

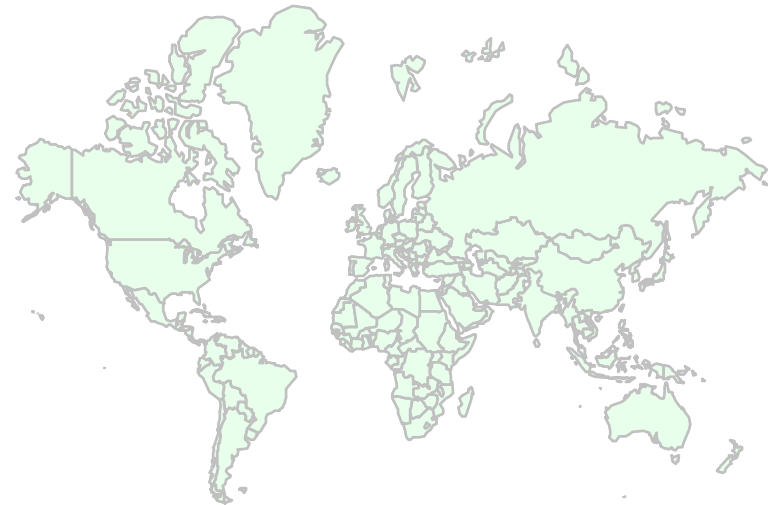
About PAS

Global provider of **People And Asset Solutions™**

Empowering People by providing relevant, timely and accurate process and business information to plant personnel at all levels

Driving Assets by maximizing asset availability, optimizing production and mitigating abnormal situations

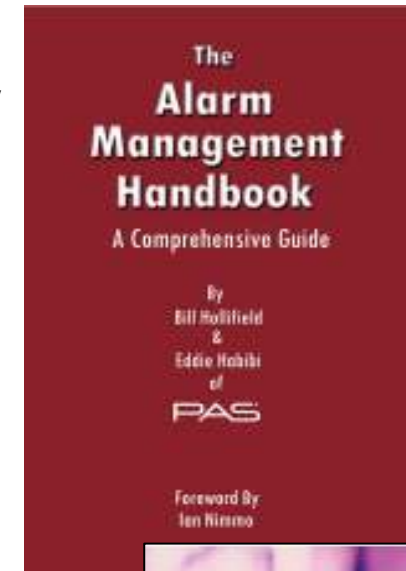
- Founded in 1993
- *Global Alarm Management Authority*
- PAS Alarm Management Growth
 - 2006 -> 86%
 - 2007 -> 45%
 - 2008 Projected -> 60%
- 55% Americas, 45% International



The Alarm Management Handbook

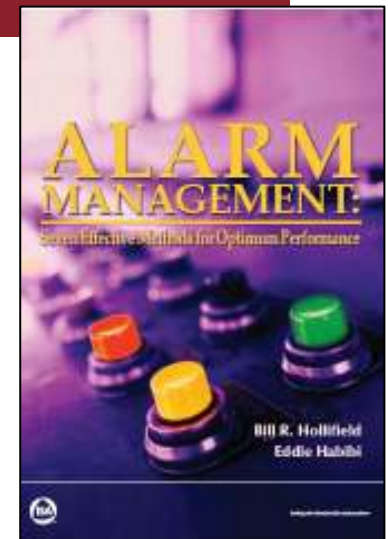
Why we wrote the book

- Alarm management recognized as a major issue globally
- To compile in one volume a comprehensive reference
- To share our experience and knowledge with industry
- To provide a reference to new practitioners
- To help improve safety and reliability of industrial plants



What went into the book

- Over 12 years of experience & over 100 person-years of effort
- Comprehensive compilation of best practices
- Lessons learned from hundreds of projects
- Practical field proven strategies and techniques
- Fun to read
- A significant update to EEMUA 191



Alarm Management: The 7 Steps

Always Required

Step 1: Develop, adopt and maintain an Alarm Philosophy

Step 2: Collect data and Benchmark your systems

Step 3: Perform “Bad Actor” alarm resolution

Can be simultaneous

Based Upon Performance

Step 4: Perform alarm Documentation and Rationalization (D&R)

Step 5: Implement alarm Audit and Enforcement technology (A&E)

Step 6: Implement Real Time Alarm Management

Step 7: Control and maintain your improved system

PlantState Suite's DCS Interface Types

■ Alarms & Events

- Process alarms, system alarms, operator changes
- Event analysis, operator loading analysis

■ DCS (Tag) Configuration

- Tags, descriptors, alarms, alarm types, priorities
- Alarm system configuration analysis
- Fill in data missing from event journals

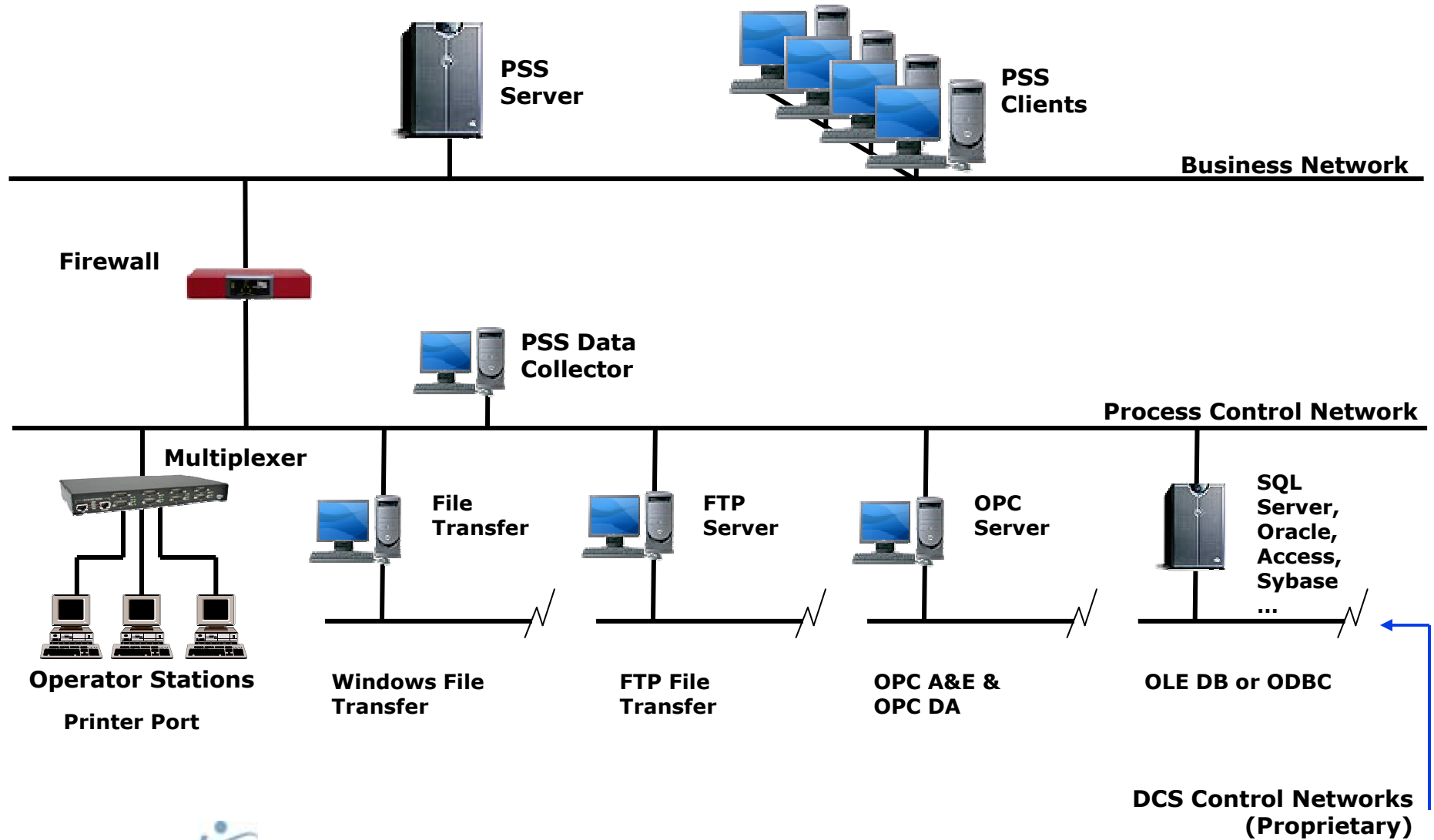
■ Real-Time Data

- Alarm system audits
- Enforcement of deviations
- State-based alarm management

■ Interface Protocols

- Text File Import
- ODBC or OLE DB connection
- Printer ports via multiplexer
- OPC DA or A&E

PlantState Suite Data Collection Options - Overview



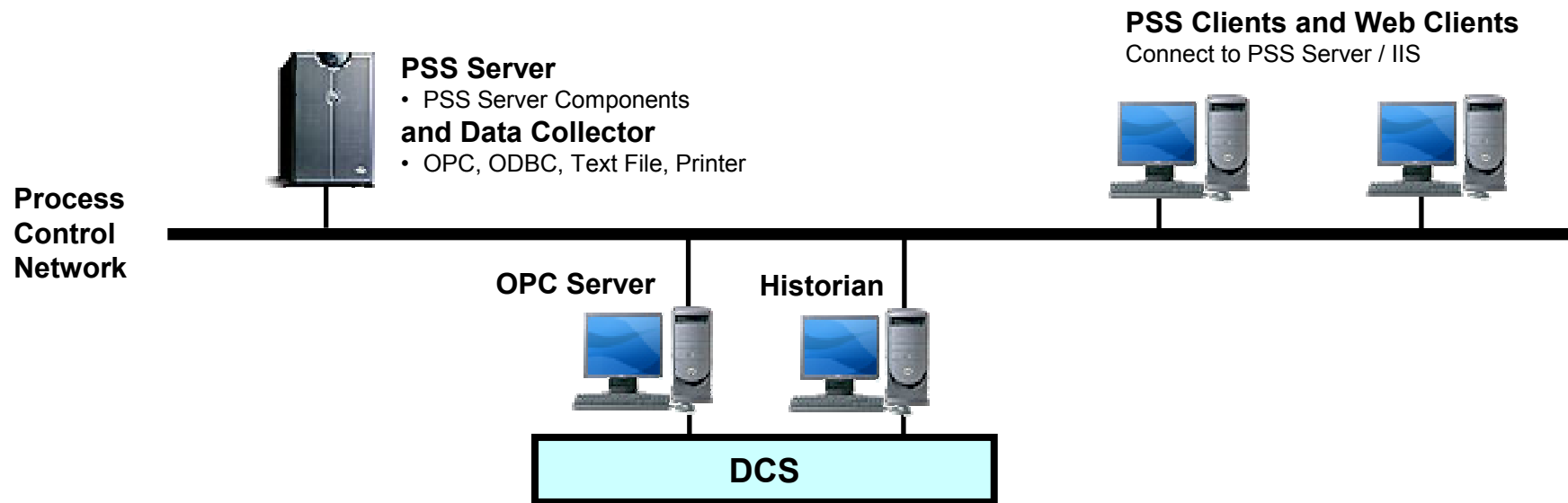
Currently Installed Import Types

Brand	DCS / Model	ODBC	OLE DB	File	OPC	Printer	Import Mechanism
ABB	MOD300/ Advant	X					ODBC to Oracle
ABB	Maestro				X		OPC A&E
ABB	Infi 90 Unix Printer File			X			Unix file transfer protocol
ABB	Infi 90 Process Portal B		X		X		OLEDB to SQL Server and OPC DA / OPC A&E
ABB	Enterprise Historian	X					OLEDB to Oracle
ABB	800xA				X		OPC A&E
Comdale	Comdale			X			QNX file transfer protocol
Emerson	Delta V	X	X	X			FHX File Import / Access Database / SQL Server
Emerson	Fisher Provox	X				X	ODBC to Sybase / Serial Printer/ Access Database
Emerson	Ovation XP / NT			X	X		EXP Point File / Alarm Reports file / OPC A&E
Emerson	Ovation Unix			X			Unix file transfer protocol
Emerson	RS3			X		X	Text File Import / Printer Port
Honeywell	TDC3000	X		X		X	D3K / EB/EL Files/ ODBC PHD/Serial Printer
Honeywell	Experion		X		X		ERDB SQL/ Quick Builder/ OPC A&E
Honeywell	Plantscape		X				ERDB SQL / EMSEVENTS SQL
GE	Bently-Nevada				X		OPC A&E
Invensys	FoxIA with AIM*			X			Unix FTP ICCPRT/ ODBC to AIM*
Invensys	FoxIA with Legacy Hist.			X			Unix file transfer
Invensys	FoxIA			X			Serial Printer Port
Invensys	FoxIA		X				Batch History SQL Server
Invensys	Wonderware		X	X			CSV file import from dump / ODBC to SQL Server
Metso	Max DNA	X					Access Database
Siemens	Moore APACS APS			X			Scripts + FTP File Import
Siemens	PCS7			X	X		CSV / OPC A&E via WinCC
Yokogawa	CS, CS3000, XL				X		OPC DA Browse
Generic	Generic			X			
Generic	Generic			X			CFF File
Generic	Generic			X			CSV File
Generic	Generic					X	Serial / Parallel Printer

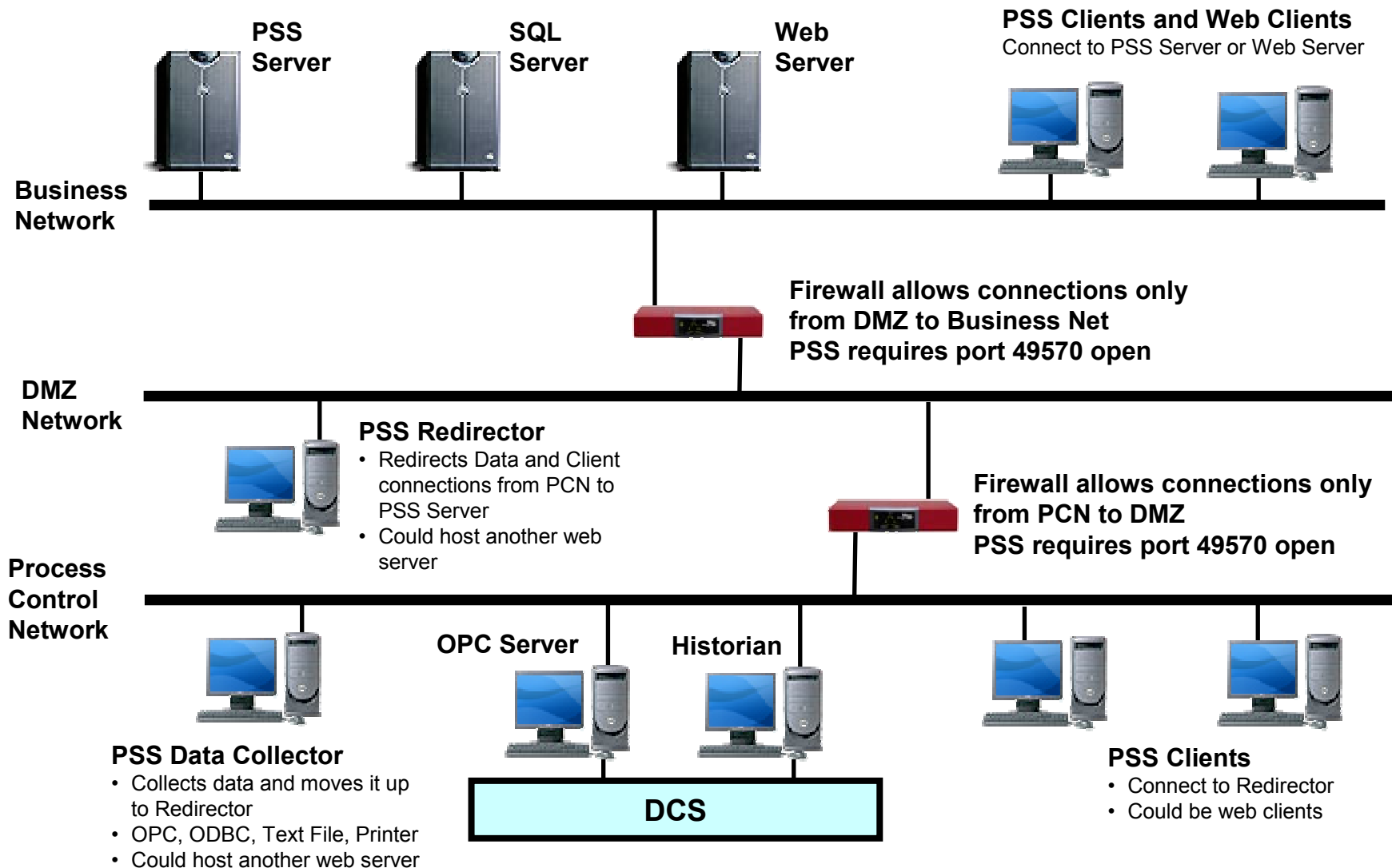
New system support is normally created within 3 - 8 days



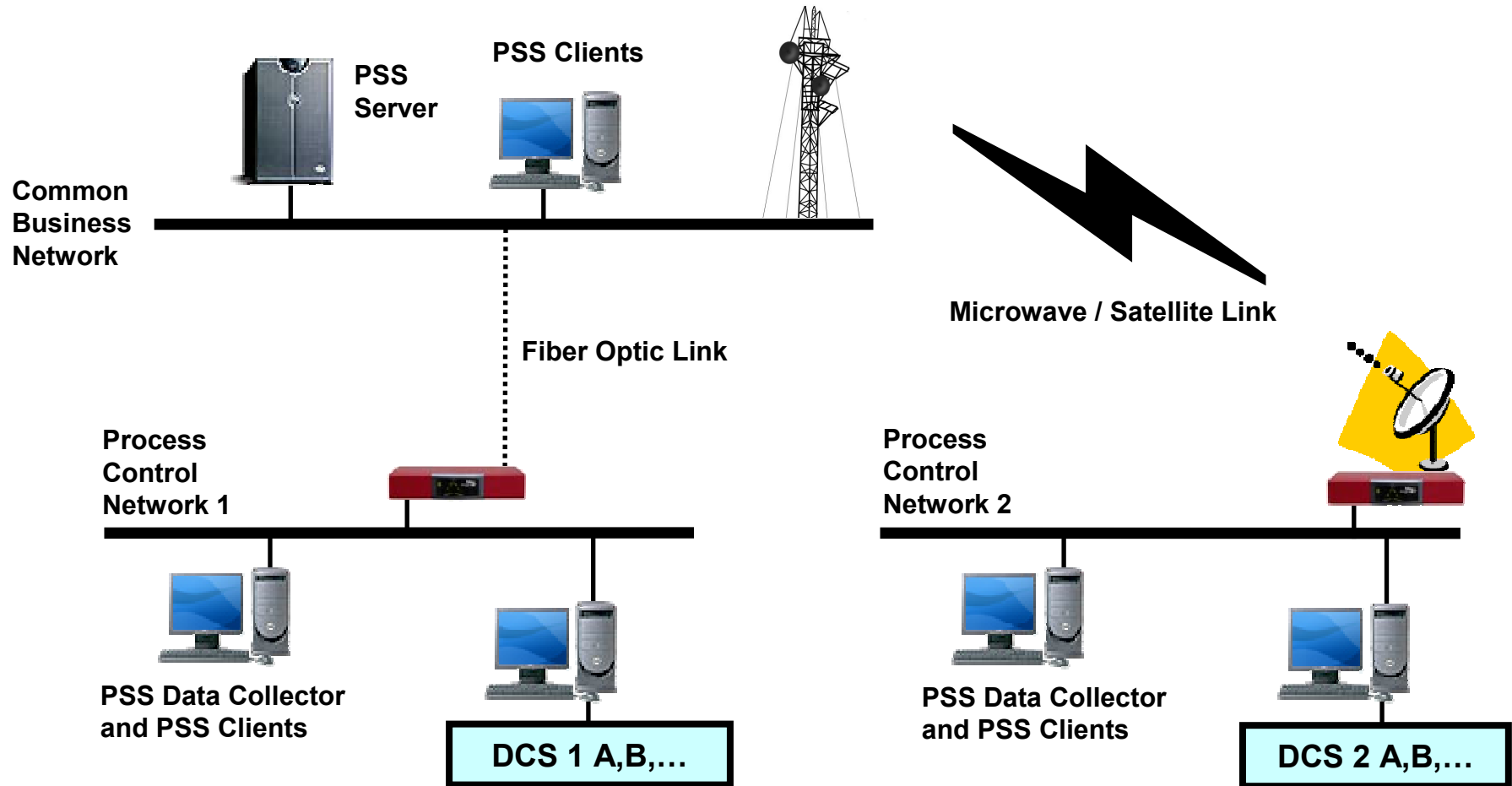
Simple PSS Deployment



Elaborate PSS Deployment



PSS Deployment with Several Remote DCS



Partnering with PAS

Experience

- Wrote the book on Alarm Management
- Alarm Management is our core business
- 300+ Alarm Management Improvement projects completed
- 4 Successful ExxonMobil Upstream projects



Complete Integrated Portfolio of Solutions

- Complete portfolio of Alarm Management and Operator Effective solutions
- Quickly and easily Interface with new and legacy automation systems
- Scalable to meet current and future needs



Support

- Available for you around the clock and around the world
- Extensive record of supporting customers globally

