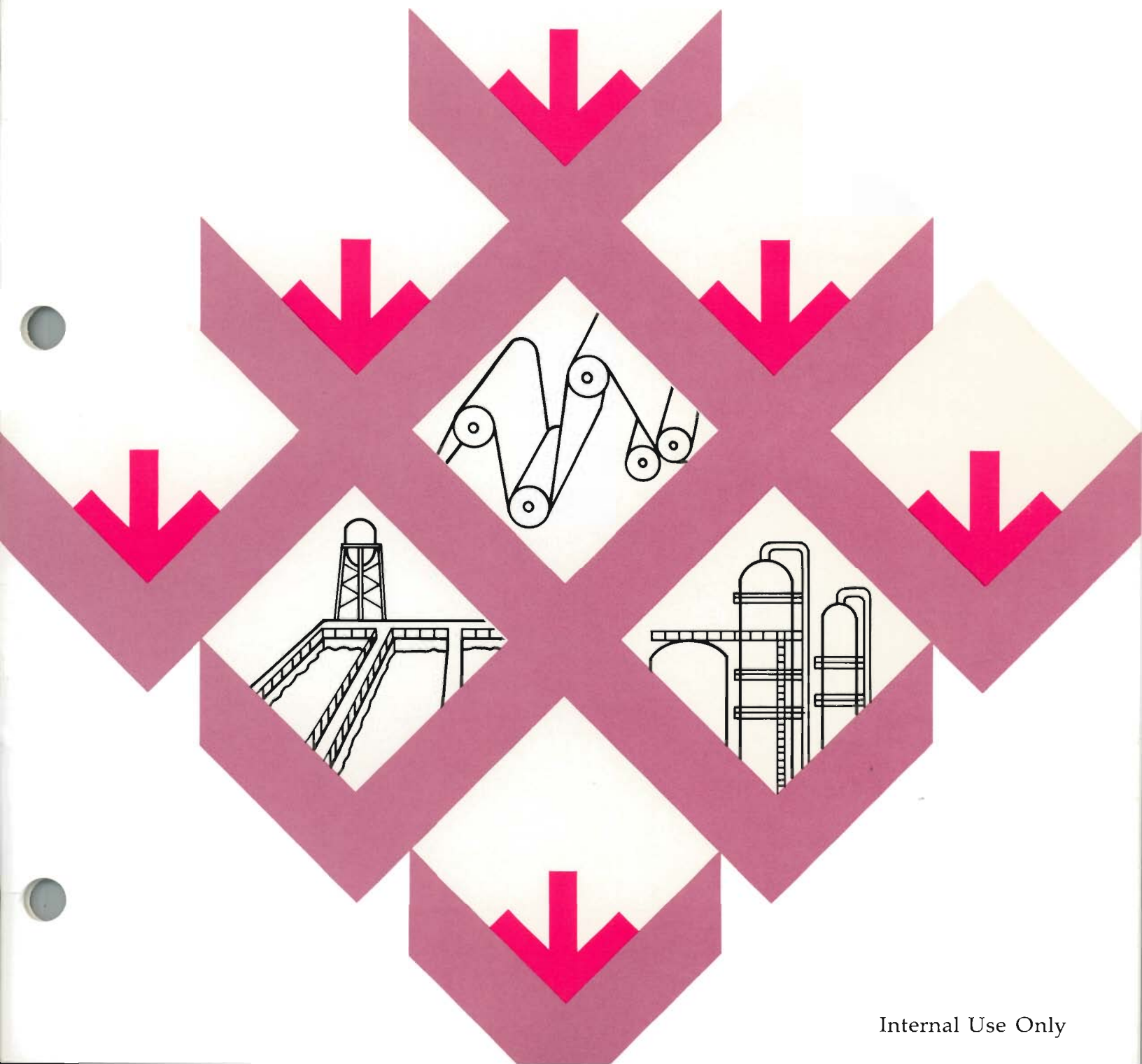


# Process Monitoring and Control/1000



PMC/1000

Sales Training Manual  
Supplement



Internal Use Only

# Table of Contents

- Objective ..... 1
- Highlights ..... 3
- Price/Performance ..... 5
- Ordering Information ..... 7
- Typical A900 Starter System ..... 9
- Sales Aids ..... 11
- Questions and Answers ..... 13
- Qualification and Target Markets ..... 15
- Competition ..... 17
- Sales Cycle ..... 20





# Objective

The objective of this Sales Training Manual Supplement is to help you prospect for and close orders for A-Series HP PMC/1000 Application Software. The product number is 92121A.

The original 92120A PMC Sales Training Manual (STM-02) contains a wealth of information on the PMC/1000 application software package, target applications, the competition, technical basics etc. It is a good idea to (re) read the STM before you start enjoying this supplement.



# Highlights

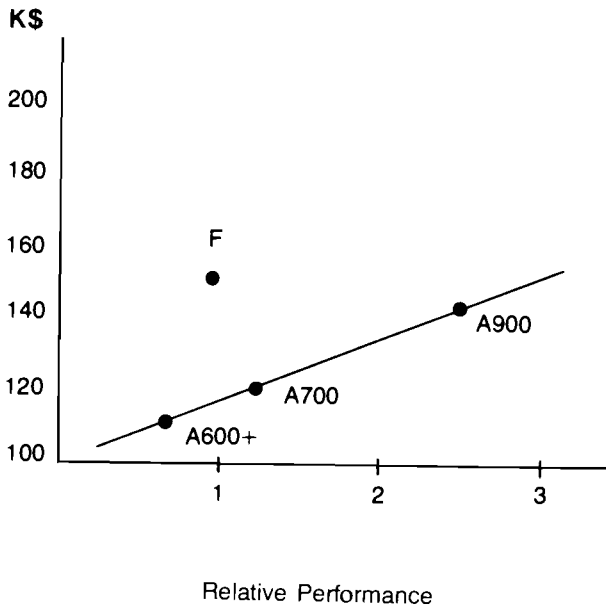
- Now HP PMC/1000 Application Software will run on A600+, A700 and A900 based computer systems.
- The A700 and A900 product options will be on the February 1, 1984 CPL. The A600+ option will be on the March 1, 1984 CPL.
- For high Performance applications choose the A900. Performance is 2-3 times F-Series performance.
- Choose the A600+ for applications where minimum cost is essential and performance is not a main issue.
- When Performance and Price are both important, then the A700 is a real winner. Performance is 1-1.3 times F-Series performance.
- Main target applications are:
  - Pilot Plants
  - Small production processes (<200-300 I/O points)
- Coincident with the introduction of 92121A A-Series PMC, MPD will mature the 92120A F-Series PMC. This allows the field and the factory to focus on one product.



# Price/Performance

Price/Performance of A-Series based PMC systems has dramatically improved over an F-Series based PMC system.

For typical systems (Hardware & Software) we can draw the following Price-Performance diagram, based on preliminary Performance measurements.



Note: A600+ performance is estimated.

PMC Performance is defined by the Base Scan Interval (BSI). This value can be estimated for a particular application with the PMC Performance Brief. An F-Series PMC Performance Brief is currently available from the application specialists in SMC. The A-Series PMC Performance Brief will be available from SMC Q2, 1984.

Until the A-Series Performance Brief is available, use the following procedure for estimating the Performance:

1. Calculate the BSI using the F-Series PMC Performance Brief.
2. Multiply this BSI (F) with the below factor to arrive at the estimated A-Series PMC Performance. Accuracy is  $\pm 25\%$ .

$$\text{BSI (A900)} = \frac{1}{2.5} \times \text{BSI (F)}$$

$$\text{BSI (A700)} = \frac{1}{1.2} \times \text{BSI (F)}$$

$$\text{BSI (A600+)} = \frac{1}{0.7} \times \text{BSI (F)}$$

### Example:

$$\text{BSI (F)} = 4.0 \text{ seconds}$$

$$\text{BSI (A900)} = \frac{1}{2.5} \times 4.0 = 1.6 \text{ seconds}$$







# Ordering Information

## Software Volume Pricing Program

PMC/1000 is available under the Software Volume Pricing Program. This program allows the stair-step discounting of "M" products. The discount schedule is as follows:

UNIT	TYPE	% OF "A" COPY PRICE
1	A	100%
2-5	M	70%
6-15	M	50%
16+	M	25%

Each "A" or "M" product purchased over a rolling three year window (current contract year plus two previous years) counts as a unit towards the stair-step discount for a particular use option.

Any F-Series 92120A/M purchase counts as a 92121A/M opt 890 in calculating your customer's earned Software Volume Pricing unit credit.

Additional Software Volume Pricing unit credit is given to products that are subordinate to higher use options. This is summarized in the following table.

NEW PURCHASE	ALL PRIOR PURCHASES RECEIVE SVP UNIT CREDIT IF ONE IS:
Opt 890	Opt 890 A/M product or 892 A product
Opt 700	Opt 890 or 700 A/M product or 892 A product
Opt 600	Opt 890, 700, or 600 A/M product or 892 A product

## Pricing/Ordering Information

Product No.	Description	List Price
92121A	HP Process Monitoring & Control/1000	
-890	For use on A900 .....	\$35,000
-892	A900 use, credit for prior opt 700/600 .....	30,500
-700	For use on A700 .....	25,000
-600	For use on A600 .....	15,000
-022	Disc cartridge tape media .....	0
-051	1600 BPI mag tape media .....	0

92121M Right-to-copy 92121A without sub-license (EU)

	UNIT CREDIT:	2-5	6-15	16+
-890	A900 use .....	\$24,500	\$17,500	\$ 8,750
-700	A700 use .....	17,500	12,500	6,250
-600	A600 use .....	10,500	7,500	3,750

92121R	Right-to-copy 92121A with sub-license (OEM)	\$24,500
-890	For use on A900 .....	17,500
-700	For use on A700 .....	10,500
-600	For use on A600 .....	
92121Z	PMC/1000 Manual set .....	\$50

### Support Service Pricing

92121T	CSS .....	\$350/mo
-022	Disc cartridge tape media .....	0
-051	1600 BPI magnetic tape media .....	0
92121V	CSS Extension .....	55/mo
92121S	SSS .....	80/mo
92121W	SSS Extension .....	20/mo
92121Q	MUS .....	8/mo

# Typical A900 Starter System

The following system is for a fully functional A900 PMC/1000 system. Prices are for November 1, 1983.

Product No.	Description	Approx. Price 11/83
2489A	Micro 29 (A900) system .....	\$ 24,600
-102	Value Pack (768 kb, FTN 77, DGL) .....	14,500
7911P	28 Mb Disc .....	14,800
2622A	System Console .....	2,210
2627A	Color Terminal .....	5,975
2631B	Printer .....	3,970
-214	A-Series subsystem .....	350
9872T	8-pen plotter .....	7,980
12009A	HP-IB for plotter .....	1,100
12040B	MUX card and panel .....	2,130
2250	Measurement and Control Processor* .....	27,000
12009A	HP-IB for 2250 .....	1,100
92121A	PMC/1000 software .....	35,000
<b>TOTAL</b>		<b>\$140,715</b>

This price is \$12,000 less than that of a comparable F-Series system!

\*Configured to handle 20 loops and 100 I/O points.



This page summarizes the sales aids available to help your selling effort.

## Literature

- 92121A DATA SHEET, Lit. no: 5954-0306
- 6 page COLOR BROCHURE, Lit. no: 5953-2848
- SOLUTION BRIEF: Wastewater Treatment Automation in PC Board Manufacturing, Lit. no: 22999-90615 (from DSD)
- SALES TRAINING MANUAL, Lit. no: STM-02
- SALES TRAINING MANUAL SUPPLEMENT. Adds essential information to the original STM to understand and quote PMC/1000 software on the A-Series computers, Lit. no: STM-02S1.

## Presentation Materials

- PMC Slide Pitch. Forty two 35mm slides. Can be ordered via the "Heart System" as 22999-90606 (from DSD)
- PMC Software Demo. This Demo concerns the Simulation and Control of a STEAM BOILER. The demo and the accompanying extensive description can be ordered from MPD offline support Order it now, you will have fun with this dynamic colorful, sexy demo that is sure to catch your customer's eyes. Watch out for explosions!





**HP Computer Museum**  
**[www.hpmuseum.net](http://www.hpmuseum.net)**

**For research and education purposes only.**



# Questions and Answers

## Features/Futures

### ■ Which new features have been added to PMC?

The feature set of A-Series PMC is identical to F-Series PMC. Code enhancements relate only to system performance.

### ■ How does PMC relate to Process Graphics?

Process Graphics (code name CRAYOLA) is a staffed project in R&D. It is going to provide HP with a new exciting colorful Man-Machine Interface for Industrial Applications. At MR of Crayola it is expected to be available as a stand alone product and as a new module for PMC.

### ■ What are some other Future's for PMC?

Read about future's, sales, price changes, typical applications and more in our bi-monthly "Factory and Plant Automation Newsbrief". It is published by Systems Marketing Center (SMC) in Cupertino. You can get on the mailing list by calling one of the SMC Application Specialists

### ■ What is currently available from the contributed library?

A copy of the Library is available from MPD offline support on 800 bpi tape.

Current contents:

- Example process graphics (Boiler Demo)
- Example report generation (Boiler Report)
- User program; Displays a menu of function keys and executes the appropriate program when a key is hit.
- First order process; allows changing of process and tuning parameters, displays step responses.
- Redefinition of 2627A colors on the alpha display.
- Cloning configurator; allows cloning of typical blocks as many times as desired.
- Subroutine that will limit the rate of change of a variable.
- Time proportioning subroutine; allows cycling of an on-off valve at a specified frequency to simulate a control valve.
- Report generation subroutines; e.g. computing minimums, maximums, totals, averages, integrations.
- Process graphics generation subroutines; e.g. for pumps, valves, pipes.

## Support

### ■ Will some type of PMC-Assist become available?

AMD is currently working on an PMC-Assist program. Look for the introduction in Q3/Q4 1984.

### ■ What happened to the "J" pre-generated product?

The "J" product was created because an HP 1000 F-Series took a long time to generate. This is not the case for an A-Series computer. Until custom generation will become a part of PMC-Assist, the account SE/CSR will do system generation. One day of SE/CSR time should be quoted for this to the customer.

### ■ If I have more questions, whom should I contact?

The Application Specialists of Systems Marketing Center in Cupertino or in your local Application Center. Good \$elling.

## Upgrading

### ■ Does the customer get credit when he/she upgrades from an F-Series to an A-Series?

YES. For the hardware upgrade program see the STM for the "HP 1000 Upgrade Program and Transition Aids" (STM 5-02, May 83). Software upgrade is free over a time period of 1 year after the introduction of the A-series PMC Software.

### ■ Will the Application transport from the F- to the A-Series without problems?

All standard PMC functions will transport without any modifications. User programs written in FORTRAN or Pascal should also directly transport except where EXEC calls are used.

### ■ Will PMC Applications transport from an A600+ to an A900 and vice versa?

YES. Transporting across the A-Series in painless!

## Interfacing to the Process and Other Products

- **Will frontends other than the 2250 be supported by A-Series PMC?**

MPD is looking into the possibilities of supporting Programmable Logic Controllers via PCIF. Also the Remote Terminal Units of PANACOM will be investigated. For more information regarding this I/O handling read our "Factory and Plant Automation Newsbriefs."

- **Will the PMC software run on the Control/1000?**

Not at this moment. It will be investigated however, if in the course of 1984 MPD can develop the driver for this.

- **Can I run PMC and PCIF software on the same computer?**

YES. Linking the two software packages currently requires the development of a User Program.

- **Can I run PMC and QDM on the same computer?**

NO. PMC and QDM are both full blown Application Packages that each require their own processor. The two products can be linked however via a DS/1000 connection between the two processors. User written programs should further be developed that make use of the "HOOKS" provided within both PMC and QDM.

## Miscellaneous

- **Will the factory do Specials for customers whom have Big Bucks to spend?**

YES, provided:

1. Software developments fit within the PMC strategy and the overall MPD strategy.
2. A good Functional Specification with hardware and software requirements is available.
3. The project can be managed from the factory.
4. \$, \$, \$.

- **How can I help my customer justify a PMC system?**

Point out to him that a PMC system can potentially generate any of the following benefits.

- INCREASED YIELD
- HIGHER QUALITY
- FASTER THROUGHPUT, REDUCING OVERHEAD
- LOWER ENERGY CONSUMPTION/UNIT OF PRODUCT
- LOWER LABOR COST
- LOWER POLLUTION EXPENSE
- FASTER START UP/SHUT DOWN

# Qualification & Target Markets

## Qualification

An analysis of the 19 orders booked in FY'83 and of the funnel for PMC orders, results in the following qualification checklist:

1. The process is mainly continuous.
  - Monitoring and/or Control of Pressure, Temperature, Level, Flow and Quality.
  - Monitoring and/or On-off Control of Equipment such as Valves and motors. Equipment interlocking and emergency shutdown are also handled very well by PMC.
  - Sequence Control, i.e. sequential time related equipment operation is currently not handled very well by PMC.
2. The process is small. Less than 200-300 Inputs and Outputs in total.
  - Performance (value of the Base Scan Interval) becomes unacceptable for most applications when the I/O exceeds 200-300 channels.
  - For some monitoring only applications where a BSI of 100 seconds or more is acceptable, the I/O may go up to values of 800-1000 channels or more.
3. The application needs a mix of Level 1 and Level 2 M&C functions.
  - Typical Level 1 functions are Process Interfacing, Alarming, Control, Process Graphics, Sequence Control and Manual Back-up capabilities.
  - Typical Level 2 functions are Trending, Historical Data Storage/Retrieval, Supervisory Loop Control, Computer Networking, Process Graphics, Report Generation, Optimization, Simulation and Batch/Recipe Management.
  - Note however that the standard PMC software currently does not include: Process Graphics, Sequence Control, Report Generation, Simulation, Optimization or Batch/Recipe Management. For these functions user programs have to be developed.

4. The customer has Process Control experience and some familiarity with computer systems.
  - Key persons to talk to are managers of process engineering, process control and instrument engineering departments. Also the plant and production manager who will be working with the PMC system is key.
  - If no Process Control experience is present then suggest the involvement of consultants and/or engineering system-houses. Get a copy of the "HP Plus Systems House Catalog for HP 1000 Computer System" from BDG in Cupertino.

## Target Markets

Up to date sales together with the potential sales in the funnel apply to the following specific target markets:

- Pilot Plants
- Small Production Plants
- Supervision of Level 1 control systems
- Printed Circuit boards manufacturing
- Facilities monitoring
- Lab automation

Other target markets where PMC could also very well apply are:

- Equipment test, e.g. Engine testing
- SCADA (Supervisory Control and Data Acquisition), e.g. pipeline or gaswell M&C.
- (Waste) Water Treatment
- Training, e.g. Operators, Engineers
- Bio-Engineering field, e.g. fermentation control

In all of these target markets the following **FIVE KEY COMPETITIVE PMC STRENGTHS** apply:

- **FLEXIBILITY**
- **CUSTOMIZABILITY**
- **QUICK IMPLEMENTATION**
- **ONE VENDOR SOLUTION**
- **LEADING PRICE/PERFORMANCE**

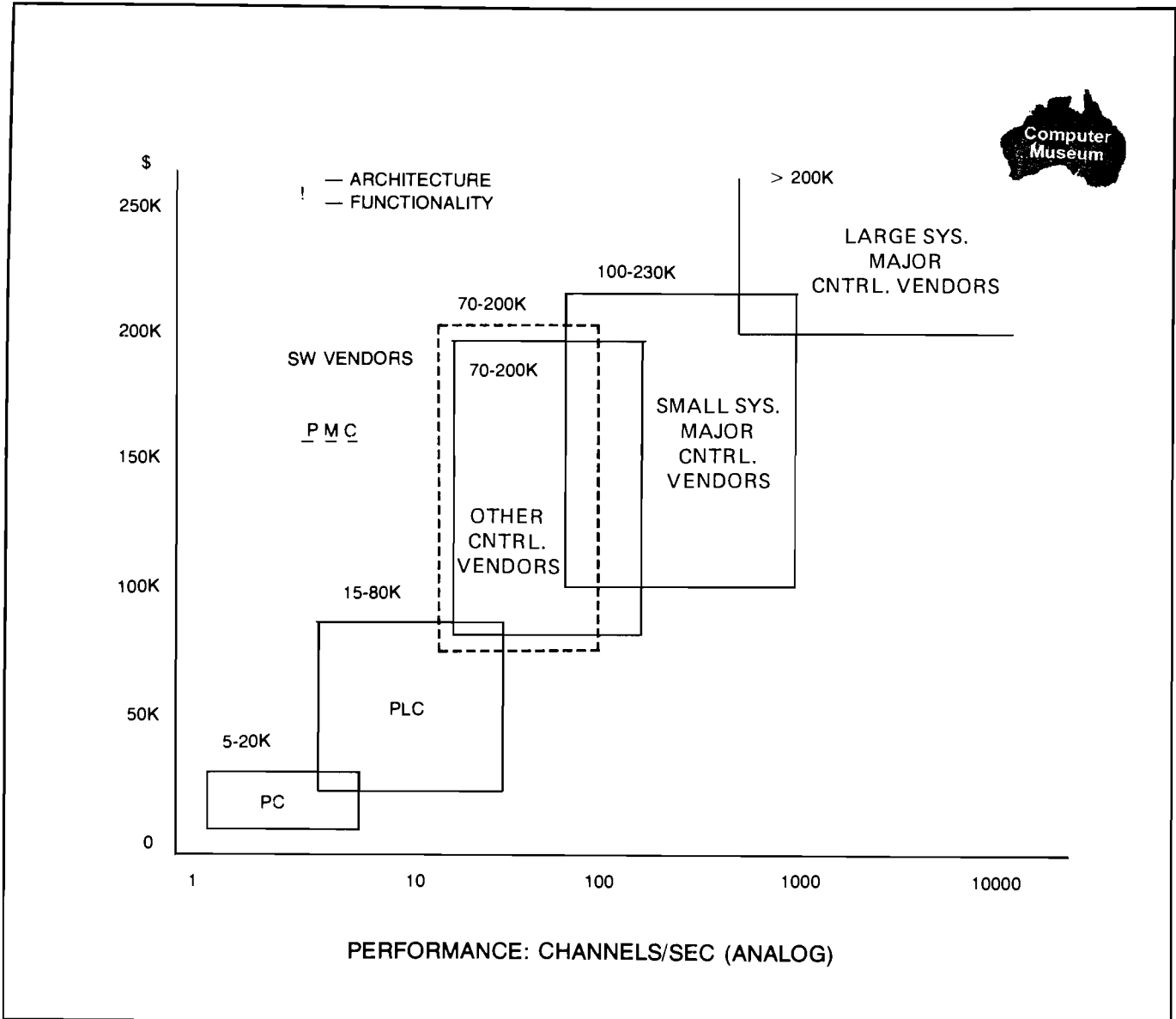


# Competition

For a detailed overview of PMC/1000 versus the competition look for the "PMC STM SUPPLEMENT ON THE COMPETITION" in Q3, 1984.

The STM already gives very useful data on the competition. In addition to this the following information will be of value to you.

The PRICE/PERFORMANCE figure below, positions PMC versus the major categories into which the competition can be subdivided. Remember however, that Price/Performance is not the only issue. The system ARCHITECTURE and its FUNCTIONALITY are equally important. See the previous chapter for where PMC excels.



## FACTS ON THE DIFFERENT COMPETITIVE CATEGORIES

### PC — Personal Computer Systems

- Mostly Data Acquisition only, however control functions are being added.
- Price range for a single system \$5-20K. A number of these systems in parallel however, will compete with PMC/1000.

#### MAJOR PLAYERS

PC's: IBM, APPLE

I/O: DATA TRANSLATION, KINETIC SYSTEMS (CAMAC), CYBORG (ISAAC), TAURUS ANALOG DEVICES, DAS

SW: ONSPEC, SAE (DAIs), CYBORG (LABSOFT), KINETIC SYSTEMS (PC/DBS)

#### WHAT TO SELL WITH PMC

- Full DA&C capabilities
- Much higher I/O capabilities
- Customizability
- HP Support
- MPN

### PLC — Programmable Logic Controller Systems

- Historically used for replacement of relay systems and for digital sequential type of applications. Programming via Relay Ladder Logic
- Most PLC manufacturers also offer analog capabilities today (PID loops)
- Data highways are becoming common place, enabling distributed architectures for PLC systems
- Price range \$15-80K

#### MAJOR PLAYERS

ALLEN BRADLEY, GOULD MODICON, TEXAS INSTRUMENTS, EAGLE SIGNAL (EPTAK)

#### WHAT TO SELL WITH PMC

- Full DA&C capabilities
- Flexibility
- Customizability
- Computer Networking
- HP Support
- MPN

#### SW Vendors

- Similar packages as PMC/1000. All however have Process Graphics and Batch/Sequential Control capabilities
- All packages run on DEC equipment. J/PICS also runs on HP 1000's
- Price range \$30-60K

#### MAJOR PLAYERS

PMCS from DEC, J/PICS from SSS, SETCON from SETPOINT, FLIC from QUADREX, CRISP from ANACONDA.

The following table compares PMC to these SW Vendors.

#### WHAT TO SELL WITH PMC

- Price/Performance
- HP is only computer vendor with "One Vendor Solution"
- HP is outselling on a yearly basis any of the SW vendors.
- HP Support
- MPN

SW PACKAGE	PRICE	INSTALLED	SALES NO./YR.	REL. PERFORMANCE (PMC ON F-SERIES = 1)
PMCS(AIM)	43K	6	3	—
J/PICS	56K	30	10	—
SETCON	50K	40	8	±5
FLIC	30-60K	80	8	±5
CRISP	140K	130	10	—
PMC	15-35K	22	40!!	0.5-2.5

\*Typical HW + I/O for all systems \$120K

### Minor Control Vendors

- Address "Small Processes" market, just like PMC
- Price range 70-200K

#### MAJOR PLAYERS

CANBERRA (IMACS 90), MOORE (1002), MACSYM (350)

#### WHAT TO SELL WITH PMC

- Flexibility
- Customizability
- Computer Networking
- HP Support
- MPN

### Major Control Vendors

- All have
  - Complete distributed control system
  - Continuous + Batch SW
  - PLC + PC interfaces
  - Fill the blanks
  - Process Graphics
  - Data highways
  - Redundancy
- Price range
  - For single I/O unit + operator console \$100-230K
  - For full distributed system >\$200K

#### MAJOR PLAYERS

HONEYWELL, FOXBORO, FISCHER, LEEDS & NORTHRUP, TAYLOR, FISCHER & PORTER, EMC, CONTROL BAILEY, WESTINGHOUSE

#### WHAT TO SELL WITH PMC

- Flexibility
- Customizability
- Leading price/performance for small applications
- Computer Networking
- HP Support
- MPN

# Sales Cycle

This list was forwarded by a Neely SR who has found it useful for his purposes. It works for him. We hope it helps you formalize your own PMC sales cycles.

Milestones	Responsibility
FIND PROSPECT	TSR/ASR
<ul style="list-style-type: none"> <li>■ Technical shows</li> <li>■ Cold calls to customer</li> <li>■ Mail literature</li> <li>■ Phone call from customer</li> </ul>	
INITIAL SALES CALL	TSR/ASR
<ul style="list-style-type: none"> <li>■ Qualification — \$, need, desire</li> <li>■ MPN pitch</li> </ul>	
SECOND SALES CALL	CSR TSR/ASR
<ul style="list-style-type: none"> <li>■ Application qualification</li> <li>■ Initial product presentation</li> </ul>	
HP INTERNAL MEETING	
<ul style="list-style-type: none"> <li>■ Discuss sales prospect</li> <li>■ Determine sales approach</li> </ul>	
THIRD SALES CALL*	CSR TSR/ASR
<ul style="list-style-type: none"> <li>■ Find out if customer understands product</li> <li>■ Product presentation</li> </ul>	
FOURTH SALES CALL*	CSR
<ul style="list-style-type: none"> <li>■ Product demo (general)</li> <li>■ Review</li> </ul>	
HP INTERNAL MEETING	TSR/ASR CSR
<ul style="list-style-type: none"> <li>■ Determine balance of sales cycle</li> <li>■ Customize plan</li> <li>■ Assign responsibilities</li> </ul>	
FIFTH SALES CALL	TSR/ASR CSR TSR/ASR TSR/ASR TSR/ASR
<ul style="list-style-type: none"> <li>■ On-site fit analysis</li> <li>■ Understand business</li> <li>■ Determine competition</li> <li>■ Close Deal</li> </ul>	

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\* Can be combined.







