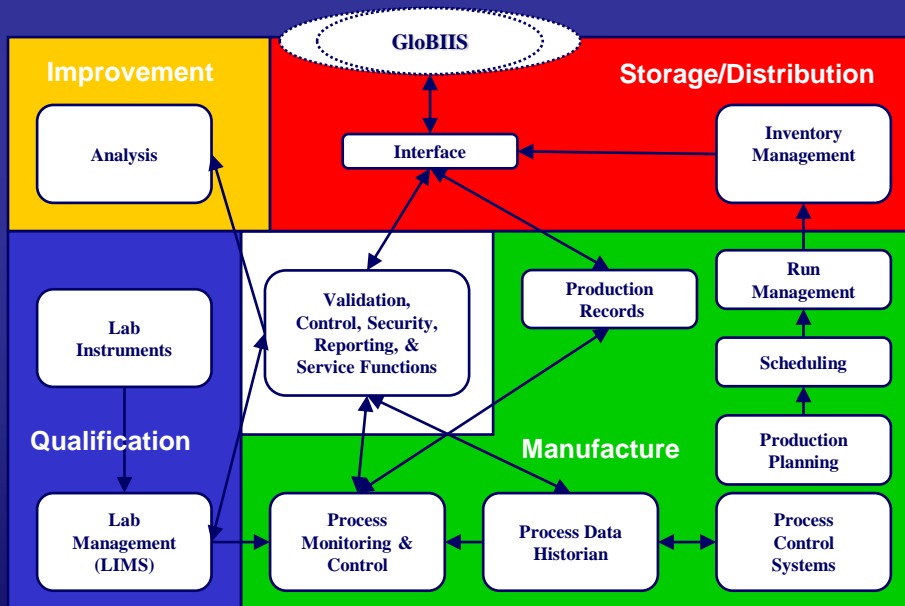
Eastman Chemical

OSI Software

Sharing ideas for a shared future.....

Why Consider a New System?

- 10 different systems
- 7 development tools
- 3 database technologies
- Similar in function
- Diverse in details
- Heavy on support
- Hard to leverage
- Data incoherence
- Lack analysis tools
- Aging technology



Project Scope

- Implement an enterprise-wide integrated manufacturing information system
- Standardize on “best practices” and drive system requirements through business process improvement efforts
- Deploy in 23 manufacturing sites worldwide

United States

Argentina

The Netherlands

Spain

England

Malaysia

Mexico

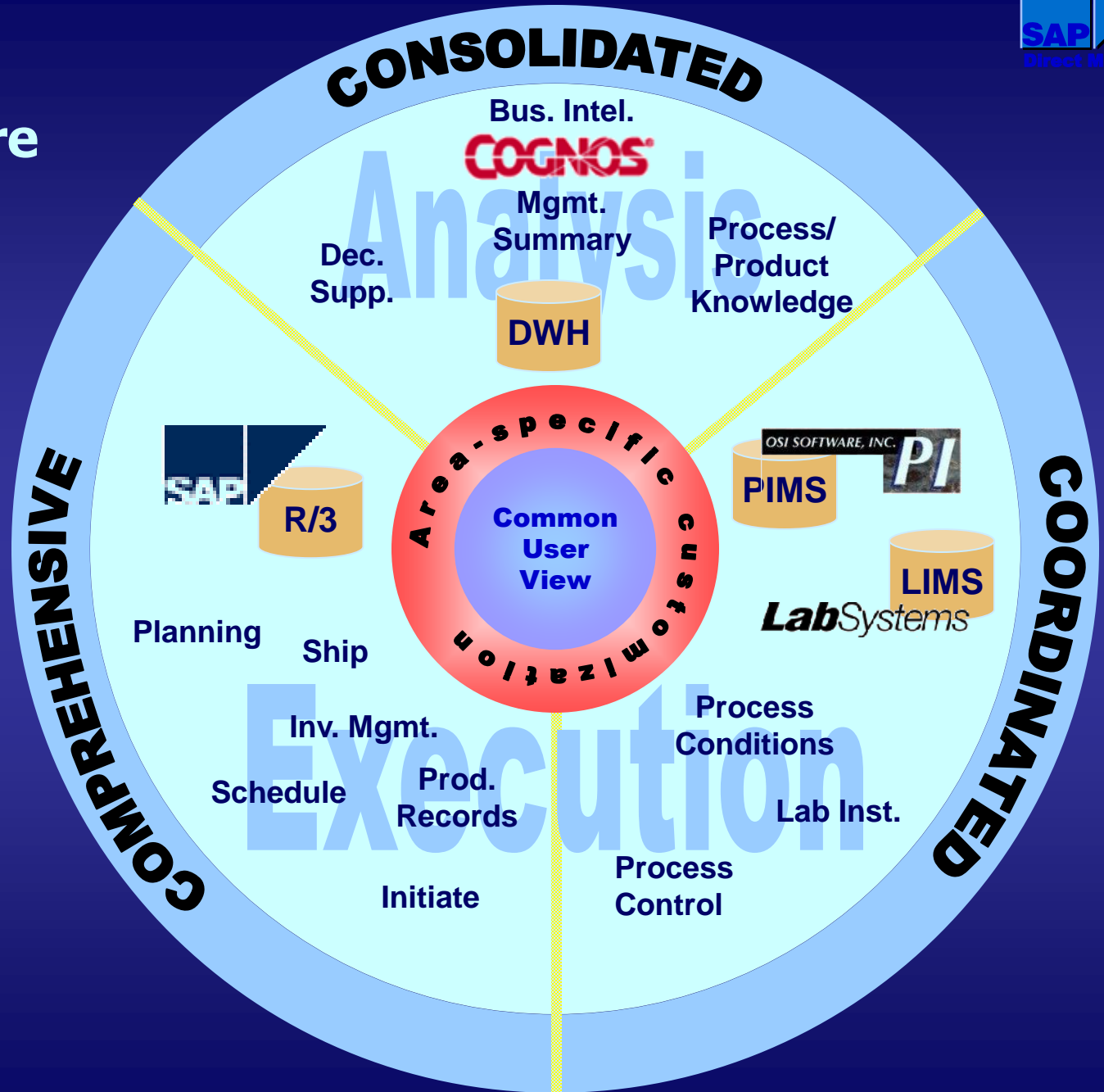
Singapore

Wales

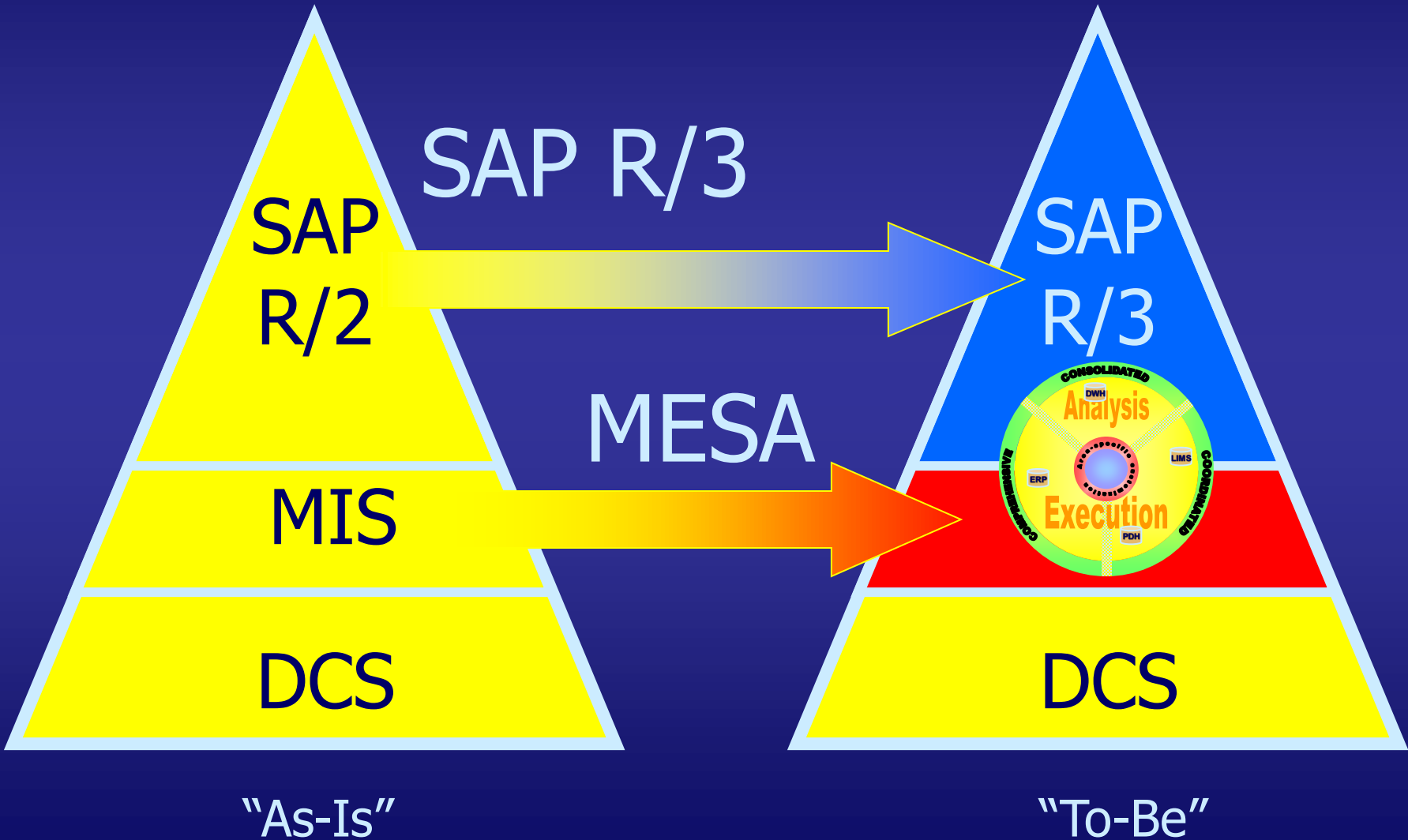
Canada

Hong Kong

Architecture



Impact on Programs



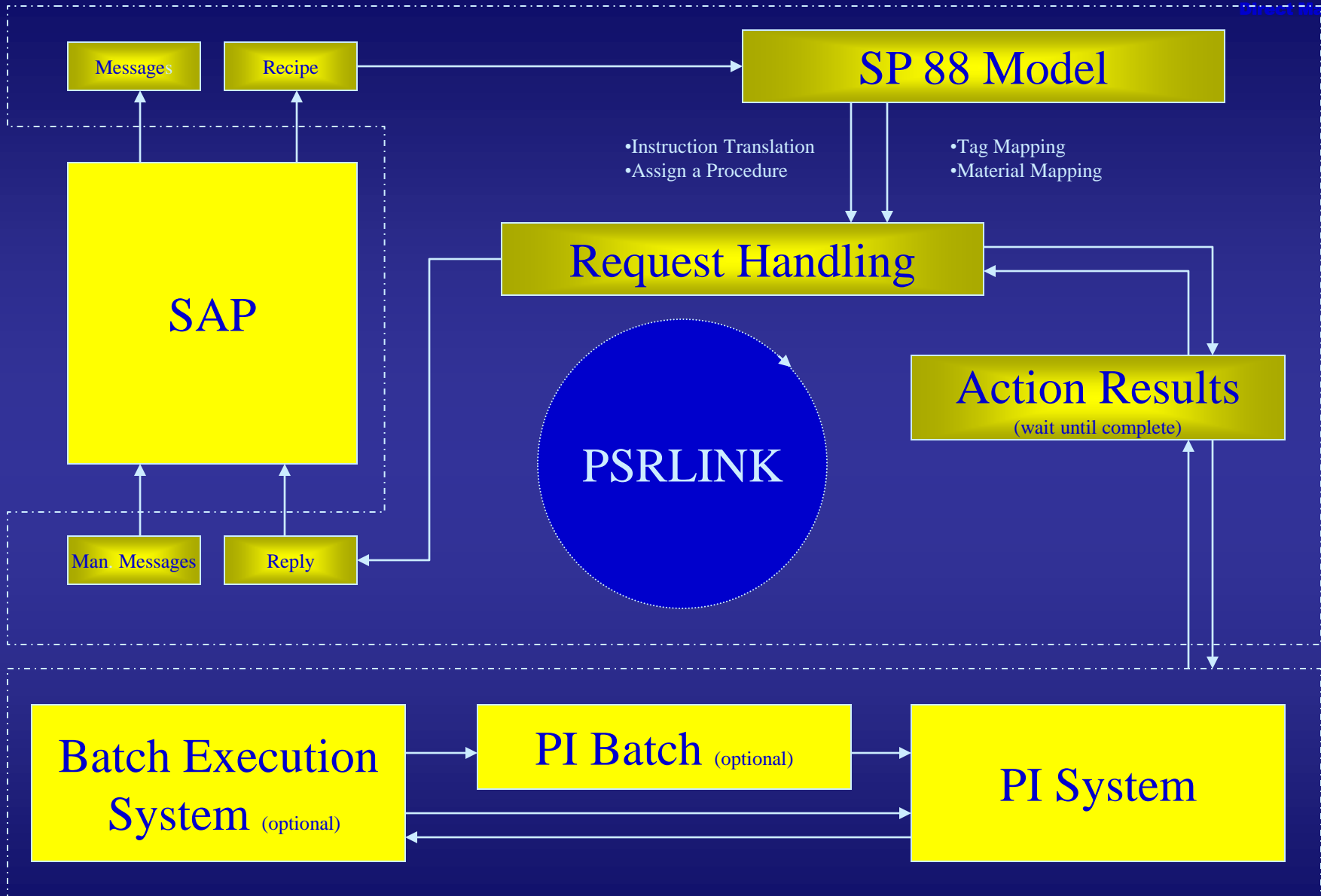
PI/SAP Interfaces

Johnette McDaniel
Principal Systems Analyst
Information Technology
Longview, Texas



PSRLink Overview

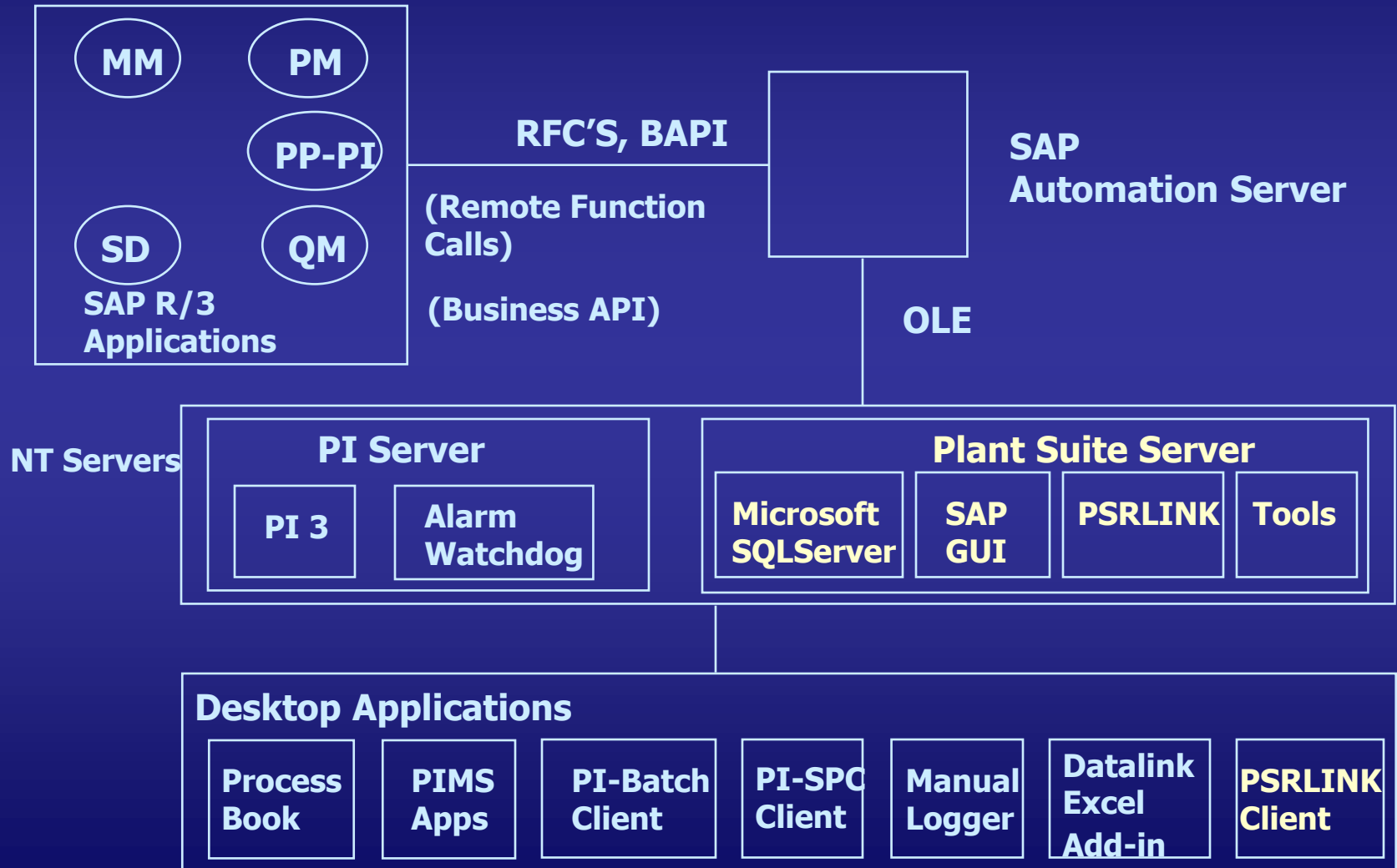
- **Pi Gateway to SAP**
- **Eastman View**
- **Interface Options**
- **User View**
- **Questions**



PSRLink Overview

- **Pi Gateway to SAP**
- **Eastman View**
- **Interface Options**
- **User View**
- **Questions**

Plant Suite Server Integration at Eastman Chemical Co. (LAR)



PSRLink Overview

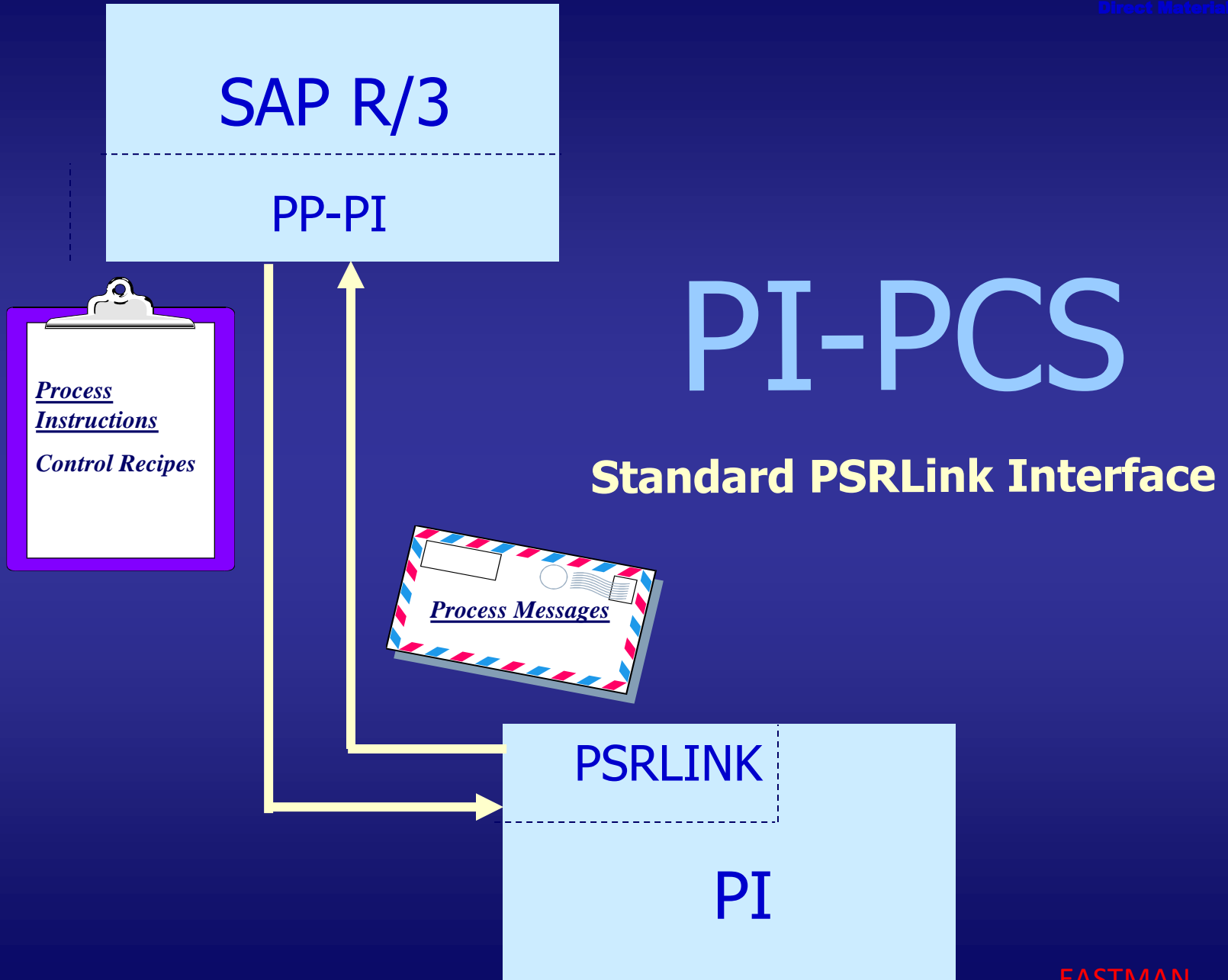
- **Pi Gateway to SAP**
- **Eastman View**
- **Interface Options**
- **User View**
- **Questions**

Interface Options

- **Standard PI-PCS Interface**
- **SAP to PI-Tag Value Updates**
- **Material Movement Interface**

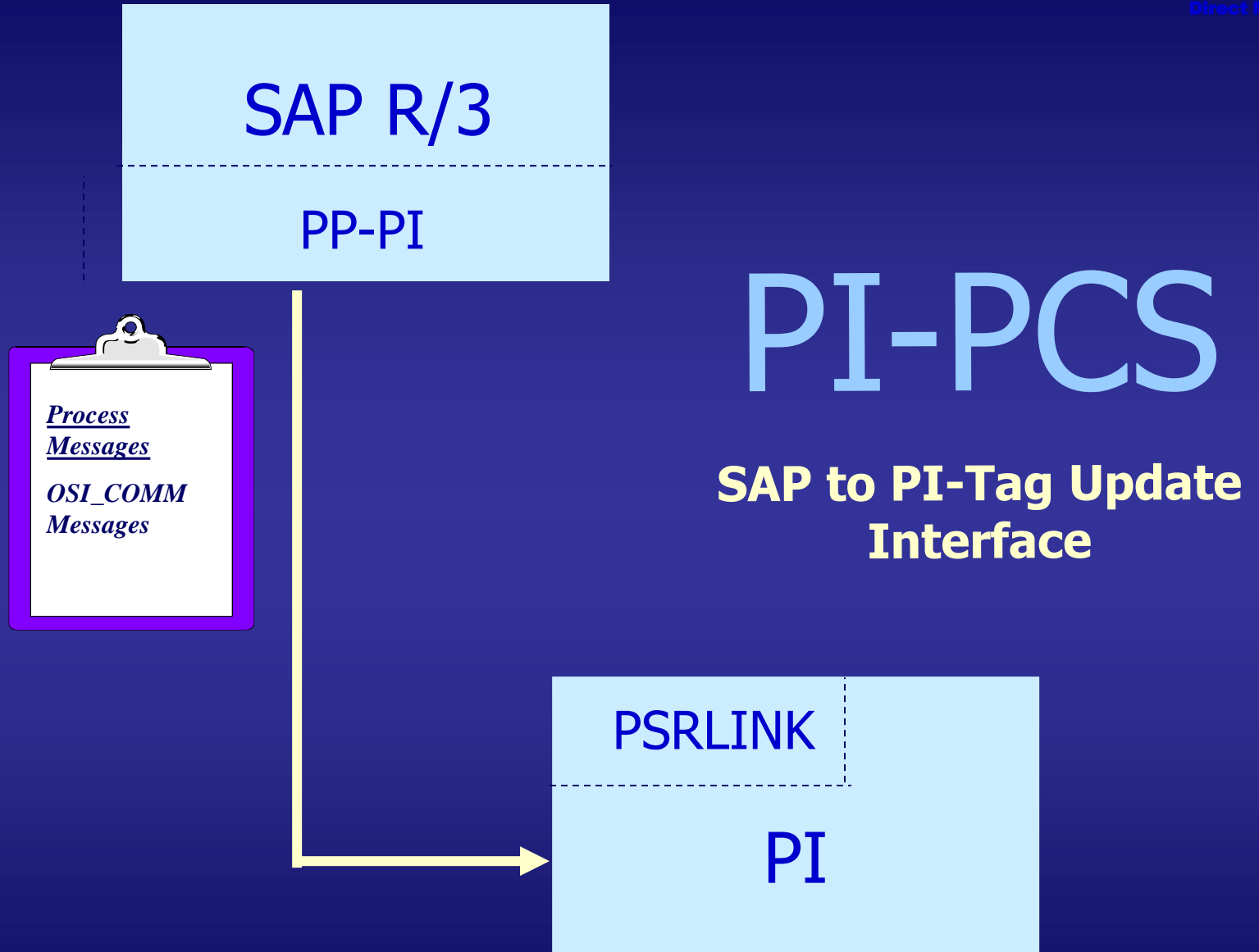
Interface Options

- **Standard PI-PCS Interface**
 - **Start/Stop Control Recipes**
 - **Start/Stop Phases**
 - **Report Production**



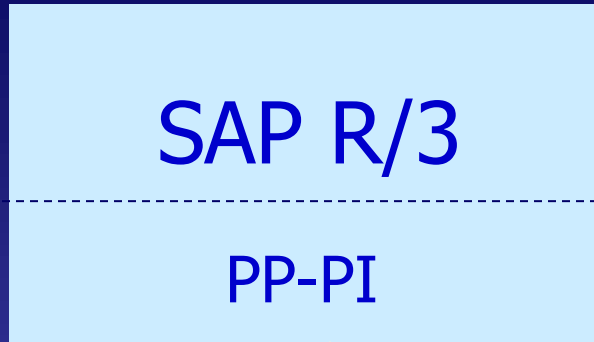
Interface Options

- **SAP to PI-Tag Value Updates**
 - **Eastman Customization**
 - **Silo Blending Lab Values from SAP to PI**
 - **PSRLink System Management Alarming**



Interface Options

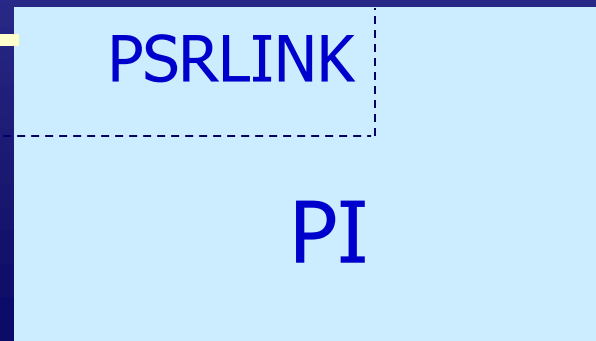
- **Material Movement Interface**
 - Eastman driven enhancement provided by OSI
 - Unsolicited Messages sent from PI to SAP



PI-PCS

Material Movements

Enhanced PSRLink Interface



PSRLink Overview

- **Pi Gateway to SAP**
- **Eastman View**
- **Interface Options**
- **User View**
- **Questions**



```

Private Sub BPhase1_NewValue()
If Bphase1.value = "Equipment Alarm" then
  MAPISession1.SignOn
  MAPIMessage1.AddressLabel = "MaintenanceSupervisor"
  MAPIMessage1.AttachmentName = "\PIAlarmReport.xls"
  MAPIMessage1.Send
End If
End Sub
  
```

Shift Production Report				
Production Tags				
Server	6/15/94 0:00	6/15/94 0:00	6/15/94 0:00	6/15/94 0:00
le:f440	tiglon	323.95	323.95	323.95
Date: 15-Jun-94	cd:f144	tiglon	681.19	681.19
Mode: stdev	le:f440	tiglon	323.95	323.95
	cd:f144	tiglon	681.19	681.19

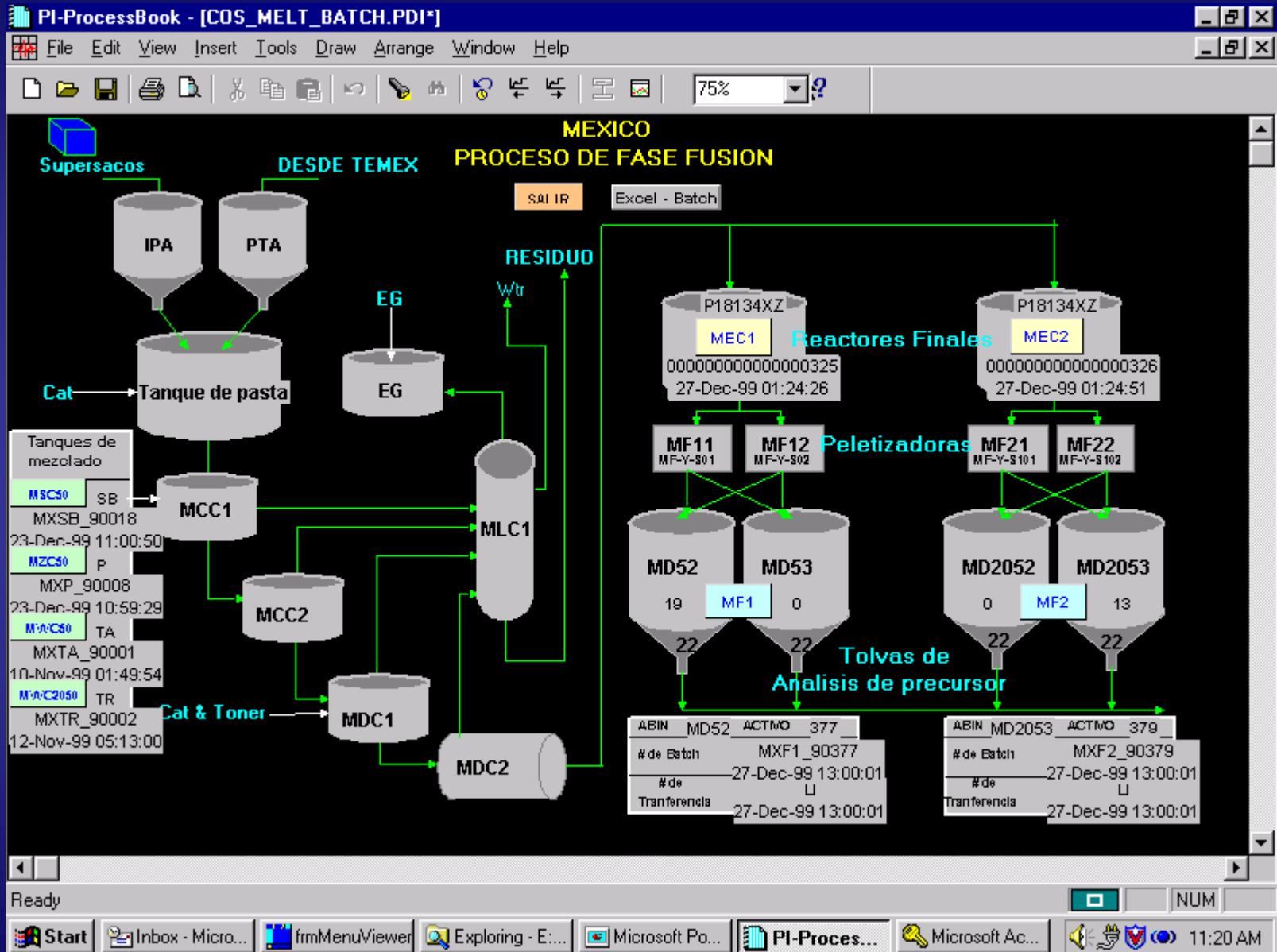
BA:PHASE.1
Phase?

PSRLink Interface ProcessBooks in LAR

- **Batch Production Reporting PB**
- **PSRLink System Management PB**

PSRLink Interface ProcessBooks in LAR

- **Batch Production Reporting PB**
- **PSRLink System Management PB**



PSRLink Interface ProcessBooks in LAR

- **Batch Production Reporting PB**
 - **Start/Stop Control Recipes**

PI-ProcessBook - [COS_MELT_BATCH.PDI*]

File Edit View Insert Tools Draw Arrange Window Help

75%

MEXICO PROCESO DE FASE FUSION

Supersacos DESDE TEMEX

SAI IR Excel - Batch

RESIDUO Wtr

IPA PTA

Cat Tanque de pasta

EG

Reactores Finales MEC1 MEC2

00000000000000000325 27-Dec-99 01:24:26

00000000000000000326 27-Dec-99 01:24:51

MELT:FFLINE1

# de Receta	Procese orden	Tiempo inicial	GMN
00000000000000000399	000030000594	27-Dec-99 00:00:00	P20633XZ

de Receta: Select Recipe to Start

Tiempo inicial de Receta: Enter Recipe Start Time

Tanques de mezclado

- MSC0 SB MXSB_90018 23-Dec-99 11:00:50
- MZC0 P MXP_90008 23-Dec-99 10:59:29
- MVC0 TA MXTA_90001 10-Nov-99 01:49:54
- MVC200 TR MXTR_90002 12-Nov-99 05:13:00

Cat & Toner

Transferencia 27-Dec-99 13:00:01

Transferencia 27-Dec-99 13:00:01

Ready NUM

Start Inbox - Micro... frmMenuViewer Exploring - E... Microsoft Po... PI-Proces... Microsoft Ac... 11:21 AM

PSRLink Interface ProcessBooks in LAR

- **Batch Production Reporting PB**
 - **Start/Stop Control Recipes**
 - **Start/Stop Mix Tank Batches**

PSRLink Interface

ProcessBooks in LAR

- **Batch Production Reporting PB**
 - **Start/Stop Control Recipes**
 - **Start/Stop Mix Tank Batches**
 - **Start/Stop Batches and Report Production**

PI-ProcessBook - [COS_MELT_BATCH.PDI*]

File Edit View Insert Tools Draw Arrange Window Help

75%

MEXICO
PROCESO DE FASE FUSION

MELT:MF2

Información del Batch actual: # de Batch: Current Batch ID

Silo: Current Silo

Tiempo inicial: Start Time

Inicio de transferencia: Tiempo inicial: Transfer Start

Ingreso fin de Batch: Tiempo final del Batch: Batch End Time

Comentarios: Comments

Reporte producción: Cantidad: Amount

Empiece un Batch nuevo: # de Batch nuevo: New Batch ID

Silo nuevo: New Silo

Tiempo inicial: New Start Time

Diagram illustrating the process flow:

- Top silo: P18134XZ MEC2 (0000000000000000326, 27-Dec-99 01:24:51)
- Intermediate silos: MF21 MF-Y-S101 and MF22 MF-Y-S102
- Bottom silos: MD2052 and MD2053 (Bad Input MF2, Bad Input)
- Transfer points: 22
- Cursor: ABIN MD2053 ACTMO 379
- Batch details: # de Batch: MXF2_90379, # de: 27-Dec-99 13:00:01, Transferencia: 27-Dec-99 13:00:01

Ready

NUM

Start Inbox - Micro... frmMenuVie... Exploring - E... Microsoft Po... PI-Proces... Microsoft Ex... 1:13 PM

PSRLink Interface

ProcessBooks in LAR

- **Batch Production Reporting PB**
 - **Start/Stop Control Recipes**
 - **Start/Stop Mix Tank Batches**
 - **Start/Stop Batches and Report Production**
 - **Create Batch Reports using Datalink to Excel**

Microsoft Excel - COS_BATCH.xls

File Edit View Insert Format Tools Data Window PI PI-SMT Help

Arial 10 B I U

	A	B	C	D	E	G	H
1	ntmesapicos	20					
2	servidor			Batch Query		Clear all data	
3		leave blank for all, enter string to find units starting with the string, do not use		*	*-30d	comments	
4	Unidad	*		a de solida	tiempo de final	Alias	
5	ESLINE1	000000000000000000527	P20635XZ	27-Dec-99 01:25:44	*		
6	ESLINE2	000000000000000000328	P20633XZ	27-Dec-99 01:25:52	*		
7	EU:ES1	EUS1_90003	P20635XZ	12-Oct-99 17:12:45	*	No archive entry at given time	
8	EU:ESLINE1	000000000000000000248	P20635XZ	12-Oct-99 16:16:55	*		
9	EU:FF1	EUF1_90002	P20634XZ	12-Oct-99 15:34:09	*	No archive entry at given time	
10	EU:FFLINE1	000000000000000000243	P20634XZ	12-Oct-99 15:34:39	*		
11	EU:MS50	EUSB_90002	P1506301	12-Oct-99 15:32:02	*	Test for 90002	
12	FFLINE1	000000000000000000325	P18134XZ	27-Dec-99 01:24:26	*		
13	FFLINE2	000000000000000000326	P18134XZ	27-Dec-99 01:24:51	*		
14	MF1	MXF1_90377	P18134XZ	27-Dec-99 13:00:01	*	No archive entry at given time	
15	MF1_DAILY	MF1_DAILY_20000105	P18134XZ	5-Jan-00 00:00:20	*		
16	MF2	MXF2_90379	P18134XZ	27-Dec-99 13:00:01	*	No archive entry at given time	
17	MF2_DAILY	MF2_DAILY_20000105	P18134XZ	5-Jan-00 00:00:20	*		
18	MSC50	MXSB_90018	P1506301	23-Dec-99 11:00:50	*	No archive entry at given time	
19	MWC2050	MXTR_90002	P14943S1	12-Nov-99 05:13:00	*	Internal PI-APIX error	
20	MWC50	MXTA_90001	P14978S1	10-Nov-99 01:49:54	*	Internal PI-APIX error	
21	MZC50	MXP_90008	P1549702	23-Dec-99 10:59:29	*	No archive entry at given time	
22	S1_DAILY	S1_DAILY_20000105	P20633XZ	5-Jan-00 00:00:20	*		
23	S2	MXS2_90379	P20633XZ	30-Dec-99 14:30:48	*	No archive entry at given time	
24	S2_DAILY	S2_DAILY_20000105	P20633XZ	5-Jan-00 00:00:20	*		
25							
26							

BatchReport / LongBatch /

Start | Inbox - Micro... | frmMenuVie... | Exploring - E... | Microsoft Po... | PI-ProcessB... | Microsoft ... | 11:30 AM

PSRLink Interface ProcessBooks in LAR

- **Batch Production Reporting PB**
- **PSRLink System Management PB**

PI-ProcessBook - [PSRLINK SYSTEM MANAGEMENT.PDI*]

File Edit View Insert Tools Draw Arrange Window Help

100%

SAP - PI Interface Systems Management

PSRLINK Apps	SAP Links	Alarms
Database Logon HELP	SAP Recipe Monitor HELP	PSRLINK Error ACK HELP
Error Log Review HELP	SAP Message Monitor HELP	Recipe Error ACK HELP
PSRGUI HELP	SAP Gateway Monitor HELP	Message Error ACK HELP
SAP Message Correct HELP		Recipe Hung in SAP ACK HELP
Recipe Time Change HELP		Error in SAP Post ACK HELP
SAP Values to PI Tags HELP		
Configuration HELP		
PI Tag Value Correct HELP		
Database Table View HELP		

Documentation	PSRLINK Program Status
Debugging Document HELP	PSRLINK Exec Status HELP
PI Error Codes HELP	

NUM

PSRLink Interface ProcessBooks in LAR

- **PSRLink System Management PB**
 - **PSRLink Applications**

PI-ProcessBook - [PSRLINK SYSTEM MANAGEMENT.PDI*]

File Edit View Insert Tools Draw Arrange Window Help

100%

SAP - PI Interface Systems Management

PSRLINK Apps

Database Logon HELP

Error Log Review HELP

PSRGUI HELP

SAP Message Correct HELP

Recipe Time Change HELP

SAP Values to PI Tags HELP

Configuration HELP

PI Tag Value Correct HELP

Database Table View HELP

SAP Links Alarms

Error log review

Log no: 122 Timestamp: 1 / 5 /00 9 :47:39 AM

Rcode: putvalue.exe

Message: SOLID:ES2_MSG_STATUS.DV

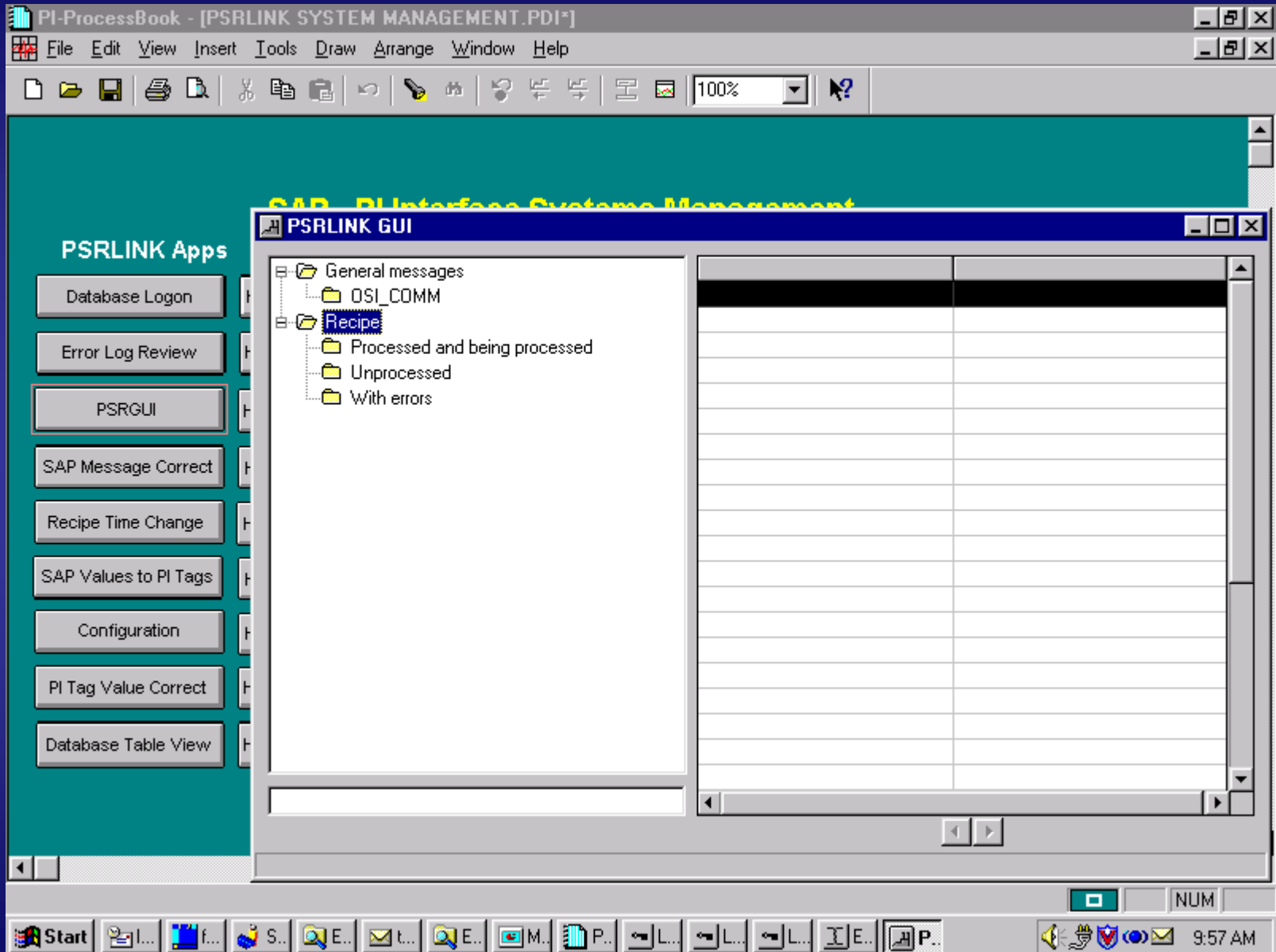
Status: pipt_findpoint Tag not found, or not yet connected to a server : -5

Intstat: 23538

Clear

NUM

Start In... fr... S... Ex... ta... Ex... Mi... PI... Lo... Lo... Lo... E... 9:47 AM



The screenshot shows a Windows-style application window titled "PI-ProcessBook - [PSRLINK SYSTEM MANAGEMENT.PDI*]". The menu bar includes File, Edit, View, Insert, Tools, Draw, Arrange, Window, and Help. The toolbar contains various icons for file operations and a zoom level of 100%. The main content area has a teal background with the text "SAP PI Interface Systems Management" and a sidebar titled "PSRLINK Apps" containing buttons for Database Logon, Error Log Review, PSRGUI, SAP Message Correct, Recipe Time Change, SAP Values to PI Tags, Configuration, PI Tag Value Correct, and Database Table View. A foreground window titled "PSRLINK GUI" is open, showing a tree view with folders: General messages, OSI_COMM, Recipe (selected), Processed and being processed, Unprocessed, and With errors. The right side of this window is a large empty table with a header row. The Windows taskbar at the bottom shows the Start button, several open application icons, and the system tray with the time 9:57 AM.

PI-ProcessBook - [PSRLINK SYSTEM MANAGEMENT.PDI*]

File Edit View Insert Tools Draw Arrange Window Help

PSRLINK Configuration Application

Application object | Phase resource | Resource | Instruction requirements | General instructions

Class | Material group | Material | SAP message alias | PB application menu

Unit | Plant group | Equipment | Equipment group | Point group

Plant | Material tag | Common name | Translator | System parameters

Modify

Plant id: MX00 MEXICO POLYMERS

Description: MEXICO POLYMERS

Shift hours: 0

Shift minutes: 0

Partial minutes: 0

Language: E

From which plant you want to copy data into

Instruction characteristic table

SAP message alias table

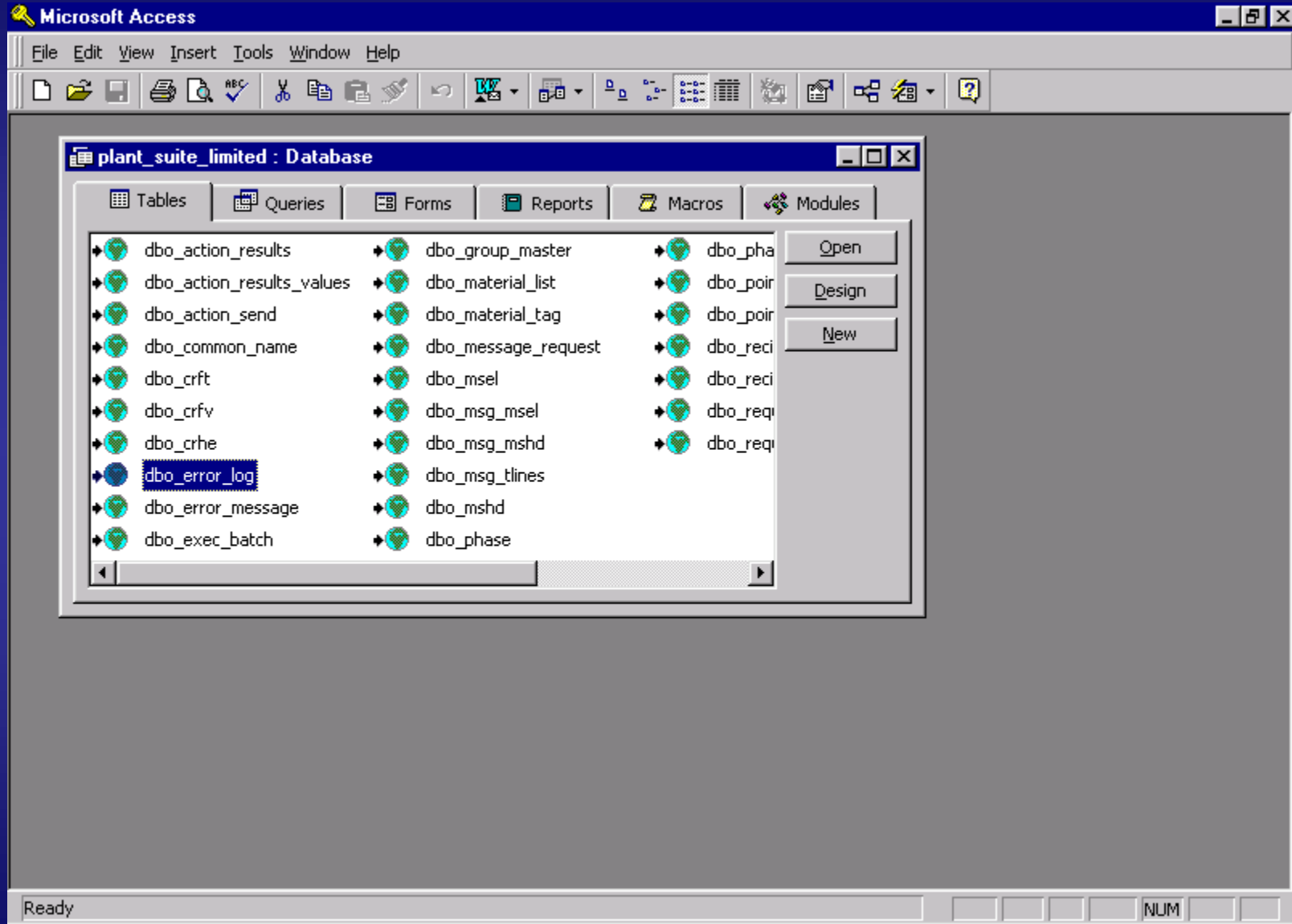
	Plant type	Resource network	Copied plant id	Copied resc
1	BPI	ES1-NET		
2	BPI	ES2-NET		
3	BPI	FF1-NET		
4	BPI	FF2-NET		

Apply Clear

PSRLINK Apps

- Database Logon
- Error Log Review
- PSRGUI
- SAP Message Correct
- Recipe Time Change
- SAP Values to PI Tags
- Configuration
- PI Tag Value Correct
- Database Table View

Start | I... | f... | S... | E... | t... | E... | M... | P... | L... | L... | L... | E... | P... | P... | P... | Wednesday, January 05, 2000 10:01 AM



PSRLink Interface ProcessBooks in LAR

- **PSRLink System Management PB**
 - **PSRLink Applications**
 - **SAP Links**

PI-ProcessBook - [PSRLINK SYSTEM MANAGEMENT.PDI*]

File Edit View Insert Tools Draw Arrange Window Help

100%

SAP - PI Interface Systems Management

PSRLINK Apps	SAP Links	Alarms
Database Logon HELP	SAP Recipe Monitor HELP	PSRLINK Error ACK HELP
Error Log Review HELP	SAP Message Monitor HELP	Recipe Error ACK HELP
PSRGUI HELP	SAP Gateway Monitor HELP	Message Error ACK HELP
SAP Message Correct HELP		ACK HELP
Recipe Time Change HELP		ACK HELP
SAP Values to PI Tags HELP		
Configuration HELP		
PI Tag Value Correct HELP		
Database Table View HELP		

SAP R/3 System

Please type your user name and password.

User name: L885103

Password: xxxxxx

OK Cancel

Program Status

NUM

Start Microsoft PowerP... frmMenuViewer PI-ProcessBook ... PI-ProcessBook ... SAP R/3 System 8:31 AM

Process Message Monitor: Messages

Messages Edit Goto Utilities Environment System Help

Plant: MX00

Selected messages: 146

MessCat	Creation time	Sender	Detailed send status
<input checked="" type="checkbox"/> OSI_COMM	12/29/1999 00:13:10	S837849	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 00:13:59	S837849	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 03:24:43	S837849	Sent
<input type="checkbox"/> PI_PHST	12/29/1999 03:37:09	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PHST	12/29/1999 03:37:09	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PROD	12/29/1999 03:37:09	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PROD	12/29/1999 03:37:09	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 04:25:38	S837849	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 04:26:11	S837849	Sent
<input type="checkbox"/> PI_PHST	12/29/1999 07:35:56	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PHST	12/29/1999 07:35:56	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PROD	12/29/1999 07:35:56	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PROD	12/29/1999 07:35:56	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 07:52:15	S837849	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 07:54:51	S837849	Sent
<input type="checkbox"/> PI_PHST	12/29/1999 11:40:52	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PROD	12/29/1999 11:40:52	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PHST	12/29/1999 11:42:03	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> PI_PROD	12/29/1999 11:42:03	OSI_NTMESSADACOS	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 11:56:16	S837849	Sent
<input type="checkbox"/> OSI_COMM	12/29/1999 11:57:04	S837849	Sent
<input type="checkbox"/> PI_PHST	12/29/1999 15:45:26	OSI_NTMESSADACOS	Sent

Gateway monitor for sp2n035f / connection list

Edit Goto System Help

LU Name	TP Name	User	Status	SymDest	ConvID	Request	Log	CPI
PC792110	SAPCPIC	?	CONNECTED	PRD	57872017	06:24:50	INT	0
PC792110	SAPCPIC	?	CONNECTED	LOAD_BLC	57871149	06:25:43	INT	0
sp2n035f	sapgw00	L885439	CONNECTED	SAPSYS	62638117	07:43:58	INT	0
DPCU8584	SAPCPIC	?	CONNECTED	LOAD_BLC	62681753	08:40:05	INT	0
PC833019	SAPCPIC	?	CONNECTED	LOAD_BLC	69228844	09:33:51	INT	0
PC833019	SAPCPIC	?	CONNECTED	PRD	69231190	09:34:12	INT	0
PC859843	SAPCPIC	?	CONNECTED	LOAD_BLC	56204631	05:56:49	INT	0
PC859843	SAPCPIC	?	CONNECTED	PRD	56208640	05:57:15	INT	0
PC797382	SAPCPIC	?	CONNECTED	PRD	57558148	06:19:18	INT	0
PC797382	SAPCPIC	?	CONNECTED	LOAD_BLC	57561644	06:19:22	INT	0
PC797013	SAPCPIC	?	CONNECTED	PRD	56502892	09:33:44	INT	0
PC797013	SAPCPIC	?	CONNECTED	LOAD_BLC	56513194	08:45:56	INT	0
PC832333	SAPCPIC	?	CONNECTED	LOAD_BLC	58248386	06:30:50	INT	0
PC797393	SAPCPIC	?	CONNECTED	LOAD_BLC	58111373	06:28:38	INT	0
PC797393	SAPCPIC	?	CONNECTED	PRD	58116957	06:29:03	INT	0
PC832333	SAPCPIC	?	CONNECTED	PRD	58250450	06:31:19	INT	0
KPCU8308	SAPCPIC	?	CONNECTED	LOAD_BLC	58483207	06:34:45	INT	0
KPCU8308	SAPCPIC	?	CONNECTED	PRD	58484221	06:35:02	INT	0
PC797352	SAPCPIC	?	CONNECTED	PRD	58557923	09:37:19	INT	0
PC797352	SAPCPIC	?	CONNECTED	LOAD_BLC	58562003	06:36:02	INT	0
PC795931	SAPCPIC	?	CONNECTED	LOAD_BLC	58842047	06:40:49	INT	0
PC795931	SAPCPIC	?	CONNECTED	PRD	58847053	06:41:11	INT	0
DPCU8584	SAPCPIC	?	CONNECTED	PRD	62683269	07:45:03	INT	0
KPCS8574	SAPCPIC	?	CONNECTED	LOAD_BLC	59067025	06:44:28	INT	0

PSRLink Interface ProcessBooks in LAR

- **PSRLink System Management PB**
 - **PSRLink Applications**
 - **SAP Links**
 - **Debugging Documentation**

Microsoft Word - Debugging Document.doc

File Edit View Insert Format Tools Table Window Help

1

Diagnosing problems in PSRLINK (Eastman Chemical Company Version)

Problem	Method of Diagnosis and solution
Configuration	
Problem with customization in the procedure_table	The numbers should be adjusted to allow for the custom procedures being added
Translation method for activity should be usr_phact_activity not usr_phact_monitor	Change the name in the translation_methods table from usr_phact_monitor to usr_phact_activity
Continuous plant get error on initial process of the recipe about date conversion	No shift duration has been set up
Tag_id not found	Check the material_tag table and common_name table are configured correctly
Material Tag not found	Check the configuration for the material tag. If there are leading 0's in the material number that comes down from SAP these must match. The materials that came down in a recipe can be seen in the material list table. The configuration is in the material_tag table. You can also see the materials that came down in the recipe using PSRGUI and selecting the FT number for the AMAT instruction. You can see what materials are configured by using

Page 1 Sec 1 1/14 At 1.1" Ln 1 Col 1 REC TRK EXT OVR WPH

Start [Taskbar icons] 10:14 AM

```

PISTATUS.txt - Notepad
File Edit Search Help

/*-----
$Archive: /PI/3.2/libraries/piapi/x86/pistatus.h $
%W% %G%

-----

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OSI Software, Inc.
777 Davis Street, Suite 250, San Leandro CA 94577

-----

Description:

This file enumerates the pistatus states. It may be included in C or C++
programs.

Note that the C functions use the typedef for the status code enumerations
directly. This exposes the structure of the status object to C programs and
therefore makes it difficult to change that structure in a backward compatible
    
```

PSRLink Interface ProcessBooks in LAR

- **PSRLink System Management PB**
 - **PSRLink Applications**
 - **SAP Links**
 - **Debugging Documentation**
 - **Problem Alarms**

PI-ProcessBook - [PSRLINK SYSTEM MANAGEMENT.PDI*]

File Edit View Insert Tools Draw Arrange Window Help

100%

SAP - PI Interface Systems Management

PSRLINK Apps	SAP Links	Alarms
Database Logon HELP	SAP Recipe Monitor HELP	PSRLINK Error ACK HELP
Error Log Review HELP	SAP Message Monitor HELP	Recipe Error ACK HELP
PSRGUI HELP	SAP Gateway Monitor HELP	Message Error ACK HELP
SAP Message Correct HELP		Recipe Hung in SAP ACK HELP
Recipe Time Change HELP		Error in SAP Post ACK HELP
SAP Values to PI Tags HELP		
Configuration HELP		
PI Tag Value Correct HELP		
Database Table View HELP		

Documentation	PSRLINK Program Status
Debugging Document HELP	PSRLINK Exec Status HELP
PI Error Codes HELP	

NUM

Start Inbo... frmM... SAP ... Expl... tags ... RE: t... Expl... Micr... PI-...

9:38 AM

PSRLink Interface ProcessBooks in LAR

- **PSRLink System Management PB**
 - **PSRLink Applications**
 - **SAP Links**
 - **Debugging Documentation**
 - **Problem Alarms**
 - **PSRLink Program Status**

PI-ProcessBook - [PSRLINK PROGRAM STATUS.PDI]

File Edit View Insert Tools Draw Arrange Window Help

100%

```
graph TD; SAP1[SAP Jan 5 2000 10:24AM] --> CO57[CO57 Messqes Jan 5 2000 10:24AM]; SAP1 --> RP[Read and Process Jan 5 2000 10:24AM]; PMU[PMU Jan 5 2000 10:24AM] --> SAP1; SAP2[SAP Msg Reply Jan 5 2000 10:25AM] --> PMU; RP --> AR[Action Results Jan 5 2000 10:24AM]; RP --> AS[Action Send Jan 5 2000 10:22AM]; AR --> RT[Reply Translator Jan 5 2000 10:25AM]; AS --> PI[PI]; RT --> SAP2; PI --> AR; PI --> AS;
```

CO57 Messqes
Jan 5 2000 10:24AM

Action Send
Jan 5 2000 10:22AM

SAP
Jan 5 2000 10:24AM

Read and Process
Jan 5 2000 10:24AM

PMU
Jan 5 2000 10:24AM

SAP Msg Reply
Jan 5 2000 10:25AM

Action Results
Jan 5 2000 10:24AM

Reply Translator
Jan 5 2000 10:25AM

PI

get PI value	Jan 5 2000 10:22AM
multiple value retrieve	Jan 5 2000 10:22AM
recipe status control	Jan 5 2000 10:24AM
phase status control	Jan 5 2000 10:24AM

Ready

NUM

10:26 AM

PSRLink Overview

- **Pi Gateway to SAP**
- **Eastman View**
- **Interface Options**
- **User View**
- **What we have learned**



MESA

Manufacturing Enterprise Systems Alignment

Questions & Discussion...

Sharing ideas for a shared future.....