

Cray

**Customer Satisfaction Survey
Western Region
Report of Findings**



CRAY

CUSTOMER SATISFACTION SURVEY

WESTERN REGION

REPORT OF FINDINGS

JUNE 9, 1986

by
Jack Keen, Project Manager

INPUT
1943 Landings Drive
Mountain View, CA 94303
(415) 960-3990

INPUT



CONTENTS

- **Objectives and Methodology**
- **Analysis of Findings**
 - **Overall Attitudes, Decision Criteria**
 - **Hardware Reliability/Support**
 - **Software Reliability/Support**
 - **CRI Marketing and Hardware Management**
- **Recommendations/Summary**
- **Sample Questionnaire**

INPUT



Executive Summary

CRI OBJECTIVE

- **Maintain CRI as the Standard of Value**
- **Further Strengthen CRI by:**
Using Customer Satisfaction as a
Primary Competitive Edge
- **Method:**
Conduct Customer Satisfaction Survey
to Understand Attitudes/Concerns
- **Outcome:**
Identify Steps to Enhance Customer
Satisfaction

INPUT



METHODOLOGY

- **U.S.A. Customer's Only**
- **42 Sites (West = 12)**
- **45 Interviews (West = 14)**
- **18 On-Site Interviews (West = 7)**
- **27 Telephone Interviews (West = 7)**
- **Respondents: Person(s) Most Likely to:**
 - **Influence Next Supercomputer Acquisition**
 - **Be Most Knowledgeable of CRI Performance**
- **Standard Questionnaire**
- **Comments Actively Encouraged**

INPUT



RATING SCALES

- **Respondents Often Asked to Rate Their Attitudes on a Scale of 1 to 10**

1 - Low

10 - High

- **Respondents Given No Further Description of Rating Values**

- **Generally Consider Evaluating Responses as Follows:**

9 - 10 Excellent

7 - 8 Good

5 - 6 Fair

1 - 4 Poor

- **▲ = Western Region Number**

INPUT



WESTERN REGION CUSTOMERS INTERVIEWED

ORGANIZATION	RESPONDENT
Boeing Compter Services	Robert Spielman
Chevron Oil Field Research	Jim Simpson
Digital Productions	Jim Davis
Fairchild	Carlso D'Angelo
GA Technologies	Sid Karin
Lawrence Livermore Nat. Lab.	Bob Borchers
Lockheed Adv. Aeronautics	Harold Weinberger
Lockheed Missiles and Space	Doug Telford
NASA Ames	F. R. Bailey
National Magnetic Fusion Energy	Marcie Smith
	John Kileen
	Marilyn Richards
Rockwell	Dan Parcel
	Abraham Levine
Sandia Nat. Lab., CA	Steve Binkley

INPUT



ANALYSIS OF FINDINGS

INPUT

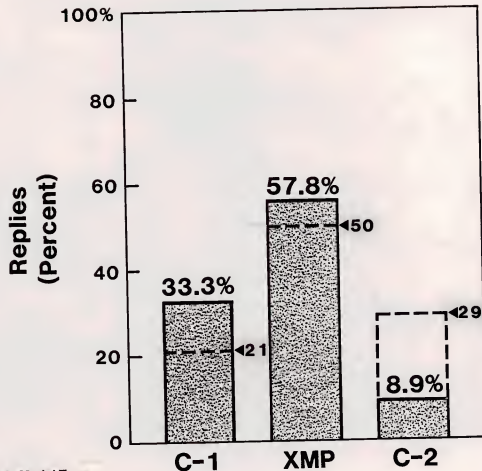


CUSTOMER PROFILE

INPUT



MODEL TYPE

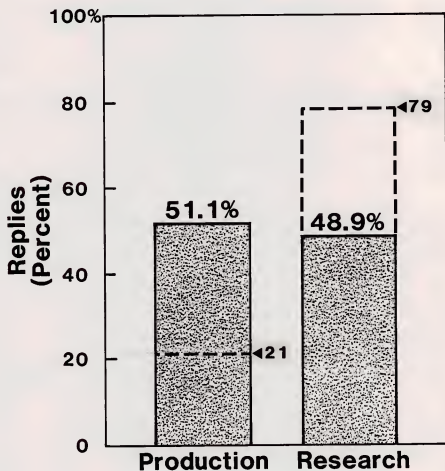


Q1A: Model Type

	Model Type	Percent	Number of Cases
All	C-1	33.3	15
	XMP	57.8	26
	C-2	8.9	4
West	C-1	21	3
	XMP	50	7
	C-2	29	4



PROCESSING TYPE



Q1F: PROCESSING TYPE

PROCESSING TYPE	%	DESCRIPTION
PROD.	51.1	PRODUCTION
RES.	48.9	RESEARCH

INPUT

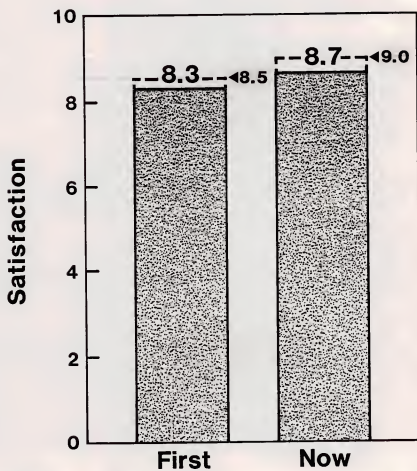


OVERALL ATTITUDES AND DECISION CRITERIA

INPUT



CRAY SYSTEM MEETING EXPECTATIONS



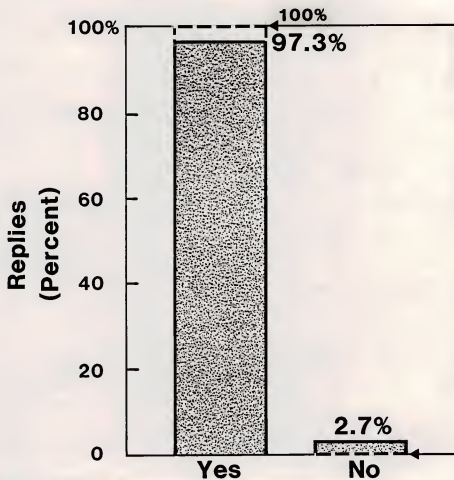
Q24: Extent Living up to Expectations

	Code	Mean	Min.	Max.	Std. Dev.	Cases
All	First	8.3	1	10	2	45
	Now	8.7	5	10	1.3	45
West	First	8.5	5	10	1.2	14
	Now	9.0	8	10	0.8	14



THE UNIVERSITY OF CHICAGO
LIBRARY
1207 EAST 58TH STREET
CHICAGO, ILL. 60637
TEL. 773-936-5000
FAX 773-936-5001
WWW.CHICAGO.EDU

BUY CRAY TOMORROW?



Q26: Buy Cray Tomorrow?

	<u>Rating</u>	<u>Percent</u> <u>Total</u>	<u>Number of</u> <u>Cases</u>
All	Yes	97.3	36
	No	2.7	1
	Total	100	37
West	Yes	100	11
	No		

INPUT

WHY BUY FROM CRAY TOMORROW MORNING?

"Hardware Well-Designed"

"Compatibility"

"No Alternative Today"

"Dollar for Dollar, CRAY Is Best"

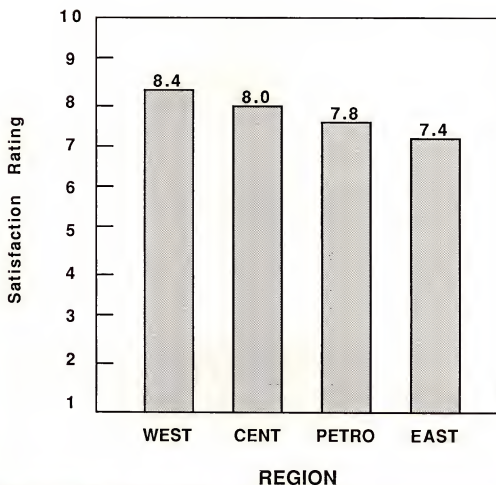
"But- - - - -"

**"My Answer Might Be
Different a Year from Now"**

**"Our Software Needs May
Help CRI Competition"**

INPUT

REG. OS SKILL (SITE)

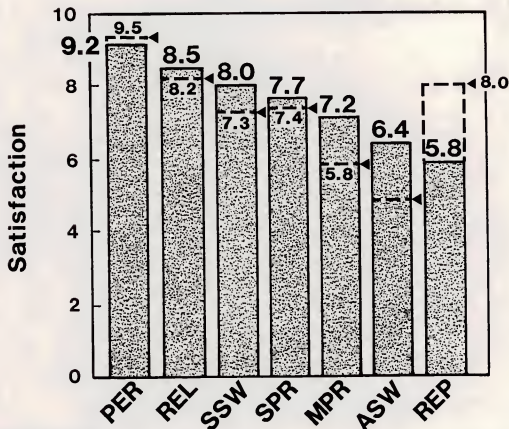


Q16: Region OS Skill Level (On-site)

Region	Mean	Min.	Max.	Std. Dev.	Number of Cases
West	8.4	8	10	.8	7
Cent	8	4	10	2.5	5
Petro	7.8	5	10	1.7	11
East	7.4	5	8	1.3	5
Total					21



DECISION CRITERIA TODAY



Q2: Decision Criteria

	Code	Mean	Min.	Max.	Std. Dev.	Description
All	PER	9.2	6.0	10.0	1.1	Overall System Perform.
	REL	8.5	3.0	10.0	1.6	System Reliability
	SSW	8.0	1.0	10.0	2.0	Availability of Sys. SW
	REP	5.8	1.0	10.0	3.0	Vendor Maint. Rep.
	SPR	7.7	4.0	10.0	1.6	Overall System Price
	MPR	7.2	3.0	10.0	1.8	Maintenance Price
	ASW	6.4	3.0	10.0	1.8	Avail. of Appl. SW
West	PER	9.5	8.0	10.0	0.8	
	REL	8.2	4.0	10.0	2.0	
	SSW	7.3	1.0	10.0	2.9	
	REP	8.0	5.0	10.0	1.7	
	SPR	7.4	4.0	10.0	1.8	
	MPR	5.8	3.0	8.0	1.6	
	ASW	4.8	1.0	10.0	2.9	

COMMENTS REGARDING DECISION CRITERIA

“Ease of Converting Is Very Important.”

“Compatibility Is Very Important.”

“Throughput and Compatibility Is Key.”

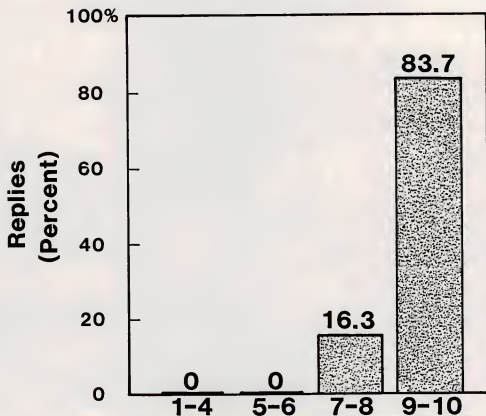
**“Availability of Systems Software
Will Be Especially Important.”**

INPUT

HARDWARE RELIABILITY/SUPPORT

INPUT

HARDWARE INSTALLATION

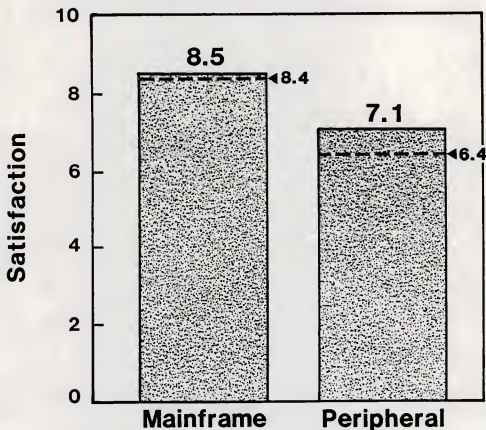


Q19: Hardware Installation

<u>Rating</u>		<u>Percent Total</u>	<u>Number of Cases</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>
1-4		0	0				
5-6		0	0				
7-8		16.3	7				
9-10		83.7	36				
All	Total	100.0	43	9.4	7	10	.9
West			14	9.4	8	10	.8



HARDWARE SATISFACTION

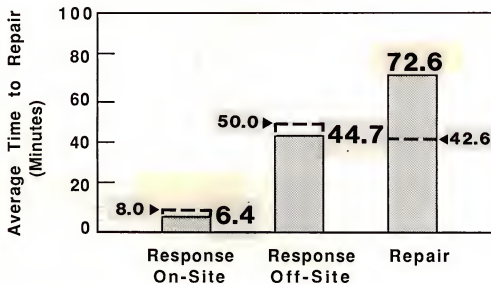


Q9: Mainframe Availability/Reliability

	<u>Code</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Cases</u>	<u>Description</u>
All	MF	8.5	2	10	1.8	44	Mainframe Avail./Reliability
	PER	7.1	2	10	1.8	42	Peripheral Avail./Reliability
West	MF	8.4					
	PER	6.4					

INPUT

HARDWARE SUPPORT TIME



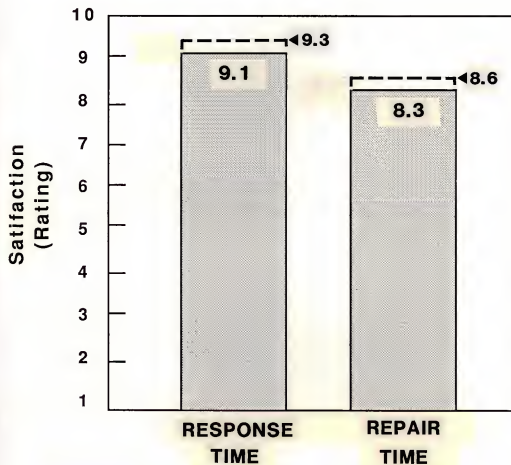
Q7A, B, Q8: Hardware Response/Repair Time

	<u>Code</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Number of Cases</u>
All	Response On-Site	6.4	1	60	10.0	35
	Response Off-Site	44.7	10	75	17.7	17
	Repair	72.6	18	210	47.5	30
West	Response On-Site	8	1	60	16.5	12
	Response Off-Site	50	10	75	24.7	5
	Repair	42.6	18	60	16.6	17

INPUT



HARDWARE MAINTENANCE SATISFACTION

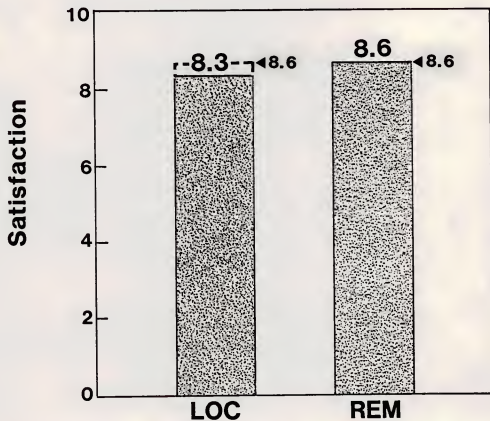


Q9C.D: Hardware Maintenance Response/Repair Time

	<u>Code</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Number of Cases</u>
All	RESPONSE	9.1	5	10	1.1	38
	REPAIR	8.3	2	10	1.7	37
West	RESPONSE	9.3	8	10	1.2	12
	REPAIR	8.6	6	10	2.0	11



CE SKILL LEVEL



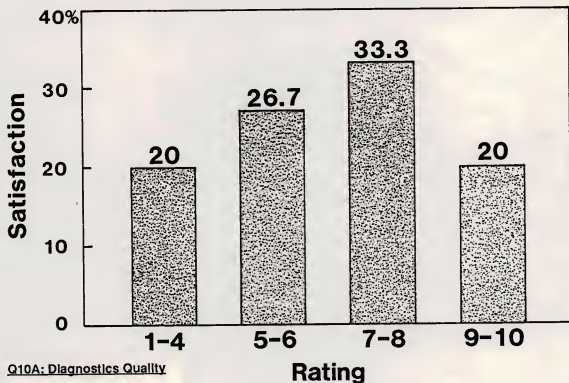
Q11E.F: Customer Engineer Skill Level Ratings

	Code	Mean	Min.	Max.	Std. Dev.	Number of Cases
All	LOC	8.3	5	10	1.1	37
	REM	8.6	7	10	.9	23
West	LOC	8.6	6	10	1.0	12
	REM	8.6	8	9	0.5	7

INPUT



DIAGNOSTICS



Q10A: Diagnostics Quality

Rating	Percent Total	Number of Cases	Mean	Min.	Max.	Std. Dev.
1-4	20	6				
5-6	26.7	8				
7-8	33.3	10				
9-10	20	6				
All	Total	30	6.5	2	10	2.3
West		12	6.7	4	10	2.0

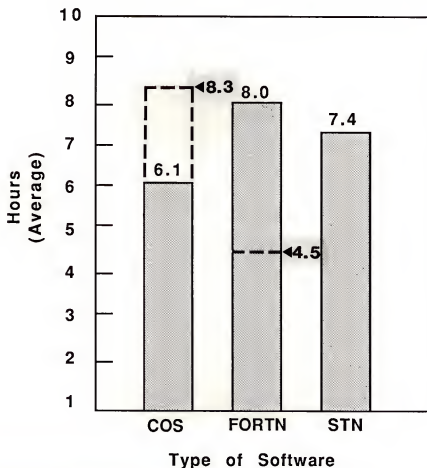
INPUT



SOFTWARE RELIABILITY/SUPPORT

INPUT

SYSTEMS SOFTWARE RESPONSE TIME

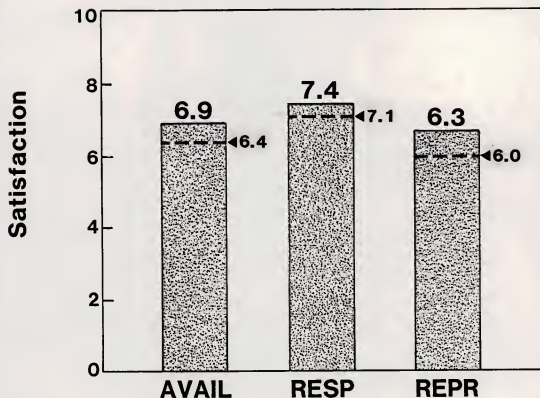


Q13: Systems Software Response Time

	Type	Mean	Min.	Max.	Number of Cases	Description
All	COS	6.1	.1	40	17	COS
	FORTN	8	.1	80	17	FORTRAN
	STN	7.4	.1	40	10	STATION
West	COS	8.3	1	16	3	COS
	FORTN	4.5	1	8	2	FORTRAN



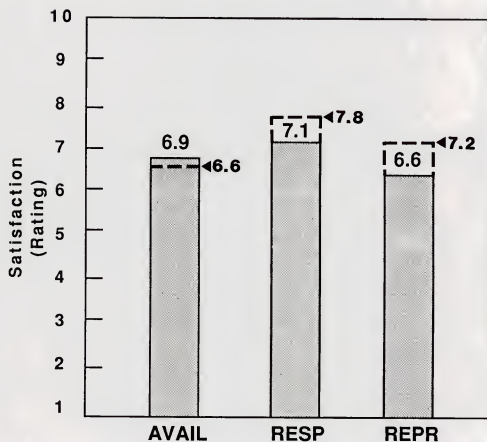
COS RATINGS



Q15: Operating Systems Ratings

	<u>Code</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Number of Cases</u>	<u>Description</u>
All	AVAIL	6.9	2	10	1.9	35	OS Avail./Reliability
	RESP	7.4	2	10	1.9	30	OS Maint. Response Time Rating
	REPR	6.3	2	9	1.6	30	OS Maint. Repair Time Rating
West	AVAIL	6.4	2	10	2.2	10	
	RESP	7.1	2	10	2.5	8	
	REPR	6.0	2	7	1.6	9	

FORTRAN RATINGS



Q15. Fortran Ratings (Q15)

	<u>Code</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Number of Cases</u>	<u>Description</u>
All	AVAIL	6.9	2	10	1.8		Fortran Avail./Rel.
	RESP	7.1	2	10	2		Fortran Maint. Resp. Time
	REPR	6.6	2	9	1.8		Fortran Maint. Repair Time
West	AVAIL	6.6	6	8	0.7	9	
	RESP	7.8	6	10	1.6	5	
	REPR	7.2	6	8	0.8	6	

SOFTWARE RESPONSE/REPAIR COMMENTS

“Takes Months to Resolve Software Problems.”

“Takes 1 Hour to Forever to Repair Software.”

**“Is Responsive to Severe Software Problems,
But Less So to Less Urgent Ones.”**

**“Repair Time for Non-Critical Software
Problems Is Terrible.”**

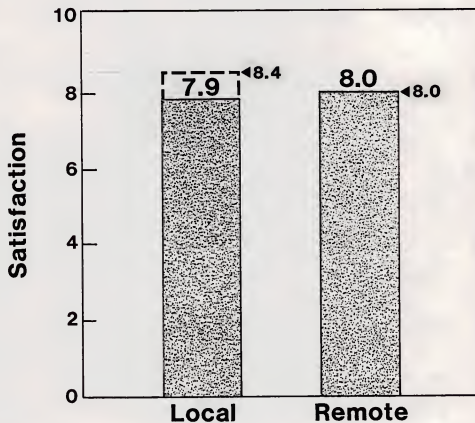
“Deferred Software Problems Take Too Long.”

**“CRI Is Terrible Regarding Bugs in Initial
Releases.”**

**“Many CRI Users in CUG Are Upset Regarding
CRI’s Quality Assurance Methods.”**

INPUT

OS SKILL LEVELS



Q16: OS Skill Level Ratings

	<u>Code</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Number of Cases</u>	<u>Description</u>
All	LOCAL	7.9	4	10	1.6	28	Local On-site SW
	REMOTE	8	5	10	1.4	21	Remote (Dist., Reg., HQ)
West	LOCAL	8.4	8	10	0.8	7	
	REMOTE	8.0	7	9	1.0	5	

INPUT

FORTTRAN COMMENTS

“FORTTRAN has Dropped in Quality in the Past Year.”

“CFT Is a Nightmare.”

“CFT Is a Shaky Piece of Software.”

“We Feel No One Is Listening to Us Regarding CFT.”

“Can’t Get Any Attention at CRI Headquarters Regarding FORTTRAN.”

“FORTTRAN Is a Memory Hog.”

INPUT

EXAMPLES OF UNIX COMMENTS

“We Are Uneasy About UNIX Planning.”

**“CRAY Should Carefully Evaluate if UNIX
Is the Right OS.”**

**“Very Important to Have Smooth
Transition to UNIX.”**

“UNIX Information Flow to Us Is Sporadic.”

INPUT

**COMMENTS CONCERNING SOFTWARE
(GOVERNMENT CUSTOMERS)**

"Want More CTSS Support from CRI"

"Improve Software."

"(CRI) Software Helps Competition."

**"Repeatedly Ship Software That Doesn't
Work."**

**"If We Had Relied on CRAY Software, We
Would Have Been Much Further Behind."**

**"Taken CRAY a Long Time to Realize
That Software Is Key to the Environment."**

**"If CRAY Software Were As Good As Their
Hardware, No One Could Touch Them."**

INPUT

**COMMENTS CONCERNING SOFTWARE
(COMMERCIAL CUSTOMERS)**

"Software Is Not Robust."

"Not At Same Level As Other Vendors."

"Need More Features."

**"All Our Fault Finding with CRI Relates
to Software."**

"Insure Compatibility between OS Levels."

"Systems Software Development Is Crucial."

**"Systems Software Failure - Our Strongest
Concern."**

"Software Is CRAY's Weakness."

"CRI Wants to Get Away from Software."

"CRAY Really Lacking in Systems Software."

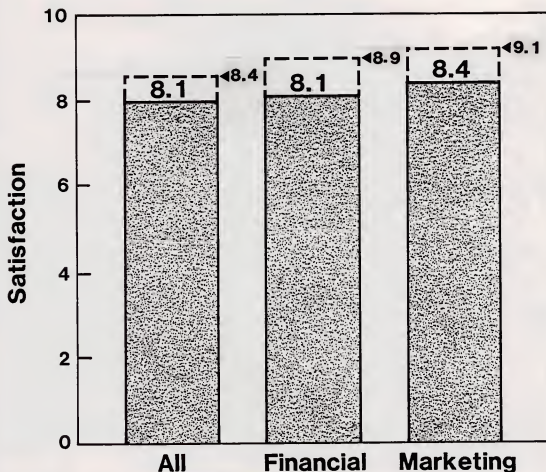
INPUT

CRI MARKETING AND HQ MANAGEMENT

INPUT



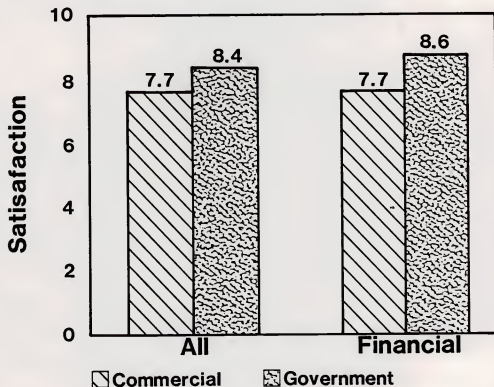
CRI RESPONSIVENESS



Q21A,B,C: CRI Responsiveness

	<u>Code</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Number of Cases</u>	<u>Description</u>
All	ALL	8	3	10	1.8	44	To Overall Needs
	FIN	8.1	3	10	2	41	To Financial Quest.
	MKTG	8.4	5	10	1.5	41	Marketing Personnel Helpfulness
West	ALL	8.4	6	10	1.4	14	
	FIN	8.9	6	10	1.2	14	
	MKTG	9.1	7	10	1.1	13	

CRI RESPONSIVENESS (COMMERCIAL/GOVERNMENT)



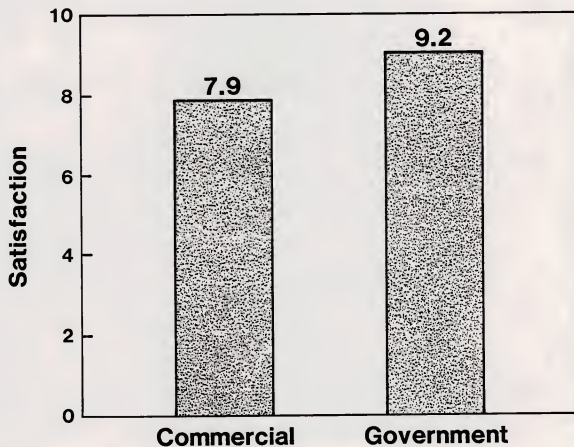
Q21AB : CRI RESPONSIVENESS

TYPE	MEAN	MIN	MAX	STD. DEV.	CASES	DESCRIPTION
ALL	8	3	10	1.8	44	TO OVERALL NEEDS
FIN.	8.1	3	10	2	41	TO FINANCIAL QUESTIONS

	ALL	FIN	STD. DEV. (ALL)	STD. DEV. (FIN)
COM	7.7	7.7	1.8	2.2
GOV	8.4	8.6	1.6	1.6

INPUT

MARKETING RESPONSIVENESS (COMMERCIAL/GOVERNMENT)



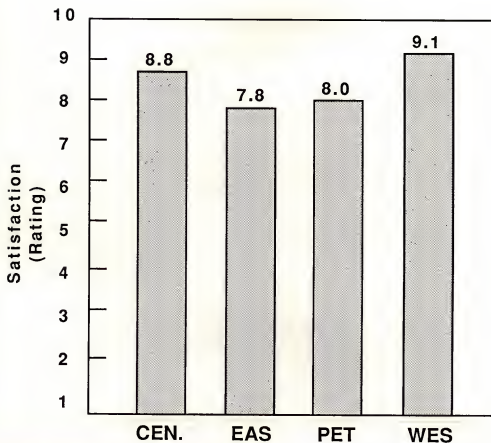
Q21C: MARKETING RESPONSIVENESS (COM/GOV)

TYPE	MEAN	MIN	MAX	STD. DEV.	CASES	DESCRIPTION
COM	7.9	5	10	1.5	24	COMMERCIAL
GOV	9.2	7	10	1	17	GOVERNMENT
ALL	8.4	5	10	1.5	41	COMBINED

INPUT



MARKETING RESPONSIVENESS (REGION)

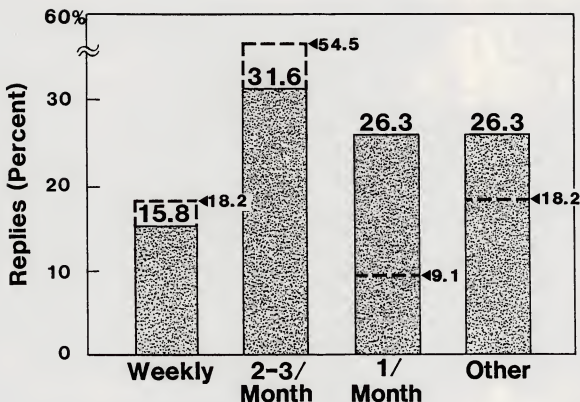


Q21C: Marketing Personnel Helpfulness (By Region)

<u>Region</u>	<u>Mean</u>	<u>Min.</u>	<u>Max.</u>	<u>Std. Dev.</u>	<u>Number of Cases</u>	<u>Description</u>
CEN	8.8	6	10	1.4	8	Central
EAS	7.8	5	10	1.8	10	Eastern
PET	8	6	10	1.4	10	Petroleum
WES	9.1	7	10	1.7	13	Western
ALL	8.4	5	10	1.5	41	All Regions Combined



FREQUENCY OF SALES VISITS



Q21D: Frequency of CRI Marketing Rep. Visits

	<u>Class</u>	<u>Percent</u>	<u>Number of</u>	<u>Description</u>
		<u>Total</u>	<u>Cases</u>	
All	Weekly	15.8	6	Once per Week
	2-3/Mo.	31.6	12	2 to 3 Times per Month
	1/Mo.	26.3	10	About once per Month
	Other	26.3	10	Other
	Total	100	38	
West	Weekly	18.2		
	2-3/Mo.	54.5		
	1/Mo.	9.1		
	Other	18.2		
	Total	100.0	11	

LOCAL SALES STAFF

- **Most Are Responsive at the Local Level**
- **Kept Too Isolated from Corporate Activities, Decisions**
- **Don't Have Enough Authority**
- **Love Us and Leave Us**

INPUT

CRI HEADQUARTERS MANAGEMENT

- **Responsive**
- **Available**
- **Too Inflexible Regarding Policies**
- **Sometimes Come Across As Arrogant**

INPUT



CRI'S MARKET POSITION

- **To Date: Only Game in Town**
- **Very Soon: Significant Competition That Has Less Fast Hardware, But:**
 - **More Reliable Hardware**
 - **Better Systems Software**
 - **More Flexible Business Policies**
 - **Better End User Empathy, Support**

INPUT

TYPICAL ADJECTIVES USED BY RESPONDENTS

POSITIVE ADJECTIVES	NEGATIVE ADJECTIVES
Class Company	Set in Ways
Best Kid on Block	Arrogant
Great Hardware	Poor Software
Making Progress on Deficiencies	Progress Is too Slow

INPUT

**COMPARISON:
GOVERNMENT VERSUS COMMERCIAL**

Item	Government Attitudes	Commercial Attitudes
CRI Image:	A Class Act	Not a Class Act
Standard of Comparison:	CDC, Other Supercom-puter Vendors	IBM, DEC, Japanese
Decision Criteria:	Speed Software	Availability Total Needs
Software:	Support CTSS	Support Production Processing

INPUT



QUALITY AND PERFORMANCE STANDARDS ARE CHANGING

- **Quality Definition Is Changing:**
 - **No Longer = Hardware Speed**
 - **Now = Hardware/Software/Support
Availability and Reliability**
- **CRI Current Quality Is:**
 - **Superior to IBM in Terms of:**
 - **Hardware Speed, But**
 - **Inferior to IBM in Terms of:**
 - **Reliability**
 - **Hardware/Software Support**
 - **Sales Support**

INPUT

RECOMMENDATIONS

- **Customer-Based**
- **INPUT-Based**

INPUT



CUSTOMER-BASED RECOMMENDATIONS

INPUT



**PERCEPTIONS OF CRI
ATTITUDES/CHANGE NEEDED**

Current CRI Attitudes	CRI Needs to Change to
Meeting Expectations	Meeting Total Needs
Fixing a Problem	Avoiding Problem in First Place
Policy Clarification	Creating Better Ones Quickly
Wanting to Help	Making It Happen
Scientific Lab Oriented	Responding to Commercial Differences
Hardware Oriented	Total Computing Solution Oriented

— INPUT —

INCREASE INTERACTION WITH CUSTOMER TOP MANAGEMENT

- **Purpose:**

**Keep Key Decision-Makers Contin-
uously Pro-CRI**

- **Suggestions:**

- **More Frequent Sales Contact**
- **More CRI Top Management Contact**
- **Conduct Executive Seminars**
- **Develop Top Management-Oriented
Presentations/Papers**

INPUT



INCREASE INTERACTION WITH END USERS

- **Purpose:**

**Help Information Systems Department
Fill Up Installed CRAYs Faster**

- **Suggestions:**

- **Get To Know End Users More Intimately**
- **More Frequent Sales Contact**
- **Establish Regular Flow of Applications Ideas**
 - **Newsletter**
 - **Special Seminars**
- **Offer More End-User Applications Tools**
- **Publicize Availability of Third-Party Software**

INPUT



KEEP INFORMATION SYSTEMS PEOPLE BETTER INFORMED

- **Purpose:**

Keep Key Personnel Happy, Sell More

- **Suggestions:**

- **Formally Communicate New Products, Services, Plans, Policy Announcements**
- **Increase Frequency of Sales Contacts**
- **Require Hardware/Software Support Managers to Meet Customers**
- **Respond Faster to Pricing, Contracts, Product Questions**
- **Send Special Summary of This Survey**

INPUT

GENERAL RECOMMENDATIONS

- **Clarify Existing Plans/Directions**
 - **UNICOS Characteristics, Implications**
 - **YMP Status**
- **Develop "CRI Vision of the Computing Future" Presentation**
- **More Aggressively Stimulate End-User Demand for CRI Computing Power**

INPUT



SUMMARY: CUSTOMER ATTITUDES

- **CRI Is a Very Impressive Company**
- **But Competitive Threat Is Greater Than CRI Realizes**
- **Customers Are Very Worried CRI is Insensitive to Need for a Total Computing Solution Strategy**
- **CRI Is Changing Too Slowly Regarding:**
 - **Role of Software**
 - **Reasonable Policies**
 - **Support After the Sale**
 - **Respect for the Customer**
- **Customers Like CRI and Want to Win**

INPUT



INPUT-BASED RECOMMENDATIONS

INPUT



INPUT RECOMMENDATIONS:

BUSINESS STRATEGY

- **Reduce Image of:**

**We Are the Premier Hardware
Performance Vendor**

- **Increase Image of:**

**We Are the Premier Vendor for Total
Computing Solutions for the Large-Scale
Computing User**

- **Carefully Define, Respond to Commercial
Versus Government Differences**

INPUT

**INPUT RECOMMENDATIONS:
BUSINESS STRATEGY**

- **Explicitly Define the Total Computing Solutions in Terms of:**
 - **Role of CRI in Commercial Shops**
 - **Role of CRI in IBM, DEC, Etc. World**
 - **Strong, Leading Edge Systems Software**
 - **Enhanced Information Systems and End-User Support**

INPUT



INPUT RECOMMENDATIONS:

**MAKE SYSTEMS SOFTWARE QUALITY,
QUANTITY A TOP PRIORITY**

- **Software Now Perceived As Afterthought**
- **Make It a Major Competitive Edge**
- **Provide Powerful:**
 - **OS Functions**
 - **Languages**
 - **Applications Development Tools**

INPUT



SUMMARY

- **User Expectations Are Changing and Increasing**
- **Customers Are Loyal, Want CRI to Prosper**
- **Government/Commercial Distinctions Becoming Apparent**
- **Customers Concerned CRI Is Underestimating Importance of Total Computing Solution Strategy**
- **Result: Loyalty to CRI Will Diminish as Competition Grows**
- **Opportunity: Demonstrate CRI Can Respond to these Changing Customer Needs**

INPUT



SAMPLE QUESTIONNAIRE

INPUT

INTRODUCTION

Cray Research has commissioned INPUT to conduct a national customer satisfaction survey of all Cray computer users. The purpose of the survey is to help Cray identify opportunities to best serve you and others in the future.

INPUT is an independent international market research and consulting firm that specializes in the computer industry.

Cray has specifically asked us to interview you. Your opinions and suggestions are very important to Cray. We would like to get your candid responses at this time. If you wish any of your answers to be treated anonymously, please let us know.

SYSTEM PROFILE

1. To begin with we would like a quick profile of your current Cray computer system(s).

	System #1	System #2	System #3
a. Model Type	_____	_____	_____
b. Date of Installation	_____	_____	_____
c. Operating System	_____	_____	_____
d. Maint. Contract Type	_____	_____	_____
e. Maint. Service Since (Month/Year)	_____	_____	_____
f. Type of processing for majority of work: (Circle answer)	PRODUCTION RESEARCH	PRODUCTION RESEARCH	PRODUCTION RESEARCH

Definition: "Production" processing directly serves the organization's primary operational mission and is characterized most often by repetitive tasks that are frequently time critical. In contrast, "Research" processing usually involves projects dealing with investigations of scientific-related phenomena, and is typically less time critical than production tasks.

DECISION CRITERIA

2. If your organization were to purchase a supercomputer today, how important would each of these factors be in the purchase decision process (scale of 1 to 10, with 1 = very low and 10 = very high importance).

Rating
(1 to 10)

- a. Overall system performance _____
- b. System reliability _____
- c. Availability of systems software _____
- d. Availability of applications software _____
- e. Vendor reputation for maintenance _____
- f. Overall system price _____
- g. Maintenance price _____

PERFORMANCE

3. How many hours per week is your system currently scheduled to operate? _____ HOURS

4. What is your percentage of utilization of the system during the past month, i.e. what portion of the time is the system actually being used, expressed as a percentage of the time the system is available for use. (Excluded from available time is downtime due to preventive maintenance and non-problem related software update time.) _____%

5. What percent utilization (on average over the past 6 months) are you currently experiencing with the entire system?
_____%

6. How many hardware or software-caused system interruptions per system do you have monthly (on average over the past 6 months)? _____

- a. What percent are hardware related? _____
- b. What percent are software related? _____
- c. What percent are "other" (environment, etc.)? _____

TOTAL = 100%

HARDWARE

7. On the average how long does it take Cray to respond once you have placed a maintenance request:

a. during regular maintenance availability time? _____minutes

b. during off-hours? _____minutes

8. On the average how long does it take your Cray customer engineer to repair routine hardware problems once work has begun? _____hours

9. On a scale of 1 to 10, how satisfied are you with Cray's:

Rating
(1 to 10)

a. Mainframe availability/reliability _____

b. Peripheral availability/reliability
(e.g. disks, tapes, I/O subsystem) _____

c. Hardware maintenance response time _____

d. Hardware maintenance repair time _____

10a. On a scale of 1 to 10, in your opinion what is the level of quality of the diagnostic procedures currently being used by Cray? _____

10b. What factors influenced your rating?_____

11. Please rate on a scale of 1 to 10 your requirements for the following hardware goods and services, as well as your current level of satisfaction.

	Requirement? (YES/NO)	Satisfaction (1 to 10)
a. Hardware installation consulting	_____	_____
b. Hardware documentation	_____	_____
c. Parts availability	_____	_____
d. Cray's escalation procedures		_____
e. Cray ON-SITE customer engineer skill level		_____
f. Cray FIELD hardware technical support personnel skill level (i.e. region or headquarters-based people)		_____

SOFTWARE

12. For which of the following types of systems software are you currently receiving support (check all that apply)?

COS_____ CTSS_____ UNICOS_____

FORTRAN_____ STATION_____

Operating
System

FORTRAN

STATION

13. On average, how long does it take Cray to RESPOND to a systems software problem? (in hours).....

14. On average, how long does it take Cray to RESOLVE a systems software problem? (in hours).....

	Operating System	FORTRAN	STATION
15. How satisfied are you (1 to 10, 10 = highest) with:			
a. Systems software availability/reliability..	_____	_____	_____
b. Systems software maintenance RESPONSE time..	_____	_____	_____
c. Systems software maintenance REPAIR time..	_____	_____	_____

16. How satisfied are you with the different methods of software support, as provided by:			
a. Cray's ON-SITE software analyst?	_____	_____	_____
b. Cray FIELD software technical support personnel (region or headquarter-based)?	_____	_____	_____

17. Would you be willing to participate in systems software support maintenance by any of the following methods?

	Doing Now? (YES/NO)	Would Consider Doing? (YES/NO)	Expect Maintenance Discount? (YES/NO)	How Much?
a. Working with a support center to diagnose a problem.	_____	_____	_____	_____
b. Installing patches or modifications developed by Cray.	_____	_____	_____	_____
c. Installing new releases received from Cray.	_____	_____	_____	_____

18. Please rate on a scale of 1 to 10 your requirements for the following systems software goods and services, as well as your current level of satisfaction:

S A T I S F A C T I O N (1 TO 10)

	Operating System	FORTRAN	STATION
a. Systems software documentation	_____	_____	_____
b. Systems software training at your site	_____	_____	_____
c. Systems software training at Cray headquarters	_____	_____	_____
d. Systems software consulting	_____	_____	_____
e. Systems software escalation	_____	_____	_____

GENERAL

19a. On a scale of 1 to 10, how satisfied were you with the hardware installation service provided by Cray?_____

19b. What factors influenced your installation satisfaction rating above?_____

20a. Would you like to see Cray become more active in the use of remote diagnostics?

YES__

NO__

20b. Why or why not?_____

21. The following questions relate to how well you like doing business with Cray. Please respond on a scale of 1 to 10 with 1 being not satisfied and 10 being extremely satisfied.

Satisfaction
(1 to 10)

- a. Extent Cray is responsive to your organization's overall needs _____
- b. Cray's responses to your financial questions _____
- c. Helpfulness of Cray marketing personnel _____

In regards to your Cray marketing representative:

d. On the average, how frequently have you seen that person face to face during the past six months?

ABOUT ONCE PER WEEK _____

ABOUT 2 TO 3 TIMES PER MONTH _____

ABOUT ONCE PER MONTH _____

OTHER _____

(Specify frequency)_____

e. How many working days has it been since you last you last received a visit from that person?

DAYS SINCE LAST VISIT_____

22. On a scale of 1 to 10 (10 = high) please rate Cray in the following categories:

Satisfaction
(1 to 10)

- a. Overall satisfaction with Cray's maintenance service
- b. Price of maintenance service
- c. Frequency of interaction with Cray executive and senior management personnel

23. What suggestions do you have concerning how interaction could be improved between Cray executives and Cray customers?

24. On a scale of 1 to 10, how well is your Cray system living up to your expectations:

Expectation
Level
(1 to 10)

- a. When you first acquired it?
- b. Currently?

25. In addition to what has been discussed above, is there anything Cray could do to further improve your satisfaction with them?

26a. All things considered, if tomorrow morning you were to suddenly receive funding approval for acquiring additional supercomputer capability, would you buy from Cray?

YES__

NO__

26b. Why or why not?_____

27. Do you have any other suggestions or comments that you would like to pass along to Cray concerning any aspect of their business? If YES, what are they?_____

ADDITIONAL NOTES

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. A small dark speck is located near the top center of the page, and another smaller one is near the bottom left corner. The paper appears slightly aged or off-white.

THANK YOU VERY MUCH FOR YOUR TIME

