Engineering

November 1989
Book I
Project Descriptions
Volume 1 of 2

fy 90 beige book

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Russ Gullotti VP
BTH1-2/C7

SPONSOR: Don Busiek VP

FY 89–91
Plan Summary of
Product and Support Projects

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Ancona VP	Henry	TTB1-2/G10
Andersen	Bob	MET-2/E2
Aramati	Victor	HLO2-3/K10
Arayas	Joe	UPO2-4
Avery	Al	MRO1-2/S10
Babcock	Bill	HLO2-2/N07
Backman	David	AKO1-2/C13
Baker	Ken	NIO/B2
Baltes	Heinz	UFC-416
Barron	Ed	NKS1-2/H2
Bastiani	Vince	AKO1-1/C9
Baudelaire	Patrick	PRL
Bell	David	NEW B/G1
Benton	Lyn	MLO1-3/E47
Bergerat	Andre	AEO
Berg-Sonne	Anker	MRO4-3/C18
Best	Richard	MLO3-2/H14
Bhalerao	Prakash	MRO4-3/H10
Biondi	Bob	MLO1-4/T99
Booth	Tom	MLO1-3/B10
Bourgeois	Margaret	MLO3-3/T61
Braley	Jon	ICO/D03
Brown	David W.	NKS5-2/J5
Burckhardt	Werner	KBO-3
Burke	Ken	MRO1-1/A65
Burnce	Michael	UCO-2B
Cabrinety	Larry	DSG2-2/J5
Cappello	Nick	MRO1-3/T2
Carabetta	Michael	TTB1-5/B03
Cataldo VP	Pat	BUO/E17
Chen	Yvonne	TWO/A14
Clinton	Dick	OGO1-1/R12
Colarusso	Rick	MRO3-3/N17
Colon-Osorio	Fernando	MRO1-2/S10
Connors	Agnes	MLO1-3/B68
Crouse VP	Henry	MLO10-1/T77
Davis	Steve	PDM1-1/H6
Demmer VP	Bill	BXB1-2/D10
Dias	Manny	VRO3-3/Y4
Dormitzer	Ralph	MLO6A-3/T96
Doyle	John	NRO2-2/H7
Drottar	Donna	MLO3-3/T61
Eng. Corp.	Archives	MLO3-3/T61
Farrahar VP	Dick	MLO12-2/T8
Fassbender	Paul	UPO2-2
Ferry	George	MLO1-5/B94
Fink	Terry	PDM1-2/B2
Follien	Ken	NIO/A2
Fowkes	Bob	MLO12B/U49
Frazer	Al	HGO
Frederick	Charlotte	CXO1-2/Q22
Frederick	Tom	SHR1-4/010
Fuller VP	Sam	MLO12-2/T7
Galbraith	John	MKO2-2/G5
Gannon	Tom	MLO1-3/B10
Gaubatz	Don	MLO5-2/G1
Gaviglia VP	Lou	WJO1-2/C7
Giacoletto	Sergio	GEO/E1306
Glazer	Eli	MLO3-3/T61
Glorioso VP	Bob	MRO1-1/A65
Goldberg	Norman	PDM1-2/L11
Goldman	Aharon	ISO
Gordon	Bruce	NKS5-2/J6
Gordon	Ken	VRO3-2/B7
Grunes	Hal	ICO/D03
Guest	Paul	MRO4-3/H20
Gullotti VP	Russ	BTH1-2/C7
Gyllstrom	Hans	ALF1-2/T26
Hall	George	MKO2-2/F10
Hamel	Dan	LMO2/P35
Hamill	Art	DLB12-2/C6
Hanley	Mike	MLO1-5/B94
Heaton	Dick	UPO2-4/B7
Heffner VP	Bill	VRO6-2/C1
Herbener	Don	OGO1-2/C16
Hodges	Gene	TTB1-2/F03
Hodgson	Bill	CXN1/3
Hofmann	Karl	UFC
Holz	John	BXB1-2/E2
Hooper	David	KAO2-3
Huckle	Peter	REO2-F/B2
Hunt	Claudette	MLO3-3/T61
Hunt	Donald	MLO1-4/P14
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Kania	Bill	VBE
Kappler	John	REO D4/5F
Keating	Bill	ZKO2-3/Q08
Keillor	Sharon	OGO1-2/W08
Kent	Bill	TWO/B21
Knoll	Dave	MLO1-5/B98
Kobayashi	Tom	JRD-F8
Kochan	Matt	MLO1-3/H20
Koteff	Bill	MLO12-2/T39
Krysak	Mike	GSO2-X5
LaCava VP	Dom	MLO12-2/T81
Lajoie	Dana	MKO2-1/K06
Levine	Randy	MRO4-2/C15
Lewan	Rich	MRO4-3/H6
Lipcon	Jesse	MLO5-5/E71
Lipner	Steve	BXB1-2/D04

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Mancuso	Mike	MRO4-1/H18
Marchand	Don	CTS1-2/D2
Masand	Suresh	MKO2-1/K6
McCabe	Eugene	GAE
McCabe VP	Frank	MLO1-5/T55
McCredie	Jack	MLO1-3/B11
McDermott	John	DLB5-3/E2
McDonough VP	Edward	BPO1
Melia VP	Kevin	MLO1-5/B98
Metzger	Don	BTH1-2/D2
Miller	Walter	GSF/D21
Mills	Jim	VBE
Moquin	Mary Anne	ZKO2-3/Q08
Morgan	Dave	CHM1-2/C7
Myrick	Ron	MSO/M6
Nadler	Joe	MRO3-3/G6
O'Connell	Mark	MLO1-3/H20
O'Connor	Dennis	DLB5-2/E5
O'Keefe	John	MKO2-2/F10
Olivotto	Nino	VAR
Paciulan	Dick	MSO1/C5
Patel	Mahendra	LKG1-2/E19
Pesquet	Claude	AKO1-1/C9
Picott	Bill	MLO6B-U36
Pietrowski	Phil	DAS1-2/L06
Plakias VP	Greg	MLO1-5/T33
Plumer	David	86 Ord St.
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Reindorp	Peter	SBP F5
Richardson	Catherine	ZSO1-2/B2
Riggle	Mike	CXO1-2/Q22
Riordan	Dan	MKO2-2/F10
Rosa	Pat	OPA
Rose	John	LJO2/F4
Rosenberg	Larry	MRO4-3/H16
Rozwat	Chuck	ZKO2-1/P05
Scanlan	Jem	RTO/DCC
Schmidt	Rod	MRO1-3/T2
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Stone	Ollie	LKG2-2/T2
Strecker VP	Bill	MLO12-2/T8
Struck	Mildred	NIO/B18
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Taylor	Bob	UCT
Taylor	Mike	MRO4-1/H16
Thurk	Mike	LKG1-2/M07
Titelbaum	Mike	MLO1-4/P14
Ueda	Toshio	TKO
Van Roekens	Peter	MLO1-5/B94
Vickers	Carlha	MLO3-3/T61
Vyssotsky	Victor	CRL
Watson	Jenny	MLO1-3/B10
Weed	Dennis	MRO4-3/H19
Wharff	Conray	OGO1-1/E17
Whitman	Rich	MRO1-1/C22
Whitney	Susan	BXC1-1/H4
Williams	Art	MLO5-5/E71
Willis	Jim	TTB1-4/E03
Winters	Gayn	BXB1-2/D04
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Backman	David	AKO1-2/C13
Gyllstrom	Hans	ALF1-2/T26
McDonough VP	Edward	BPO1
Gullotti VP	Russ	BTH1-2/C7
Metzger	Don	BTH1-2/D2
Cataldo VP	Pat	BUO/E17
Lipner	Steve	BXB1-2/D04
Winters	Gayn	BXB1-2/D04
Demmer VP	Bill	BXB1-2/D10
Holz	John	BXB1-2/E2
Jennings	Dan	BXB1-2/F12
Quimby	Dave	BXB1-2/G12
Whitney	Susan	BXC1-1/H4
Jancourtz	Peter	CFO1-1/M18
Morgan	Dave	CHM1-2/C7
Vyssotsky	Victor	CRL
Marchand	Don	CTS1-2/D2
Hodgson	Bill	CXN1/3
Riggle	Mike	CXO1-2/Q22
Frederick	Charlotte	CXO1-2/Q22
Pietrowski	Phil	DAS1-2/L06
Hamill	Art	DLB12-2/C6
O'Connor	Dennis	DLB5-2/E5
McDermott	John	DLB5-3/E2
Cabrinety	Larry	DSG2-2/J5
McCabe	Eugene	GAE
Stone VP	David	GEC/609A
Giacoletto	Sergio	GEO/E1306
Miller	Walter	GSF/D21
Krysak	Mike	GSO2-X5
Frazer	Al	HGO
Quraeshi	Shoaib	HLO2-2/M10
Babcock	Bill	HLO2-2/N07
Aramati	Victor	HLO2-3/K10
Grunes	Hal	ICO/D03
Braley	Jon	ICO/D03
Goldman	Aharon	ISO
Kobayashi	Tom	JRD-F8
Hooper	David	KAO2-3
Burckhardt	Werner	KBO-3
Rose	John	LJO2/F4
Patel	Mahendra	LKG1-2/E19
Thurk	Mike	LKG1-2/M07
Adams	John	LKG1-2/M07
Stone	Ollie	LKG2-2/T2
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Andersen	Bob	MET-2/E2
Stokes	Ron	MKO2-1/J12
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John		MKO2-2/F10
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Agnes		MLO1-3/B68
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Matt		MLO1-3/H20
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Donald		MLO1-4/P14
Bob		MLO1-4/T99
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Mike		MLO1-5/B94
Peter		MLO1-5/B94
Kevin		MLO1-5/B98
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Bill		MLO12-2/T8
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Walter		MLO3-3/T61
Donna		MLO3-3/T61
Claudette		MLO3-3/T61
Don		MLO5-2/G1
Art		MLO5-5/E71
Jesse		MLO5-5/E71
Ralph		MLO6A-3/T96
Bill		MLO6B-U36
Ken		MRO1-1/A65
Bob		MRO1-1/A65
Joseph		MRO1-1/A65
Jan		MRO1-1/A65
Diane		MRO1-1/A65
Rich		MRO1-1/C22
Al		MRO1-2/S10

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Colon-Osorio	Fernando	MRO1-2/S10
Cappello	Nick	MRO1-3/T2
Schmidt	Rod	MRO1-3/T2
Nadler	Joe	MRO3-3/G6
Colarusso	Rick	MRO3-3/N17
Taylor	Mike	MRO4-1/H16
Mancuso	Mike	MRO4-1/H18
Levine	Randy	MRO4-2/C15
Segal	Bill	MRO4-2/C16
Berg-Sonne	Anker	MRO4-3/C18
Bhalerao	Prakash	MRO4-3/H10
Rosenberg	Larry	MRO4-3/H16
Weed	Dennis	MRO4-3/H19
Guest	Paul	MRO4-3/H20
Lewan	Rich	MRO4-3/H6
Myrick	Ron	MSO/M6
Paciulan	Dick	MSO1/C5
Bell	David	NEW B/G1
Follien	Ken	NIO/A2
Struck	Mildred	NIO/B18
Baker	Ken	NIO/B2
Srivastava	Keshava	NKS1-2/F2
Barron	Ed	NKS1-2/H2
Brown	David W.	NKS5-2/J5
Gordon	Bruce	NKS5-2/J6
Doyle	John	NRO2-2/H7
Wharff	Conray	OGO1-1/E17
Clinton	Dick	OGO1-1/R12
Herbener	Don	OGO1-2/C16
Sutherland	Rod	OGO1-2/P04
Keillor	Sharon	OGO1-2/W08
Rosa	Pat	OPA
Startsman	Terry	OPA
Davis	Steve	PDM1-1/H6
Fink	Terry	PDM1-2/B2
Zilvitis	Patrick	PDM1-2/F2
MacSwain	Dave	PDM1-2/H4
Goldberg	Norman	PDM1-2/L11
Baudelaire	Patrick	PRL
Kappler	John	REO D4/5F
Huckle	Peter	REO2-F/B2
Simensen	Jac	REOG/7
Scanlan	Jem	RTO/DCC
Reindorp	Peter	SBP F5
Frederick	Tom	SHR1-4/010
Starkey	Bob	SNA/2
Ueda	Toshio	TKO
Loveland	Dick	TTB1-1/E09
Hodges	Gene	TTB1-2/F03
Ancona VP	Henry	TTB1-2/G10
Woolf	Howard	TTB1-4/B05
Willis	Jim	TTB1-4/E03
Carabetta	Michael	TTB1-5/B03
Chen	Yvonne	TWO/A14
Kent	Bill	TWO/B21
Powers	Rich	TWO/C15
Johnston	Bob	UCF5/2
Burnce	Michael	UCO-2B
Swan	Richard	UCO-4
Taylor	Bob	UCT
Hofmann	Karl	UFC
Baltes	Heinz	UFC-416
Fassbender	Paul	UPO2-2
Arayas	Joe	UPO2-4
Heaton	Dick	UPO2-4/B7
Olivotto	Nino	VAR
Kania	Bill	VBE
Mills	Jim	VBE
Gordon	Ken	VRO3-2/B7
Dias	Manny	VRO3-3/Y4
Heffner VP	Bill	VRO6-2/C1
Gaviglia VP	Lou	WJO1-2/C7
Rozwat	Chuck	ZKO2-1/P05
Moquin	Mary Anne	ZKO2-3/Q08
Keating	Bill	ZKO2-3/Q08
Johnson	Pam	ZKO3-2/V20
Richardson	Catherine	ZSO1-2/B2

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Bill Kolb

RESPONSIBLE ENGINEER / MANAGER

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SUBMITTED NOVEMBER 1, 1989

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INTRODUCTION TO THE YELLOW BOOK

The FY90 Engineering Beige Book summarizes strategy, project plans and organization of groups responsible for product development and development support. It represents the engineering commitment to the rest of the company. Subsequent updates and changes to product oriented projects are reported in the engineering Yellow books which are published three times a year.

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Who to Contact. When looking for project information and status, contact the following:

PROJECT CONTACT	LOCATION OF CONTACT NAME	KINDS OF FUNCTIONS PERFORMED
Product Management	To find the name of the Product Manager of an individual project refer to the PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR.	. Project Coordination . Business Plans . Interface to DEC functions other than sales . Phase review process

Engineering Product Planning. When the right contact cannot be found, an individual needing additional help can refer to the Engineering Product Planning Office, Bill Koteff (DTN 223-3123) or Eli Glazer (DTN 223-4434).

INDEX OF ABBREVIATIONS FOR ENGINEERING GROUPS AND ORGANIZATIONS

REPRESENTS ORGANIZATIONS/GROUPS AS OF NOVEMBER 1989

ABS	ASIAN BASED SYSTEMS (DSSG)
AI	ARTIFICAL INTELLIGENCE TECH. GRP (DSSG)
AIM	ARCHITECTED INFO. MGMT. (SIMG)
AQU	AQUARIUS SYSTEM FAMILY (HPS)
BOSE	BUSINESS & OFFICE SYSTEMS
CENT	CENTAURUS (HPS)
CMPD	CIM MKTG. & PRODUCT DEV. (PMG)
CSS	COMPUTER SPECIAL SYSTEM
DBS	DATABASE SYSTEMS STORAGE (SIMG)
D&PE	DESIGN & PROCESS ENGINEERING (LES)
EMD & S ...	ELECTRO MECH. DESIGN & SUPPORT (LES)
ESD	ELECTRONIC STORAGE (SIMG)
ESG	ENGINEERING SYSTEMS GROUP (PMG)
FTS	FAULT TOLERANT SYSTEMS (HPS)
GSG	GOVERNMENT SYSTEMS GROUP
HCI	HEALTH CARE INDUSTRY
IE	INTERNATIONAL ENGINEERING (DSG)
ISG	IMAGE SYSTEM GROUP (DSG)
JRDC	JAPAN RESEARCH & DEV. CENTER (SIMG)
LDP	LABORATROY DATA PRODUCTS (PMFG)
LEDS	LOW END DISK STORAGE (SIMG)
MLDS	MEDIUM/LARGE DISKS & SUBSYSTEMS (SIMG)
MSD	MICRO/SYSTEMS DEVELOPMENT (LES)
MVAX	MICROVAX GROUP (LES)
NAC	NETWORKS & COMMUNICATIONS (DSG)
OSG	OPEN SOFTWARE GROUP (DSSG)
PCSG	PERSONAL COMPUTING SYS GROUP (LES)
PDP	PDP-11 (MSD)
PS & A	PRODUCT STRATEGY & ARCH. (DSSG)
PTG	PHYSICAL TECHNOLOGY GROUP (SCIT)
RTBG	REAL TIME BUSINESS GROUP (MSD)
SAD	STORAGE ADVANCE DEV. (SIMG)
SDT	SOFTWARE DEVELOPMENT TECH. (DSSG)
SEG	SEMICONDUCTOR ENGINEERING GROUP (SCIT)
SWSE	SOFTWARE SYSTEMS ENGINEERING
TOPS	TAPE & OPTICAL PRODUCT DEVELOPMENT (SIMG)
TPS	TRANSACTION PROCESSING SYSTEMS (HPS)
VAXCLU	VAXcluster ENGINEERING (HPS)
VIPS	VIDEO, IMAGE & PRINTER SYSTEMS (LES)
WRKSYS	WORKSTATIONS GROUP (LES)

GROUPS BY ORGANIZATIONS

HIGH PERFORMANCE SYSTEMS (HPS)	- VAXCLU, CENT, FTS, AQU, TPS
MID RANGE SYSTEMS BUSINESS GROUP (MSB)	- MSB
LOW END SYSTEMS (LES)	- VIPS, WRKSYS, PCSG, MicroVAX, MSD (PDP-11, RTBG, VAX DSM), D & PE, EMD & S
DISTRIBUTED SYSTEMS ENG (DSG)	- IE, NAC
SEMICONDUCTOR & INTERCONNECT TECHNOLOGY GROUP (SCIT)	- SEG, PTG
DISTRIBUTED SOFTWARE SYSTEMS GROUP (DSSG)	- SDT, ABSS, AI, VMS, OSG, PS & A
BUSINESS AND OFFICE SYS. ENG. (BOSE)	- BOSE
STORAGE INFORMATION & MGMT. GROUP (SIMG)	- DBS, ESD, LEDS, MLDS, TOPS, SAD, JRDC, AIM
PRODUCT MARKETING (PMG)	- CMPD, ESG, LDP, ISG, HCI
FIELD ENGINEERING (FE)	- CSS, GSG, SWSE
CENTRAL ENGINEERING (CE)	- CRA, CTC, PCP

ANNOUNCEMENT CALENDAR

FY90Q2

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
21501E00	ALL-IN-1 V3.0	8910	9012	9012	LUSTIG
21501E00	ALL-IN-1 DESKTOPS V1.0	8910	9001	9002	GABREE
21501E00	ALL-IN-1 MAINTENANCE	8912	8912	8912	CAMPKIN
15311100	AQUARIUS I	8910	9003	8906	JIM YIM
3M240000	B SERIES PVAX	8912	9001	8911	FORBES, DAVE
15131700	CONTROLLER	8910	8912	8910	RUSS, CLARE
11301V00	DAS V2.0	8911	9001	8912	B. LIBERTY
21701A00	DECFRAME-ELECTRONICS	8912	8912	8912	CHAN YOU CHOW
3M220100	DECSICON	8910	8910	8910	KETTNER, ERWIN
14201C00	DECSYSTEM 5800	8912	8912	8910	STEVE GEORGE
21702F00	DECVIEW 3D V2.0	8911	9003	8911	F. SANDERSON
15F01100	DISK STRIPING DRIVER	8910	8912	8912	MUNSON, WILLIAM
11301Y00	DSM V1.0	8911	9001	8912	J. CARPENTER
11302500	DSS V2.0	8910	9001	8911	V. MAMONE
21703200	EDCS II V2.1	8911	9007	9007	TAMY LOCKHART
3M210300	RACKMOUNT 3XXX	8912	8912	TBD	SALERNO, PAUL
15E31100	RDB/VMS - V3.1	8910	8912	8908	STEVE HORN
34004G00	RX-DISK PEDESTAL	8911	9001	9001	LOUISE BRANDWEIN
15471400	RZ56	8911	8911	8911	ADRIAN PICCOLO
15471A00	RZ56	8911	8911	8911	ADRIAN PICCOLO
3M220000	SUNFLOWER I	8911	8911	8911	HELMER, ERWIN
13141200	VAX 9000	8910	8912	8912	PETER ROSS
21311100	VAX DEC/MAP V3.0	8910	8912	8912	NADDEO, GENE
15E31600	VAX SQL - V3.1	8910	8912	8908	STEVE HORN
15E61200	VAX SQL SVCS - V1.1	8910	8912	8908	DEBORAH WASSERMAN
33401200	VMS SES	8911	8912	8912	FRENCH, ROGER

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 FOUR QUARTER ANNOUNCEMENT CALENDAR

FY90Q3

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
14101600	C-MAX	9003	9006	9003	JOHN TANK
15331200	CIRRUS	9002	9006	9006	JIM YIM
131E1100	CIRRUS I	9002	9005	8909	PECK, LAURIE
131E1200	CIRRUS I PROTOS	9002	9005	8909	PECK, LAURIE
15E71100	DEC RDBEXPERT - V1.0	9002	9006	8909	MICHAEL O'CONNELL
15E71400	DECTRACE - V1.0	9002	9006	9012	MICHAEL O'CONNELL
21221100	DECTRADE S1.0	9001	9001	9001	OLSEN, LIN
11301Z00	DSM V2.0	9001	9003	TBD	J. CARPENTER
3M210000	GRASSHOPPER-VME	9002	9006	TBD	HILMAN, ERIC
15901D00	LODGEPOLE	9003	9003	9003	
15121200	RA90	9003	9003	9003	SPENCE, ROB
15121300	RA90	9003	9003	9003	SPENCE,ROB
15E31200	RDB/VMS - V4.0	9002	9009	TBD	STEVE HORN
3M421100	RF-CALYPSO (6400)	9003	9003	9003	HOOPER, DAVE
3M411200	RF-LJ250	9003	9003	TBD	BENNETT, JOHN
15451300	RF31	9001	TBD	9006	DONNA MUNDY
34004500	RX-DELNI TERM CONCEN	9001	9004	9004	FRANK NOVAK
34004400	RX-LK401 KEYBOARD	9003	9006	9006	FRANK NOVAK
15901200	TOOTHPICK	9003	9003	9003	
15231700	TZ30 COST REDUCTION	9003	9003	9003	DIAZ, NORMANDO
3M210200	ULTRIX DRIVERS	9003	9003	TBD	TBD
15E31B00	VAX DATA DISTR-V2.2	9002	9009	TBD	ANDREW WATSON
15E21200	VAX DBMS - V4.2	9002	9007	9003	ABE MATHEW
15E31700	VAX SQL - V4.0	9002	9009	TBD	STEVE HORN
15E61300	VAX SQL SVCS - V4.0	9002	9009	TBD	DEBORAH WASSERMAN
15E61500	VAXLINK - V1.1	9002	9006	8907	ANNE THOMAS
15E61E00	VIDA TO ORACLE-V1.0	9002	9006	9006	ANNE THOMAS
15261D00	ZEPHYR	9001	9006	9006	BLANCHARD, ANNE

VI
DIGITAL RESTRICTED DISTRIBUTION

FY90Q4

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
21702P00	DECFRAME-AERO	9006	9006	9006	ED TANG
21702Q00	DECFRAME-AERO	9006	9006	9006	ED TANG
21702R00	DECFRAME-AERO	9006	9006	9006	ED TANG
21702T00	DECFRAME-AERO	9006	9006	9006	ED TANG
21702X00	DECFRAME-AERO	9006	9006	9006	ED TANG
21702Y00	DECFRAME-AERO	9006	9006	9006	ED TANG
21702Z00	DECFRAME-AERO	9006	9006	9006	ED TANG
1B801J00	DEFWA	9006	9007	9007	PARIKH, ANAND
3M411100	FIBER OPTIC LAN	9006	9006	TBD	BENNETT, JOHN
15261300	GUARDIAN	9006	9006	9006	MCCARREN, ED
15341400	MIPSFAIR II -32MB	9004	9004	8910	LOIS ANGERAMI
15331300	PELE 32MB	9005	9006	9005	LOIS ANGERAMI
11W01100	PRODUCTS AS PLANNED	9006	9006	9006	M. OUGHTON
11W01200	PRODUCTS AS PLANNED	9006	9006	9006	JACQUES SORNAY
11W01300	PRODUCTS AS PLANNED	9006	9006	9006	M OUGHTON/S MARIN
11W01400	PRODUCTS AS PLANNED	9006	9006	9006	M OUGHTON
11W01600	PRODUCTS AS PLANNED	9006	9006	9006	M SEGOND/ J SLADE
11W01900	PRODUCTS AS PLANNED	9006	9006	9006	BOB DRAY
11W01A00	PRODUCTS AS PLANNED	9006	9006	9006	ANDY VOWLES
11W01B00	PRODUCTS AS PLANNED	9006	9006	9006	A GOLDMAN/ G SEBAGH
11W01S00	PRODUCTS AS PLANNED	9006	9006	9006	PAUL NAYLOR
11W01800	PROJECTS AS PLANNED	9006	9006	9006	NOT APPLICABLE
15231200	QUABBIN	9006	9006	9006	JACOBS, CHET
3M411300	RF-PVAX	9006	9006	TBD	BENNETT, JOHN
15471500	RZ24	9006	TBD	TBD	MARY MEEKER
3M220200	SUNFLOWER II	9006	9006	TBD	KETTNER, ERWIN
15261100	TA90E	9006	9006	9006	DAMESEK, JAYNE
15231N00	TF70	9005	9005	9003	DIAZ, NORMANDO
21311J00	VAX DEC/OMNI V1.0	9004	9006	TBD	BASS, TERRY
21231B00	VAX SS7 V1.0	9004	8912	8901	LEBRIS, HERVE
21231C00	VAX SS7 V2.0	9004	9010	TBD	LEBRIS, HERVE
21231G00	VAXSMS V1.0	9004	9012	9003	BARRY, SEAN
21501300	VAX VTX V4.1	9004	9006	9006	CAREY
11W01500	VERSIONS AS PLANNED	9006	9006	9006	G TROTMAN/ A VOWLES

FY91Q1

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
34004F00	CMW-BASIC NETWRK INT	9009	9012	9012	BILL NAAS
34004E00	COMPART MODE WRKST	9009	9012	9012	BILL NAAS
11301W00	DAS V3.0	9007	9009	TBD	V. MAMONE
11302700	DCR V1.0	9007	9009	TBD	B. LIBERTY
11302A00	DECIMAGE III	9009	9011	TBD	B. PAGE
21221200	DECTRADE VMS V1.0	9009	9012	9012	LIN OLSEN
11302600	DSS V3.0	9007	9009	TBD	B. LIBERTY
3M230500	FISHCAT	9007	9009	TBD	NANBA, HIROMI
15431200	KFMSA	9008	9008	9008	ROBERT C. GRAY
1C201200	N/A	9007	9007	TBD	BARTOSZEK, JOHN
15451400	RF72	9009	TBD	TBD	DONNA MUNDY
34004900	RX-3MAX WRKST	9009	9012	9012	LOUISE BRANDWEIN
34004600	RX-H4005 ETHERNET TA	9007	9010	9010	FRANK NOVAK
34004800	RX-PVAX2 WRKST	9009	9012	9012	LOUISE BRANDWEIN
34004700	RX-VR320 MONITOR	9009	9012	9012	FRANK NOVAK
34004H00	SCSI REMOVABLE DRIVE	9009	9012	9012	TOM BEAUDET
15261400	SLS	9009	9009	9009	MCCARREN, ED
14201E00	VAX 6000 MODEL 500	9008	9008	9008	MARK MILLER
15F01E00	VAX/VMS FDU	9009	9009	TBD	MUNSON, WILLIAM
15331500	WINDCHILL	9009	9009	9009	FRANK LAZGIN

HIGH-END BUSINESS SEGMENT

FY90 Beige Book

1.0 High-end Segment Overview

Mission

Establish Digital as the industry leader in the high-performance technical and TP/commercial markets.

Strategies

- Focus on markets where mission-critical enterprise integration, high performance, and/or high availability are fundamental requirements.
- Invest in base process and product technologies that are building blocks for high-performance/high-availability platforms and systems.
- Invest in systems integration technologies and develop joint programs with Services to provide customized, sole-source, integrated solutions that enable our customers to compete effectively in their markets.

Business Focus

The High-end Segment is a market and engineering driven, full line systems business. We work with other Digital organizations to optimize the total returns to Digital from investments in logical and physical base technologies, process and assembly manufacturing, integrated technology/engineering, support, services, marketing, and sales capabilities.

Within the Segment are five business. High-end Segment revenues are derived primarily from sales and service of systems associated with two of these business: High-end Systems (large processes such as VAX 9000) and Fault-tolerant systems (Cirrus). This revenue stream will provide the return on investments made in support of our misison and strategies.

The three other businesses, Transaction Processing, VAXcluster Systems and Systems Integration Software Business Units also play a critical role in the High-end Segment strategy, although they also address requirements in other segments.

-TP Systems is focused on the TP marketplace, which extends across all pricebands. For the High-end Segment, the contribution of TP to high-end and fault-tolerant sysems sales is its critical role.

- VAXcluster Systems is focused on meeting customers' system-level requirements in the midrange and high-end markets. For the High-end Segment, VAXcluster Systems' critical role is providing high availability, flexible growth, system management, and system integration to fault-tolerant and high-end customers (all applications).
- Systems Integration Software is focused on the integration of applications which support product development activities across an enterprise.

2.0 Market Focus

High-end Market*

- High-end revenue will grow at about 6% to reach over $40B by 1992. This includes revenue from systems selling for >$500K. Approximately 85% of this revenue will be in the commercial market, predominantly transaction processing. (Further, most of the commercial market *growth* is in TP, which is growing at 10%). Of the remaining 15% of the revenue covering technical markets, more that half is in the high-performance technical arena, where growth is at the rate of 25% per year.
- There are three specific avenues to achieving market share growth in the high-end: providing a growth path to our installed base of 6XXX and 8XXX customers, targeting new applications in TP and high performance technical segments, and taking share from non-IBM competitors (e.g. Unisys, Bull).
- To achieve this market share growth, we must offer superior products and services, drive down customer switching costs, and offer equivalent performance, functionality, availability, and support in lower price ranges than the competition.

Fault-tolerant Market

- The fault-tolerant market size is approximately $2.3B in FY90, and is expected to grow at 23% per year to $2.7B in FY91 and to $4B by FY93.
- This market is largely a subset of the transaction processing market, but is not limited to that market. The market to date is concentrated in the major industries of finance, manufacturing, telecommunications, and government.
- The fault-tolerant market priceband today is primarily $75K - $1M.

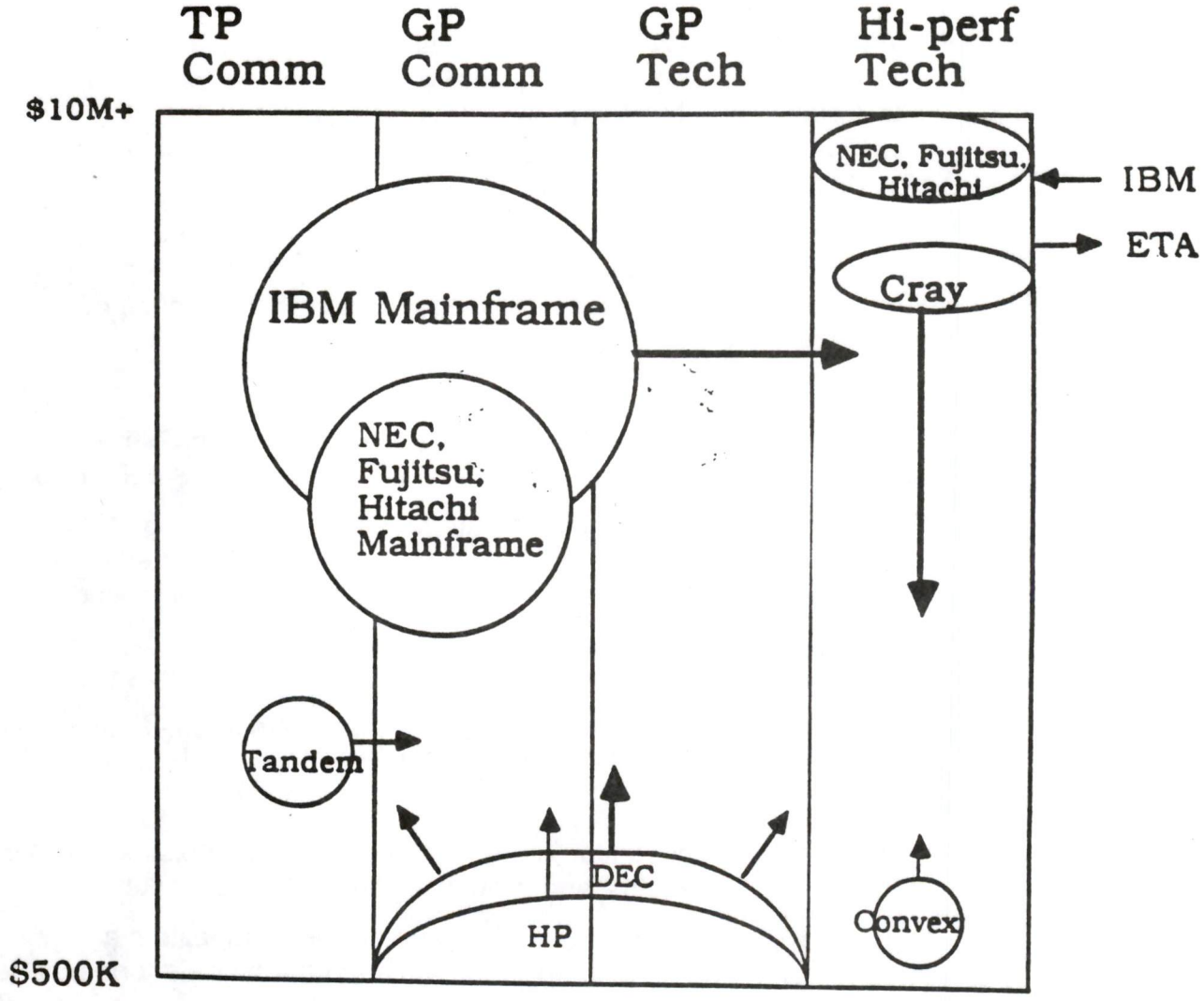
**Work is in progress to revisit high-end market size and growth rates in conjunction with the 1990 Environmental Assumptions Book activity. Figures will be revised in the near future.*

3.0 Competition (Figure 1)

- IBM is the dominant vendor in the high-end market, is building on its commercial market strengths, and is pursuing the technical market.
- NEC, FUJITSU and HITATCHI are major system competitors and will continue to pursue both commercial markets and the high-performance technical market based on technology leadership, service and support offerings, strong marketing alliances, and supercomputer products.
- CRAY will begin to compete in the high-performance technical market with lower-priced supercomputers.

(Fig 1)

Competitive Positioning



- TANDEM has demonstrated technical leadership in transaction processing and has been expanding its markets into general purpose applications. It is the clear leader in the fault-tolerant market with over 70% share and total corporate revenues of $1.3B in FY88.

- STRATUS is the second-place fault-tolerant vendor. Their hardware fault-tolerant systems are targeted primarily at the midrange market. Stratus sells its systems directly and through IBM which remarkets Stratus systems as IBM System 88 products.

- CONVEX will continue to push price/performance competition in the low end of the high- performance technical market, and to attract Digital's customers by offering emulation of our system software environment.

4.0 Positioning of Digital Systems in the Marketplace

In the high end, Digital offers:

- High system throughput as a result of the balance between CPU performance, high-speed I/O performance, and memory subsystem performance.

- High system flexibility, permitting customization for today's needs with the capability of expanding to meet tomorrow's demands.

- Broad range of system performance in a single CPU (30 to 117 VUPS, up to 512 MB of main memory, up to four XMI I/O channels, and up to 14 VAXBI I/O channels), and up to 400+ VUPS in VAXcluster systems.

- Integrated VAX vector processing - Digital has the broadest range of systems using integrated vector processing in the industry.

- Exceptional reliability and availability achieved through high reliability at the component level, and through the high-availability characteristics of VAXcluster systems.

- Comprehensive service and support - strategic consulting, program management, systems and application design and development support, and customized hardware.

- Rich selection of compatible applications through the extensive library of VMS and ULTRIX software products.

- Pricing significantly below IBM for equivalent performance and functionality.

In the fault-tolerant market:

- Cirrus is a family of systems protecting the customer's application investment by upgrading or clustering.

- Digital has the widest range of availability on the broadest single architecture.
- Cirrus is the only fault-tolerant system fully compatible with a mainstream architecture -- VAX.
- Digital is the leading high-availability vendor with over 9000 CI VAXclusters installed.
- Digital offers a spectrum of support and services to meet our customers' high-availability service needs.
- Digital fault tolerance is transparent and requires no unique programming. If it runs on a VAX, it can run on fault-tolerant.
- Digital has a fault-tolerant enterprise network strategy to deliver our customers' continuous networking availability.

5.0 Product Plans

o CPUs: The following table demonstrates continued improvements in CPU performance in the high-end and fault-tolerant markets,

Product	FRS	VUPs	MFlops	I/O Mb/Sec	Max Mem MB
High-end Systems:					
9000/210	FY90	30	18	80-320	512
9000/210 9000/410-440	FY91	35-120	21-84	80-320	2000
9XXX/Aqu II	FY92	45-155	27-108	80-320	2000
9XXX/Borealis	FY93	60-220	36-144	80-320	2000
Centaurus/EVAX	FY93	300-1200	100-400	100-1200	4000
Fault-tolerant Systems:					
Cirrus I	FY90	3.8	--	3.3	128
Cirrus II	FY91	6	--	3.3	512
Cirrus III	FY92	20	--	--	--
Cirrus Clusters	FY92	--	--	--	--

o Transaction Processing:

- By FY91, today's two TP monitors (ACMS and DECintact) will evolve into the DECtp monitor, which will be compatible with existing applications and offer extended capabilities (e.g. support of distributed transactions).

- DECxtp is a new TP environment being designed for the OZiX operating system.
- DECtp components (DECtp Front End, DECtp System Management and DECq, VMS queuing facility) are being designed for use in both VMS and OZiX environments.
- DECtp tools for CASE will include the capability to generate applications through DECtp Design. DECtp Workbench will cover the entire applications development lifecycle.

o VAXclusters:

- The CI will remain the primary CPU-to-storage interconnect. We will integrate new technologies such as FDDI and Giganet into multi-hub, multi-interconnect VAXcluster systems.
- The ease of selling, configuring and managing VAXcluster systems will be continually improved.
- To support increasing customer requirements for VAXcluster system management and capacity planning capabilities, investment will continue in software tools such as VPA and VCS.

o Software System Integration:

System integration through software engineering is a key strategic direction for the High-end Segment. Examples of software products which form the foundation for the implementation of this strategy are:

- Databus for the integration of applications which support product development activities across an enterprise (currently supporting all High-end Segment engineering/manufacturing efforts).

6.0 Product Dependencies

In addition to comprehensive and responsive two-way channels with sales, sales support, services groups and PMGs/IMGs, interdependencies that must be negotiated and managed during the planning process include:

- Fault tolerance is needed in the LAN/WAN strategies to support Cirrus plans.
- Disk and tape will become a higher percentage of total system price over time. Performance, price competitiveness and reliability are critical to systems competitiveness.
- Memory will become a higher percentage of total system price over time. We need a strategy for competing with vertically integrated competitors who design and manufacture their own memory chips and have a long-term pricing advantage over Digital.

- Digital needs competitive relational database products with high performance and data integrity.
- A UNIX strategy is needed for fault-tolerant systems.
- EVMS needs to be highly robust and VMS-compatible for commercial markets.
- Ultrix with vectors is critical today for technical markets. OZiX will grow in importance in commercial markets.
- Need for coordination of Digital system management activities in DSSG, NaC, Storage, and the High-end Segment.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Group Code: FAULT					Group: FAULT TOLERANT									
131E1100	1	PD	MRO	FC	CIRRUS I	2	9005	9002	0.0	17.7	18.5	0.0		HOFF,GEORGE PECK, LAURIE
131E1200	1	PD	MRO	FC	CIRRUS I PROTOTYPES	2	9005	9002	0.0	0.4	3.4	0.0		HOFF,GEORGE PECK, LAURIE
131E1300	1	PD	MRO	FC	CIRRUS II	1	9106	9103	0.0	0.1	1.9	0.0		HOFF,GEORGE PECK, LAURIE
131E1400	1	PD	MRO	FC	CIRRUS II PROTOTYPES	1	9106	9103	0.0	0.0	0.0	0.0		HOFF,GEORGE PECK, LAURIE
131E1600	1	PD	MRO	FC	CIRRUS CI ADAPTER	PRE-0	9109	9106	0.0	0.0	0.0	0.0		HOFF, GEORGE TBD
131E1A00	1	PD	MRO	FC	CIRRUS III	PRE-0	9206	9203	0.0	0.0	1.0	0.0		HOFF, GEORGE PECK, LAURIE
Chart	1				In-House Funded Proposed Project Totals				0.0	18.2	24.8	0.0		
Chart	1				Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
Chart	1				Proposed FAULT TOLERANT				0.0	18.2	24.8	0.0		
Chart	1				In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
Chart	1				Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
Chart	1				Incremental FAULT TOLERANT				0.0	0.0	0.0	0.0		
Chart	1				Totals for FAULT TOLERANT				0.0	18.2	24.8	0.0		
In-House Funded Proposed Project Totals									0.0	18.2	24.8	0.0		
Externally Funded Proposed Project Totals									0.0	0.0	0.0	0.0		
Proposed FAULT TOLERANT									0.0	18.2	24.8	0.0		
In-House Funded Incremental Project Totals									0.0	0.0	0.0	0.0		
Externally Funded Incremental Project Totals									0.0	0.0	0.0	0.0		
Incremental FAULT TOLERANT									0.0	0.0	0.0	0.0		
Totals for FAULT TOLERANT									0.0	18.2	24.8	0.0		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Group Code: HPSC					Group: HPS SYSTEMS COMPONENTS									
13141200	1	PD	MRO	FC	AQUARIUS	2	8912	8910	0.0	71.7	66.2	0.0		CARL GIBSON PETER ROSS
13141700	1	PD	MRO	FC	AQUARIUS FOLLOW-ONS	2	TBD	TBD	0.0	0.5	11.8	0.0		SULTAN ZIA TBD
131G1100	1	PD	MRO	FC	CENTAURUS	0	9212	9209	0.0	11.6	19.7	0.0		GRIFFITH,JAMES PUGLIESE, FRANK
	Chart	1			In-House Funded Proposed Project Totals				0.0	83.8	97.7	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed HPS SYSTEMS COMPONENTS				0.0	83.8	97.7	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental HPS SYSTEMS COMPONENTS				0.0	0.0	0.0	0.0		
	Chart	1			Totals for HPS SYSTEMS COMPONENTS				0.0	83.8	97.7	0.0		
13131100	2	AD	MRO	NA	SYSTEMS RESEARCH & ENGINEERING	NA	NA	NA	0.0	0.7	1.2	0.0		CAO, XIREN NA
13131200	2	AD	MRO	NA	SRE - ADV. SYSTEMS ARCHITECTUR	NA	NA	NA	0.0	0.2	0.2	0.0		CAO, XIREN NA
13121100	2	PM	MRO		86XX PRODUCT MANAGEMENT	NA	NA		0.0	0.8	0.0	0.0		WHITMAN, RICH
	Chart	2			In-House Funded Proposed Project Totals				0.0	1.7	1.4	0.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed HPS SYSTEMS COMPONENTS				0.0	1.7	1.4	0.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental HPS SYSTEMS COMPONENTS				0.0	0.0	0.0	0.0		
	Chart	2			Totals for HPS SYSTEMS COMPONENTS				0.0	1.7	1.4	0.0		

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Proposed Project Totals				0.0	85.5	99.1	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed HPS SYSTEMS COMPONENTS				0.0	85.5	99.1	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental HPS SYSTEMS COMPONENTS				0.0	0.0	0.0	0.0		
					Totals for HPS SYSTEMS COMPONENTS				0.0	85.5	99.1	0.0		
*** Group Code: SW					Group: SOFTWARE									
13181300	1	PD	MRO	FC	DIGITAL EXTENDED MATH LIBRARIE	0	8912	8910	0.0	0.0	0.7	0.0		BARADELLO, CARLOS HAIGH, JERRY
13181100	1	PD	MRO	NA	DATABUS SYSTEM	0	9009	TBD	0.0	0.0	3.0	0.0		REZAC, ROY THACKERAY, RAY
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	0.7	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed SOFTWARE				0.0	0.0	0.7	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	3.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental SOFTWARE				0.0	0.0	3.0	0.0		
	Chart	1			Totals for SOFTWARE				0.0	0.0	3.7	0.0		
13601200	2	RE	TAY	NA	SOFTWARE ENG TECH CENTER	NA	NA	NA	0.0	0.0	0.3	0.0		HUTCHINGS, TONY NA
13601300	2	PM	MRO	NA	UNIX SYSTEM V	NA	NA	NA	0.0	0.0	0.1	0.0		BARADELLO, CARLOS NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed SOFTWARE				0.0	0.0	0.0	0.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.4	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental SOFTWARE				0.0	0.0	0.4	0.0		
	Chart	2			Totals for SOFTWARE				0.0	0.0	0.4	0.0		
					In-House Funded Proposed Project Totals				0.0	0.0	0.7	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed SOFTWARE				0.0	0.0	0.7	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	3.4	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental SOFTWARE				0.0	0.0	3.4	0.0		
					Totals for SOFTWARE				0.0	0.0	4.1	0.0		
*** Group Code: TPS					Group: TP SYSTEMS									
13F01T00	1	PD	TAY	FC	DECTP MONITOR V1.0	0	9105	TBD	0.0	3.0	4.4	0.0		CARLOS BORGIALLI GAIL FERREIRA
13F01U00	1	PD	TAY	NA	INTACT	3	8909	TBD	0.0	1.5	0.0	0.0		CARLOS BORGIALLI JERRY HERSHEY
13F01V00	1	PD	TAY	NA	ACMS V3.0	0	8811	TBD	0.0	1.5	0.1	0.0		CARLOS BORGIALLI PENNY SCHARFMAN
13F01W00	1	PD	TAY	NA	TP WORKBENCH V1.0	0	9105	TBD	0.0	1.5	2.0	0.0		CARLOS BORGIALLI LANCE SIMON
13F01Z00	1	PD	TAY	NA	ACMS API	0	9105	TBD	0.0	0.0	0.4	0.0		CARLOS BORGIALLI PENNY SCHARFMAN
13F02400	1	PD	TAY	NA	ACMS V3.1	2	8910	TBD	0.0	0.0	0.6	0.0		CARLOS BORGIALLI PENNY SCHARFMAN

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
13F02200	1	PD	TAY	NA	DECINTACT V1.1	3	8908	TBD	0.0	3.2	1.4	0.0		CARLOS BORGIALLI JERRY HERSHEY
13F02300	1	PD	TAY	NA	DECINTACT V2.0	0	9006	TBD	0.0	0.0	2.3	0.0		CARLOS BORGIALLI JERRY HERSHEY
13F02800	1	PD	TAY	NA	DECTP MONITOR V2.0	0	9202	TBD	0.0	0.0	0.4	0.0		CARLOS BORGIALLI GAIL FERREIRA
13F02900	1	PD	TAY	NA	ACMS V3.2	0	9005	TBD	0.0	0.0	0.1	0.0		CARLOS BORGIALLI PENNY SCHARFMAN
13F01500	1	PD	UCF	NA	DECXTP	PRE-0	9206	TBD	0.0	1.0	5.7	0.0		DIETER GAWLICK JIM CASEY
13F01800	1	PD	TAY	NA	VMS/CICS PROGRAM	0	9007	TBD	0.0	0.0	1.3	0.0		JAMES BEHYMER DAVID LOVE-ACTING PM
13F02A00	1	PD	TAY	NA	DECTP BACKEND	0	9105	TBD	0.0	0.0	0.2	0.0		CARLOS BORGIALLI GAIL FERREIRA
13F02B00	1	PD	TAY	NA	DECTP FRONTEND V1.0	0	9202	TBD	0.0	0.0	0.3	0.0		CARLOS BORGIALLI GAIL FERREIRA
13F01L00	1	PD	TAY	NA	CONFIGURATION & RECOV. TESTING	0	9011	TBD	0.0	0.0	0.9	0.0		LINDA WRIGHT LINDA WRIGHT
	Chart	1	In-House Funded Proposed Project Totals						0.0	11.7	19.2	0.0		
	Chart	1	Externally Funded Proposed Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Proposed TP SYSTEMS						0.0	11.7	19.2	0.0		
	Chart	1	In-House Funded Incremental Project Totals						0.0	0.0	0.9	0.0		
	Chart	1	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Incremental TP SYSTEMS						0.0	0.0	0.9	0.0		
	Chart	1	Totals for TP SYSTEMS						0.0	11.7	20.1	0.0		
13F01900	2	PS	TAY	NA	DESIGN CONSULTATION	NA	NA	NA	0.0	1.0	1.3	0.0		NORM DEPLEDGE NA
13F01A00	2	AR	TAY	NA	ARCHITECTURE/STDS	NA	NA	NA	0.0	0.9	1.0	0.0		D. TORRES NA
13F01B00	2	PS	TAY	NA	PROGRAM OFFICE	NA	NA	NA	0.0	0.9	1.1	0.0		DENNIS ROBERSON NA
13F01C00	2	PS	TAY	NA	PERFORMANCE ANALYSIS	NA	NA	NA	0.0	4.5	4.2	0.0		LINDA WRIGHT NA
13F01D00	2	BPM	TAY	NA	BASE SYSTEM MARKETING	NA	NA	NA	0.0	3.4	3.3	0.0		TED GRENHAM NA
13F02500	2	PS	TAY	NA	TP QUALITY	NA	NA	NA	0.0	0.0	0.1	0.0		J. JAFERIAN NA
13F02600	2	PM	TAY	NA	TP TIMESHARING SYSTEM	NA	NA	NA	0.0	0.0	1.0	0.0		KIMBALL HINES NA

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 SUBMISSION SUMMARY REPORT
MAJOR ORGANIZATION: HIGH PERFORMANCE SYSTEMS

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
13F02700	2	FN	TAY	NA	TP FINANCE	NA	NA	NA	0.0	0.0	0.6	0.0		JOHN R. SAMPLE NA
13F01M00	2	MC	TAY	NA	MARCOM	NA	NA	NA	0.0	0.0	0.9	0.0		TED GRENHAM NA
13F01N00	2	NS	TAY	NA	TAYLOR STREET MOVE	NA	NA	NA	0.0	0.0	0.1	0.0		D. ROBERSON NA
	Chart	2			In-House Funded Proposed Project Totals				0.0	10.7	12.6	0.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed TP SYSTEMS				0.0	10.7	12.6	0.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	1.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental TP SYSTEMS				0.0	0.0	1.0	0.0		
	Chart	2			Totals for TP SYSTEMS				0.0	10.7	13.6	0.0		
					In-House Funded Proposed Project Totals				0.0	22.4	31.8	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed TP SYSTEMS				0.0	22.4	31.8	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	1.9	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental TP SYSTEMS				0.0	0.0	1.9	0.0		
					Totals for TP SYSTEMS				0.0	22.4	33.7	0.0		
*** Group Code: VCS					Group: VAXCLUSTER SYSTEMS									
13771200	1	PD	MRO	FC	ADAPTER DEVELOPMENT	2	9003	8910	0.0	5.2	4.7	0.0		ANTON/KU BURQUE, DAVE
13771300	1	PD	MRO	FC	VAX PERFORMANCE ADVISOR	0	9003	9002	0.0	0.9	1.2	0.0		BARADELLO, CARLOS FARNHAM, LAURA
13771400	1	PD	MRO	FC	VAXCLUSTER CONSOLE SYSTEM	0	9005	9003	0.0	0.6	0.8	0.0		BARADELLO, CARLOS DEPERALTA, AIREEN

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
13771600	1	PD	MRO	FC	VAXCLUSTER SYSTEM MANAGEMENT	PRE-0	9006	9006	0.0	0.0	0.6	0.0		BARADELLO, CARLOS FARNHAM, LAURA
	Chart	1	In-House Funded Proposed Project Totals						0.0	6.7	7.3	0.0		
	Chart	1	Externally Funded Proposed Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Proposed VAXCLUSTER SYSTEMS						0.0	6.7	7.3	0.0		
	Chart	1	In-House Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Incremental VAXCLUSTER SYSTEMS						0.0	0.0	0.0	0.0		
	Chart	1	Totals for VAXCLUSTER SYSTEMS						0.0	6.7	7.3	0.0		
13771500	2	PS	MRO	NA	CI PRODUCTS	NA	NA	NA	0.0	0.0	0.1	0.0		ZAGAME, STEVE NA
13771700	2	PS	MRO	NA	CURRENT SERIES	NA	NA	NA	0.0	0.3	0.5	0.0		ROSS, RAY NA
13771800	2	PM	MRO	NA	VAXCLUSTER OPERATIONS	NA	NA	NA	0.0	0.5	0.6	0.0		ROSS, RAY NA
13771900	2	BPM	MRO	NA	BASE SYSTEMS MARKETING	NA	NA	NA	0.0	1.4	1.4	0.0		ZAGAME, STEVE NA
13771A00	2	PS	NIO	NA	CVG	NA	NA	NA	0.0	3.1	3.2	0.0		ENGLUND, GLENN NA
13771B00	2	PS	MRO	NA	SYSTEMS ENGINEERING	NA	NA	NA	0.0	2.4	2.7	0.0		ENGLUND, GLENN NA
13771C00	2	AD	MRO	NA	TECHNICAL OFFICE	NA	NA	NA	0.0	1.3	2.6	0.0		BALKOVICH, ED NA
13771D00	2	AD	MRO	NA	SPG LAB	NA	NA	NA	0.0	1.7	1.5	0.0		CAO, XIREN NA
13771E00	2	PM	MRO	NA	VAXCLUSTERS SYSTEMS PRODUCT MG	NA	NA	NA	0.0	0.4	0.4	0.0		ZAGAME, STEVE NA
13771Q00	2	PS	MRO	NA	VAXCLUSTER HUBS	NA	NA	NA	0.0	6.7	6.5	0.0		BAKER, KEN NA
13771S00	2	PS	MRO	NA	INTERCONNECT AND IOTF PROG MGM	NA	NA	NA	0.0	0.0	0.5	0.0		ENGLUND, GLENN NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	17.8	20.0	0.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed VAXCLUSTER SYSTEMS				0.0	17.8	20.0	0.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental VAXCLUSTER SYSTEMS				0.0	0.0	0.0	0.0		
	Chart	2			Totals for VAXCLUSTER SYSTEMS				0.0	17.8	20.0	0.0		
					In-House Funded Proposed Project Totals				0.0	24.5	27.3	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed VAXCLUSTER SYSTEMS				0.0	24.5	27.3	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental VAXCLUSTER SYSTEMS				0.0	0.0	0.0	0.0		
					Totals for VAXCLUSTER SYSTEMS				0.0	24.5	27.3	0.0		
*** Group Code: ZMANADJ Group: MANAGEMENT ADJUSTMENT														
13Z01100	2	AM	MRO	NA	ADMIN ADJUSTMENT	NA	NA	NA	0.0	3.4-	0.9-	0.0		HPS FINANCE NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	3.4-	0.9-	0.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed MANAGEMENT ADJUSTMENT				0.0	3.4-	0.9-	0.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental MANAGEMENT ADJUSTMENT				0.0	0.0	0.0	0.0		
	Chart	2			Totals for MANAGEMENT ADJUSTMENT				0.0	3.4-	0.9-	0.0		
					In-House Funded Proposed Project Totals				0.0	3.4-	0.9-	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed MANAGEMENT ADJUSTMENT				0.0	3.4-	0.9-	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental MANAGEMENT ADJUSTMENT				0.0	0.0	0.0	0.0		
					Totals for MANAGEMENT ADJUSTMENT				0.0	3.4-	0.9-	0.0		
					In-House Funded Project Totals				0.0	147.2	182.8	0.0		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed HIGH PERFORMANCE SYSTEMS				0.0	147.2	182.8	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	5.3	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental HIGH PERFORMANCE SYSTEMS				0.0	0.0	5.3	0.0		
					Grand Totals for HIGH PERFORMANCE SYSTEMS				0.0	147.2	188.1	0.0		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Prod	Owner/ Mgr
*** Group Code: FAULT Group: FAULT TOLERANT															
131E1100	1	PD	MRO	FC	CIRRUS I	2	9005	9002	0.0	17.7	18.5	0.0			HOFF,GEORGE PECK, LAURIE
Fault tolerant VAX computer system consisting of a non-stop CVAX based CPU, mirrored ECC memory, Ethernet/DSSI disk interface, sync. communications interface, RF disks with end-to-end date checking, and BA213 "like" packaging with system level BBU.															
131E1200	1	PD	MRO	FC	CIRRUS I PROTOTYPES	2	9005	9002	0.0	0.4	3.4	0.0			HOFF,GEORGE PECK, LAURIE
131E1300	1	PD	MRO	FC	CIRRUS II	1	9106	9103	0.0	0.1	1.9	0.0			HOFF,GEORGE PECK, LAURIE
Fault tolerant processor based on SOC chip set and a 128 MB ECC memory for the CIRRUS computer system. Based on existing Cirrus I s-box platform with CPU module upgrade. Also develop packaging to mount s-box within a 60" cab to improve system footprint.															
131E1400	1	PD	MRO	FC	CIRRUS II PROTOTYPES	1	9106	9103	0.0	0.0	0.0	0.0			HOFF,GEORGE PECK, LAURIE
Upgrade available Cirrus I platforms.															
131E1600	1	PD	MRO	FC	CIRRUS CI ADAPTER	PRE-0	9109	9106	0.0	0.0	0.0	0.0			HOFF, GEORGE TBD
The Cirrus CI adapter (CCI) will use the Israel-designed CIDL which is part of the CIVIC chip set. Module will also contain NI adaptor.															
131E1A00	1	PD	MRO	FC	CIRRUS III	PRE-0	9206	9203	0.0	0.0	1.0	0.0			HOFF, GEORGE PECK, LAURIE
Next generation of Cirrus product will incorporate the most advanced chip and packaging technologies as well as key software enhancements.															

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	1			In-House Funded Proposed Project Totals				0.0	18.2	24.8	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed FAULT TOLERANT				0.0	18.2	24.8	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental FAULT TOLERANT				0.0	0.0	0.0	0.0		
	Chart	1			Totals for FAULT TOLERANT				0.0	18.2	24.8	0.0		
					In-House Funded Proposed Project Totals				0.0	18.2	24.8	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed FAULT TOLERANT				0.0	18.2	24.8	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental FAULT TOLERANT				0.0	0.0	0.0	0.0		
					Totals for FAULT TOLERANT				0.0	18.2	24.8	0.0		
*** Group Code: HPSC					Group: HPS SYSTEMS COMPONENTS									
13141200	1	PD	MRO	FC	AQUARIUS	2	8912	8910	0.0	71.7	66.2	0.0		CARL GIBSON PETER ROSS

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					AQUARIUS FAMILY									

The AQUARIUS VAX 9000 series is a system development program to produce a family of high performance processors. This program will develop high performance interconnect (HDSC), micro-packaging (MCU-I), semiconductor and cooling technologies which will provide Digital with a set of competitive products for the early 1990s and an upward migration path for implementation of future high performance systems

AQUARIUS: Uniprocessor performance of 30 times the 11/780 and 6000 hours MTBF. AQUARIUS systems are expandable to provide performance of 120 times the 11/780 in quad SMP configurations.

13141700	1	PD	MRO	FC	AQUARIUS FOLLOW-ONS	2	TBD	TBD	0.0	0.5	11.8	0.0		SULTAN ZIA TBD

Follow-on Aquarius products include an entry level cpu, ARIES; AQUARIUS II; BOREALIS; MPP and VLIW.

131G1100	1	PD	MRO	FC	CENTAURUS	0	9212	9209	0.0	11.6	19.7	0.0		GRIFFITH, JAMES PUGLIESE, FRANK

The Centaurus platform will incorporate innovative technologies, such as Mosaic V ECL semiconductors, HDSC/MCU interconnect, and heat exchange technologies to deliver high performance, highly available, and highly expandable systems. The first CPU implemented on the Centaurus platform wi be Centaurus EVAX. This product will offer 1-4 EVAX CPUs (300-1200 VUPS), 1-12 XMI (I/O bandwidth of 100 - 1200 MB/sec), and up to 4GB main memory at FRS. At least one mid-life kicker to Centaurus EVAX is planned. The $19.7M funding level listed does not reflect the request of the Centaurus program, which requires $33.0M in funding in FY90.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart		1		In-House Funded Proposed Project Totals				0.0	83.8	97.7	0.0		
	Chart		1		Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Proposed HPS SYSTEMS COMPONENTS				0.0	83.8	97.7	0.0		
	Chart		1		In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Incremental HPS SYSTEMS COMPONENTS				0.0	0.0	0.0	0.0		
	Chart		1		Totals for HPS SYSTEMS COMPONENTS				0.0	83.8	97.7	0.0		
13131100	2	AD	MRO	NA	SYSTEMS RESEARCH & ENGINEERING	NA	NA	NA	0.0	0.7	1.2	0.0		CAO, XIREN NA
Systems Research and Engineering provides the tools, algorithms, modeling, methods and constant units of work necessary to ensure HPS' ability to accurately and efficiently represent performance of both single and multiple CPU systems today and through the 1990's.														
13131200	2	AD	MRO	NA	SRE - ADV. SYSTEMS ARCHITECTUR	NA	NA	NA	0.0	0.2	0.2	0.0		CAO, XIREN NA
SRE provides research into advanced architectures and funds university research in the areas of performance analysis, CAD, system verification, and multicomputer architecture.														
13121100	2	PM	MRO		86XX PRODUCT MANAGEMENT	NA	NA		0.0	0.8	0.0	0.0		WHITMAN, RICH
Product phase down plan developed in FY89 will be implemented.														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	1.7	1.4	0.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed HPS SYSTEMS COMPONENTS				0.0	1.7	1.4	0.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental HPS SYSTEMS COMPONENTS				0.0	0.0	0.0	0.0		
	Chart	2			Totals for HPS SYSTEMS COMPONENTS				0.0	1.7	1.4	0.0		
					In-House Funded Proposed Project Totals				0.0	85.5	99.1	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed HPS SYSTEMS COMPONENTS				0.0	85.5	99.1	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental HPS SYSTEMS COMPONENTS				0.0	0.0	0.0	0.0		
					Totals for HPS SYSTEMS COMPONENTS				0.0	85.5	99.1	0.0		
*** Group Code: SW					Group: SOFTWARE									
13181300	1	PD	MRO	FC	DIGITAL EXTENDED MATH LIBRARIE	0	8912	8910	0.0	0.0	0.7	0.0		BARADELLO, CARLOS HAIGH, JERRY

The Digital Extended Math Library is a set of subprograms, subroutines, and libraries which are drawn from existing proprietary or public libraries. It compliments the VAX/VMS RTL. DXML will be optimized for the VAX vector architecture, but must also support VAX scalar platforms. DXML will initially include BLAS level 1 extensions, BLAS level 2, BLAS level 3, Linpack, Eispack and LDP's LSP. The initial project goals are to establish DXML as a product on VAX, and later on on ULTRIX and the MIPS architecture.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
13181100	1	PD	MRO	NA	DATABUS SYSTEM	0	9009	TBD	0.0	0.0	3.0	0.0		REZAC, ROY THACKERAY, RAY

The DATABUS Based Systems are focused on improving the management and use of product development data across engineering, manufacturing and customer service. The DATABUS programs for FY90 will provide version control/configuration management for internal use and to some key Digital customers.

Chart 1	In-House Funded Proposed Project Totals	0.0	0.0	0.7	0.0	
Chart 1	Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0	
Chart 1	Proposed SOFTWARE	0.0	0.0	0.7	0.0	
Chart 1	In-House Funded Incremental Project Totals	0.0	0.0	3.0	0.0	
Chart 1	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0	
Chart 1	Incremental SOFTWARE	0.0	0.0	3.0	0.0	
Chart 1	Totals for SOFTWARE	0.0	0.0	3.7	0.0	

13601200	2	RE	TAY	NA	SOFTWARE ENG TECH CENTER	NA	NA	NA	0.0	0.0	0.3	0.0		HUTCHINGS, TONY NA

The Software Engineering Technology Center (SETC) is being created to evaluate new software engineering methods, i.e. object oriented techniques, rapid prototyping, data-dictionary driven designs, program design languages, and introducing them into production use when applicable. Ultimately the SETC will provide a technology "base" for HPS, where engineers can learn new skills and develop new techniques to be used to solve critical problems in actual HPS software programs.

13601300	2	PM	MRO	NA	UNIX SYSTEM V	NA	NA	NA	0.0	0.0	0.1	0.0		BARADELLO, CARLOS NA

UNIX System V development activities to support Aquarius and Cirrus platforms.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed SOFTWARE				0.0	0.0	0.0	0.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.4	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental SOFTWARE				0.0	0.0	0.4	0.0		
	Chart	2			Totals for SOFTWARE				0.0	0.0	0.4	0.0		
					In-House Funded Proposed Project Totals				0.0	0.0	0.7	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed SOFTWARE				0.0	0.0	0.7	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	3.4	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental SOFTWARE				0.0	0.0	3.4	0.0		
					Totals for SOFTWARE				0.0	0.0	4.1	0.0		
*** Group Code: TPS					Group: TP SYSTEMS									
13F01T00	1	PD	TAY	FC	DECTP MONITOR V1.0	0	9105	TBD	0.0	3.0	4.4	0.0		CARLOS BORGIALLI GAIL FERREIRA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

This product is a merger of and replacement for the two current monitors, DECintact and VAX ACMS. The new VMS-based monitor will preserve the two existing programming styles, which customers will be able to mix and match in the same application to meet various requirements. New features include:

- Distributed server management. DECtp Monitor will provide service to allow users to create, delete, and maintain servers both locally and remotely. This capability coupled with DDTM support for transaction integrity allows users to route transactions throughout a DECnet network.

- DECq. Version 1 will support a new, general purpose queing mechanism to facilitate store-and-forward and general message switching applications.

13F01U00	1	PD	TAY	NA	INTACT	3	8909	TBD	0.0	1.5	0.0	0.0		CARLOS BORGIALLI JERRY HERSHEY

This product is a TP Monitor offering traditional 3GL style of programming. This product was converted to DECintact V1.1.

13F01V00	1	PD	TAY	NA	ACMS V3.0	0	8811	TBD	0.0	1.5	0.1	0.0		CARLOS BORGIALLI PENNY SCHARFMAN

This product offers substantial improvement to existing software. It includes significant research and development of new technology regarding ACMS functionality in the TP environment.

13F01W00	1	PD	TAY	NA	TP WORKBENCH V1.0	0	9105	TBD	0.0	1.5	2.0	0.0		CARLOS BORGIALLI LANCE SIMON

This new product will provide a CASE environment for designing, coding, and testing TP applications. One sub-component of TP Workbench, namely TP Generator, will dramatically reduce application development time.

13F01Z00	1	PD	TAY	NA	ACMS API	0	9105	TBD	0.0	0.0	0.4	0.0		CARLOS BORGIALLI PENNY SCHARFMAN

This is a major enhancement to the ACMS application program interface that will enable it to access functionality provided in the new DECtp monitor. It is now included in the DECtp Monitor V1.0 project.

13F02400	1	PD	TAY	NA	ACMS V3.1	2	8910	TBD	0.0	0.0	0.6	0.0		CARLOS BORGIALLI PENNY SCHARFMAN

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
This new product provides support for: o DECforms o CDDplus o SQL o ADU Syntax														
13F02200	1	PD	TAY	NA	DECINTACT V1.1	3	8908	TBD	0.0	3.2	1.4	0.0		CARLOS BORGIALLI JERRY HERSHEY
This new product provides full support of Digital database products.														
13F02300	1	PD	TAY	NA	DECINTACT V2.0	0	9006	TBD	0.0	0.0	2.3	0.0		CARLOS BORGIALLI JERRY HERSHEY
This product supports DECforms and VAX Rdb in a multi-threaded as well as a per-process application environment. Also supports DECdtm.														
13F02800	1	PD	TAY	NA	DECTP MONITOR V2.0	0	9202	TBD	0.0	0.0	0.4	0.0		CARLOS BORGIALLI GAIL FERREIRA
This is a major release of the DECtp Monitor product. Major deliverables for the project include: o Portable front end component. Front ends for DECtp V2.0 will run on both VMS and one other platform. o IBM interoperability. DECtp V2.0 programs will be able to communicate and interoperate with TP application programs running on IBM systems. o High availability. The failover capabilities of DECtp V2.0 applications will be greatly enhanced over those available in V1.0. o Improved system management.														
13F02900	1	PD	TAY	NA	ACMS V3.2	0	9005	TBD	0.0	0.0	0.1	0.0		CARLOS BORGIALLI PENNY SCHARFMAN
ACMS V3.2 is a maintenance release. In addition to bug fixes, ACMS will provide as a new feature the ability to coordinate queue operations with database updates. The mechanism to support this coordination is the distributed transaction manager (DECdtm) capability in VMS.														
13F01500	1	PD	UCF	NA	DECXTP	PRE-0	9206	TBD	0.0	1.0	5.7	0.0		DIETER GAWLICK JIM CASEY

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					Next generation Transaction Processing product using the current state of the art performance as a starting point. Additional emphasis will be on enhanced functionality, ease of use and cost of ownership. Specific attention will be given to the ability to connect independent transactions to business processes. The initial systems will be based on UNIX.									
13F01800	1	PD	TAY	NA	VMS/CICS PROGRAM	0	9007	TBD	0.0	0.0	1.3	0.0		JAMES BEHYMER DAVID LOVE-ACTING PM
					Adds interoperability support. Offloads applications on other operating systems. Adds SQL data base support. Tracks CICS evolution and DECtp evolution.									
13F02A00	1	PD	TAY	NA	DECTP BACKEND	0	9105	TBD	0.0	0.0	0.2	0.0		CARLOS BORGIALLI GAIL FERREIRA
					This product combines 32-bit backend compliant with DECtp architecture. It provides common core TP services accessed by multiple TP programming interfaces (ACMS, DECintact, and others.) Will combine with DECtp Monitor.									
13F02B00	1	PD	TAY	NA	DECTP FRONTEND V1.0	0	9202	TBD	0.0	0.0	0.3	0.0		CARLOS BORGIALLI GAIL FERREIRA
					This system provides common front-end access to all DECtp systems. It will use VAXforms for forms management. Version 1 will run only on a VAX platform. Later versions will handle UNIX and PS/2. It will combine with DECtp Monitor.									
13F01L00	1	PD	TAY	NA	CONFIGURATION & RECOV. TESTING	0	9011	TBD	0.0	0.0	0.9	0.0		LINDA WRIGHT LINDA WRIGHT
					Develop and perform functional and performance tests on complete TP systems that include local and wide area communications networks, terminal servers, front-end forms processors, and back-end data processors. Develop and perform system level integration tests to demonstrate that transactions and databases are fully recoverable under common types of failures.									

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	1			In-House Funded Proposed Project Totals				0.0	11.7	19.2	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed TP SYSTEMS				0.0	11.7	19.2	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.9	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental TP SYSTEMS				0.0	0.0	0.9	0.0		
	Chart	1			Totals for TP SYSTEMS				0.0	11.7	20.1	0.0		
13F01900	2	PS	TAY	NA	DESIGN CONSULTATION	NA	NA	NA	0.0	1.0	1.3	0.0		NORM DEPLEDGE NA
					Design analysis of customers systems for performance, functionality, capacity planning and on-site project management. Location: TAY									
13F01A00	2	AR	TAY	NA	ARCHITECTURE/STDS	NA	NA	NA	0.0	0.9	1.0	0.0		D. TORRES NA
					Define system architecture to optimize and integrate component architecture.									
13F01B00	2	PS	TAY	NA	PROGRAM OFFICE	NA	NA	NA	0.0	0.9	1.1	0.0		DENNIS ROBERSON NA
					General management and system engineering for DECtp. Contract with ASCI for DECintact (FY89-FY90).									
13F01C00	2	PS	TAY	NA	PERFORMANCE ANALYSIS	NA	NA	NA	0.0	4.5	4.2	0.0		LINDA WRIGHT NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

Design Support
Provide performance related design support to TP Software Engineering and TP Architecture groups. This will include performance measurement and analysis studies of DECintact, ACMS, DECtp Workbench, and DECtp Runtime components.

Benchmark Specification and Development
Define and implement TP benchmarks and benchmarking tools for characterizing and positioning base DECtp systems. Audit TP benchmark tests performed by other testing group.

Product Positioning
Perform (and coordinate with other DEC groups the performance of) benchmarks on DECtp software and hardware in the TP marketplace.

DECtp Sizing Tools
Provide DECtp application sizing tools and guidelines to field organizations and other internal DEC groups. Collect information about TP applications at several different levels and put them into the knowledge base used by the sizing tools.

13F01D00	2	BPM	TAY	NA	BASE SYSTEM MARKETING	NA	NA	NA	0.0	3.4	3.3	0.0		TED GRENHAM NA

Market the base TP platforms to generate new market opportunities in TP. Leverage PMG in industry market groups for new solutions. Train and transfer expertise to field sales and support. Establish programs aimed at industry consultants.

13F02500	2	PS	TAY	NA	TP QUALITY	NA	NA	NA	0.0	0.0	0.1	0.0		J. JAFERIAN NA

Designs, develops and supports the introduction of new processes which increase engineering and product team productivity and increases customer satisfaction.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
13F02600	2	PM	TAY	NA	TP TIMESHARING SYSTEM	NA	NA	NA	0.0	0.0	1.0	0.0		KIMBALL HINES NA

Development of an expert system with an analytic modeling engine that will be used to determine what system configuration will meet performance goals for specific TP applications.

13F02700	2	FN	TAY	NA	TP FINANCE	NA	NA	NA	0.0	0.0	0.6	0.0		JOHN R. SAMPLE NA
13F01M00	2	MC	TAY	NA	MARCOM	NA	NA	NA	0.0	0.0	0.9	0.0		TED GRENHAM NA

-Product Information

-Selling Techniques

-Sales Tools and Literature

13F01N00	2	NS	TAY	NA	TAYLOR STREET MOVE	NA	NA	NA	0.0	0.0	0.1	0.0		D. ROBERSON NA

Chart 2	In-House Funded Proposed Project Totals	0.0	10.7	12.6	0.0
Chart 2	Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart 2	Proposed TP SYSTEMS	0.0	10.7	12.6	0.0
Chart 2	In-House Funded Incremental Project Totals	0.0	0.0	1.0	0.0
Chart 2	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2	Incremental TP SYSTEMS	0.0	0.0	1.0	0.0
Chart 2	Totals for TP SYSTEMS	0.0	10.7	13.6	0.0

Project ID	Act Ch	Loc Cde	Int Cde	St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Proposed Project Totals				0.0	22.4	31.8	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed TP SYSTEMS				0.0	22.4	31.8	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	1.9	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental TP SYSTEMS				0.0	0.0	1.9	0.0		
					Totals for TP SYSTEMS				0.0	22.4	33.7	0.0		
*** Group Code: VCS					Group: VAXCLUSTER SYSTEMS									
13771200	1	PD	MRO	FC	ADAPTER DEVELOPMENT	2	9003	8910	0.0	5.2	4.7	0.0		ANTON/KU BURQUE, DAVE
13771300	1	PD	MRO	FC	VAX PERFORMANCE ADVISOR	0	9003	9002	0.0	0.9	1.2	0.0		BARADELLO, CARLOS FARNHAM, LAURA

The XCD project will provide a high performance, low cost, and highly reliable port controller connecting the XMI bus to the high speed computer interconnect (CI). The XCD will implement a native CI simultaneous dual path feature with performance of greater than 8 megabytes per second and will be contained on one double sided surface mount module. XCD will implement a 32 bit microprocessor and internal data path using the latest CMOS gate array and mixed mount package technologies. XCD will support Aquarius shipments beginning on 9003. XCD will begin shipping as a corporate adapter on 9004, after qualification with Calypso systems.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

The VAX Performance Advisor is a leadership product in the capacity management market, combining expert system technology for performance management and analytic modeling for capacity planning. FY90 engineering requirements include:

- Support of field image versions of VPA

- Development of version 2.1 to:
  - stay current with new versions of VMS
  - provide support for new hardware (Aquarius, Cirrus, SAxxx, solid state disk, etc.)
  - enhance modeling to include memory, larger clusters and MI-clusters
  - support DECwindows
  - provide several minor functional improvements
  - VPA 2.1 currently in Phase 0
  - FRS targeted for Q3 FY90

13771400	1	PD	MRO	FC	VAXCLUSTER CONSOLE SYSTEM	0	9005	9003	0.0	0.6	0.8	0.0		BARADELLO, CARLOS DEPERALTA, AIREEN

VCS has been available since 1986. It provides a central control point for console lines of the nodes in a VAXcluster as well as stand-alone systems. VCS 1.3 includes DECwindows support, remote access capabilities, expanded event notification, and 32-node support as well as maintenance fixes.

13771600	1	PD	MRO	FC	VAXCLUSTER SYSTEM MANAGEMENT	PRE-0	9006	9006	0.0	0.0	0.6	0.0		BARADELLO, CARLOS FARNHAM, LAURA

The VAXcluster System Management Tool Kit provides a framework for development and release of system management tools. It improves customer satisfaction by reducing complexity and by making it easier to manage the VAXcluster. FY90 product development will focus on 2 specific products/capabilities, chosen from proposals currently under review. Proposals under evaluation include automatic tuning (based on the Monitor A/D project), a system management workstation (based on VCS and the Captain A/D project), and configuration management and control capabilities. The specific products to be developed will be chosen by the end of Q2FY90.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart		1		In-House Funded Proposed Project Totals				0.0	6.7	7.3	0.0		
	Chart		1		Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Proposed VAXCLUSTER SYSTEMS				0.0	6.7	7.3	0.0		
	Chart		1		In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Incremental VAXCLUSTER SYSTEMS				0.0	0.0	0.0	0.0		
	Chart		1		Totals for VAXCLUSTER SYSTEMS				0.0	6.7	7.3	0.0		
13771500	2	PS	MRO	NA	CI PRODUCTS	NA	NA	NA	0.0	0.0	0.1	0.0		ZAGAME, STEVE NA

Product management of all current hub, adapter, and cable products for CI VAXcluster Systems. Includes all ongoing business management and phase 4/5 activities.

13771700	2	PS	MRO	NA	CURRENT SERIES	NA	NA	NA	0.0	0.3	0.5	0.0		ROSS, RAY NA

In FY90, the VAXcluster Series Programs will:

1. Systems integrate, deliver and install VAX 6333 systems
2. Configure, integrate, and deliver complex VAXcluster Systems for mission-critical sales.
3. Administer the end of life for the VAX 8974, 8978, and 8842 systems.

13771800	2	PM	MRO	NA	VAXCLUSTER OPERATIONS	NA	NA	NA	0.0	0.5	0.6	0.0		ROSS, RAY NA

The VAXcluster Operations Group provides business information systems, analysis and operations support to the VAXcluster PBU, VAXcluster Product Management, and VAXcluster Marketing. This group uses existing corporate databases (PFR, COPIS, MIC) and our own VAXcluster Customer Database (VCCD) to measure all aspects of the VAXcluster business including customer, product, configuration and application information. A quarterly Business Analysis Report is generated and used by the PBU and other interdependent PBUs and business groups to understand trends and developments in the VAxcluster business. Support is provided to product management throughout the company. VAXcluster operations is the VAXcluster business unit focus for the creation of a multi-star, multi-interconnect VAXcluster system to be implemented and used in Marlboro.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
13771900	2	BPM	MRO	NA	BASE SYSTEMS MARKETING	NA	NA	NA	0.0	1.4	1.4	0.0		ZAGAME, STEVE NA

Provide marketing support for VAXcluster Systems and products developed by the PBU. This includes development of marketing programs, sales tools, reference accounts, sales training, customer events, market requirements, promotional activities and overall marketing of component products and systems.

13771A00	2	PS	NIO	NA	CVG	NA	NA	NA	0.0	3.1	3.2	0.0		ENGLUND, GLENN NA

CVG test High Performance VAXclusters using a customer perspective with the goal of experiencing problems prior to customers' experiencing them. CVG tests are designed to exercise clusters in several functional dimensions and detect hardware, software, interaction, and other types of latent design problems. When problems are experienced, CVG troubleshoots the problem to the faulty VAXcluster component or function, then supports the engineering group responsible for that product (component) in their efforts to design a solution. The corrections made to the components are re-tested to ensure that the originally experienced problem has been corrected.

In performing this service, CVG supports the business and engineering LRPs (company wide) by removal of latent problems in VAXcluster component products.

13771B00	2	PS	MRO	NA	SYSTEMS ENGINEERING	NA	NA	NA	0.0	2.4	2.7	0.0		ENGLUND, GLENN NA

Provide engineering support, including pre-sales support, in the form of configuration analysis and design to ensure that Digital's VAXcluster systems meet and exceed the customers' expectations. Provide post-sales support where problems are found in installed VAXcluster systems which cannot be resolved by the normal escalation processes.

VAXcluster Systems Engineering is also focused on driving system design to ensure that new VAXcluster components integrate well with existing and planned VAXcluster systems. To accomplish this work, the Systems Engineering team will develop configuration guidelines and rules for VAXcluster systems, and will provide training to implement these guidelines. Further, the Systems Engineering team will also be actively involved in the development of new architectures and designs which are applicable to VAXcluster Systems. As a part of this work VAXcluster Systems Engineering serves as a focal point for the work of the System Reliability Engineering team and the VAXcluster SASE team.

13771C00	2	AD	MRO	NA	TECHNICAL OFFICE	NA	NA	NA	0.0	1.3	2.6	0.0		BALKOVICH, ED NA

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

The VAXcluster Technical Office identifies and solves strategic technical problems for VAXclusters. The current list of strategic problems includes: a long-term technical vision for VAXclusters, system-level design validation methods, performance and availability, scaling, and system management. This work is accomplished with a team staffed by both Advanced High-End Systems Development (HPS) and VMS engineering. This team works with the VAXcluster PBU and the VMS PBU, among others, to implement recommended solutions.

In performing this service, the Technical Office supports the business and engineering LRPs of organizations delivering VAXcluster systems and components. It does so by developing a long-term plan for the evolution of VAXcluster systems, and improving processes used to design and test the systems and components.

13771D00	2	AD	MRO	NA	SPG LAB	NA	NA	NA	0.0	1.7	1.5	0.0		CAO, XIREN NA

Lab support for system characterization and modeling studies conducted for VAXcluster PBU. These studies support product development, Technical Office, and Systems Engineering activities.

13771E00	2	PM	MRO	NA	VAXCLUSTERS SYSTEMS PRODUCT MG	NA	NA	NA	0.0	0.4	0.4	0.0		ZAGAME, STEVE NA

Provide management direction and strategy for Product Management and Base Product Marketing. Ensures consistency and integration of requirements, business plans and marketing plans for VAXcluster Systems. Also provides clerical support for the marketing and product management groups as well as cost center administration functions.

13771Q00	2	PS	MRO	NA	VAXCLUSTER HUBS	NA	NA	NA	0.0	6.7	6.5	0.0		BAKER, KEN NA

The VAXcluster hub strategy is based on VAXcluster systems with multiple hubs and multiple types of interconnects. This project funds engineering activities required to support multiple star coupler environments, including development of a CI traffic monitoring device, and investigation of active hub technologies. This project also funds the wind-down of the Pleiades program which will be completed in Q2FY90.

13771S00	2	PS	MRO	NA	INTERCONNECT AND IOTF PROG MGM	NA	NA	NA	0.0	0.0	0.5	0.0		ENGLUND, GLENN NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

This project initiates program management and systems engineering work required to support the implementation of the I/O task force recommendations, and the integration of FDDI, Giganet, and other interconnects into VAXcluster system environments.
Activities include definition of market requirements for system capabilities, positioning of FDDI's role within VAXcluster system environments, testing of mixed interconnect VAXcluster systems, performance and availability modeling of mixed interconnect systems, and investigation of extension of system management capabilities to support physically separated, multi-hub systems.

Chart 2 In-House Funded Proposed Project Totals	0.0	17.8	20.0	0.0
Chart 2 Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart 2 Proposed VAXCLUSTER SYSTEMS	0.0	17.8	20.0	0.0
Chart 2 In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Incremental VAXCLUSTER SYSTEMS	0.0	0.0	0.0	0.0
Chart 2 Totals for VAXCLUSTER SYSTEMS	0.0	17.8	20.0	0.0

In-House Funded Proposed Project Totals	0.0	24.5	27.3	0.0
Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Proposed VAXCLUSTER SYSTEMS	0.0	24.5	27.3	0.0
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental VAXCLUSTER SYSTEMS	0.0	0.0	0.0	0.0
Totals for VAXCLUSTER SYSTEMS	0.0	24.5	27.3	0.0

*** Group Code: ZMANADJ Group: MANAGEMENT ADJUSTMENT

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
13Z01100	2	AM	MRO	NA	ADMIN ADJUSTMENT	NA	NA	NA	0.0	3.4-	0.9-	0.0		HPS FINANCE NA

Administrative adjustments, including adjustments for spending on projects which have ended.

Chart	2	In-House Funded Proposed Project Totals	0.0	3.4-	0.9-	0.0
Chart	2	Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart	2	Proposed MANAGEMENT ADJUSTMENT	0.0	3.4-	0.9-	0.0
Chart	2	In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart	2	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart	2	Incremental MANAGEMENT ADJUSTMENT	0.0	0.0	0.0	0.0
Chart	2	Totals for MANAGEMENT ADJUSTMENT	0.0	3.4-	0.9-	0.0

In-House Funded Proposed Project Totals	0.0	3.4-	0.9-	0.0
Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Proposed MANAGEMENT ADJUSTMENT	0.0	3.4-	0.9-	0.0
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental MANAGEMENT ADJUSTMENT	0.0	0.0	0.0	0.0
Totals for MANAGEMENT ADJUSTMENT	0.0	3.4-	0.9-	0.0

Project ID	Act Ch	Loc Cde	Int Cde	St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Project Totals				0.0	147.2	182.8	0.0		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed HIGH PERFORMANCE SYSTEMS				0.0	147.2	182.8	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	5.3	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental HIGH PERFORMANCE SYSTEMS				0.0	0.0	5.3	0.0		
					Grand Totals for HIGH PERFORMANCE SYSTEMS				0.0	147.2	188.1	0.0		

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Major Organization: HIGH PERFORMANCE SYSTEMS

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
13181300	DXML	8910	8912	8912	HAIGH, JERRY
13F01T00	DECTP MONITOR V1.0	TBD	9105	TBD	GAIL FERREIRA
13F01U00	INTACT	TBD	8909	TBD	JERRY HERSHEY
13F01V00	ACMS V3.0	TBD	8811	TBD	PENNY SCHARFMAN
13F01W00	TP WORKBENCH V1.0	TBD	9105	TBD	LANCE SIMON
13F01Z00	ACMS API	TBD	9105	TBD	PENNY SCHARFMAN
13F02400	ACMS V3.1	TBD	8910	TBD	PENNY SCHARFMAN
13F02200	DECINTACT V1.1	TBD	8908	TBD	JERRY HERSHEY
13F02300	DECINTACT V2.0	TBD	9006	TBD	JERRY HERSHEY
13F02800	DECTP MONITOR V2.0	TBD	9202	TBD	GAIL FERREIRA
13F02900	ACMS V3.2	TBD	9005	TBD	PENNY SCHARFMAN
13141200	VAX 9000	8910	8912	8912	PETER ROSS
13141700	AQUARIUS FOLLOW-ONS	TBD	TBD	TBD	TBD
131E1100	CIRRUS I	9002	9005	8909	PECK, LAURIE
131E1200	CIRRUS I PROTOS	9002	9005	8909	PECK, LAURIE
131E1300	CIRRUS II	9103	9106	9106	PECK, LAURIE
131E1400	CIRRUS II PROTOS	9103	9106	9106	PECK, LAURIE
131E1600	CIRRUS CI ADAPTER	9106	9109	9109	TBD
131E1A00	CIRRUS III	9203	9206	9206	PECK, LAURIE
131G1100	CENTAURUS	9209	9212	9212	PUGLIESE, FRANK
13771200	XCD	8910	9003	8912	BURQUE, DAVE
13771300	VPA	9002	9003	9003	FARNHAM, LAURA
13771400	VCS	9003	9005	9005	DEPERALTA, AIREEN
13771600	SYSTEM MANAGEMENT	9006	9006	9006	FARNHAM, LAURA
13F01500	DECXTP	TBD	9206	TBD	JIM CASEY
13F01800	VMS/CICS PROGRAM	TBD	9007	TBD	DAVID LOVE-ACTING PM
13F02A00	DECTP BACKEND	TBD	9105	TBD	GAIL FERREIRA
13F02B00	DECTP FRONTEND V1.0	TBD	9202	TBD	GAIL FERREIRA
13181100	DATABUS V1.0	TBD	9009	TBD	THACKERAY, RAY
13F01L00	CONFIG/RECOV. TEST	TBD	9011	TBD	LINDA WRIGHT

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MID-RANGE SYSTEMS
DEVELOPMENT ENGINEERING

digital Mid-Range Systems

Mid-Range Systems
FY90 Beige Book

November 8, 1989

Mid-Range Systems' Top 4 Strategic Directions

Servers as Resources for the Distributed Backbone

In the 90's, mid-range systems will be the key resources in a Distributed Backbone, which will assimilate traditional data center applications and serve the desktop. We will rapidly evolve our product set to offer VAX and DECsystem servers (general purpose, compute, file, realtime, mail, etc.) as well as support for resources from other vendors. We will become the leading server vendor in the industry.

Reinvigorate VAX as the engine for growth and profit

VAX provides most of Digital's profit today, and must continue to contribute in the future. We will continue to invest heavily in VAX to provide competitive customer solutions in high value-added, high-growth markets, including servers for the Distributed Backbone.

Build the DECsystem business

Establish Digital as a leading provider of profitable, world-class UNIX solutions to mid-range customers, including servers for the Distributed Backbone.

Disinvest selectively

The above directions will require investment. We will have to meet the investment need by disinvesting in activities with less added value across the corporation.

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Mid-Range Product Strategy

1. Single Platform Strategy	6000 followed by Laser
2. Near Term Processors	$100–400K VAX: Mariah, NVAX $300–600K VAX: Raven $100–300K RISC: CMAX, R4000
3. Long Term Processors	EVAX: AD level investment in FY90

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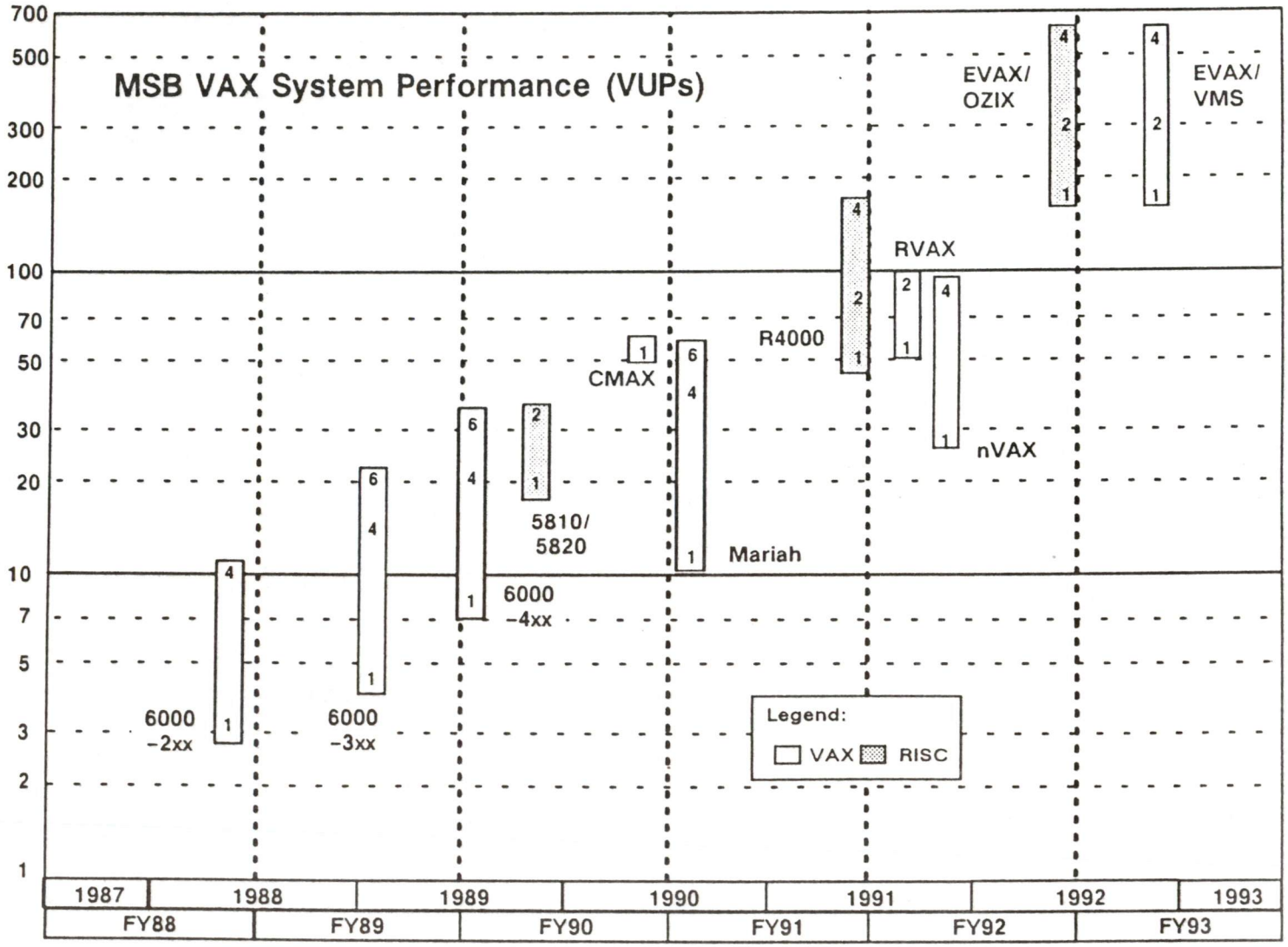


DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Group Code: HEMSB					Group: HIGH-END MID-RANGE SYSTEMS									
14401C00	1	PD	LTN	FC	RVAX	1	9109	9109	0.0	0.0	0.0	0.0		STEVE JENKINS JIM BECKER

A new member of the VAX6000 family optimized to be a market leading compute server, also targetting emerging server markets (real-time, mail, etc.). Performance: 50 VUPS single processor (expandable to 100 VUPS dual) or 35 MFLOPS (Linpack 100x100) single vector processor system. Based on bipolar microprocessor technology, combining high performance with low cost, high volume microprocessor attributes.

Chart 1	In-House Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart 1	Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart 1	Proposed HIGH-END MID-RANGE SYSTEMS	0.0	0.0	0.0	0.0
Chart 1	In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 1	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 1	Incremental HIGH-END MID-RANGE SYSTEMS	0.0	0.0	0.0	0.0
Chart 1	Totals for HIGH-END MID-RANGE SYSTEMS	0.0	0.0	0.0	0.0

In-House Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Proposed HIGH-END MID-RANGE SYSTEMS	0.0	0.0	0.0	0.0
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental HIGH-END MID-RANGE SYSTEMS	0.0	0.0	0.0	0.0
Totals for HIGH-END MID-RANGE SYSTEMS	0.0	0.0	0.0	0.0

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Group Code: HPWS					Group: HIGH-PERF WORK SYSTEMS									
14101600	1	PD	LTN	FC	C-MAX	2	9006	9003	0.0	0.0	0.0	0.0		DURVASULA, SAS JOHN TANK
C-MAX is a Server for UNIX-based Workstations. It is based on the MIPS R6000 Chip Set and incorporates a XMI-1 platform with SCSI, DSSI and HSC based storage. Performance is 50-60 VUPS.														
Chart 1					In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
Chart 1					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
Chart 1					Proposed HIGH-PERF WORK SYSTEMS				0.0	0.0	0.0	0.0		
Chart 1					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
Chart 1					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
Chart 1					Incremental HIGH-PERF WORK SYSTEMS				0.0	0.0	0.0	0.0		
Chart 1					Totals for HIGH-PERF WORK SYSTEMS				0.0	0.0	0.0	0.0		
In-House Funded Proposed Project Totals									0.0	0.0	0.0	0.0		
Externally Funded Proposed Project Totals									0.0	0.0	0.0	0.0		
Proposed HIGH-PERF WORK SYSTEMS									0.0	0.0	0.0	0.0		
In-House Funded Incremental Project Totals									0.0	0.0	0.0	0.0		
Externally Funded Incremental Project Totals									0.0	0.0	0.0	0.0		
Incremental HIGH-PERF WORK SYSTEMS									0.0	0.0	0.0	0.0		
Totals for HIGH-PERF WORK SYSTEMS									0.0	0.0	0.0	0.0		
*** Group Code: LEMSB					Group: LOW-END MID-RANGE SYSTEMS									
14201600	1	PD	BXB	FC	R4000 SYSTEM	0	9106	9106	0.0	0.0	0.0	0.0		HARBERT, DON STEVE GEORGE

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Development of a multiprocessor RISC system, using the MIPS R4000 chip the XMI-2 platform. Performance: 35-45 VUPS (single) through 140-180 VUPS (quad). OZIX and ULTRIX software support.														
14201C00	1	PD	BXB	FC	R3000 (ISIS)	2	8912	8912	0.0	0.0	0.0	0.0		HARBERT, DON STEVE GEORGE
Digital's first mid-range RISC offering, based on the MIPS R3000 processor and the VAX 6000 system platform. Performance: 14 VUPS or 18.7 integer MIPS (single) to 28 VUPS or 36.0 integer MIPS (dual processor). Supported by ULTRIX, with MIPS' Optimized C, Pascal, and FORTRAN compilers.														
14201E00	1	PD	BXB	FC	MARIAH	1	9008	9008	0.0	0.0	0.0	0.0		HARBERT, DON MARK MILLER
Continuation of the VAX 6000 family, using the Mariah processor for 10 VUPS (single) to 55 VUPS (6 processor) scalar performance. The XMI-2 system bus with writeback cache will be introduced to accommodate the higher processor performance whiole continuing to support all XMI I/O adapters without modification. Mariah will support the Rigel vector processor, delivering slightly higher floating point performance.														
14201G00	1	PD	BXB	FC	NVAX	1	9112	9112	0.0	0.0	0.0	0.0		HARBERT, DON MARK MILLER
Continuation of the VAX 6000 family with the NVAX processor, implementing a new micro-architecture that will deliver 24 VUPS (single) through 125 VUPS (six processor) performance.														
14201M00	1	PD	BXB	FC	EVAX	PRE-0	9206	9206	0.0	0.0	0.0	0.0		DON HARBERT DARYL LONG (ACTING)
System based on the EVAX processor and the Laser system platform, providing competitive performance and cost/performance running either VMS or OZIX [EVAX/VMS FRS is 9212]. Performance: 150 VUPS (single) to 600 VUPS (quad processor). Platform designed for aggressive cost, with 300 MB/s system bus and integrated I/O subsystem.														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed LOW-END MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental LOW-END MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
	Chart	1			Totals for LOW-END MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
					In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed LOW-END MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental LOW-END MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
					Totals for LOW-END MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
					In-House Funded Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		
					Grand Totals for MID-RANGE SYSTEMS				0.0	0.0	0.0	0.0		

DIGITAL RESTRICTED DISTRIBUTION

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Major Organization: MID-RANGE SYSTEMS

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
14101600	C-MAX	9003	9006	9003	JOHN TANK
14201600	R4000 SYSTEM	9106	9106	9106	STEVE GEORGE
14201C00	DECSYSTEM 5800	8912	8912	8910	STEVE GEORGE
14201E00	VAX 6000 MODEL 500	9008	9008	9008	MARK MILLER
14201G00	NVAX	9112	9112	9112	MARK MILLER
14201M00	EVAX	9206	9206	9206	DARYL LONG (ACTING)
14401C00	RVAX	9109	9109	9109	JIM BECKER

DIGITAL RESTRICTED DISTRIBUTION

Low End Systems

FY90 Beige Book

Product Strategy and Investment Plan

November 1, 1989

Low End Systems Summary

Low End Systems Summary / Overview

INTRODUCTION

The Low End Systems (LES) Group is composed of the following Organizations:

Video, Image and Printer Systems - VIPS - Group
(formerly Desktop Systems Group)
Worksystems Group
Personal Computing Systems Group
MicroVAX Group
MicroSystems Development Group
Design and Process Engineering Group
Electro Mechanical Design and Support Group
Base Product Marketing and Planning Group

Each of these groups is focused on supporting the LES goal of providing leadership low end integrated computing systems/solutions from Desktop to department level.

Beige Book entries for each individual LES unit follow the LES consolidation and integration overview.

MISSION

* Provide leadership Low End Integrated Computing Systems from Desktop to the Department

Desktop	General Purpose
Personal Computer Integration	Servers
Personal Computers	Realtime Systems
Workstations	Multiuser Systems
Terminals and Monitors	
Printers	

* Optimize the financial contribution of Low End Systems and achieve our overall financial objectives of 18% Operating Profit and 18% Return on Assets by 1992.

* Develop, provide and manage a multi-functional integrated Planning Process that fosters and drives the implementation of the Business Segment Organizational Model.

STRATEGIES

The Low End System Product Strategy is divided into two categories:

* Desktop
* General Purpose

DESKTOP STRATEGY

Digital provides desktop users with leadership solutions on the desk and beyond, plus the ability to easily expand these solutions while leveraging their past and current investments.

Digital provides these solutions for the desktop style of computing our customers require.

* For customers who do simple wordprocessing, mail, spreadsheets, we offer leadership **terminals**.
* For customers who require MS-DOS industry-standard personal computers, we offer our new family of Digital **personal computers**.
* For customers who require a fast UNIX workstation, we offer our new RISC-based **UNIX workstation**.
* For customers who want breadth and richness of the VAX/VMS environment in a VAX-based desktop system, we offer an entire range of **VAXstations**.
* And, for customers who have already made investments on the desk, we will **integrate** those **systems** into the enterprise better than any of our competitors.

Through Digital's local area networks and Network Application Support, we link the user to the enterprise information network.

The detailed plans which support this overall Desktop Strategy are included in the Workstation, Desktop Systems, and Personal Computer sections of this Long Range Plan.

GENERAL PURPOSE SYSTEMS STRATEGY

* Obtain a significant portion of the systems/servers market within the $7K to $200K range by achieving over $4 billion of revenue by FY91 at a high profitability (PBT > 20%)

* Develop standard-setting general purpose, multi-user and realtime systems and servers in order to be the system choice for:
  - Server intelligence behind the machine on the desk
  - System in front of the Corporate mainframe
  - System that ties it all together

* Enhance PDP-11 software and hardware and develop PDP-11 to MVAX migration tools/products in order to generate high profit, and keep PDP-11 customers is the Digital family.

* Develop competitive PDP-11/VAX products that integrate distributed realtime applications into the departmental and enterprise-wide network in order to re-establish Digital's leadership in realtime factory and laboratory markets.

The detailed plans which support this General Purpose Strategy are included in the MicroVAX and MicroSystems Development sections of this Long Range Plan.

PRODUCT DELIVERABLES

Deliver these Systems/Products in FY90:

Desktop

PrintServer 20
DECwindows Terminal:
mono,color,image
LA324
LA70
VT330,340 cost reduced
VT420
LNXX (8ppm laser)
PVAX 1
Mfariah/PV
3 MAX: 2D, 3D
NAS-PCSA Server, V3.0
VMS Services for Mac, V1.0
NAS-PCSA Pkg'd Server V2.0
NAS-PCSA/DOS Client V1.0,3.0,4.0
PC DECwindows OS/2 X Server
DECnet-DOS V3.0
DECnet-OS/2 V1.0
3270 T.E. V2.0
3270 D.S. V1.0
MS-DOS Gateway SNA API
OS/2 Gateway SNA API

General Purpose

DECsystem 5400 (16.6 mips)
MIPsfair 2 (24 mips)
PELE (8-10 vups)
RT-11 V5.5
C Language for RT-11
RSTS/E, RSX
rtVAX 300

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: LESCENT					Sub Group: LES CENTRAL									
1BZZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed LES CENTRAL				0.0	0.0	0.0	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
	Chart	1			Totals for LES CENTRAL				0.0	0.0	0.0	0.0		
1BZ01100	2	PN	MLO	NA	TRANSITION	NA	NA	NA	0.0	0.0	2.0	5.0		KOCH, LES . NA
1BZ01200	2	NS	MLO	NA	OCCUPANCY	NA	NA	NA	0.0	2.6	2.6	0.0		KOCH, LES NA
1BZ01300	2	PM	MLO	NA	OPPORTUNITY INVESTMENT	NA	NA	NA	0.0	0.0	1.8	2.0		LACAVA, DOM NA
	Chart	2			In-House Funded Proposed Project Totals				0.0	2.6	6.4	7.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed LES CENTRAL				0.0	2.6	6.4	7.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
	Chart	2			Totals for LES CENTRAL				0.0	2.6	6.4	7.0		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Proposed Project Totals				0.0	2.6	6.4	7.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed LES CENTRAL				0.0	2.6	6.4	7.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
					Totals for LES CENTRAL				0.0	2.6	6.4	7.0		
					In-House Funded Project Totals				0.0	2.6	6.4	7.0		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for LES CENTRAL				0.0	2.6	6.4	7.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
					Grand Totals for LES CENTRAL				0.0	2.6	6.4	7.0		

DIGITAL RESTRICTED DISTRIBUTION

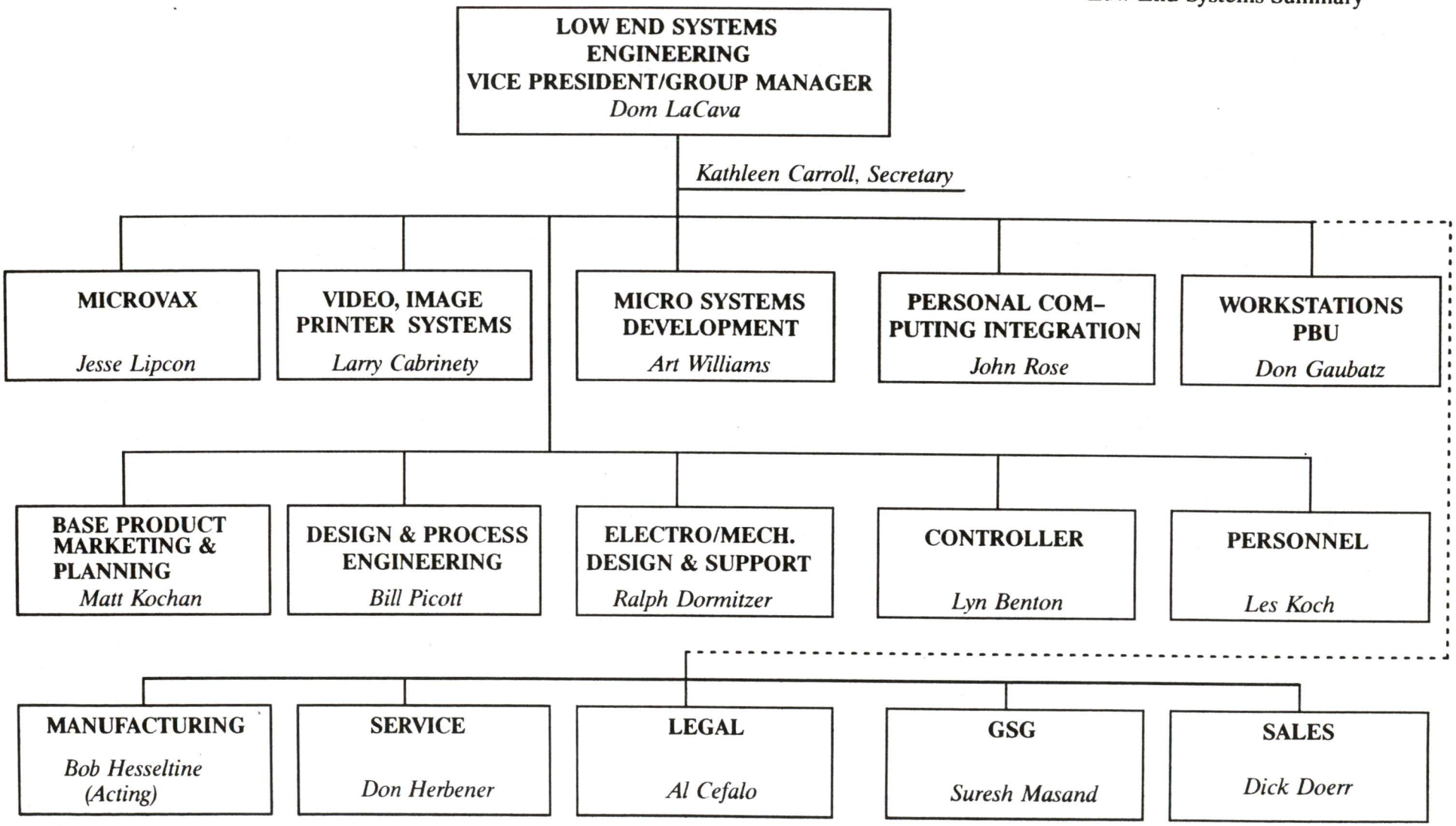
DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: LESCENT					Sub Group: LES CENTRAL									
1BZZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed LES CENTRAL				0.0	0.0	0.0	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
	Chart	1			Totals for LES CENTRAL				0.0	0.0	0.0	0.0		
1BZ01100	2	PN	MLO	NA	TRANSITION	NA	NA	NA	0.0	0.0	2.0	5.0		KOCH, LES NA
Low End Systems Transition Program to support the reskilling and job placement activities required to meet the changing business environment. This proposed investment covers expenses related to training, relocation, salaries and occupancy.														
1BZ01200	2	NS	MLO	NA	OCCUPANCY	NA	NA	NA	0.0	2.6	2.6	0.0		KOCH, LES NA
Move expenses related to the West Coast organization, Desktop Systems Group and our transition into the the Parker Street and Mill facilities.														
1BZ01300	2	PM	MLO	NA	OPPORTUNITY INVESTMENT	NA	NA	NA	0.0	0.0	1.8	2.0		LACAVA, DOM NA
This investment is proposed within the base LES FY90 funding to cover emerging technology and potential opportunities that will arrise over the course of FY90.														

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	2.6	6.4	7.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed LES CENTRAL				0.0	2.6	6.4	7.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
	Chart	2			Totals for LES CENTRAL				0.0	2.6	6.4	7.0		
					In-House Funded Proposed Project Totals				0.0	2.6	6.4	7.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed LES CENTRAL				0.0	2.6	6.4	7.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
					Totals for LES CENTRAL				0.0	2.6	6.4	7.0		
					In-House Funded Project Totals				0.0	2.6	6.4	7.0		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for LES CENTRAL				0.0	2.6	6.4	7.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental LES CENTRAL				0.0	0.0	0.0	0.0		
					Grand Totals for LES CENTRAL				0.0	2.6	6.4	7.0		

Low End Systems Engineering



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November 1, 1989

Video, Image and Printer Systems

VIDEO, IMAGE AND PRINTER SYSTEMS GROUP

(Formerly Desktop Systems Group)

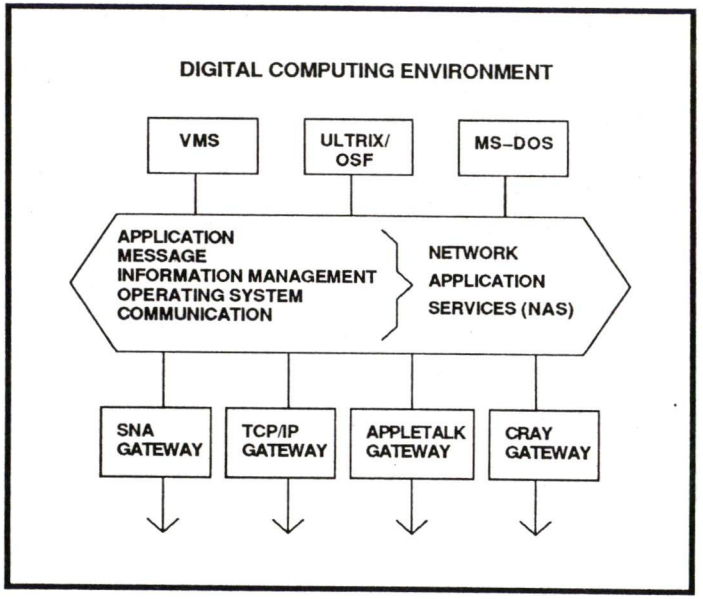
FY90 BEIGE BOOK

1 November 1989

1 Mission/Goals/Organization/Strategy

1.1 Mission

To be the leading worldwide supplier of high quality, cost-effective Video, Image and Printer systems and services for the Digital Computing Environment.



1.2 Goals for FY90

- PEOPLE: Develop people who can respond and manage quickly and appropriately in the rapidly changing environment of high volume products and services.
- COMMITMENTS: Deliver on commitments (schedules, specifications, expenses, profitability, market share, etc.)
- PRODUCTS: Provide a minimum product set with maximum integration into Digital's systems, networks, and applications and the Digital Computing Environment.

1.3 Organization

1.3.1 New Business Organization

In FY89, Video, Image and Printer Systems (VIPS) Group organized into four (4) business groups, each with responsibilities for specific groups of products. The four groups and their products are:

1. Video Products
   - Video Terminals (VTs, DECwindows, Imaging Options)
   - Monitors (VR200 series, VR300 series, Flat Panel, etc.)
   - Keyboards and Pointing Devices (LKs, Mouse, Tablet, etc.)
2. Desktop Printer Products
   - Data Processing Quality Printing Products (LAs, LPs)
   - Office Quality Printing Products (LNs, LJs)
3. PrintServer and Systems Products
   - PrintServers (LPS20, LPS40, LPSXX)
   - Production Printers (Xerox, Kodak, Siemens)
4. Software and Supplies Products
   - Software (Drivers, Print Symbionts, Emulators, etc.)
   - Supplies and Accessories (Toner, Maintenance Kits, Stands, etc.)

The products for which these groups are responsible can originate in any one of four internal engineering groups, the Governments Systems Group (GSG) or Computer Special Systems (CSS). In addition, the internal Quality Engineering Group and the International Products Group (IPG) of Reading, England, also contribute to the development and internationalization of the VIPS Group products. The matrix on the following page shows the engineering and business contributions of both engineering and business groups.

1.3.2 Matrix of Businesses, Engineering Groups, and Products

Table 1: Businesses, Engineering Groups, and Products

	Business Groups			
Engineering Group	Video Products	Desktop Printer Products	PrintServers & Systems Products	Software & After Markets Products
Video Engineering	VTs, VRs, Image			
Printer/Scanner Engineering		LAs, LJs, LNs, Scanners	PrintServers	Supplies, Accessories
Architecture & Systems Engineering	Image Drivers, SSU/TDSMP, DECterm, TEK emulators (components)	TDSMP, Common Print Symbiont (CPS)	Common Print Symbiont (CPS)	VAXpac, Fonts, Print System Model (PSM), DECterm and other emulators (external sales)
DFM & I/O Devices Engineering	Keyboard, Mouse, Tablet, Design for Manufacturing	Design for Manufacturing	Design for Manufacturing	Design for Manufacturing
Quality Engineering	Quality, Metrics, and Education	Quality, Metrics, and Education	Quality, Metrics, and Education	Quality, Metrics, and Education
Internationalization Engineering	Internationalization of VT300 series, VR300 series, VRE01, VT420, DWT	Internationalization of LA324 (LA85), LNXX, LJYY	Internationalization of LPS20	
Other External Engineering	DECvoice (CSS), Tempest VTs (GSG), Asian-based VTs (CSS)	LPs (CSS), LCG01 (CSS), Tempest Printers (GSG), Asian-based Printers (CSS)	Kanji Print-Servers (CSS), Kodak, Siemens, and/or Xerox Production Printers	

Rev.5a, 26OCT89

1.4 Business Strategies

Video Products	Desktop Printer Products	PrintServer & Systems Products	Software & Supplies Products: Software	Software & Supplies Products: Supplies
Capture ports on Digital's systems and networks at time of sale		Be "vendor of choice" for distributed printing	Evolve new software business	Grow supplies revenue 25%/year
Focus on profitable high volume products; use CSS, GSG, European Engineering, and third parties to fill niche markets and develop emerging technologies (scanners, voice, et al)			Use DECprint products to focus on enterprise-wide "pushbutton printing	Use DECdirect, 24 hour order turnaround, and telephone support to achieve customer satisfaction
Sell DWT as midlife kicker for Timesharing	Encourage selling through DECdirect and authorized distributors to reduce costs	Use third party high throughput production printers for large systems markets		
Supply high quality monitors, keyboards, mouse, imaging	Capitalize on Digital and third-party support of PostScript®			
Emphasize product reliability and service quality			Emphasize product reliability, modularity, extensibility	Emphasize product reliability
Lead in compliance with Internationalization standards and trends				

2 Product Strategies

2.1 Video Engineering Product Strategies

2.1.1 Video Terminals Product Strategy

- Low priced terminals in support of the desktop strategy:
  - — Low cost text terminals.
  - — Terminals to improve OLTP performance.
  - — Terminals to emulate workstations (DECwindows terminals).
- Cost competitive ergonomic desktop devices (keyboard, mouse).
- Options that allow workstations and DECwindows terminals to display and manipulate document images.

2.1.2 Monitors Product Strategy

- Develop display quality monitors
- Establish new corporate standard interface for all Digital video products.
- Reduce number of monitors required for desktop strategy.
  - — Optimize design efforts and product costs through common components.
  - — Integrate 15" monitors and video terminal components.
- Focus Central Engineering on profitable high volume products; use External Products Group (EPG) for low volume products.
- Be competitive supplier by emphasizing low cost, reliability, and service quality.

2.2 Printer/Scanner Engineering Product Strategy

- Support need of desktop strategy for quality printing.
- Complement networked VAXes with PrintServer family.
- Complement OLTP strategy with production printers.
- Emphasize complete solutions including fonts, accessories, and supplies.

2.3 Architecture & Systems Engineering Product Strategy

- Drive DECprint (Printing Systems Model) across Digital systems and networks.
- Provide a quality library of coordinated fonts for printing and display from Digital and third party vendors to meet the broad range of corporate applications.
- Provide terminal emulators for DECwindows.

Product Strategies, (Cont)

2.4 DFM & I/O Device Engineering Product Strategy

- Provide keyboards and pointing devices (Mouse, Tablet, etc.) that are cost competitive and ergonomic.

2.5 Quality Engineering Strategy

Aggressively provide leadership to drive continuous product and process improvement through educational and Quality Awareness programs that will enable the VIPS Group to:

- Enhance customer awareness;
- Be the leader in products and service—excelling in quality and innovation;
- Grow with the industry;
- Be the most efficient in every phase; and
- Sustain profitability.

2.6 VIPS Advanced Development Strategy

- Provide basis for shortening time-to-market
- Track competitive and technology trends
- Anticipate future development directions
  - — Develop internal technologies
  - — Track external (buyout) technologies and components
- Develop strategic alliances
- Cooperate with groups working similar problems (Worksystems, CSS, etc.)

2.7 International Engineering Product Strategy

Ensure that Digital's systems and products can be sold across all strategic countries by:

- Promoting awareness of internationalization issues
- Providing technical consultancy for international requirements
- Reviewing plans and designs for international suitability
- Coordinating plans for and overseeing delivery of country-specific language variant (LV) documentation

Product Strategies, (Cont)

2.8 Other Engineering (CSS, GSG, etc.) Product Strategy

2.8.1 Computer Special Systems (CSS) Product Strategy

CSS's Hardcopy development strategy is designed to maintain market share in the Impact Printer space by investing to maintain revenue and positive cash flow. Key elements of the strategy are:

- Integration with DSG's product development strategy
- Support of NaC for connectivity products
- Investment in new print engines to replace less competitive printers
- Added value supplied through connectivity and intelligence
- Investments to identify next product opportunities in new areas required by the corporation (e.g., color)
- Continued development in Japan of products to meet local needs

The CSS DECvoice project supplies worldwide platforms for voice applications.

CSS-Japan, in addition to supplying Kanji printers, also provides terminals for the Japanese market. CSS-Hong Kong is supplying terminals and printers for the Chinese-speaking markets.

2.8.2 Government Systems Group (GSG) Product Strategy

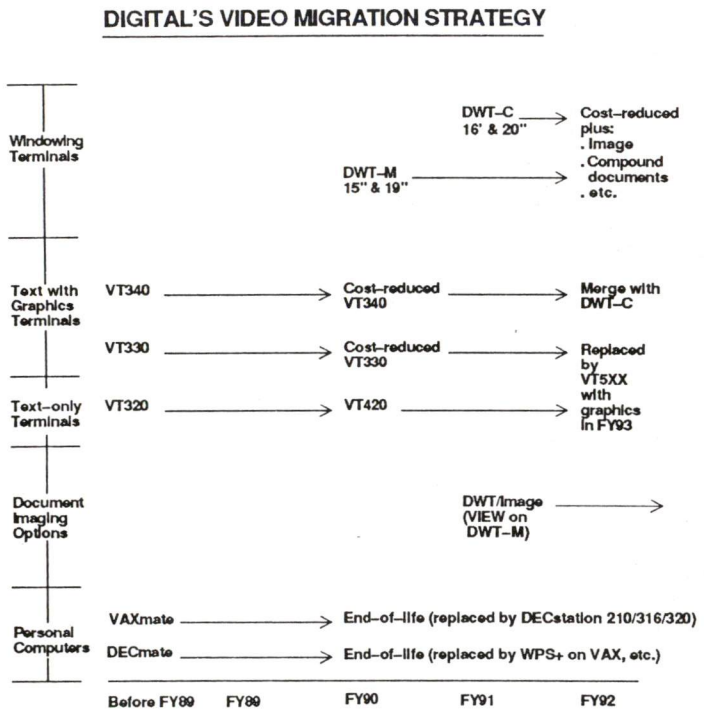
Supply TEMPEST (RF-secure) equivalents of standard video terminals and printing products:

- Consistent with the VIPS strategy and tactics;
- In a timely manner;

when and where required to leverage sales of systems to federal governments.

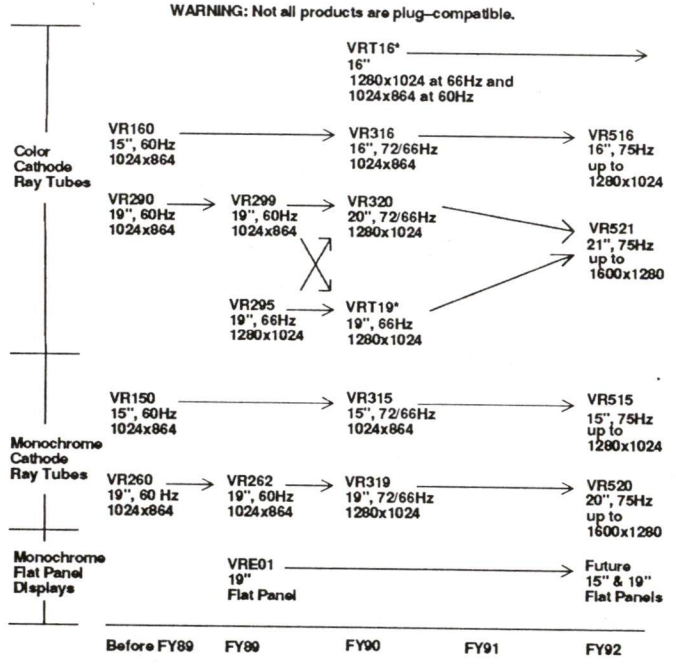
3 Product Positioning/Migration/Roadmaps

Figure 1: Video Products Migration



rev. 3c/dbc/19jul89

Figure 2: Monitor Products Migration



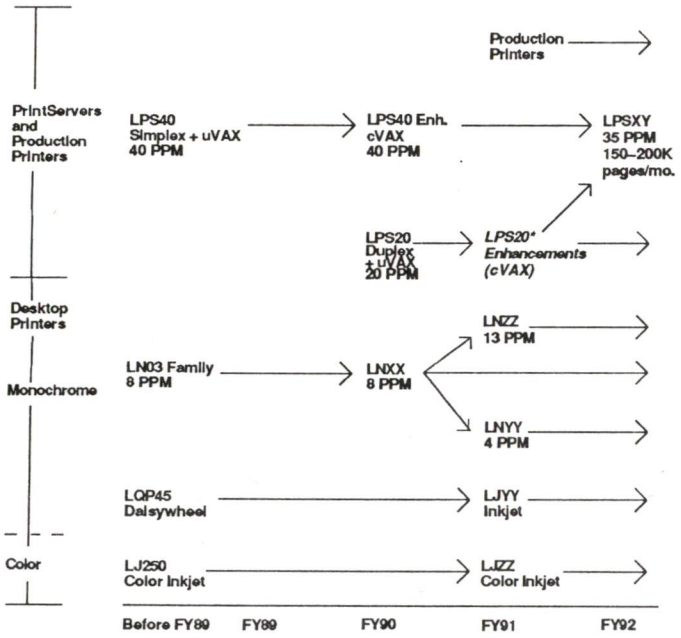
* = Sony Buyout

dbc/rev.5b/22sep89

Figure 3: Office Quality Printer Products Migration

Desktop Systems Group
FY90–91 Long Range Plan

DIGITAL'S OFFICE QUALITY
PRINTER MIGRATION STRATEGY



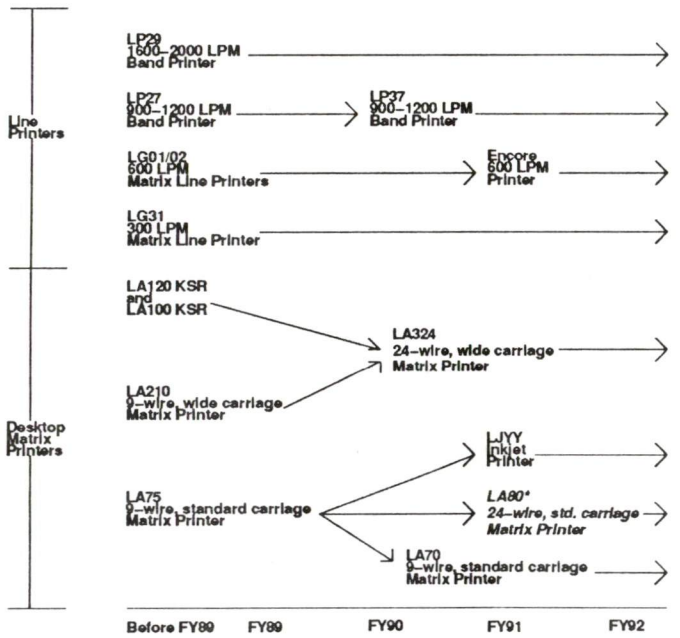
* = not yet funded

rev.4B/dbc/26sep89

Figure 4: Data Processing Quality Printer Products Migration

Desktop Systems Group
FY90–91 Long Range Plan

DIGITAL'S DATA PROCESSING QUALITY
PRINTER MIGRATION STRATEGY



* = not yet funded

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Figure 5: Terminal Software Products Migration

Desktop Systems Group
FY90–91 Long Range Plan

DIGITAL'S TERMINAL SOFTWARE MIGRATION STRATEGY

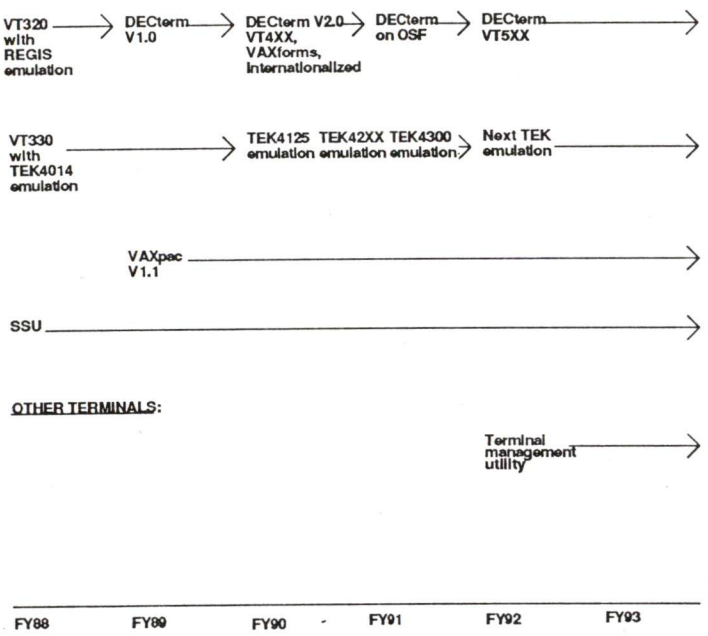

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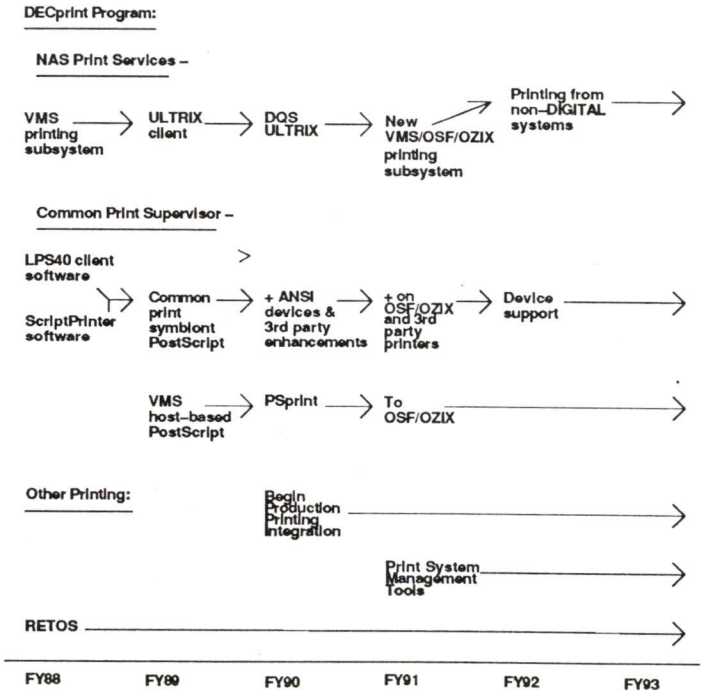
Figure 6: Printing Software Products Migration

Desktop Systems Group
FY90–91 Long Range Plan

DIGITAL'S PRINTING SOFTWARE MIGRATION STRATEGY



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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Group Code: VIPS					Group: VIDEO, IMAGE AND PRINTER SYSTEMS									
1B921100	1	PD	DSG	FC	LPS20	4A	8907	8907	10.7	3.1	1.5	0.0		SWEENEY, DAVID LANNING, RON
1B923B00	1	PD	DSG	FC	LPS20 ENHANCEMENTS	PRE-0	TBD	TBD	1.2	0.0	1.2	0.0		SWEENEY, DAVID LANNING, RON
1B922C00	1	PD	DSG	FC	LPS20 4MB MEMORY OPTION BOARD	0	TBD	TBD	0.1	0.1	0.0	0.0	CSS JAP	SWEENEY, DAVID LANNING, RON
1B911100	1	PD	DSG	FC	DECTERM V2 & V3	3	8912	8912	2.2	0.9	0.7	0.6		FITZGERALD, BRIAN HICKS, MARGE
1B921200	1	PD	DSG	FC	DECPRINT PRINT SERVICES	0	9004	TBD	4.1	1.3	1.4	1.4		FITZGERALD, BRIAN BROWN, SHERRI
1B923F00	1	PD	DSG	FC	DECPRINT UTIL/POSTSCR TO SIXEL	3	9001	9001	0.0	0.0	0.0	0.0		FITZGERALD, BRIAN BROWN, SHERRI
1B911300	1	PD	DSG	FC	VR300	2	9004	9004	7.5	3.4	3.9	0.0		UPTON, DAVID WITTS, DENNIS
1B911400	1	PD	DSG	FC	VT420 CHARACTER CELL TERMINAL	2	9005	9005	3.9	1.8	2.0	0.0		UPTON, DAVID JOY, PETER
1B911500	1	PD	DSG	FC	DECWINDOWS TERM (15"&19" MONO)	3	8912	9001	6.7	2.0	4.7	0.0		UPTON, DAVID BELLEMARE, VIC
1B911900	1	PD	DSG	FC	LOW COST DWT	PRE-0	TBD	TBD	4.4	0.0	0.2	4.2		UPTON, DAVID BELLEMARE, VIC
1B914300	1	PD	DSG	FC	HIGH PERFORMANCE DWT	PRE-0	TBD	TBD	5.0	0.0	0.0	1.0		UPTON, DAVID BELLEMARE, VIC
1B911600	1	PD	DSG	FC	CORE FONTS PROGRAM SUMMARY	PRE-0	TBD	TBD	4.6	2.2	1.1	1.3		FITZGERALD, BRIAN HICKS, MARGE
1B921400	1	PD	DSG	FC	LA324	3	8912	8911	2.1	1.1	1.0	0.0		SWEENEY, DAVID CHIN, GENE
1B911B00	1	PD	DSG	FC	MATH/PUBLISHING FONTS	0	TBD	TBD	0.7	0.0	0.2	0.5	EPS/BOIS	FITZGERALD, BRIAN HICKS, MARGE
1B921500	1	PD	DSG	FC	AFTERMARKET PRODUCTS	0	TBD	TBD	2.7	0.4	0.7	0.9		SWEENEY, DAVID SMITH, JANET
1B921600	1	PD	DSG	FC	LNXX	2	9006	9006	5.1	2.3	2.7	0.1		SWEENEY, DAVID MCCALL, ROY
1B911U00	1	PD	DSG	FC	DECWINDOWS TERM.(16"&20" COLOR	1	9009	TBD	4.6	1.0	2.4	1.2		UPTON, DAVID PAGE, BILL
1B921700	1	PD	DSG	FC	LJYY	0	9010	TBD	2.6	0.7	1.1	0.7		SWEENEY, DAVID MCCALL, ROY
1B921800	1	PD	DSG	FC	LPSXY	PRE-0	9109	TBD	6.0	0.0	0.6	2.9		SWEENEY, DAVID TBD
1B911700	1	PD	DSG	FC	LK401	1	8912	9001	1.7	1.0	0.7	0.0		FITZGERALD, BRIAN GAUCHER, JOHN
1B912C00	1	PD	DSG	FC	LK401VE	PRE-0	TBD	TBD	0.4	0.0	0.0	0.4	SSM	FITZGERALD, BRIAN GAUCHER, JOHN
1B921900	1	PD	DSG	FC	DECPRINT	1	8912	8912	5.0	2.3	0.4	0.6		FITZGERALD, BRIAN HICKS, MARGE

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911800	1	PD	DSG	FC	VRE01	2	9001	9001	2.3	1.5	0.6	0.0		UPTON, DAVID WITTS, DENNIS
1B911800	1	PD	DSG	FC	VRE01	2	9001	9001	0.0	0.2	0.0	0.0	SSM	UPTON, DAVID WITTS, DENNIS
1B921B00	1	PD	DSG	FC	LNYY	0	9009	TBD	1.6	0.0	1.0	0.6		SWEENEY, DAVID URBANUS, DAVE
1B911R00	1	PD	DSG	FC	VT330/340 COST REDUCTION	2	9003	9003	0.3	0.0	0.1	0.2	GIA ENG	UPTON, DAVID GAUCHER, JOHN
1B913L00	1	PD	DSG	FC	IMAGE III-L	0	TBD	TBD	1.9	1.9	0.0	0.0		UPTON, DAVID PAGE, BILL
1B911A00	1	PD	DSG	FC	IMAGE III-M	0	TBD	TBD	0.6	0.0	0.0	0.0		UPTON, DAVID PAGE, BILL
1B911A00	1	PD	DSG	FC	IMAGE III-M	0	TBD	TBD	0.6	0.0	0.6	0.0	CSG	UPTON, DAVID PAGE, BILL
1B913J00	1	PD	DSG	FC	DWT IMAGE	0	9006	TBD	2.9	0.0	1.1	1.8		UPTON, DAVID PAGE, BILL
1B921Y00	1	PD	DSG	FC	PRODUCTION PRINTER INTEGRATION	PRE-0	9012	TBD	3.2	0.0	1.2	2.0	HPS	SWEENEY, DAVID ZWOLINSKI, MIKE
1B921U00	1	PD	DSG	FC	LA70	2	9004	9004	0.2	0.0	0.2	0.0	EUR MFG	SWEENEY, DAVID MAHER, DAN (VBO)
1B921V00	1	PD	DSG	FC	LNZZ	0	9010	TBD	2.0	0.0	1.0	1.0		SWEENEY, DAVID BELLIVEAU, DAVE
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	3.2	0.5	0.0	0.0	FULLER	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.1	0.0	0.0	MSB	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.1	0.0	0.0	RAD COM	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.0	0.3	0.0	LES	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.0	0.0	2.2	LDP	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B912200	1	PD	ABO	FC	OPHIR - WKSYS GRAPHICS HARDWAR	0	TBD	TBD	0.2	0.0	0.2	0.0	WKSYS	FITZGERALD, BRIAN TBD
1B913D00	1	PD	DSG	FC	TEKTERM V1	3	TBD	TBD	0.5	0.1	0.0	0.0	ESG	FITZGERALD, BRIAN BROWN, SHERRI
1B913D00	1	PD	DSG	FC	TEKTERM V1	3	TBD	TBD	0.0	0.1	0.0	0.3	SALES	FITZGERALD, BRIAN BROWN, SHERRI
1B913E00	1	PD	DSG	FC	TERMINAL MANAGEMENT UTILITY V1	PRE-0	TBD	TBD	0.4	0.0	0.0	0.4	HPS	FITZGERALD, BRIAN TBD
1B911V00	1	PD	DSG	FC	PC FONTS FOR DECWINDOWS	PRE-0	TBD	TBD	0.1	0.0	0.1	0.0	PCI	FITZGERALD, BRIAN HICKS, MARGE
1B911S00	1	PD	DSG	FC	NON-LATIN DECWINDOWS FONTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0	INTL ENG	FITZGERALD, BRIAN HICKS, MARGE
1B911W00	1	PD	DSG	FC	DECWINDOWS - KANJI FONTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0	ABSS	FITZGERALD, BRIAN HICKS, MARGE
1B922M00	1	PD	DSG	FC	LPS40 PRINTSERVER ENHANCEMENTS	4	8907	8907	8.9	1.7	0.0	0.0		SWEENEY, DAVID TOBIN, ROBIN
1B922D00	1	PD	DSG	NA	THOR PRODUCTION PAGE PRINTER	0	TBD	TBD	0.5	0.2	0.3	0.0	SWS	SWEENEY, DAVID SZYMANOWSKI, J (SWS)

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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B922E00	1	PD	DSG	NA	THOR POSTSCRIPT ENHANCEMENTS	0	TBD	TBD	0.4	0.4	0.0	0.0	SWS	SWEENEY, DAVID SZYMANOWSKI, J (SWS)
1B922F00	1	PD	DSG	FC	PIXIE SCANNER & PRINTER	0	8909	8909	0.1	0.1	0.0	0.0	CSS	SWEENEY, DAVID PELAVIN, LARRY (CSS)
1B913I00	1	PD	DSG	FC	VR500 MONITOR FAMILY	PRE-0	TBD	TBD	7.5	0.0	0.0	3.6		UPTON, DAVID TBD
1B913H00	1	PD	DSG	FC	VT520 TEXT + GRAPHICS TERMINAL	PRE-0	TBD	TBD	5.5	0.0	0.0	2.0		UPTON, DAVID TBD
1B921X00	1	PD	DSG	FC	LJZZ	0	TBD	TBD	1.6	0.0	0.0	1.6		SWEENEY, DAVID TBD
1B913M00	1	PD	DSG	FC	FUTURE FLAT PANEL DISPLAYS	PRE-0	TBD	TBD	4.0	0.0	0.0	1.5		UPTON, DAVID TBD
1B911T00	1	PD	DSG	FC	DECWINDOWS APPLE LW-PLUS FONTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0		FITZGERALD, BRIAN TBD
1B921Z00	1	PD	DSG	FC	POSTSCRIPT FILE COMP SERVER	PRE-0	TBD	TBD	1.0	0.0	0.0	0.6		SWEENEY, DAVID TBD
1B922100	1	PD	DSG	FC	FAX GATEWAY	PRE-0	TBD	TBD	0.6	0.0	0.0	0.6		SWEENEY, DAVID TBD
1B922R00	1	PD	DSG	FC	LPS TYPESETTER	PRE-0	TBD	TBD	7.0	0.0	0.0	1.2		SWEENEY, DAVID TBD
1B921C00	1	PD	DSG	FC	PRINTER MANAGEMENT UTILITY V1.	PRE-0	TBD	TBD	2.0	0.0	0.0	0.5		FITZGERALD, BRIAN TBD
1B923900	1	PD	DSG	FC	ADD'L ELECTRONIC PUBLISH FONTS	PRE-0	TBD	TBD	1.4	0.0	0.0	0.7		FITZGERALD, BRIAN TBD
1B923A00	1	PD	DSG	FC	TECHNICAL DOCUMENT CONVERSION	PRE-0	TBD	TBD	1.0	0.0	0.0	0.5		FITZGERALD, BRIAN TBD
1B922O00	1	PD	MKO	FC	ENCORE	PRE-0	9012	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON HAYES, SUSAN (CSS)
1B922P00	1	PD	MKO	FC	COMPANION	PRE-0	9106	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON BROWN, ROD (CSS)
1B922T00	1	PD	MKO	FC	BANDIT (LP37)	4	8906	8906	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON FISCHER, BOB (CSS)
1B922U00	1	PD	MKO	FC	VAX VERTICAL FORMS PRINTER	0	9012	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B922V00	1	PD	MKO	NA	VIOLET (KANJI LNXX)	1	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B922W00	1	PD	MKO	NA	KPS20	1	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B922X00	1	PD	MKO	NA	LA86S	PRE-0	9009	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B922Y00	1	PD	MKO	NA	BELLADONNA (LA280S)	0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B913N00	1	PD	MKO	NA	MAXINE (KDWT-BW)	0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B913O00	1	PD	MKO	NA	KDWT-C	PRE-0	9012	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B922Z00	1	PD	MKO	FC	MOXIE	PRE-0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)
1B923100	1	PD	MKO	FC	MERCURY	PRE-0	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B923200	1	PD	MKO	FC	SAVVY	PRE-0	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)
1B914C00	1	PD	MKO	FC	DECSERVER 250	3	8909	8909	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON BROWN, ROD (CSS)
1B914D00	1	PD	MKO	FC	DEPRILA 2	PRE-0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON BROWN, ROD (CSS)
1B914B00	1	PD	MKO	NA	TOMCAT ENHANCEMENTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B914A00	1	PD	MLO	FC	SYBIL (DECVOICE TELECOM)	0	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B923D00	1	PD	MKO	NA	LJAA	PRE-0	9106	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)
1B923E00	1	PD	MKO	FC	PRODUCTION SCANNER	PRE-0	9103	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)
1B913X00	1	PD	MKO	FC	RF-VT320	2	8906	TBD	0.0	0.0	0.0	0.0	GSG	NOVAK, FRANK TBD (GSG)
1B913Z00	1	PD	MKO	FC	RF-DWT	PRE-0	9103	TBD	0.0	0.0	0.0	0.0	GSG	NOVAK, FRANK TBD (GSG)
1B914100	1	PD	MKO	FC	RF-VR320	PRE-0	9009	TBD	0.0	0.0	0.0	0.0	GSG	NOVAK, FRANK TBD (GSG)
1B913R00	1	PD	REO	FC	DESKTOP INTERNATIONALIZATION	0	TBD	TBD	0.0	0.0	0.0	0.0	INTL	RYLAND, MARK DAWSON, COLIN (IPG)
1B913S00	1	PD	REO	FC	DECTERM INTERNATIONAL/LOCAL	0	TBD	TBD	0.0	0.0	0.0	0.0	INTL	DRAY, BOB TBD (IPG)
1B913T00	1	PD	REO	NA	ARABIC VT420	0	9009	TBD	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY TBD (IPG)
1B913U00	1	PD	REO	NA	ARABIC DECTERM	0	9009	TBD	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY TBD (IPG)
1B913V00	1	PD	REO	NA	HEBREW LESG PRODUCT ADAPTATION	0	TBD	TBD	0.0	0.0	0.0	0.0	INTL	GOLDMAN, AHARON TBD (ISRAEL)
1B923300	1	PD	REO	NA	LNXX SYMBIONT COUNTRY KIT	0	9003	TBD	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY TBD (IPG)
1B913100	1	PD	LJO	NA	PANDAMATE I TRANSITION	0	TBD	TBD	6.0	1.3	0.0	0.0		CABRINETY, LARRY NA
	Chart	1	In-House Funded Proposed Project Totals						137.9	29.9	30.0	31.1		
	Chart	1	Externally Funded Proposed Project Totals						10.9	1.9	3.2	6.0		
	Chart	1	Proposed VIDEO, IMAGE AND PRINTER SYSTEMS						148.8	31.8	33.2	37.1		
	Chart	1	In-House Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Incremental VIDEO, IMAGE AND PRINTER SYSTEMS						0.0	0.0	0.0	0.0		
	Chart	1	Totals for VIDEO, IMAGE AND PRINTER SYSTEMS						148.8	31.8	33.2	37.1		

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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911D00	2	AR	DSG	NA	TERMINAL INTERCONNECT ARCH	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA
1B911E00	2	AR	DSG	NA	EXTERNAL STANDARDS	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA
1B921E00	2	AR	DSG	NA	POSTSCRIPT ARCHITECTURE	NA	NA	NA	0.0	0.0	0.1	0.2		FITZGERALD, BRIAN NA
1B921T00	2	AR	DSG	NA	MAINTENANCE OF DEC STANDARDS	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA
1B913200	2	AR	DSG	NA	VIDEO SYS REFERENCE MANUAL	NA	NA	NA	0.0	0.2	0.0	0.0		FITZGERALD, BRIAN NA
1B913W00	2	AR	REO	NA	ARABIC/R2L ARCHITECTURES/TECH	NA	NA	NA	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY NA
1B922G00	2	AR	DSG	NA	PRINT SYS ARCH REF MANUAL	NA	NA	NA	0.0	0.2	0.0	0.0		FITZGERALD, BRIAN NA
1B921F00	2	AR	DSG	NA	ANSI EXT./HP-PCL LEVEL 5	NA	NA	NA	0.0	0.0	0.0	0.3		SWEENEY, DAVID NA
1B911F00	2	AD	ABO	NA	DWT PLUS	NA	NA	NA	0.0	0.0	0.3	0.3		FITZGERALD, BRIAN NA
1B911G00	2	AD	DSG	NA	FLAT PANEL DISPLAYS AD	NA	NA	NA	0.0	0.0	0.3	0.3		FITZGERALD, BRIAN NA
1B911H00	2	AD	ABO	NA	MONITORS AD	NA	NA	NA	0.0	0.4	0.4	0.6		FITZGERALD, BRIAN NA
1B911I00	2	AD	ABO	NA	HUMAN INTERFACE HARDWARE AD	NA	NA	NA	0.0	0.0	0.4	0.3		FITZGERALD, BRIAN NA
1B911J00	2	AD	DSG	NA	INPUT DEVICE AD	NA	NA	NA	0.0	0.1	0.3	0.3		FITZGERALD, BRIAN NA
1B913300	2	AD	ABO	NA	IMAGING ARCHITECTURE	NA	NA	NA	0.0	0.3	0.0	0.0		FITZGERALD, BRIAN NA
1B921G00	2	AD	DSG	NA	ADVANCED CONTROLLER HARDWARE A	NA	NA	NA	0.0	0.0	0.2	0.2		SWEENEY, DAVID NA
1B921H00	2	AD	DSG	NA	ADVANCED MARKING TECHNOLOGY	NA	NA	NA	0.0	0.0	0.4	0.5		SWEENEY, DAVID NA
1B921I00	2	AD	DSG	NA	HARDCOPY IMAGING/COLOR AD	NA	NA	NA	0.0	0.0	0.2	0.2		SWEENEY, DAVID NA
1B921J00	2	AD	DSG	NA	SCANNER/OCR AD	NA	NA	NA	0.0	0.0	0.1	0.1		SWEENEY, DAVID NA
1B912100	2	AD	ABO	NA	NETWORK SYSTEMS SUPPORT	NA	NA	NA	1.2	1.2	0.0	0.0	NWSS	FITZGERALD, BRIAN NA
1B912300	2	AD	ABO	NA	FULL MOTION VIDEO	NA	NA	NA	0.0	0.1	0.0	0.0	MSB	FITZGERALD, BRIAN NA
1B912300	2	AD	ABO	NA	FULL MOTION VIDEO	NA	NA	NA	0.0	0.4	0.0	0.0	ED SVCS	FITZGERALD, BRIAN NA
1B912300	2	AD	ABO	NA	FULL MOTION VIDEO	NA	NA	NA	0.0	0.0	0.3	0.7		FITZGERALD, BRIAN NA
1B913500	2	AD	ABO	NA	VISUAL QUALITY A/D	NA	NA	NA	0.0	0.2	0.0	0.0	MSB	STOCKEBRAND, THOMAS NA
1B913500	2	AD	ABO	NA	VISUAL QUALITY A/D	NA	NA	NA	0.0	0.3	0.0	0.0		STOCKEBRAND, THOMAS NA
1B913500	2	AD	ABO	NA	VISUAL QUALITY A/D	NA	NA	NA	0.0	0.1	0.0	0.0	OTHER	STOCKEBRAND, THOMAS NA

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1B912500	2	AD	ABO	NA	ARCH FOR SUPP HUMAN INTERACTIO	NA	NA	NA	0.0	0.0	0.1	0.0	B J	STOCKEBRAND, THOMAS NA
1B912500	2	AD	ABO	NA	ARCH FOR SUPP HUMAN INTERACTIO	NA	NA	NA	0.0	0.0	0.0	0.0	OTHERS	STOCKEBRAND, THOMAS NA
1B913600	2	AD	ABO	NA	GALLIUM ARSENIDE	NA	NA	NA	0.0	0.0	0.0	0.0	RAD COMM	FITZGERALD, BRIAN NA
1B913600	2	AD	ABO	NA	GALLIUM ARSENIDE	NA	NA	NA	0.0	0.1	0.0	0.0		FITZGERALD, BRIAN NA
1B922H00	2	AD	DSG	NA	PRINTING SYSTEMS A/D	NA	NA	NA	0.0	0.9	0.0	0.0		SWEENEY, DAVID NA
1B911K00	2	PS	DSG	NA	IMAGE II/VR419 SUPPORT ENGINEE	NA	NA	NA	0.0	0.1	0.2	0.0		UPTON, DAVID NA
1B911L00	2	PS	DSG	NA	IMAGE III-L SUPPORT ENGINEERIN	NA	NA	NA	0.0	0.0	0.1	0.0		UPTON, DAVID NA
1B911M00	2	PS	DSG	NA	VR295 SUPPORT ENGINEERING	NA	NA	NA	0.0	0.3	0.1	0.0		UPTON, DAVID NA
1B921K00	2	PS	DSG	NA	RELEASE ENGINEERING	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA
1B921L00	2	PS	DSG	NA	DSG SOFTWARE SUPPORT	NA	NA	NA	0.0	0.6	0.5	0.4		FITZGERALD, BRIAN NA
1B921N00	2	PS	DSG	NA	VENDED FIRMWARE/SOFTWARE SUPP	NA	NA	NA	0.0	0.1	0.2	0.2		SWEENEY, DAVID NA
1B921O00	2	PS	DSG	NA	MARKETING TECHNICAL SUPPORT	NA	NA	NA	0.0	0.0	0.8	0.0		SWEENEY, DAVID NA
1B921P00	2	PS	DSG	NA	PRINTSERVER PRODUCT SUPPORT	NA	NA	NA	0.0	0.0	0.1	0.1		SWEENEY, DAVID NA
1B922I00	2	PS	DSG	NA	PHASE 4A HARDWARE PROD SUPPORT	NA	NA	NA	0.0	0.7	0.0	0.0		SWEENEY, DAVID NA
1B922300	2	PS	DSG	NA	HARDCOPY FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.0	0.0	0.0	CSS	FITZGERALD, BRIAN NA
1B922300	2	PS	DSG	NA	HARDCOPY FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.0	0.0	0.0	ABO	FITZGERALD, BRIAN NA
1B922300	2	PS	DSG	NA	HARDCOPY FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.2	0.2	0.0	EPG	FITZGERALD, BRIAN NA
1B922400	2	PS	DSG	NA	LP37 BAND PRINTER SUPPORT	NA	NA	NA	0.0	0.0	0.0	0.0	CSS	SWEENEY, DAVID NA
1B922500	2	PS	DSG	NA	ACCESSORIES & SUPPLIES SUP ENG	NA	NA	NA	0.0	0.1	0.0	0.2	SSM	SWEENEY, DAVID NA
1B922800	2	PS	DSG	NA	PRINTING SYS BUYOUT SUPPORT	NA	NA	NA	0.0	0.6	0.4	0.7	EPG	SWEENEY, DAVID NA
1B922J00	2	PS	DSG	NA	PRINT SYSTEMS SUPP ENGINEERING	NA	NA	NA	0.0	0.2	0.0	0.0	ABO	SWEENEY, DAVID NA
1B912800	2	PS	DSG	NA	VIDEO FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.1	0.1	0.2	TAO	FITZGERALD, BRIAN NA
1B912800	2	PS	DSG	NA	VIDEO FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.0	0.1	0.0	BOO	FITZGERALD, BRIAN NA
1B912F00	2	PS	DSG	NA	KEYBOARD SUPPORT	NA	NA	NA	0.0	0.3	0.1	0.3	BOSTON	FITZGERALD, BRIAN NA
1B912G00	2	PS	DSG	NA	EPG - VIDEO SUPPORT	NA	NA	NA	0.0	0.3	0.2	0.3	EPG	UPTON, DAVID NA

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1B912H00	2	PS	DSG	NA	VIDEO - SUPPORT	NA	NA	NA	0.0	0.5	0.1	1.0	ABO	UPTON, DAVID NA
1B912J00	2	PS	DSG	NA	TAIWAN SUPPORT ENGINEERING	NA	NA	NA	0.0	0.2	0.1	0.3	TAIWAN	UPTON, DAVID NA
1B912L00	2	PS	DSG	NA	WORKSTATIONS SUPPORT ENG	NA	NA	NA	0.0	0.2	0.0	0.1	ABO	UPTON, DAVID NA
1B912M00	2	PS	DSG	NA	UCO/WORKSYSTEMS SUPPORT ENG	NA	NA	NA	0.0	0.0	0.0	0.0		UPTON, DAVID NA
1B913700	2	PS	DSG	NA	VR262 19" MONOCHROME MONITOR	NA	NA	NA	0.0	0.2	0.0	0.0	SSM	UPTON, DAVID NA
1B913800	2	PS	DSG	NA	VR292 19" COLOR MONITOR	NA	NA	NA	0.0	0.3	0.0	0.0	SSM	UPTON, DAVID NA
1B913900	2	PS	DSG	NA	MOUSE COST REDUCTION	NA	NA	NA	0.0	0.1	0.0	0.0	SSM	FITZGERALD, BRIAN NA
1B913A00	2	PS	DSG	NA	EUROPEAN/TEMPEST SUPPORT ENG	NA	NA	NA	0.0	0.0	0.0	0.0	READING	UPTON, DAVID NA
1B913A00	2	PS	DSG	NA	EUROPEAN/TEMPEST SUPPORT ENG	NA	NA	NA	0.0	0.0	0.0	0.0	ABO	UPTON, DAVID NA
1B913A00	2	PS	DSG	NA	EUROPEAN/TEMPEST SUPPORT ENG	NA	NA	NA	0.0	0.1	0.0	0.0	VBO	UPTON, DAVID NA
1B913400	2	PS	DSG	NA	LK301 KEYBOARD PHASE 4A SUPPOR	NA	NA	NA	0.0	0.3	0.0	0.0		FITZGERALD, BRIAN NA
1B914E00	2	PS	DSG	NA	DECSTATION 210, 310 SUPPORT	NA	NA	NA	0.0	0.0	0.1	0.0	PCSG	UPTON, DAVID NA
1B911N00	2	EC	DSG	NA	SCRAP & REWORK	NA	NA	NA	0.0	0.6	0.4	1.0		CABRINETY, LARRY NA
1B911Q00	2	EC	DSG	NA	VIDEO ECO'S	NA	NA	NA	0.0	0.4	0.4	0.4		UPTON, DAVID NA
1B921Q00	2	EC	DSG	NA	HARDCOPY ECO'S	NA	NA	NA	0.0	0.1	0.2	0.3		SWEENEY, DAVID NA
1B912O00	2	EC	DSG	NA	KEYBOARD ECO'S	NA	NA	NA	0.0	0.2	0.1	0.2	BOSTON	FITZGERALD, BRIAN NA
1B912Q00	2	EC	DSG	NA	VIDEO BUYOUT ECO'S	NA	NA	NA	0.0	0.1	0.2	0.1	EPG	UPTON, DAVID NA
1B912R00	2	EC	DSG	NA	VIDEO ECO'S	NA	NA	NA	0.0	0.4	0.1	0.1	ABO	UPTON, DAVID NA
1B912S00	2	EC	DSG	NA	TAIWAN VIDEO ECO'S	NA	NA	NA	0.0	0.2	0.0	0.1	TAIWAN	UPTON, DAVID NA
1B912U00	2	EC	DSG	NA	UCO/WORKSTATIONS ECO'S	NA	NA	NA	0.0	0.0	0.1	0.1	ABO	UPTON, DAVID NA
1B913C00	2	EC	DSG	NA	LES & EUROPEAN ECO'S	NA	NA	NA	0.0	0.1	0.0	0.0	LES	UPTON, DAVID NA
1B913C00	2	EC	DSG	NA	LES & EUROPEAN ECO'S	NA	NA	NA	0.0	0.0	0.0	0.0	READING	UPTON, DAVID NA
1B913C00	2	EC	DSG	NA	LES & EUROPEAN ECO'S	NA	NA	NA	0.0	0.0	0.0	0.0	VBO	UPTON, DAVID NA
1B914F00	2	EC	DSG	NA	DECSTATION 210, 310 ECO'S	NA	NA	NA	0.0	0.0	0.2	0.0	PCSG	UPTON, DAVID NA
1B914900	2	EC	DSG	NA	TEAMMATE 1 & 2 ECO'S	NA	NA	NA	0.0	0.0	0.1	0.0	SASE	UPTON, DAVID NA

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B922700	2	EC	DSG	NA	ACCESSORIES & SUPPLIES ECO'S	NA	NA	NA	0.0	0.1	0.0	0.1	SSM	SWEENEY, DAVID NA
1B922600	2	EC	DSG	NA	PRINTING SYS BUYOUT ECO'S	NA	NA	NA	0.0	0.1	0.3	0.3	EPG	SWEENEY, DAVID NA
1B912V00	2	PE	DSG	NA	DESIGN FOR MANUFACTURING	NA	NA	NA	0.0	0.4	0.3	0.8	SSM	FITZGERALD, BRIAN NA
1B912V00	2	PE	DSG	NA	DESIGN FOR MANUFACTURING	NA	NA	NA	0.0	0.9	0.4	0.2		FITZGERALD, BRIAN NA
1B911000	2	TL	DSG	NA	CAD/CAE	NA	NA	NA	0.0	0.7	0.7	0.9		FITZGERALD, BRIAN NA
1B912900	2	TL	DSG	NA	CORPORATE IDENTITY FONTS	NA	NA	NA	0.0	0.0	0.0	0.0	CORP	FITZGERALD, BRIAN NA
1B921S00	2	TL	DSG	NA	SOFTWARE METHODS & TOOLS	NA	NA	NA	0.0	0.2	0.2	0.0		SWEENEY, DAVID NA
					Chart 2 In-House Funded Proposed Project Totals				0.0	7.5	7.7	7.9		
					Chart 2 Externally Funded Proposed Project Totals				1.2	7.0	2.9	4.9		
					Chart 2 Proposed VIDEO, IMAGE AND PRINTER SYSTEMS				1.2	14.5	10.6	12.8		
					Chart 2 In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Chart 2 Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Chart 2 Incremental VIDEO, IMAGE AND PRINTER SYSTEMS				0.0	0.0	0.0	0.0		
					Chart 2 Totals for VIDEO, IMAGE AND PRINTER SYSTEMS				1.2	14.5	10.6	12.8		
					In-House Funded Project Totals				137.9	37.4	37.7	39.0		
					Externally Funded Project Totals				12.1	8.9	6.1	10.9		
					Proposed for VIDEO, IMAGE AND PRINTER SYSTEMS				150.0	46.3	43.8	49.9		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental VIDEO, IMAGE AND PRINTER SYSTEMS				0.0	0.0	0.0	0.0		
					Grand Totals for VIDEO, IMAGE AND PRINTER SYSTEMS				150.0	46.3	43.8	49.9		

Project ID	Ch	Act Cde	Loc Cde	Int	St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Group Code: VIPS						Group: VIDEO, IMAGE AND PRINTER SYSTEMS									
1B921100	1	PD	DSG	FC		LPS20	4A	8907	8907	10.7	3.1	1.5	0.0		SWEENEY, DAVID LANNING, RON

LPS20: Completion and initial ship support activity.

MLP: $25,000; Transfer Cost: $7,000

ULTRIX PrintServer V2.0: Merges DECnet and TCP/IP client kits. Adds support for LPS20.

ULTRIX PrintServer V3.0: Adds job overlap and failover support for LPS20. Adds ANSI access to PostScript fonts. Adds PostScript enhancements: CCITT DECimage, Composite fonts, New Color operators.

ULTRIX PrintServer V4.0: (to be supplied)

PrintServer V4.0: Merged symbiont with CPS. Adds job overlap and failover support for LPS20. Adds new PostScript features - CCITT, DECimage, Composite Fonts, New Color operators. Adds ANSI access to PostScript fonts

PrintServer V5.0: (to be supplied)

1B923B00	1	PD	DSG	FC		LPS20 ENHANCEMENTS	PRE-0	TBD	TBD	1.2	0.0	1.2	0.0		SWEENEY, DAVID LANNING, RON

- Controller enhancements to improve printer throughput on complex jobs.

MLP: TBD; Transfer Cost: TBD

1B922C00	1	PD	DSG	FC		LPS20 4MB MEMORY OPTION BOARD	0	TBD	TBD	0.1	0.1	0.0	0.0	CSS JAP	SWEENEY, DAVID LANNING, RON
1B911100	1	PD	DSG	FC		DECTERM V2 & V3	3	8912	8912	2.2	0.9	0.7	0.6		FITZGERALD, BRIAN HICKS, MARGE

V2: Complete DCL & ULTRIX command line parse

MLP: N/A; Transfer Cost: $0

V3 (phase= PRE-0; FRS: 9010):
- Enhanced VT3xx terminal emulation.
- Dynamically redefinable character set.
- VT420 terminal emulation.
- VAXforms support (ANSI color text).
- Hebrew
- Arabic
- Integration into Asian-based systems
- Connects to LAT
- Output to local printer port

MLP: N/A; Transfer Cost: $0

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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B921200	1	PD	DSG	FC	DECPRINT PRINT SERVICES	0	9004	TBD	4.1	1.3	1.4	1.4		FITZGERALD, BRIAN BROWN, SHERRI

Former known as CPS, V4; Supports new DSG printers. Supports DDFF documents. Integrates with new VMS queueing system. Provides customer extendibility. Provides LN03 emulation.

MLP: TBD; Transfer Cost: $0

1B923F00	1	PD	DSG	FC	DECPRINT UTIL/POSTSCR TO SIXEL	3	9001	9001	0.0	0.0	0.0	0.0		FITZGERALD, BRIAN BROWN, SHERRI

(This project is funded under the DECprint Print Services program - see above)

- PostScript printing for non-PostScript printers via host software conversion to sixels.

1B911300	1	PD	DSG	FC	VR300	2	9004	9004	7.5	3.4	3.9	0.0		UPTON, DAVID WITTS, DENNIS

Four product family of monitors (monochrome and color 15"/16" and 19"/20 designed to capitalize on economies of scale and common sub-systems (Video design, power and packaging, etc.) to be used on workstations and DWT.

- 19"/20" 1280 x 1024 72 or 66Hz 100 dpi FRS = Jun'90

- 15"/16" 1024 x 864 72 100 dpi FRS = Apr'90

MLP: N/A; Transfer Cost: See Below

Transfer Costs:	VR315	VR316	VR319	VR320
@75K units/year, FY90 =	$338	$748	$458	$973
FY91 =	$324	$715	$435	$924

1B911400	1	PD	DSG	FC	VT420 CHARACTER CELL TERMINAL	2	9005	9005	3.9	1.8	2.0	0.0		UPTON, DAVID JOY, PETER

- Increased performance replacement for the VT320 entry terminal for text and on-line transaction processing 14"; 800 x 400; 70Hz overscan
- Cost optimized North American Version.
- Worldwide version with full ergonomic and regulatory features.
- Video SRM documentation and DEC Std 70 ECO's.
- Includes LK401 keyboard.

MLP: NA $575, WW $625; Transfer Cost: NA $231, WW $257.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911500	1	PD	DSG	FC	DECWINDOWS TERM (15"&19" MONO)	3	8912	9001	6.7	2.0	4.7	0.0		UPTON, DAVID BELLEMARE, VIC

- Lowest cost product running DECwindows.
- Ethernet (LAT, TCP/IP) & Serial line communications.
- Supports all present workstations monitors and future displays.
- This program involves two firmware releases in customer ROM cartridges. The 1st in 1/90 will provide DECwindows support on Ethernet, TCP/IP and integral terminal emulator. The 2nd in 06/90 will provide DECwindows support over a serial line.

MLP: (15")=$2,795, (19")=$3,595; Transfer Cost: (15")=$1,255, (19")=$1,350.

1B911900	1	PD	DSG	FC	LOW COST DWT	PRE-0	TBD	TBD	4.4	0.0	0.2	4.2		UPTON, DAVID BELLEMARE, VIC

- Low cost follow-on to DWT in single package.

MLP: TBD; Transfer Cost: TBD

1B914300	1	PD	DSG	FC	HIGH PERFORMANCE DWT	PRE-0	TBD	TBD	5.0	0.0	0.0	1.0		UPTON, DAVID BELLEMARE, VIC

- Constant cost, higher performance DWT follow-on.

1B911600	1	PD	DSG	FC	CORE FONTS PROGRAM SUMMARY	PRE-0	TBD	TBD	4.6	2.2	1.1	1.3		FITZGERALD, BRIAN HICKS, MARGE

- DECwindows font support.
- Font Production Tools/Utilities.
- Font Access Facility.
- Packaged with VMS and Ultrix.

MLP: N/A; Transfer Cost: N/A

1B921400	1	PD	DSG	FC	LA324	3	8912	8911	2.1	1.1	1.0	0.0		SWEENEY, DAVID CHIN, GENE

Wide Carriage impact dot matrix printer. LA120/LA100/LA210 replacement. 24-wire printhead (300 cps). Demand printing capability. Protocols: DEC-ANSI level II, IBM Proprinter XL/24. Primary interfaces: DEConnect (MMJ), 36 pin parallel (PC compatible). Options: Pedestal, Color Ribbon, Table Top Stand, 2-Bin Sheet Feeder.

MLP: $1,995; Transfer Cost: $637 (base unit)

1B911B00	1	PD	DSG	FC	MATH/PUBLISHING FONTS	0	TBD	TBD	0.7	0.0	0.2	0.5	EPS/BOIS	FITZGERALD, BRIAN HICKS, MARGE

(Ships with DECwrite V1.x)

- V1 Math fonts maintenance.
- Quality enhancement add Lucider Font.
- DEC Tech Font Set
- Publishing set enhancements.
- Bitmap scaling tool for presenter (or huge video bitmaps)

MLP: N/A; Transfer Cost: N/A

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B921500	1	PD	DSG	FC	AFTERMARKET PRODUCTS	0	TBD	TBD	2.7	0.4	0.7	0.9		SWEENEY, DAVID SMITH, JANET

Release desk top stand, pedestal and cover for LA324. Source ribbons for LA324. Release LNXX supplies. Release LPS20 accessories. Release gummed labels, envelopes and cotton paper for all laser printers.

(Shown as Media, Accessories, and Supplies on Chart II in FY 89; shown as Accessories and Supplies on Chart I in FY90 LRP)

1B921600	1	PD	DSG	FC	LNXX	2	9006	9006	5.1	2.3	2.7	0.1		SWEENEY, DAVID MCCALL, ROY

8 PPM shared usage laser printer. LN03 replacement. Simplex & Duplex mode Dual input tray w/Duplex model.DEC-ANSI level III or PostScript w/DEC-ANSI optional cartridge (+6 mo). Primary interface - Serial. PC Parallel interface.

MLP: <$2,700; Transfer Cost: <$1,400 (base model)

1B911U00	1	PD	DSG	FC	DECWINDOWS TERM.(16"&20" COLOR	1	9009	TBD	4.6	1.0	2.4	1.2		UPTON, DAVID PAGE, BILL

- Lowest cost color product running DECwindows.
- Ethernet and Serial line communications.
- Utilizes VR316 color monitors.
- Four planes
- Extended memory option available.

MLP: TBD; Transfer Cost: $1300(T)

1B921700	1	PD	DSG	FC	LJYY	0	9010	TBD	2.6	0.7	1.1	0.7		SWEENEY, DAVID MCCALL, ROY

Office quality ink jet printer, narrow carriage, 300 dpi. Optimized for bottom end of page printer market. Cut sheet paper only, 8.5" x 14" maximu 4 PPM draft, 2 PPM high quality. Primary interface - Serial, PC Parallel interface.

MLP: $1100; Transfer Cost: $465

1B921800	1	PD	DSG	FC	LPSXY	PRE-0	9109	TBD	6.0	0.0	0.6	2.9		SWEENEY, DAVID TBD

A replacement for the LPS40, features 35ppm, higher duty cycle (250K pages/month) and color options. Includes:

- Engine selection
- Controller development - based on RISC project architecture
- Adobe PostScript development
- Diagnostics
- PrintServer software development
- Documentation

MLP: tbd; Transfer Cost: tbd

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911700	1	PD	DSG	FC	LK401	1	8912	9001	1.7	1.0	0.7	0.0		FITZGERALD, BRIAN GAUCHER, JOHN

- New corporate keyboard, smaller than LK201.
- Tactile feel.
- Meets new DIN standards for keyboards.

MLP: N/A; Transfer Cost: $38

1B912C00	1	PD	DSG	FC	LK401VE	PRE-0	TBD	TBD	0.4	0.0	0.0	0.4	SSM	FITZGERALD, BRIAN GAUCHER, JOHN

- LK401 cost reduction

MLP: N/A; Transfer Cost: N/A

1B921900	1	PD	DSG	FC	DECPRINT	1	8912	8912	5.0	2.3	0.4	0.6		FITZGERALD, BRIAN HICKS, MARGE

Management of Round-89 through delivery. Planning & management of Round-90 Management of DECprint Architecture process.

MLP: N/A; Transfer Cost: N/A

1B911800	1	PD	DSG	FC	VRE01	2	9001	9001	2.3	1.5	0.6	0.0		UPTON, DAVID WITTS, DENNIS
1B911800	1	PD	DSG	FC	VRE01	2	9001	9001	0.0	0.2	0.0	0.0	SSM	UPTON, DAVID WITTS, DENNIS

Thin film electroluminescent panel, displaying 1024 x 864 pixels on 13.6" x 11.5" area. Operates on any workstation utilizing VR260 type composite 54KHz signal.

MLP: N/A; Transfer Cost: $3200

1B921B00	1	PD	DSG	FC	LNYY	0	9009	TBD	1.6	0.0	1.0	0.6		SWEENEY, DAVID URBANUS, DAVE

Personal laser printer; 4 PPM; compact - 14" x 16" x 8"; front load, 50 sheets (optional 250 sheet input tray); 2500 page/month. Primary interface serial + PC parallel interface. ANSI + PostScript @FRS. Cartridge different from LNxx.

MLP: $1,500; Transfer Cost: $650 (base model)

1B911R00	1	PD	DSG	FC	VT330/340 COST REDUCTION	2	9003	9003	0.3	0.0	0.1	0.2	GIA ENG	UPTON, DAVID GAUCHER, JOHN

- Cost reduce VT330 & VT340.
- Run series of tests per base level.
- Verify terminals are functionally compatible with VT330/VT340's.
- Certify terminals meet DEC Std 070 - Video SRM.

MLP: N/A; FY91 Transfer Cost: $423 (VT330), $738 (VT340).

1B913L00	1	PD	DSG	FC	IMAGE III-L	0	TBD	TBD	1.9	1.9	0.0	0.0		UPTON, DAVID PAGE, BILL

VIEW-ONLY image for PVAX. T/C = $260.

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911A00	1	PD	DSG	FC	IMAGE III-M	0	TBD	TBD	0.6	0.0	0.0	0.0		UPTON, DAVID PAGE, BILL
1B911A00	1	PD	DSG	FC	IMAGE III-M	0	TBD	TBD	0.6	0.0	0.6	0.0	CSG	UPTON, DAVID PAGE, BILL

- Image III-M is VIEW and EDIT for PVAX.

MLP: N/A; Transfer Cost: <$600.

1B913J00	1	PD	DSG	FC	DWT IMAGE	0	9006	TBD	2.9	0.0	1.1	1.8		UPTON, DAVID PAGE, BILL

VIEW image option for DECwindows terminal.

1B921Y00	1	PD	DSG	FC	PRODUCTION PRINTER INTEGRATION	PRE-0	9012	TBD	3.2	0.0	1.2	2.0	HPS	SWEENEY, DAVID ZWOLINSKI, MIKE

- Integration of high speed, high volume printers into Digital's systems (Xerox 9700 class, Kodak 1392 class, Siemens NDX class printers)
- Enable use of Digital line printer and vendor native modes to facilitate high speed EDP applications.
- V1 Kodak 1392 support under VMS scheduled 9012
- V1 Xerox support under VMS scheduled for 9104
- V1 Siemens support under VMS scheduled for 9104
- Develop plans for forms overlay solution and printer management utilities
- Advanced development study of future connectivity for high speed printers

MLP: N/A; Transfer Cost: N/A

1B921U00	1	PD	DSG	FC	LA70	2	9004	9004	0.2	0.0	0.2	0.0	EUR MFG	SWEENEY, DAVID MAHER, DAN (VBO)

(Formerly called LA75EL; may also have 24-wire variant [LA80])

- Low cost, entry level, personal printer
- 9-wire printhead (200 cps)
- Quiet operation for office use (<55dba)
- Integral table top stand
- Protocols: DEC-ANSI level II, IBM ProPrinter
- Primary interfaces: DEConnect (MMJ), 36 pin parallel (PC compatible)
- Label printing capability
- Options: 1 bin sheet feeder with envelope capability

MLP: <$500; Transfer Cost: <$200 (base unit)

1B921V00	1	PD	DSG	FC	LNZZ	0	9010	TBD	2.0	0.0	1.0	1.0		SWEENEY, DAVID BELLIVEAU, DAVE

- 13 ppm shared laser printer
- Second-generation low-end shared printer
- 8.5" writing line
- Duplex
- Serial/parallel I/O interfaceS
- PostScript option

MLP: $6,000; Transfer Cost: $1,785 (base model)

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	3.2	0.5	0.0	0.0	FULLER	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.1	0.0	0.0	MSB	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.1	0.0	0.0	RAD COM	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.0	0.3	0.0	LES	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)
1B911Z00	1	PD	ABO	FC	SUPERCOMPUTER INTERCONNECT	PRE-0	9012	TBD	0.0	0.0	0.0	2.2	LDP	FITZGERALD, BRIAN QUIGLEY, WIN (ABO)

- High performance interconnect for Cray/VAX.
- Possible next generation CI
- Support for supercomputer gateway product
- High performance switching cores
- Design of the next generation CBI

(Known as Crossbar Interface A/D in FY89)

MLP: TBD; Transfer Cost: TBD

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B912200	1	PD	ABO	FC	OPHIR - WKSYS GRAPHICS HARDWAR	0	TBD	TBD	0.2	0.0	0.2	0.0	WKSYS	FITZGERALD, BRIAN TBD

- New color spaces (YST)
- Multiport Video Rams
- Full motion video options
- Worksystem/monitor interconnect
- Monochrome/color imaging
- Visualization worksystems

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913D00	1	PD	DSG	FC	TEKTERM V1	3	TBD	TBD	0.5	0.1	0.0	0.0	ESG	FITZGERALD, BRIAN BROWN, SHERRI
1B913D00	1	PD	DSG	FC	TEKTERM V1	3	TBD	TBD	0.0	0.1	0.0	0.3	SALES	FITZGERALD, BRIAN BROWN, SHERRI

- Deliver V1 of DECterm VT4xx terminal emulator
- Tektronix 42xx graphics
- Support of Tekterm v1

MLP: TBD; Transfer Cost: $0

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913E00	1	PD	DSG	FC	TERMINAL MANAGEMENT UTILITY V1	PRE-0	TBD	TBD	0.4	0.0	0.0	0.4	HPS	FITZGERALD, BRIAN TBD

- Customized saved VT420 "Set-ups" for transaction processing
- Runs under VMS, with design to accommodate future OZIX support
- Fail-over for terminal connectivity
- Host-to-terminal-server port management

MLP: TBD; Transfer Cost: $0

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911V00	1	PD	DSG	FC	PC FONTS FOR DECWINDOWS	PRE-0	TBD	TBD	0.1	0.0	0.1	0.0	PCI	FITZGERALD, BRIAN HICKS, MARGE

- DECwindows 60 x 80 pixel screen fonts (EGA, HGA)
- DECtech, DECmath for PC aspect ratio
- Basic publishing set for PC aspect ratio

MLP: TBD; Transfer Cost: TBD

1B911S00	1	PD	DSG	FC	NON-LATIN DECWINDOWS FONTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0	INTL ENG	FITZGERALD, BRIAN HICKS, MARGE

(Funding issues still being discussed with International Engineering)

- Integrate Hebrew 12 fonts, 144 Video bitmaps.
- Integrate Greek 12 fonts, 144 Video bitmaps.
- Integrate Arabic 12 fonts, 144 Video bitmaps.
  (includes 4 types each: Serif, San Serif, fixed)
  (includes 6 sizes each, 2 screen resolutions)

MLP: TBD; Transfer Cost: TBD

1B911W00	1	PD	DSG	FC	DECWINDOWS - KANJI FONTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0	ABSS	FITZGERALD, BRIAN HICKS, MARGE

(Funding issue still being discussed with ABSS)

- Integrate minimum set of Kanji fonts.
- Video bitmaps of 2 sizes for 2 screen resolutions.

MLP: TBD; Transfer Cost: TBD

1B922M00	1	PD	DSG	FC	LPS40 PRINTSERVER ENHANCEMENTS	4	8907	8907	8.9	1.7	0.0	0.0		SWEENEY, DAVID TOBIN, ROBIN
1B922D00	1	PD	DSG	NA	THOR PRODUCTION PAGE PRINTER	0	TBD	TBD	0.5	0.2	0.3	0.0	SWS	SWEENEY, DAVID SZYMANOWSKI, J (SWS)
1B922E00	1	PD	DSG	NA	THOR POSTSCRIPT ENHANCEMENTS	0	TBD	TBD	0.4	0.4	0.0	0.0	SWS	SWEENEY, DAVID SZYMANOWSKI, J (SWS)
1B922F00	1	PD	DSG	FC	PIXIE SCANNER & PRINTER	0	8909	8909	0.1	0.1	0.0	0.0	CSS	SWEENEY, DAVID PELAVIN, LARRY (CSS)

Scanner (MD300)
- FRS = 8901
- Announcement Date = 8901
- FRS at Phase 1 = 8809

Printer (LN03Q)
- FRS = 8909
- Announcement Date = 8909
- FRS at Phase 1 = 8809

1B913I00	1	PD	DSG	FC	VR500 MONITOR FAMILY	PRE-0	TBD	TBD	7.5	0.0	0.0	3.6		UPTON, DAVID TBD

Future monitor family; follow-on to VR300 series.

1B913H00	1	PD	DSG	FC	VT520 TEXT + GRAPHICS TERMINAL	PRE-0	TBD	TBD	5.5	0.0	0.0	2.0		UPTON, DAVID TBD

FY93 follow-on to VT420 with some graphics capabilities.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B921X00	1	PD	DSG	FC	LJZZ	0	TBD	TBD	1.6	0.0	0.0	1.6		SWEENEY, DAVID TBD

- Inkjet plotter/printer
- 11" writing line (B size)
- 180 dpi
- Serial/parallel interfaces
- Color Option

MLP: <$3,000; Transfer Cost: <$1,200

1B913M00	1	PD	DSG	FC	FUTURE FLAT PANEL DISPLAYS	PRE-0	TBD	TBD	4.0	0.0	0.0	1.5		UPTON, DAVID TBD

Development of future flat panel dispalys.

1B911T00	1	PD	DSG	FC	DECWINDOWS APPLE LW-PLUS FONTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0		FITZGERALD, BRIAN TBD

- Integrate 14 outline fonts into DDS Program.
- Provide 10 sizes of video bitmaps (280 files).

MLP: TBD; Transfer Cost: TBD

1B921Z00	1	PD	DSG	FC	POSTSCRIPT FILE COMP SERVER	PRE-0	TBD	TBD	1.0	0.0	0.0	0.6		SWEENEY, DAVID TBD

- Provides on the network compressed (CCITT) versions of PostScript files, includes:
  - o LPSXX controller/firmware based
  - o build/adapt box to hold controller
  - o modify PrintServer software
  - o modify Adobe software
  - o documentation

MLP: $9995; Transfer Cost: $3000

1B922100	1	PD	DSG	FC	FAX GATEWAY	PRE-0	TBD	TBD	0.6	0.0	0.0	0.6		SWEENEY, DAVID TBD

- Bridge from Enet to private faxes
- Allows E-mail to/from any GRP3 Fax
- PC-based (Tandy)
- Std FAX board, OCR SW
- DEC-specific SW in PC
- GROUP 4 PC-PC Transmission

MLP: $3K - 5K; Transfer Cost: <$600

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B922R00	1	PD	DSG	FC	LPS TYPESETTER	PRE-0	TBD	TBD	7.0	0.0	0.0	1.2		SWEENEY, DAVID TBD

Provides typeset quality resolution (>600 dpi) with PrintServer family capability. Includes:

- Engine selection
- Controller development
- Adobe PostScript development
- PrintServer Software development
- Diagnostics
- ELN driver development

MLP = $125,000; T/C = $34,000.

1B921C00	1	PD	DSG	FC	PRINTER MANAGEMENT UTILITY V1.	PRE-0	TBD	TBD	2.0	0.0	0.0	0.5		FITZGERALD, BRIAN TBD

A new product program to develop software and documentation which will simplify the control of printers on all Digital operating systems. This component of the DECprint program is required to solve the heterogeneous printer management problem. This will be highly saleable to medium/large installations. Integrates with Enterprise Management Architecture.

- Report and controls status of printers and print queues.
- Consolidated documentation for all print-related activities.

MLP: TBD; Transfer Cost: $0

1B923900	1	PD	DSG	FC	ADD'L ELECTRONIC PUBLISH FONTS	PRE-0	TBD	TBD	1.4	0.0	0.0	0.7		FITZGERALD, BRIAN TBD

Expand the library of saleable fonts (coordinated Video bitmaps and Printing outlines) for the needs of corporate electronic publishing.

1B923A00	1	PD	DSG	FC	TECHNICAL DOCUMENT CONVERSION	PRE-0	TBD	TBD	1.0	0.0	0.0	0.5		FITZGERALD, BRIAN TBD

- Adobe is developing a next generation application to incorporate engineering drawings into PostScript documents. This will support this product on DECwindows as part of the compound document architecture.

1B922000	1	PD	MKO	FC	ENCORE	PRE-0	9012	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON HAYES, SUSAN (CSS)

- 600 LPM impact line matrix product
- Succeeds LG01 and LG02
- Offers text, enhanced text, graphics, forms creation
- Multi part forms capability
- Enhanced bar code at speeds up to 600 LPM
- MIS and open office environment
- The project will be funded and run by CSS Engineering

FY90 proposed funding = $0.175 CSS
FY91 proposed funding = $0.625 CSS

MLP: $8,500 WW; Transfer Cost: $3825 WW

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B922P00	1	PD	MKO	FC	COMPANION	PRE-0	9106	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON BROWN, ROD (CSS)

- Bi-directional statusing
- Both synchronous and asynchronous
- Forms alignment features
- Job restart at selected point

This project is funded and run by CSS Engineering

FY91 funding = $0.420 CSS

MLP: $5,000 WW; Transfer Cost: (SW Lic. only)

1B922T00	1	PD	MKO	FC	BANDIT (LP37)	4	8906	8906	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON FISCHER, BOB (CSS)

- 1200 LPM impact line print
- Multi-part forms (5 + original)
- MIS and open office (55 db)
- Duty cycle 150K pages/mo.

This project will be funded and run by CSS Engineering.

FY89	$0.658	CSS
FY90	0.032	CSS
Life	0.690	CSS

MLP: $22,500 WW; Transfer Cost: $7,094 WW

1B922U00	1	PD	MKO	FC	VAX VERTICAL FORMS PRINTER	0	9012	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Software product layered to VMS.
- Meets commercial impact printer needs.
- Forms management via VFU control.

This project will be funded and run by CSS Engineering.

FY89 funding	= $0.115	CSS
FY90 funding	= $0.145	CSS
Total	= $0.260	CSS

MLP: $3,500 WW; Transfer Cost: (SW Lic. only)

1B922V00	1	PD	MKO	NA	VIOLET (KANJI LNXX)	1	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Shared Kanji mid-speed cut sheet laser printer.

This project is funded and run by CSS Engineering.

FY89 funding	= $0.117	CSS
FY90 funding	= $0.413	CSS
Total	= $0.530	CSS

MLP: $3,800 FER; Transfer Cost: $1,400 FER

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B922W00	1	PD	MKO	NA	KPS20	1	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Cut sheet non-impact 20 ppm departmental printer (Kanji LPS20).

This project is funded and run by CSS Engineering.

FY89 funding = $0.248 CSS
FY90 funding = $0.097 CSS
Life funding = $0.345 CSS

MLP: $33,000 FER; Transfer Cost: $10,000 FER

1B922X00	1	PD	MKO	NA	LA86S	PRE-0	9009	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Shared Kanji serial 24 pin wide carriage printer.
- Successor to LA86.

This project is funded and run by CSS Engineering.

FY90 funding = $0.150 CSS
FY91 funding = $0.050 CSS
Lifetime = $0.200 CSS

MLP: $2,900 FER; Transfer Cost: $800 FER

1B922Y00	1	PD	MKO	NA	BELLADONNA (LA280S)	0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- 500 LPM Kanji dot matrix printer.

This project is funded and run by CSS Engineering.

FY90 funding = $0.218 CSS

MLP: $25,400 FER; Transfer Cost: $10,500 FER

1B913N00	1	PD	MKO	NA	MAXINE (KDWT-BW)	0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Kanja-Kanji DECwindows terminal (monochrome) with VT284 emulation.

This project is funded and run by CSS Engineering.

FY90 funding =$0.287 CSS

MLP: $3,300 FER; Transfer Cost: $1,000 FER

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913000	1	PD	MKO	NA	KDWT-C	PRE-0	9012	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Kanja-Kanji color DECwindows terminal with VT286 emulation.
- ReGIS/Tektronix support
- Supports 16", 17" and 20" color monitors

This project is funded and run by CSS Engineering.

FY90 funding = $0.200 CSS
FY91 funding = $0.150 CSS
Total = $0.350 CSS

MLP: $6,160 FER; Transfer Cost: $1,960 FER

1B922Z00	1	PD	MKO	FC	MOXIE	PRE-0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)

- SCSI grayscale scanner for PVAX.

This project is funded and run by CSS Engineering.

FY90 funding = $0.200 CSS

MLP: $3,000 WW; Transfer Cost: $2000 WW

1B923100	1	PD	MKO	FC	MERCURY	PRE-0	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)

- FAX to VAX to FAX

This project is funded and run by CSS Engineering.

FY90 funding = $0.150 CSS

MLP: $14,000 WW; Transfer Cost: $9,800 WW

1B923200	1	PD	MKO	FC	SAVVY	PRE-0	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)

- DHH of a recognition server with third party software license for Image file transfer.

This project is funded and run by CSS Engineering.

FY90 funding = $0.100 CSS

MLP: $25,000 WW; Transfer Cost: $17,500 WW

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B914C00	1	PD	MKO	FC	DECSERVER 250	3	8909	8909	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON BROWN, ROD (CSS)

- Interface between Ethernet and multiple parallel and serial printers.

This project funded and run by CSS.

FY89 funding = $0.999 CSS
FY90 funding = $0.306 CSS
Total = $1,370 CSS

MLP: $4,025 WW; Transfer Cost: $728 WW.

1B914D00	1	PD	MKO	FC	DEPRILA 2	PRE-0	9006	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON BROWN, ROD (CSS)

- Centronics-parallel version of DECserver 250.

This project is funded and run by CSS.

FY90 funding = $0.350 CSS

MLP: $4025 WW; Transfer Cost: $728 WW.

1B914B00	1	PD	MKO	NA	TOMCAT ENHANCEMENTS	PRE-0	TBD	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- UNIX-focused Kanji terminal enhancement of VT3282

This project is funded and run by CSS.

FY90 funding = $0.150 CSS
FY91 funding = $0.250 CSS
Life funding = $0.400 CSS

MLP: $1,143 FER; Transfer Cost: $400 FER.

1B914A00	1	PD	MLO	FC	SYBIL (DECVOICE TELECOM)	0	9003	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Multiline DECvoice
- Platform for both Telecom network services and integrated voice messaging

FY90 funding = TBD

MLP: $90,000 (24 line system);
Transfer Cost: $28,800

MLP: $120,000 (48 line system);
Transfer Cost: $38,400

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B923D00	1	PD	MKO	NA	LJAA	PRE-0	9106	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON TBD (CSS)

- Personal Kanji printer for DWT, W/S & VTs

This project will be funded and run by CSS.

FY91 funding = $0.400 CSS

MLP: $1,434 FER; Transfer Cost: $435 FER

1B923E00	1	PD	MKO	FC	PRODUCTION SCANNER	PRE-0	9103	TBD	0.0	0.0	0.0	0.0	CSS	MCADAMS, GORDON PELAVIN, LARRY (CSS)

- DDH of a 20-30 PPM, 200 DPI scanner

This project is funded and engineered by CSS.

FY91 proposed funding = $0.100 CSS

MLP: $25,000; Transfer cost: $15,000.

1B913X00	1	PD	MKO	FC	RF-VT320	2	8906	TBD	0.0	0.0	0.0	0.0	GSG	NOVAK, FRANK TBD (GSG)

- TEMPEST version is the same as commercial.

FY89	$1.775	GSG
FY90	0.125	GSG
Life	1.900	GSG

MLP: $1,495; Transfer Cost: $573

1B913Z00	1	PD	MKO	FC	RF-DWT	PRE-0	9103	TBD	0.0	0.0	0.0	0.0	GSG	NOVAK, FRANK TBD (GSG)

- TEMPEST version is the same as commercial.

FY90	$0.020	GSG
FY91	0.480	GSG
Life	0.500	GSG

MLP: TBD; Transfer Cost: TBD

1B914100	1	PD	MKO	FC	RF-VR320	PRE-0	9009	TBD	0.0	0.0	0.0	0.0	GSG	NOVAK, FRANK TBD (GSG)

- TEMPEST version is the same as commercial.

FY90	$0.525	GSG
FY91	0.275	GSG
Life	0.800	GSG

MLP: TBD; Transfer Cost: TBD

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913R00	1	PD	REO	FC	DESKTOP INTERNATIONALIZATION	0	TBD	TBD	0.0	0.0	0.0	0.0	INTL	RYLAND, MARK DAWSON, COLIN (IPG)

- Activities include monitoring product development, reviewing specs/ design for international suitability, production of International- ization plans, providing technical consultancy where needed, coord- ination of requirements for new videos and printer products, product management of international components, coordinating production/ product management of Language Variant (LV) documentation, and revision of LV documentation for existing products.

FY89	$0.332	IED/LES
FY90	0.429	IED/LES
FY91	0.483	IED/LES

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913S00	1	PD	REO	FC	DECTERM INTERNATIONAL/LOCAL	0	TBD	TBD	0.0	0.0	0.0	0.0	INTL	DRAY, BOB TBD (IPG)

FY89	yes	
FY90	$0.067	IED/LES
FY91	0.074	IED/LES

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913T00	1	PD	REO	NA	ARABIC VT420	0	9009	TBD	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY TBD (IPG)

- This corporate funded re-engineering project will develop the natural successor to the Arabic VT320.

FY90	$0.530	Arabic
FY91	0.096	Arabic

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913U00	1	PD	REO	NA	ARABIC DECTERM	0	9009	TBD	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY TBD (IPG)

- This corporate funded re-engineering project will build the Arabic functionality of the VT320/VT420 devices into a DECwindows terminal emulator.

FY90	$0.337	Arabic
FY91	0.036	Arabic

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B913V00	1	PD	REO	NA	HEBREW LESG PRODUCT ADAPTATION	0	TBD	TBD	0.0	0.0	0.0	0.0	INTL	GOLDMAN, AHARON TBD (ISRAEL)

- Provide integrated corporate products and architecture with Hebrew language support in order to retain and enhance market share of Hebrew speaking customer base.

FY89	$0.262	Israel
FY90	0.226	Israel
FY91	0.242	Israel

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B923300	1	PD	REO	NA	LNXX SYMBIONT COUNTRY KIT	0	9003	TBD	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY TBD (IPG)
- This corporate funded project will produce a completely new product which will provide Arabic/Latin bilingual capability when it is installed on the Desktop laser printer which replaces the LN03.														
FY90	$0.097	Arabic												
1B913100	1	PD	LJO	NA	PANDAMATE I TRANSITION	0	TBD	TBD	6.0	1.3	0.0	0.0		CABRINETY, LARRY NA
	Chart	1	In-House Funded Proposed Project Totals						137.9	29.9	30.0	31.1		
	Chart	1	Externally Funded Proposed Project Totals						10.9	1.9	3.2	6.0		
	Chart	1	Proposed VIDEO, IMAGE AND PRINTER SYSTEMS						148.8	31.8	33.2	37.1		
	Chart	1	In-House Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Incremental VIDEO, IMAGE AND PRINTER SYSTEMS						0.0	0.0	0.0	0.0		
	Chart	1	Totals for VIDEO, IMAGE AND PRINTER SYSTEMS						148.8	31.8	33.2	37.1		

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911D00	2	AR	DSG	NA	TERMINAL INTERCONNECT ARCH	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA

- Define architecture for management of all terminal resources.
- Define architecture for printer connect including Printer Access Protocol.
- Define architecture for wide area terminal interconnect.
- Define architecture for occasional systems interconnect.
- Understand impact of public ISDN on terminals.

1B911E00	2	AR	DSG	NA	EXTERNAL STANDARDS	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA

- ANSI/ISO/ECMA/IEC tracking, co-ordination, representation and influence.
- Develop architecture and implementation strategy for:
  - o Multiple Octet character sets Stds.
  - o ISO 8-bit character sets.
  - o Non-Left-to-Right language support (ECMA Std).
  - o Strategy ends up in DEC Std 70, 74, 138, 169.

1B921E00	2	AR	DSG	NA	POSTSCRIPT ARCHITECTURE	NA	NA	NA	0.0	0.0	0.1	0.2		FITZGERALD, BRIAN NA

- DEC Std-87, PostScript language + implementation Architecture: maintenance support for new devices, displays + other implementations.
- ISO SPDL Standards Committee: representative; expect draft ISO Std (DIS) in FY90.
- Review and comment of all Adobe public specs.
- DEC clarifications of Adobe specs: (PDSC)PS Doc structuring conventions + (ESPF) Encapsulated PS format.
- PS language Usage Specs: lead team of application developers.
- Develop verifiers to certify correct use of PDSC and EPSF.

1B921T00	2	AR	DSG	NA	MAINTENANCE OF DEC STANDARDS	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA

- Admin support for the following DEC Stds:

  - o 138 - registry of escape sequences
  - o 180 - registry of font names
  - o 169 - registry of character sets
  - o 107-1 - registry of keyboard layouts

- Technical consulting fo DEC Std. 138, 169.
- IPG/CSS product development assistance.
- Consulting/support for serial line products Corporatewide.

1B913200	2	AR	DSG	NA	VIDEO SYS REFERENCE MANUAL	NA	NA	NA	0.0	0.2	0.0	0.0		FITZGERALD, BRIAN NA
1B913W00	2	AR	REO	NA	ARABIC/R2L ARCHITECTURES/TECH	NA	NA	NA	0.0	0.0	0.0	0.0	INTL	VOWLES, ANDY NA

- Character cell terminal envirnment: H/W devices

FY90	$0.1	Arabic
FY91	0.1	Arabic

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B922G00	2	AR	DSG	NA	PRINT SYS ARCH REF MANUAL	NA	NA	NA	0.0	0.2	0.0	0.0		FITZGERALD, BRIAN NA
1B921F00	2	AR	DSG	NA	ANSI EXT./HP-PCL LEVEL 5	NA	NA	NA	0.0	0.0	0.0	0.3		SWEENEY, DAVID NA

- Competitive non-bitmap laser printers are now offering outline fonts in their devices. To remain competitive, we need to consider offering similar capability in our own devices (LNXX family).
- Investigate the possibility of adding outline fonts to the ANSI level 3 specification.
- Investigate the possibility of adopting HP-PCL level 5 to obtain this type of font capability.
- Determine and select the best approach.

1B911F00	2	AD	ABO	NA	DWT PLUS	NA	NA	NA	0.0	0.0	0.3	0.3		FITZGERALD, BRIAN NA

- More powerful DWT using TI 34020.
- Coprocessor included for image work.
- Flexible platform.
- Video option port for real time video or grayscale imaging or document imaging.
- Could provide a comparison benchmark to be used to compare TI vs Motorola 68000.

1B911G00	2	AD	DSG	NA	FLAT PANEL DISPLAYS AD	NA	NA	NA	0.0	0.0	0.3	0.3		FITZGERALD, BRIAN NA

- Joint development or buyout effort.
- 2 panels 800 x 500 and 1280 x 1024.
- Color and grayscale.
- Needed for VT520 and worksystems.
- alternative for CRT technology.
- Terminal and monitor single package.

1B911H00	2	AD	ABO	NA	MONITORS AD	NA	NA	NA	0.0	0.4	0.4	0.6		FITZGERALD, BRIAN NA

- Preparation for next generation monitors (VR500 family).
- Cost reduced VR300 series monitors.
- Evaluation of 150DPI technologies.
- Monitor/system box interconnects.
- Evaluation/design of overscanning.
- Design of more digital adjustments.
- Investigate analog ASIC applications.

1B911I00	2	AD	ABO	NA	HUMAN INTERFACE HARDWARE AD	NA	NA	NA	0.0	0.0	0.4	0.3		FITZGERALD, BRIAN NA

- Demonstrate three dimensional visual outputs,
- Three dimensional input devices.
- Sound I/O
- Tactile I/O

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B911J00	2	AD	DSG	NA	INPUT DEVICE AD	NA	NA	NA	0.0	0.1	0.3	0.3		FITZGERALD, BRIAN NA

- Cursor advanced development.
  - o GOAL: Cursor in keyboard models built with various technologies, i.e. trackball, key puck, isopoint, since cursor devices will exist for man years due to DECwindows environment.
    - Communications interface development
    - Build experimental models
    - Human factors tests run

1B913300	2	AD	ABO	NA	IMAGING ARCHITECTURE	NA	NA	NA	0.0	0.3	0.0	0.0		FITZGERALD, BRIAN NA
1B921G00	2	AD	DSG	NA	ADVANCED CONTROLLER HARDWARE A	NA	NA	NA	0.0	0.0	0.2	0.2		SWEENEY, DAVID NA

- Continuous - tone compression/decompression.
- Interface to faster networks (FDDI?).
- Hardcopy half toning.

1B921H00	2	AD	DSG	NA	ADVANCED MARKING TECHNOLOGY	NA	NA	NA	0.0	0.0	0.4	0.5		SWEENEY, DAVID NA

- Evaluate Platemaker Processes.
- Next - generation engine evaluation.
- Emphasis on color (inkjet, sublim, xerography)process.
- Consult on product engine technology proplems.

1B921I00	2	AD	DSG	NA	HARDCOPY IMAGING/COLOR AD	NA	NA	NA	0.0	0.0	0.2	0.2		SWEENEY, DAVID NA

- Develop methods for printer/CRT color fidelity.
- Develop automatic printer test pages.

1B921J00	2	AD	DSG	NA	SCANNER/OCR AD	NA	NA	NA	0.0	0.0	0.1	0.1		SWEENEY, DAVID NA

- Color scanners (evaluate part of CRT/print/scan fidelity).
- Track/evaluate OCR techniques.
- Develop goodness metrics for OCR.

1B912100	2	AD	ABO	NA	NETWORK SYSTEMS SUPPORT	NA	NA	NA	1.2	1.2	0.0	0.0	NWSS	FITZGERALD, BRIAN NA

- Product design of DERSM
- Product design of DERES
- Provides network topology mapping
- Provides network sensors/control
- Provides network statistics

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B912300	2	AD	ABO	NA	FULL MOTION VIDEO	NA	NA	NA	0.0	0.1	0.0	0.0	MSB	FITZGERALD, BRIAN
														NA
1B912300	2	AD	ABO	NA	FULL MOTION VIDEO	NA	NA	NA	0.0	0.4	0.0	0.0	ED SVCS	FITZGERALD, BRIAN
														NA
1B912300	2	AD	ABO	NA	FULL MOTION VIDEO	NA	NA	NA	0.0	0.0	0.3	0.7		FITZGERALD, BRIAN
														NA

- Develop a full motion video option
- Motion video in a DECwindow
- Workstation independent
- Follow-on product would be tightly coupled
- ASIC being developed by worksystems
- Possible Visage involvement for future product

1B913500	2	AD	ABO	NA	VISUAL QUALITY A/D	NA	NA	NA	0.0	0.2	0.0	0.0	MSB	STOCKEBRAND, THOMAS
														NA
1B913500	2	AD	ABO	NA	VISUAL QUALITY A/D	NA	NA	NA	0.0	0.3	0.0	0.0		STOCKEBRAND, THOMAS
														NA
1B913500	2	AD	ABO	NA	VISUAL QUALITY A/D	NA	NA	NA	0.0	0.1	0.0	0.0	OTHER	STOCKEBRAND, THOMAS
														NA
1B912500	2	AD	ABO	NA	ARCH FOR SUPP HUMAN INTERACTIO	NA	NA	NA	0.0	0.0	0.1	0.0	B J	STOCKEBRAND, THOMAS
														NA
1B912500	2	AD	ABO	NA	ARCH FOR SUPP HUMAN INTERACTIO	NA	NA	NA	0.0	0.0	0.0	0.0	OTHERS	STOCKEBRAND, THOMAS
														NA

- Information architectures for Human/computer interactions
- High quality color display architectures
- Three-dimensional display architectures
- Sound I/O, Tactile I/O.

1B913600	2	AD	ABO	NA	GALLIUM ARSENIDE	NA	NA	NA	0.0	0.0	0.0	0.0	RAD COMM	FITZGERALD, BRIAN
														NA
1B913600	2	AD	ABO	NA	GALLIUM ARSENIDE	NA	NA	NA	0.0	0.1	0.0	0.0		FITZGERALD, BRIAN
														NA
1B922H00	2	AD	DSG	NA	PRINTING SYSTEMS A/D	NA	NA	NA	0.0	0.9	0.0	0.0		SWEENEY, DAVID
														NA
1B911K00	2	PS	DSG	NA	IMAGE II/VR419 SUPPORT ENGINEE	NA	NA	NA	0.0	0.1	0.2	0.0		UPTON, DAVID
														NA

- Ongoing support for Image II & VR419

1B911L00	2	PS	DSG	NA	IMAGE III-L SUPPORT ENGINEERIN	NA	NA	NA	0.0	0.0	0.1	0.0		UPTON, DAVID
														NA

- Image III-l (view only, PVAX) - FRS Q3,FY89, Transfer Cost: $260, 4A support only.

1B911M00	2	PS	DSG	NA	VR295 SUPPORT ENGINEERING	NA	NA	NA	0.0	0.3	0.1	0.0		UPTON, DAVID
														NA

- Engineering support for VR295.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B921K00	2	PS	DSG	NA	RELEASE ENGINEERING	NA	NA	NA	0.0	0.0	0.1	0.1		FITZGERALD, BRIAN NA

- Development Eng/SQM/SDC liaison.
- CPS, fonts and LPS supporting host.
- Build/ship SW field test kits.
- Software project librarian.
- Assist product managers with SPD/SSA.

1B921L00	2	PS	DSG	NA	DSG SOFTWARE SUPPORT	NA	NA	NA	0.0	0.6	0.5	0.4		FITZGERALD, BRIAN NA

Technical engineering support to CSSE for:

- Retos, SSU, ReGIS & Tek translators.
- Ultrix PrintServer.
- VMS Print symbiont.
- VAXPAC

1B921N00	2	PS	DSG	NA	VENDED FIRMWARE/SOFTWARE SUPP	NA	NA	NA	0.0	0.1	0.2	0.2		SWEENEY, DAVID NA

- Provide continued support to the PrintServer programs with respect to vendor interaction (for example: Adobe and Ricoh).
- Defining requirements for current and future releases of PrintServer software.
- Negotiating and cooperating on specification.
- Reviewing designs and monitoring implementation status.
- Obtaining responses to problems uncovered during the qualification phase.

1B921O00	2	PS	DSG	NA	MARKETING TECHNICAL SUPPORT	NA	NA	NA	0.0	0.0	0.8	0.0		SWEENEY, DAVID NA

- Provide technical support for marketing new product introduction.
- Provide performance analysis facility for competitive analysis.
- Provide minimal customer and show support.
- Improve strategic 3rd party software support.

1B921P00	2	PS	DSG	NA	PRINTSERVER PRODUCT SUPPORT	NA	NA	NA	0.0	0.0	0.1	0.1		SWEENEY, DAVID NA

Provide customer support for released versions of PrintServer software by answering questions and investigating problems directed from field through CSSE.

1B922I00	2	PS	DSG	NA	PHASE 4A HARDWARE PROD SUPPORT	NA	NA	NA	0.0	0.7	0.0	0.0		SWEENEY, DAVID NA
1B922300	2	PS	DSG	NA	HARDCOPY FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.0	0.0	0.0	CSS	FITZGERALD, BRIAN NA
1B922300	2	PS	DSG	NA	HARDCOPY FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.0	0.0	0.0	ABO	FITZGERALD, BRIAN NA
1B922300	2	PS	DSG	NA	HARDCOPY FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.2	0.2	0.0	EPG	FITZGERALD, BRIAN NA

Provide technical firmware support for:
- LN03, LA75, LJ250 and LPS40 - 12 months
- LA324 and LPS20 - 9 months
- CSS Scanner and LN03Q - 12 months.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B922400	2	PS	DSG	NA	LP37 BAND PRINTER SUPPORT	NA	NA	NA	0.0	0.0	0.0	0.0	CSS	SWEENEY, DAVID NA
1B922500	2	PS	DSG	NA	ACCESSORIES & SUPPLIES SUP ENG	NA	NA	NA	0.0	0.1	0.0	0.2	SSM	SWEENEY, DAVID NA
1B922800	2	PS	DSG	NA	PRINTING SYS BUYOUT SUPPORT	NA	NA	NA	0.0	0.6	0.4	0.7	EPG	SWEENEY, DAVID NA
- LJ250, LPS40, LPS40E, LN03A, LN03R, LN03S - LA 324, LJxx, LNxx, LPS20, LA75														
1B922J00	2	PS	DSG	NA	PRINT SYSTEMS SUPP ENGINEERING	NA	NA	NA	0.0	0.2	0.0	0.0	ABO	SWEENEY, DAVID NA
1B912800	2	PS	DSG	NA	VIDEO FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.1	0.1	0.2	TAO	FITZGERALD, BRIAN NA
1B912800	2	PS	DSG	NA	VIDEO FIRMWARE 4B SUPPORT	NA	NA	NA	0.0	0.0	0.1	0.0	BOO	FITZGERALD, BRIAN NA
Provide technical engineering support to CSSE for: - VT330, VT340 and VT320 - 12 months - LK301 and Mouse - 12 months - VT320sm(CSS) - 12 months														
1B912F00	2	PS	DSG	NA	KEYBOARD SUPPORT	NA	NA	NA	0.0	0.3	0.1	0.3	BOSTON	FITZGERALD, BRIAN NA
- LK201, LK301, LK401, Mouse VE support														
1B912G00	2	PS	DSG	NA	EPG - VIDEO SUPPORT	NA	NA	NA	0.0	0.3	0.2	0.3	EPG	UPTON, DAVID NA
- VR290, VR299, Tablet, Mouse, VRE01 Flat Panel, VR150 monitor, VR160 monitor.														
1B912H00	2	PS	DSG	NA	VIDEO - SUPPORT	NA	NA	NA	0.0	0.5	0.1	1.0	ABO	UPTON, DAVID NA
- Video - VR260/VR262 - 250K - Hardcopy - LNvii, LN03R, LN03S, LN03 Fonts - 85K - WKSYS - PVAXO, Firefox, PMAX, LYNX, Mayfair, Caylyth - 355K - GSG - RF201, RF260, RF262 - 20K - RT - DRVII-J, KDJII-AB/AC, DRVIJ-P, MXVII-BF, MXVII-AC, KXJII-CA, KDFII-AC, QDSS - 90K - TOTAL: 800K														
1B912J00	2	PS	DSG	NA	TAIWAN SUPPORT ENGINEERING	NA	NA	NA	0.0	0.2	0.1	0.3	TAIWAN	UPTON, DAVID NA
- VT320, VT330, VT340, VT420														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B912L00	2	PS	DSG	NA	WORKSTATIONS SUPPORT ENG	NA	NA	NA	0.0	0.2	0.0	0.1	ABO	UPTON, DAVID NA
- PVAXI, Firefox - Workstation support for ABO														
1B912M00	2	PS	DSG	NA	UCO/WORKSYSTEMS SUPPORT ENG	NA	NA	NA	0.0	0.0	0.0	0.0		UPTON, DAVID NA
Support for: - 3MAX - Rigelfox														
1B913700	2	PS	DSG	NA	VR262 19" MONOCHROME MONITOR	NA	NA	NA	0.0	0.2	0.0	0.0	SSM	UPTON, DAVID NA
1B913800	2	PS	DSG	NA	VR292 19" COLOR MONITOR	NA	NA	NA	0.0	0.3	0.0	0.0	SSM	UPTON, DAVID NA
1B913900	2	PS	DSG	NA	MOUSE COST REDUCTION	NA	NA	NA	0.0	0.1	0.0	0.0	SSM	FITZGERALD, BRIAN NA
1B913A00	2	PS	DSG	NA	EUROPEAN/TEMPEST SUPPORT ENG	NA	NA	NA	0.0	0.0	0.0	0.0	READING	UPTON, DAVID NA
1B913A00	2	PS	DSG	NA	EUROPEAN/TEMPEST SUPPORT ENG	NA	NA	NA	0.0	0.0	0.0	0.0	ABO	UPTON, DAVID NA
1B913A00	2	PS	DSG	NA	EUROPEAN/TEMPEST SUPPORT ENG	NA	NA	NA	0.0	0.1	0.0	0.0	VBO	UPTON, DAVID NA
1B913400	2	PS	DSG	NA	LK301 KEYBOARD PHASE 4A SUPPOR	NA	NA	NA	0.0	0.3	0.0	0.0		FITZGERALD, BRIAN NA
1B914E00	2	PS	DSG	NA	DECSTATION 210, 310 SUPPORT	NA	NA	NA	0.0	0.0	0.1	0.0	PCSG	UPTON, DAVID NA
1B911N00	2	EC	DSG	NA	SCRAP & REWORK	NA	NA	NA	0.0	0.6	0.4	1.0		CABRINETY, LARRY NA
1B911Q00	2	EC	DSG	NA	VIDEO ECO'S	NA	NA	NA	0.0	0.4	0.4	0.4		UPTON, DAVID NA
1B921Q00	2	EC	DSG	NA	HARDCOPY ECO'S	NA	NA	NA	0.0	0.1	0.2	0.3		SWEENEY, DAVID NA
1B912O00	2	EC	DSG	NA	KEYBOARD ECO'S	NA	NA	NA	0.0	0.2	0.1	0.2	BOSTON	FITZGERALD, BRIAN NA
- LK201, LK301, LK401, Mouse VE Support														
1B912Q00	2	EC	DSG	NA	VIDEO BUYOUT ECO'S	NA	NA	NA	0.0	0.1	0.2	0.1	EPG	UPTON, DAVID NA
- VR290, VR299, Tablet, Mouse, VRE01, Flat Panel, VR150 monitor, VR160 monitor, ECO support.														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B912R00	2	EC	DSG	NA	VIDEO ECO'S	NA	NA	NA	0.0	0.4	0.1	0.1	ABO	UPTON, DAVID NA
- VR260/VR262, VR295.														
1B912S00	2	EC	DSG	NA	TAIWAN VIDEO ECO'S	NA	NA	NA	0.0	0.2	0.0	0.1	TAIWAN	UPTON, DAVID NA
- VT320, VT330, VT340, VT420.														
1B912U00	2	EC	DSG	NA	UCO/WORKSTATIONS ECO'S	NA	NA	NA	0.0	0.0	0.1	0.1	ABO	UPTON, DAVID NA
- PVAX1, Firefox - Workstation ECO support for ABO														
1B913C00	2	EC	DSG	NA	LES & EUROPEAN ECO'S	NA	NA	NA	0.0	0.1	0.0	0.0	LES	UPTON, DAVID NA
1B913C00	2	EC	DSG	NA	LES & EUROPEAN ECO'S	NA	NA	NA	0.0	0.0	0.0	0.0	READING	UPTON, DAVID NA
1B913C00	2	EC	DSG	NA	LES & EUROPEAN ECO'S	NA	NA	NA	0.0	0.0	0.0	0.0	VBO	UPTON, DAVID NA
1B914F00	2	EC	DSG	NA	DECSTATION 210, 310 ECO'S	NA	NA	NA	0.0	0.0	0.2	0.0	PCSG	UPTON, DAVID NA
1B914900	2	EC	DSG	NA	TEAMMATE 1 & 2 ECO'S	NA	NA	NA	0.0	0.0	0.1	0.0	SASE	UPTON, DAVID NA
ECO support for Teammate 1 & 2.														
1B922700	2	EC	DSG	NA	ACCESSORIES & SUPPLIES ECO'S	NA	NA	NA	0.0	0.1	0.0	0.1	SSM	SWEENEY, DAVID NA
1B922600	2	EC	DSG	NA	PRINTING SYS BUYOUT ECO'S	NA	NA	NA	0.0	0.1	0.3	0.3	EPG	SWEENEY, DAVID NA
- LJ250, LPS40, LPS40E, LN03A, LN03R, LN03S, LA324, LJxx, LNxx, LPS20, LA75 ECO support.														
1B912V00	2	PE	DSG	NA	DESIGN FOR MANUFACTURING	NA	NA	NA	0.0	0.4	0.3	0.8	SSM	FITZGERALD, BRIAN NA
1B912V00	2	PE	DSG	NA	DESIGN FOR MANUFACTURING	NA	NA	NA	0.0	0.9	0.4	0.2		FITZGERALD, BRIAN NA
Integrated design and manufacturing approach tonew product development. Focus on four key areas: Electronics, Mechanical, Assembly and Computer Aided Design.														
1B911O00	2	TL	DSG	NA	CAD/CAE	NA	NA	NA	0.0	0.7	0.7	0.9		FITZGERALD, BRIAN NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B912900	2	TL	DSG	NA	CORPORATE IDENTITY FONTS	NA	NA	NA	0.0	0.0	0.0	0.0	CORP	FITZGERALD, BRIAN NA

(Project not funded by Corporate Identity Committee)

- License 8 P.S. Outline Fonts (Garamond) for unlimited internal use
- Develop Screen Logo
- Provide 160 video bitmaps

1B921S00	2	TL	DSG	NA	SOFTWARE METHODS & TOOLS	NA	NA	NA	0.0	0.2	0.2	0.0		SWEENEY, DAVID NA

- Investigate and implement state-of-the-art software development methodologies and techniques.
- Investigate, acquire and implement tools to support the above.
- Should result in long-term productivity and reliability gains, decreased time-to-FRS of software developments, decreased support costs.

Chart	2	In-House Funded Proposed Project Totals	0.0	7.5	7.7	7.9
Chart	2	Externally Funded Proposed Project Totals	1.2	7.0	2.9	4.9
Chart	2	Proposed VIDEO, IMAGE AND PRINTER SYSTEMS	1.2	14.5	10.6	12.8
Chart	2	In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart	2	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart	2	Incremental VIDEO, IMAGE AND PRINTER SYSTEMS	0.0	0.0	0.0	0.0
Chart	2	Totals for VIDEO, IMAGE AND PRINTER SYSTEMS	1.2	14.5	10.6	12.8

In-House Funded Project Totals	137.9	37.4	37.7	39.0
Externally Funded Project Totals	12.1	8.9	6.1	10.9
Proposed for VIDEO, IMAGE AND PRINTER SYSTEMS	150.0	46.3	43.8	49.9
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental VIDEO, IMAGE AND PRINTER SYSTEMS	0.0	0.0	0.0	0.0
Grand Totals for VIDEO, IMAGE AND PRINTER SYSTEMS	150.0	46.3	43.8	49.9

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: VIDEO, IMAGE AND PRINTER SYSTEMS

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1B921100	PRINTSERVER 20	8907	8907	8902	LANNING, RON
1B923B00	PRINTSERVER 20 PLUS	TBD	TBD	TBD	LANNING, RON
1B922C00	LPS20 MEMORY OPTION	TBD	TBD	TBD	LANNING, RON
1B911100	DECTERM V2	8912	8912	8909	HICKS, MARGE
1B921200	DECPRINT PRINT SERV	TBD	9004	TBD	BROWN, SHERRI
1B923F00	DECPR UT/PS TO SIXEL	9001	9001	9001	BROWN, SHERRI
1B911300	VR300 MONITOR FAMILY	9004	9004	9006	WITTS, DENNIS
1B911400	VT420 VIDEO TERMINAL	9005	9005	9006	JOY, PETER
1B911500	VT1000 (DWT-MONOCHR)	9001	8912	8911	BELLEMARE, VIC
1B911900	LOW COST DWT	TBD	TBD	TBD	BELLEMARE, VIC
1B914300	HIGH PERFORMANCE DWT	TBD	TBD	TBD	BELLEMARE, VIC
1B911600	CORE FONTS PROGRAM	TBD	TBD	TBD	HICKS, MARGE
1B921400	LA324 IMPACT PRINTER	8911	8912	8912	CHIN, GENE
1B911B00	MATH/PUBLISH'G FONTS	TBD	TBD	TBD	HICKS, MARGE
1B921500	AFTERMARKET PRODUCTS	TBD	TBD	TBD	SMITH, JANET
1B921600	LNXX 8 PPM LASER PTR	9006	9006	9006	MCCALL, ROY
1B911U00	DWT-COLOR (16"&20")	TBD	9009	TBD	PAGE, BILL
1B921700	LJYY INKJET PRINTER	TBD	9010	TBD	MCCALL, ROY
1B921800	PRINTSERVER XY	TBD	9109	TBD	TBD
1B911700	LK401 KEYBOARD	9001	8912	8911	GAUCHER, JOHN
1B912C00	LK401 COST REDUCTION	TBD	TBD	TBD	GAUCHER, JOHN
1B921900	DECPRINT	8912	8912	8912	HICKS, MARGE
1B911800	VRE01 FLAT PANEL DIS	9001	9001	8910	WITTS, DENNIS
1B921B00	LNYY 4 PPM LASER PTR	TBD	9009	TBD	URBANUS, DAVE
1B911R00	VT330/340 COST RED	9003	9003	9003	GAUCHER, JOHN
1B913L00	IMAGE III-L	TBD	TBD	TBD	PAGE, BILL
1B911A00	IMAGE III-M	TBD	TBD	TBD	PAGE, BILL
1B913J00	DWT IMAGE	TBD	9006	TBD	PAGE, BILL
1B921Y00	PRODUCT'N PTR INTEGR	TBD	9012	TBD	ZWOLINSKI, MIKE
1B921U00	LA70 PERSONAL PTR	9004	9004	9004	MAHER, DAN (VBO)
1B921V00	LNZZ 13PPM LASER PTR	TBD	9010	TBD	BELLIVEAU, DAVE
1B911Z00	SUPERCOMPUTER INTER	TBD	9012	TBD	QUIGLEY, WIN (ABO)
1B912200	OPHIR (WKSYS GRAPH.)	TBD	TBD	TBD	TBD
1B913D00	TEKTERM V1	TBD	TBD	TBD	BROWN, SHERRI
1B913E00	TERM MGMT UTIL V1	TBD	TBD	TBD	TBD
1B911V00	PC FONTS FOR DECWIND	TBD	TBD	TBD	HICKS, MARGE
1B911S00	NON-LATIN DECW FONTS	TBD	TBD	TBD	HICKS, MARGE
1B911W00	KANJI FONTS FOR DECW	TBD	TBD	TBD	HICKS, MARGE
1B922M00	PRINTSERVER 40 PLUS	8907	8907	8906	TOBIN, ROBIN
1B922D00	THOR PROD PAGE PTR	TBD	TBD	TBD	SZYMANOWSKI, J (SWS)
1B922E00	THOR POSTSCRIPT ENH	TBD	TBD	TBD	SZYMANOWSKI, J (SWS)
1B922F00	PIXIE SCANNER & PTR	8909	8909	8909	PELAVIN, LARRY (CSS)
1B913I00	VR500 MONITOR FAM	TBD	TBD	TBD	TBD
1B913H00	VT520 VIDEO TERMINAL	TBD	TBD	TBD	TBD
1B921X00	LJZZ INKJET PRINTER	TBD	TBD	TBD	TBD
1B913M00	FUTURE FLAT PANELS	TBD	TBD	TBD	TBD
1B911T00	DECW APPLE LW+ FONTS	TBD	TBD	TBD	TBD

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: VIDEO, IMAGE AND PRINTER SYSTEMS

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1B921Z00	POSTSCRIPT FILE COMP	TBD	TBD	TBD	TBD
1B922100	FAX GATEWAY	TBD	TBD	TBD	TBD
1B922R00	LPS TYPESETTER	TBD	TBD	TBD	TBD
1B921C00	PRINTER MGMT UTIL V1	TBD	TBD	TBD	TBD
1B923900	ADD'L ELECTR FONTS	TBD	TBD	TBD	TBD
1B923A00	TECH DOC CONVERSION	TBD	TBD	TBD	TBD
1B922O00	ENCORE (600 LPM PTR)	TBD	9012	TBD	HAYES, SUSAN (CSS)
1B922P00	COMPANION	TBD	9106	TBD	BROWN, ROD (CSS)
1B922T00	BANDIT (LP37)	8906	8906	8906	FISCHER, BOB (CSS)
1B922U00	VAX VERT FORMS PTR	TBD	9012	TBD	TBD (CSS)
1B922V00	VIOLET (KANJI LNXX)	TBD	9003	TBD	TBD (CSS)
1B922W00	KANJI LPS20	TBD	9003	TBD	TBD (CSS)
1B922X00	LA86S (KANJI PTR)	TBD	9009	TBD	TBD (CSS)
1B922Y00	BELLADONNA (LA280S)	TBD	9006	TBD	TBD (CSS)
1B913N00	MAXINE (KANJI DWT-M)	TBD	9006	TBD	TBD (CSS)
1B913O00	KANJI DWT-COLOR	TBD	9012	TBD	TBD (CSS)
1B922Z00	MOXIE (SCSI SCANNER)	TBD	9006	TBD	PELAVIN, LARRY (CSS)
1B923100	MERCURY	TBD	9003	TBD	PELAVIN, LARRY (CSS)
1B923200	SAVVY	TBD	9003	TBD	PELAVIN, LARRY (CSS)
1B914C00	DECSERVER 250	8909	8909	8909	BROWN, ROD (CSS)
1B914D00	DEPRILLA 2	TBD	9006	TBD	BROWN, ROD (CSS)
1B914B00	TOMCAT ENHANCEMENTS	TBD	TBD	TBD	TBD (CSS)
1B914A00	SYBIL (DECVOICE TEL)	TBD	9003	TBD	TBD (CSS)
1B923D00	LJAA PERS KANJI PTR	TBD	9106	TBD	TBD (CSS)
1B923E00	PRODUCTION SCANNER	TBD	9103	TBD	PELAVIN, LARRY (CSS)
1B913X00	RF-VT320 (TEMPEST)	TBD	8906	TBD	TBD (GSG)
1B913Z00	RF-DWT	TBD	9103	TBD	TBD (GSG)
1B914100	RF-VR320	TBD	9009	TBD	TBD (GSG)
1B913R00	DESKTOP I18N	TBD	TBD	TBD	DAWSON, COLIN (IPG)
1B913S00	DECTERM I18N	TBD	TBD	TBD	TBD (IPG)
1B913T00	ARABIC VT420	TBD	9009	TBD	TBD (IPG)
1B913U00	ARABIC DECTERM	TBD	9009	TBD	TBD (IPG)
1B913V00	HEBREW PRODUCT ADAPT	TBD	TBD	TBD	TBD (ISRAEL)
1B923300	LNXX SYMB CNTRY KIT	TBD	9003	TBD	TBD (IPG)
1B913100	PANDAMATE TRANSITION	TBD	TBD	TBD	NA

DIGITAL RESTRICTED DISTRIBUTION

DIGITAL RESTRICTED DISTRIBUTION

Workstations Group

MISSION:
Our mission is to be a leading vendor of workstations that serve the needs of the technical and business professionals who use applications that require high quality graphics and windowing capabilities in a distributed environment.

WORKSTATION CHARACTERISTICS:
Workstations are single user computing systems that provide high quality user interaction and which allow the user to work on multiple activities simultaneously. They offer stable, predictable performance, and transparent access to distributed resources such as servers.

GOALS:
Workstations PBU goals include meeting or exceeding revenue budget, establishing and maintaining a profitable business, providing technology leadership and on-time execution of product plans.

PRODUCT STRATEGY:

The product strategy is to attack the workstation market with two complimentary platforms - the VAX workstation products will be targeted at the low end of the workstation market, and will be used to expand DEC's presence in business and desktop applications. The MAX family of RISC/Ultrix based products will target the performance oriented technical workstation market.

The focus of the VAX workstation program is to reduce costs and increase time-to-market. The focus of the RISC workstation program will be leadership price/performance for the technical market.

Both VAX and RISC programs focus on solution systems by integrating workstations, networks, printers, servers, operating systems, layered products, applications, and services.

With the VAX and RISC programs DEC will deliver a complete range of competitive products in the following price bands:

Low-Cost, $5-15K:
- Characteristics
  - cost-driven, time-to-market
  - one for every desk
  - integrated, limited expansion
- Typical applications
  - software engineering
  - schematics capture
  - drafting
  - desktop publishing
  - financial services

Mid-range, $15-40K:
- Characteristics
  - cost/performance balance, time to technology
  - for key productivity workers
  - flexible, expandable systems
- Typical applications
  - 3D mechanical CAD
  - VLSI + PCB layout
  - science

SERVERS:
The Workstation PBU does not have a charter to build distinct servers, but will build workstations that may be used as servers. We are expecting MSB and MVB to develop servers that are capable of supporting systems of workstations, both VAX and RISC based.

GRAPHICS:
The importance of competitive graphics to the success of our workstations is clearly evident. In the low end, low cost, competitive, monochrome and color 2D graphics is mandatory. In the high end, leadership, price/performance 3D graphics is required. Our customers are demanding both price/performance hardware and adherence to graphics industry standards.

Our 2D workstations graphics software strategy is PHIGS running under DECwindows. Our 3D strategy is to support PHIGS and its 3D extensions (under DECwindows) as the only 3D graphics workstation interface. Developers who write to PHIGS will be ensured of application portability across DEC workstation platforms. As part of our graphics strategy, we will also support the PEX (PHIGS extensions to X) protocol.

SECURITY:
The Workstations PBU is committed to the corporate position on system security. Workstations will review and adhere to Digital's Distributed Systems Security Architecture as the specifications are made available.

RISKS and DEPENDENCIES:
VAX chips schedule and availability and high end Strategic Alliances are crucial to DEC's success in the workstations market.

The workstation plan for the next few years is extremely aggressive, from both an engineering and a business perspective. As we see this market growing rapidly, we must try to be ready to take advantage of that growth with leadership products. Consequently we have very aggressive time-to-market goals for both RISC and VAX products. To achieve these goals we must streamline the product development process.

Software continues to be a crucial area. We expect RISC/Ultrix to be 50% of our revenue by FY91. It is essential that the UNIX product set be complete for all geographies, and that it is a leadership offering. Similarly we need all the key tools and Third Party Applications to leverage workstations sales across a wide range of markets, from business applications to high performance 3D graphics.

Successful workstations also depend on competitive computing and development of technologies. The following are critical to workstations, but are the focus of other organizations: CPU, memory, disk, operating system support (leadership UNIX), programming tools, surface mount, TAB and wafer interconnect, VLSI design, and simulation tools.

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 SUBMISSION SUMMARY REPORT
GROUP: WORKSYSTEMS

1-Nov-1989
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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: WKSYS					Sub Group: WORKSYSTEMS									
1BE01C00	1	PD	MLO	NA	PVAX 0 / PVAX 1	4A	8908	8907	24.0	16.2	1.8	0.0		CLARKE, JOHN
1BE01D00	1	PD	MLO	NA	PVAX2	1	9011	9011	15.7	3.7	7.8	4.2		CLARKE, JOHN
1BE01F00	1	PD	MLO	NA	MARIAH-PV	1	9011	9011	9.7	2.4	4.2	3.1		CLARKE, JOHN
1BE01H00	1	PD	UCO	NA	4MAX 2D/3D	0	9103	TBD	21.0	0.0	0.0	21.0		FURLONG, TOM
1BE01L00	1	PD	UCO	NA	3MAX-2D/3D	2	9006	9001	31.4	10.8	20.6	0.0		FURLONG, TOM
1BE01M00	1	PD	UCO	NA	PCMAX	0	9103	TBD	6.1	0.0	1.7	4.4		FURLONG, TOM
1BE01N00	1	PD	UCO	NA	4MIN	0	9112	TBD	6.5	0.0	0.0	6.5		FURLONG, TOM
1BE01Q00	1	PD	UCO	NA	PEX	0	9006	TBD	1.7	1.2	0.5	0.0		LANE,JEFF
1BE02600	1	PD	UCO	NA	3MIN	1	9008	9007	10.2	0.0	7.1	3.1		FURLONG, TOM
1BE02900	1	PD	UCO	NA	FIREFOX	4A	8904	8901	32.3	14.3	0.0	0.0		FURLONG, TOM
1BE02A00	1	PD	UCO		PMAX	2	8902		10.2	9.6	0.0	0.0		FURLONG, TOM
1BE02C00	1	PD	MLO	NA	CHART I MGT ADJ (MLO)	0	9001	TBD	0.0	0.9-	0.0	0.0		GAUBATZ, DON
1BE02D00	1	PD	MLO	NA	PNVAX	0	TBD	TBD	0.0	0.0	0.0	7.0		CLARKE, JOHN
1BE01E00	1	PD	MLO	NA	RIGELMAX/(P-RIGEL)	0	TBD	TBD	5.2	4.9	0.3	0.0		CLARKE, JOHN
1BEZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	1			In-House Funded Proposed Project Totals				174.0	62.2	44.0	49.3		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed WORKSYSTEMS				174.0	62.2	44.0	49.3		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental WORKSYSTEMS				0.0	0.0	0.0	0.0		
	Chart	1			Totals for WORKSYSTEMS				174.0	62.2	44.0	49.3		
1BE01100	2	PS	MLO	NA	VAX PRODUCT SUPPORT	NA	NA	NA	0.0	3.2	5.0	5.7		BITTO, JOE
1BE01100	2	PS	MLO	NA	VAX PRODUCT SUPPORT	NA	NA	NA	0.0	0.6	0.4	0.0	ME	NA BITTO, JOE
1BE01300	2	AD	MLO	NA	WORKSTATIONS EAST COAST AD	NA	NA	NA	0.0	0.3	0.2	0.3		NA GAUBATX, DON
1BE01500	2	PS	MLO		PRODUCT MANAGEMENT	NA	NA		0.0	0.6	0.6	0.8		NA POOLE, DAVE
1BE01B00	2	AD	MLO	NA	UNIVERSITY RESEARCH	NA	NA	NA	0.0	0.0	0.3	0.3		GAUBATZ, DON
1BE01S00	2	AD	UCO		3D WORKBENCH	NA	NA		0.0	0.1	0.3	0.0		NA LANE, JEFF
1BE01V00	2	AD	UCO	NA	GRAPHICS ARCHITECTURE	NA	NA	NA	0.0	0.1	0.7	0.0		LANE, JEFF
1BE02200	2	EC	MLO	NA	VAX ENG ECO'S	NA	NA	NA	0.0	0.6	0.4	0.7		NA BITTO, JOE
1BE02400	2	AD	UCO	NA	A/D MGT ADJUSTMENT	NA	NA	NA	0.0	0.5	0.0	3.0		NA LANE, JEFF
1BE02700	2	PS	UCO	NA	RISC PRODUCT SUPPORT	NA	NA	NA	0.0	0.0	0.8	1.2		NA FURLONG, TOM
1BE02800	2	EC	UCO	NA	RISC ENG ECO'S	NA	NA	NA	0.0	0.0	0.0	0.8		NA FURLONG, TOM NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	5.4	8.3	12.8		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.6	0.4	0.0		
	Chart	2			Proposed WORKSYSTEMS				0.0	6.0	8.7	12.8		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental WORKSYSTEMS				0.0	0.0	0.0	0.0		
	Chart	2			Totals for WORKSYSTEMS				0.0	6.0	8.7	12.8		
					In-House Funded Proposed Project Totals				174.0	67.6	52.3	62.1		
					Externally Funded Proposed Project Totals				0.0	0.6	0.4	0.0		
					Proposed WORKSYSTEMS				174.0	68.2	52.7	62.1		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental WORKSYSTEMS				0.0	0.0	0.0	0.0		
					Totals for WORKSYSTEMS				174.0	68.2	52.7	62.1		
					In-House Funded Project Totals				174.0	67.6	52.3	62.1		
					Externally Funded Project Totals				0.0	0.6	0.4	0.0		
					Proposed for WORKSYSTEMS				174.0	68.2	52.7	62.1		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental WORKSYSTEMS				0.0	0.0	0.0	0.0		
					Grand Totals for WORKSYSTEMS				174.0	68.2	52.7	62.1		

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: WKSYS					Sub Group: WORKSYSTEMS									
1BE01C00	1	PD	MLO	NA	PVAX 0 / PVAX 1	4A	8908	8907	24.0	16.2	1.8	0.0		CLARKE, JOHN
PVAX0 contains systems integration of all module components- the CVAX(90ns) CPU system module, and the disk control module-into a new package. PVAX1 is a follow-on to PVAX0 using the 60ns CPU, with some enhancements in the packaging and SCSI floppy.														
1BE01D00	1	PD	MLO	NA	PVAX2	1	9011	9011	15.7	3.7	7.8	4.2		CLARKE, JOHN
PVAX2 is a lower cost increased performance follow-on to PVAX0 and PVAX1 using the SOC CPU/FPU combination. It provides lower cost color graphics at increased performance. It also has increased disk capability.														
1BE01F00	1	PD	MLO	NA	MARIAH-PV	1	9011	9011	9.7	2.4	4.2	3.1		CLARKE, JOHN
MARIAH-PV is a higher performance follow-on to PVAX 2. MARIAH-PV will have improved 3D graphics.														
1BE01H00	1	PD	UCO	NA	4MAX 2D/3D	0	9103	TBD	21.0	0.0	0.0	21.0		FURLONG, TOM
This project is the next generation of Digital's RISC-based UNIX workstations after 3MAX. 4MAX will use the R4000 RISC chip set from MIPS Computer Company and will follow the same strategy as 3Max.														
1BE01L00	1	PD	UCO	NA	3MAX-2D/3D	2	9006	9001	31.4	10.8	20.6	0.0		FURLONG, TOM

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
3MAX is the follow-on Risc-based workstation to PMAX. It is based on the R3000 chip set from MIPS Computer, Inc. The R3000 will offer Ultrix workstation customers 20 VUPS performance compared to 12 VUPS performance with PMAX. 3MAX will be available in 2D (8-plane color frame buffer and 2D accelerator) and 3D (entry level, mid-range, and high-end) configurations, as well as a server configuration.														
1BE01M00	1	PD	UCO	NA	PCMAX	0	9103	TBD	6.1	0.0	1.7	4.4		FURLONG, TOM
PCMAX is a low cost PC which will compete with PC's in the market-place, but also have similiar functionality as 3MAX.														
1BE01N00	1	PD	UCO	NA	4MIN	0	9112	TBD	6.5	0.0	0.0	6.5		FURLONG, TOM
1BE01Q00	1	PD	UCO	NA	PEX	0	9006	TBD	1.7	1.2	0.5	0.0		LANE, JEFF
The goal of the PEX program is to implement the DEC and industry standard 3D interface and network protocol under DECwindows (PHIGS extension to X-Window).														
1BE02600	1	PD	UCO	NA	3MIN	1	9008	9007	10.2	0.0	7.1	3.1		FURLONG, TOM
3MIN is a cost-reduced, slower version of 3MAX. It uses the same packaging, monitors, graphics options, and components as 3MAX except for the CPU board. The CPU board is a lower, cost-reduced version of the 3MAX board.														
1BE02900	1	PD	UCO	NA	FIREFOX	4A	8904	8901	32.3	14.3	0.0	0.0		FURLONG, TOM
FY89 development of CVAX based symmetric multiprocessing midrange workstation.														
1BE02A00	1	PD	UCO		PMAX	2	8902		10.2	9.6	0.0	0.0		FURLONG, TOM

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
FY89 development for high performance Ultrix only workstation based on Risc technology.														
1BE02C00	1	PD	MLO	NA	CHART I MGT ADJ (MLO)	0	9001	TBD	0.0	0.9-	0.0	0.0		GAUBATZ, DON
1BE02D00	1	PD	MLO	NA	PNVAX	0	TBD	TBD	0.0	0.0	0.0	7.0		CLARKE, JOHN
Follow on Vax workstation.														
1BE01E00	1	PD	MLO	NA	RIGELMAX/(P-RIGEL)	0	TBD	TBD	5.2	4.9	0.3	0.0		CLARKE, JOHN
RIGELMAX (P-Rigel) is a RIGEL-based PVAX0 follow-on with increased performance. Product has been cancelled.														
1BEZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
		Chart	1		In-House Funded Proposed Project Totals				174.0	62.2	44.0	49.3		
		Chart	1		Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Proposed WORKSYSTEMS				174.0	62.2	44.0	49.3		
		Chart	1		In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Incremental WORKSYSTEMS				0.0	0.0	0.0	0.0		
		Chart	1		Totals for WORKSYSTEMS				174.0	62.2	44.0	49.3		
1BE01100	2	PS	MLO	NA	VAX PRODUCT SUPPORT	NA	NA	NA	0.0	3.2	5.0	5.7		BITTO, JOE NA
1BE01100	2	PS	MLO	NA	VAX PRODUCT SUPPORT	NA	NA	NA	0.0	0.6	0.4	0.0	ME	BITTO, JOE NA
On-going product hardware and software support for all presently shipping products, including all technical issues for manufacturing, Field Service and customers.														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BE01300	2	AD	MLO	NA	WORKSTATIONS EAST COAST AD	NA	NA	NA	0.0	0.3	0.2	0.3		GAUBATX, DON NA
Advanced development in non-uniform B-splines, advanced rendering, (hardware and software), and graphics acceleration.														
1BE01500	2	PS	MLO		PRODUCT MANAGEMENT	NA	NA		0.0	0.6	0.6	0.8		POOLE, DAVE
Ongoing product management support for currently shipping products. NOTE: Product management for new products is budgeted with the product in Chart I.														
1BE01B00	2	AD	MLO	NA	UNIVERSITY RESEARCH	NA	NA	NA	0.0	0.0	0.3	0.3		GAUBATZ, DON NA
Continued support of: Cornell University MIT Multi Media Lab University of North Carolina (Chapel Hill) University of Waterloo														
1BE01S00	2	AD	UCO		3D WORKBENCH	NA	NA		0.0	0.1	0.3	0.0		LANE, JEFF
The 3D Workbench program will provide advanced development of graphics algorithms, authoring tools, and multimedia workstation environments.														
1BE01V00	2	AD	UCO	NA	GRAPHICS ARCHITECTURE	NA	NA	NA	0.0	0.1	0.7	0.0		LANE, JEFF NA
The objective of this project is to investigate and design next generation architectures for low cost 3D/imaging workstations.														
1BE02200	2	EC	MLO	NA	VAX ENG ECO'S	NA	NA	NA	0.0	0.6	0.4	0.7		BITTO, JOE NA
ECO's for current products.														
1BE02400	2	AD	UCO	NA	A/D MGT ADJUSTMENT	NA	NA	NA	0.0	0.5	0.0	3.0		LANE, JEFF NA
1BE02700	2	PS	UCO	NA	RISC PRODUCT SUPPORT	NA	NA	NA	0.0	0.0	0.8	1.2		FURLONG, TOM NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Ongoing product hardware and software support for all presently shipping products, including all technical issues for manufacturing, Field Service, and customers.														
1BE02800	2	EC	UCO	NA	RISC ENG ECO'S	NA	NA	NA	0.0	0.0	0.0	0.8		FURLONG, TOM NA
ECO's for current products.														

Chart 2 In-House Funded Proposed Project Totals	0.0	5.4	8.3	12.8
Chart 2 Externally Funded Proposed Project Totals	0.0	0.6	0.4	0.0
Chart 2 Proposed WORKSYSTEMS	0.0	6.0	8.7	12.8
Chart 2 In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Incremental WORKSYSTEMS	0.0	0.0	0.0	0.0
Chart 2 Totals for WORKSYSTEMS	0.0	6.0	8.7	12.8

In-House Funded Proposed Project Totals	174.0	67.6	52.3	62.1
Externally Funded Proposed Project Totals	0.0	0.6	0.4	0.0
Proposed WORKSYSTEMS	174.0	68.2	52.7	62.1
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental WORKSYSTEMS	0.0	0.0	0.0	0.0
Totals for WORKSYSTEMS	174.0	68.2	52.7	62.1

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Project Totals				174.0	67.6	52.3	62.1		
					Externally Funded Project Totals				0.0	0.6	0.4	0.0		
					Proposed for WORKSYSTEMS				174.0	68.2	52.7	62.1		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental WORKSYSTEMS				0.0	0.0	0.0	0.0		
					Grand Totals for WORKSYSTEMS				174.0	68.2	52.7	62.1		

DIGITAL RESTRICTED DISTRIBUTION

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: WORKSYSTEMS

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1BE01C00		8907	8908	8906	
1BE01D00		9011	9011	8912	
1BE01F00		9011	9011	8912	
1BE01H00		TBD	9103	TBD	
1BE01L00		9001	9006	8910	
1BE01M00		TBD	9103	TBD	
1BE01N00		TBD	9112	TBD	
1BE01Q00		TBD	9006	TBD	
1BE02600		9007	9008	9001	
1BE02900		8901	8904	8812	
1BE02A00			8902		
1BE02C00		TBD	9001	TBD	
1BE02D00		TBD	TBD	TBD	
1BE01E00		TBD	TBD	TBD	
1BEZZZZZ			9012		

Beige Book FY90
Low End Systems
Workstations Engineering

PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR

1 November 1989

DATE: 1 NOV 89 PREPARER: Y S McCredie

PRODUCT NAME	PROJ. ANNOU.	PROJ. FRS	PHASE 1 EXIT	PRODUCT MANAGER	DTN	COMMENTS
VS3520/3800 (Firefox)	8901	8904	8812	Gim Hom	223-7044	Enhanced Firefox
DECstation 2100	8906	8907	8906	Melanie Fulton	415-691-4458	Done
PVAX 1	8907	8908	8906	Jim Kovac	223-5685	
Mariah/PV	9011	9011	8912	Ron Ginger	223-6860	New
3 MAX 2D	9001	9001	8910	Mike Savello	415-691-4481	1 month slip
3 MAX 3D	9001	9006	8910	Mike Savello	415-691-4481	
3MIN	9007	9008	9001	Mike Gallagher	415-691-4457	New
PVAX 2	9011	9011	8912	Tim Miller	223-2995	New

Personal Computing Systems Group

PERSONAL COMPUTING SYSTEMS GROUP STRATEGY

The threefold PCSG strategies illustsrate the synergy of Personal Computer Integration, the DECstation PC Program, and the PC Independent Software Vendor Program ---- the three elements in the FY90-FY92 Personal Computing Systems Group LRP:

1. PC Integration strategy is to give Digital a leadership position in the PC Integration marketplace by evolving today's product set to a family of supervisor server platforms and enterprise network services which allow Digital to target the DNA/600 customer base, create a long-term market differentiation, and compete effectively with Intel x86 platforms at the low end and with RISC platforms at the mid-high end.

2. DECstation strategy is to maintain account control and become a major participant in the huge PC market which occurs in DEC accounts by providing a complete family of Intel 286 and 386 based Industry Standard Personal Computers; and yet to avoid cost to market by maximizing verdor involvement in regulatory compliance, testing, documentation, translation, etc.

3. ISV Program strategy is to bring a broad range of leadindg application software vendors together with the Digital networking environment to create application software which ultimately integrates totally the ISV's product and Digital's client server computing environment using PCSG server software and hardware.

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 SUBMISSION SUMMARY REPORT
GROUP: DESKTOP INTEGRATION

1-Nov-1989
Page 1

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: DSTIG					Sub Group: DESKTOP INTEGRATION									
1BD01400	1	PD	LJO	FC	MS DOS SPD ISC PROGRAM	3	TBD	TBD	4.5	0.9	1.0	1.9		CARCHIDI JOE
1BD01500	1	PD	LJO	FC	DECNET-DOS V3.0	0	8912	8911	2.1	1.8	0.3	0.0		DALEY, BILL
1BD01R00	1	PD	LJO	FC	MS-DOS 3270 DS V1.0	PRE-0	9006	TBD	0.1	0.0	0.1	0.0		ANITA UHLER DALEY, BILL
1BD01E00	1	PD	LJO	FC	VAX/VMS SVCS V3.1	PRE-0	9006	TBD	0.9	0.0	0.9	0.0		CARCHIDI, JOE
1BD01F00	1	PD	LJO	FC	VAX/VMS PC LAN SVR V3.1	PRE-0	9006	TBD	0.3	0.0	0.3	0.0		ANITA UHLER CARCHIDI, JOE
1BD01G00	1	PD	LJO	FC	3RD PARTY ETHERNET CARDS	PRE-0	9003	TBD	0.1	0.2	0.1	0.0		RON GEMMA LIU,JIM
1BD01J00	1	PD	LJO	FC	VAX/VMS SVCS FOR MAC V1.0	PRE-0	9007	TBD	0.7	0.5	0.3	0.0		JOE YANOSHPOLSKY CARCHIDI JOE
1BD01K00	1	PD	LJO	FC	VAX/VMS SVCS F/MAC V1.1	PRE-0	9012	TBD	0.9	0.0	0.4	0.5		DAVE GLASSON CARCHIDI JOE
1BD01L00	1	PD	LJO	FC	DECNET-OS/2 V1.0	PRE-0	8909	TBD	1.5	1.2	0.3	0.0		DAVE GLASSON DALEY, BILL
1BD01M00	1	PD	LJO	FC	DECNET-OS/2 V1.1	PRE-0	9006	TBD	0.1	0.0	0.1	0.0		CAROL GREENFIELD DALEY, BILL
1BD01N00	1	PD	LJO	FC	DECNET PCSA OS/2 CLIENT V1.0	2	9003	TBD	2.7	1.0	1.7	0.0		CAROL GREENFIELD CARCHIDI JOE
1BD01O00	1	PD	LJO	FC	OS/2 ISC SPD PROGRAM	PRE-0	8901	TBD	0.7	0.0	0.2	0.5		MARLENE STEGER CARCHIDI JOE
1BD01P00	1	PD	LJO	FC	OS/2 X SERVER	PRE-0	9003	TBD	0.5	0.1	0.4	0.0		CARCHIDI JOE
1BD01Q00	1	PD	LJO	FC	DECNET/PCSA OS/2 CLIENT V1.1	PRE-0	9009	TBD	1.3	0.0	0.3	1.0		CARCHIDI JOE
1BD01R00	1	PD	LJO	FC	GOLD KBDS ON PS/2	PRE-0	8901	TBD	0.5	0.0	0.1	0.3		MARLENE STEGER CARCHIDI JOE
1BD01U00	1	PD	LJO		386/OSF SVCS F/PCS V1.0	PRE-0	9009		0.9	0.0	0.7	0.0		CARCHIDI JOE
1BD01V00	1	PD	LJO	FC	386/OSF SVCS F/PCS V1.1	PRE-0	TBD	TBD	1.9	0.0	1.2	0.7		CARCHIDI JOE
1BD01W00	1	PD	LJO	FC	MS-DOS SNA API V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		JANE MURPHY DALEY, BILL
1BD01X00	1	PD	LJO	FC	OS/2 SNA API V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.1		DALEY, BILL
1BD01Y00	1	PD	LJO	FC	DECNET-OS/2 V2.0	PRE-0	9012	TBD	1.7	0.0	0.3	1.4		DALEY, BILL
1BD02700	1	PD	LJO	FC	DECNET MAC CONSULTING	PRE-0	9106	TBD	0.4	0.0	0.1	0.3		CAROL GREENFIELD DALEY, BILL

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD02800	1	PD	LJO	FC	TCI SERVER PRODUCT V1.1	PRE-0	9006	TBD	0.5	0.0	0.5	0.0		CARCHIDI JOE
1BD02900	1	PD	LJO	FC	DECNET SVR PRODUCT V1.0	PRE-0	9006	TBD	0.7	0.3	0.5	0.0		DAVE GLASSON CARCHIDI JOE
1BD02A00	1	PD	LJO	FC	DECNET MAC CLIENT V1.0	PRE-0	9007	TBD	0.8	0.1	0.6	0.0		CAROL GREENFIELD CARCHIDI JOE
1BD02M00	1	PD	LJO	FC	VAXPC F/VMS V2.0	PRE-0	9003	TBD	0.0	0.0	0.0	0.0		DAVE GLASSON CARCHIDI JOE
1BD02N00	1	PD	LJO	FC	VAXPC F/VMS V2.1	PRE-0	9012	TBD	0.4	0.0	0.0	0.4		CARCHIDI JOE
1BD02N00	1	PD	LJO	FC	VAXPC F/VMS V2.1	PRE-0	9012	TBD	0.0	0.5	0.0	0.0	WKSYS	CARCHIDI JOE
1BD02O00	1	PD	LJO	FC	MAXPC V1.0	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
1BD02P00	1	PD	LJO	FC	MAXPC V1.1	PRE-0	9009	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
1BD02Q00	1	PD	LJO	FC	VAXPC F/ULTRIX V1.0	PRE-0	8909	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
1BD02R00	1	PD	LJO	FC	VAXPC F/ULTRIX V1.1	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
1BD02S00	1	PD	LJO	FC	DECNET/PCSA DOS CLNT V3.0	PRE-0	8912	TBD	2.4	0.9	1.4	0.0		CARCHIDI JOE
1BD02U00	1	PD	LJO	FC	VAX/VMS SERVICES V3.0	3	8912	8911	2.6	0.9	1.5	0.0		CARCHIDI, JOE
1BD02V00	1	PD	LJO	FC	VAX/VMS PC LAN SVR V3.0	2	8912	TBD	0.3	0.0	0.3	0.0		ANITA UHLER CARCHIDI, JOE
1BD02X00	1	PD	LJO	FC	3270 TERMINAL EMULATOR V2.0	PRE-0	8909	8909	0.4	0.3	0.1	0.0		RON GEMMA DALEY, BILL
1BD02Y00	1	PD	LJO	FC	DECNET-DOS V3.1	PRE-0	9006	TBD	0.2	0.0	0.2	0.0		DALEY, BILL
1BD02Z00	1	PD	LJO	FC	DECNET/PCSA DOS CLNT V3.1	PRE-0	9006	TBD	0.9	0.0	0.9	0.0		CARCHIDI JOE
1BD03800	1	PD	LJO	FC	SERVER PERFORMANCE TESTING	PRE-0	TBD	TBD	1.7	0.0	0.8	0.9		ANITA UHLER CARCHIDI, JOE
1BD03900	1	PD	LJO	FC	ISV NETWORK	PRE-0	8907	TBD	0.7	0.0	0.0	0.7	COREAPP	HAM RON
1BD03900	1	PD	LJO	FC	ISV NETWORK	PRE-0	8907	TBD	0.0	0.1	0.0	0.0		HAM RON
1BD03A00	1	PD	LJO	FC	ISV SEED AND LOANER PROGRAM	PRE-0	8907	TBD	0.8	0.0	0.0	0.8	COREAPP	HAM RON
1BD03A00	1	PD	LJO	FC	ISV SEED AND LOANER PROGRAM	PRE-0	8907	TBD	0.0	0.1	0.0	0.0		HAM RON
1BD03B00	1	PD	LJO	FC	ISV BASE SUPPORT	PRE-0	8907	TBD	7.2	0.0	0.0	3.0	COREAPP	HAM RON
1BD03B00	1	PD	LJO	FC	ISV BASE SUPPORT	PRE-0	8907	TBD	0.0	1.5	0.0	0.0		HAM RON

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD03C00	1	PD	LJO	FC	DMS PROGRAM (BASE ACTIVITY)	PRE-0	8907	TBD	1.0	0.2	0.0	0.8	COREAPP	HAM RON
1BD03C00	1	PD	LJO	FC	DMS PROGRAM (BASE ACTIVITY)	PRE-0	8907	TBD	0.0	0.0	0.0	0.0		HAM RON
1BD03D00	1	PD	LJO	FC	DMS PROGRAM (MERCHANDISING)	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON
1BD03E00	1	PD	LJO	FC	CD PROGRAM MANAGEMENT	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON
1BD03F00	1	PD	LJO	FC	CD ROM PROJECT FUNDING TO NAC	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON
1BD03G00	1	PD	LJO	FC	ISV SUPPORT ACTIVITY I	PRE-0	8907	TBD	1.0	0.0	0.0	1.0	COREAPP	HAM RON
1BD03H00	1	PD	LJO	FC	ISV DEVELOPMENT EXPORT/IMPORT	PRE-0	8907	TBD	0.1	0.0	0.0	0.1	COREAPP	HAM RON
1BD03I00	1	PD	LJO	FC	BOOK READER ISV DEVELOPMENT	PRE-0	8907	TBD	0.2	0.0	0.0	0.2	COREAPP	HAM RON
1BD03J00	1	PD	LJO	FC	HETERO- PC LAN "GIVEAWAY"	PRE-0	8907	TBD	0.3	0.0	0.0	0.2	COREAPP	HAM RON
1BD03J00	1	PD	LJO	FC	HETERO- PC LAN "GIVEAWAY"	PRE-0	8907	TBD	0.0	0.1	0.0	0.0		HAM RON
1BD03K00	1	PD	LJO	FC	ISV APPLICTION DEMO	PRE-0	8907	TBD	0.2	0.0	0.0	0.2	COREAPP	HAM RON
1BD03L00	1	PD	LJO	FC	EXTERNAL ISV ENGINEERING	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON
1BD03M00	1	PD	LJO	FC	LAN APPLICATION PERFORMANCE DT	PRE-0	8907	TBD	0.4	0.0	0.0	0.4	COREAPP	HAM RON
1BD03N00	1	PD	LJO	FC	NEW API SUPPORT AND FT SOFTWAR	PRE-0	8907	TBD	1.7	0.0	0.0	1.7	COREAPP	HAM RON
1BD03O00	1	PD	LJO	FC	START-UP OF FIELD SUPPORT	PRE-0	8907	TBD	0.5	0.0	0.0	0.5	COREAPP	HAM RON
1BD03P00	1	PD	LJO	FC	PRODUCT/ACCOUNT MANAGEMENT	PRE-0	8907	TBD	0.2	0.0	0.0	0.2	BOIS	HAM RON
1BD03Q00	1	PD	LJO	FC	EXTERNAL ISV ENGINEERING	PRE-0	8907	TBD	0.1	0.0	0.0	0.3	NAC	HAM RON
1BD03R00	1	PD	LJO	FC	DECNET/OSF 386 SERVER V1.0	PRE-0	TBD	TBD	0.3	0.3	0.0	0.0		DALEY, BILL
1BD04400	1	PD	LJO		ISV BASE SUPPORT FY91	PRE-0	8907		0.0	0.0	0.0	1.8	COREAPP	JANE MURPHY HAM RON
1BD04500	1	PD	LJO	FC	DECSTATION 210 SUPPORT	3	8901	TBD	0.3	0.3	0.0	0.0		BURR, GEOFF
1BD04600	1	PD	LJO	FC	DECSTATION 316 SUPPORT	3	8901	TBD	0.3	0.3	0.0	0.0		BURR, GEOFF
1BD04700	1	PD	LJO	FC	DECSTATION 320 SUPPORT	3	8901	TBD	0.3	0.3	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04A00	1	PD	LJO	FC	DECSTATION 316 SX	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		BOB MONTEMERLO BURR, GEOFF

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD04B00	1	PD	LJO	FC	DECSTATION 212	PRE-0	TBD	TBD	0.9	0.0	0.9	0.0		BURR, GEOFF
1BD04C00	1	PD	LJO	FC	DECSTATION 100	PRE-0	9003	TBD	0.0	0.0	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04D00	1	PD	LJO	FC	OS/2 FOR D/S FAMILY	PRE-0	8909	TBD	0.0	0.0	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04E00	1	PD	LJO	FC	MS/DOS V4.0 FOR D.S. FAMILY	PRE-0	8905	TBD	0.0	0.0	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04F00	1	PD	LJO	FC	DECSTATION PORTABLE P.C.	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04G00	1	PD	LJO	FC	DECSTATION 386/25 SERVER	PRE-0	9009	TBD	0.0	0.0	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04H00	1	PD	LJO	FC	UNIX FOR D.S. FAMILY	PRE-0	9009	TBD	0.0	0.0	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04K00	1	PD	LJO	FC	EUROPEAN PC FAMILY PLUS OP/SYS	PRE-0	TBD	TBD	1.0	0.0	1.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD04Y00	1	PD	LJO	FC	INTERNATIONALIZE DECSTATIONS	PRE-0	TBD	TBD	0.5	0.3	0.0	0.0		BOB MONTEMERLO BURR, GEOFF
1BD05100	1	PD	LJO	FC	FY91 DECSTATION PRODUCTS	PRE-0	TBD	TBD	1.7	0.0	0.0	1.7		BOB MONTEMERLO BURR, GEOFF
1BD05200	1	PD	LJO	FC	UNIX 386	PRE-0	TBD	TBD	0.2	0.0	0.2	0.0		BOB MONTEMERLO DALEY, BILL
1BD05500	1	PD	LJO	FC	PC FONTS FOR DECWINDOWS	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		JANE MURPHY CONKLIN, PETER
1BD05600	1	PD	LJO	FC	VT420 TERMINAL EMULATOR FOR PC	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		CONKLIN, PETER
1BD03S00	1	PD	LJO		NAS-PCSA/DOS CLIENT V2.1	4	8812		0.8	0.8	0.0	0.0		CARCHIDI, JOE
1BD03T00	1	PD	LJO		NAS-PCSA/DOS CLIENT V2.2	2	8904		2.0	2.0	0.0	0.0		CARCHIDI, JOE
1BD03U00	1	PD	LJO		TERM EMULATORS VT220/VT240	4	8807		1.0	1.0	0.0	0.0		CARCHIDI, JOE
1BD03V00	1	PD	LJO		NAS-PCSA/VAX SERVER V2.2	2	8904		0.7	0.7	0.0	0.0		CARCHIDI, JOE
1BD03W00	1	PD	LJO		NAS-PCSA PACKAGED SERVERS	0	8906		0.7	0.7	0.0	0.0		CARCHIDI, JOE
1BD01S00	1	PD	LJO	FC	PMAX/OSF SERVICES FOR PCS V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
1BD01T00	1	PD	LJO	FC	PMAX/OSF SVCS F/PCS V1.1	PRE-0	9012	TBD	1.0	0.0	0.0	1.0		CARCHIDI JOE
1BD01Z00	1	PD	LJO		DECNET/PCSA OS/2 CLIENT V2.0	PRE-0	9103		3.4	0.0	0.0	3.4		CARCHIDI JOE
1BD02100	1	PD	LJO	FC	DECNET-DOS V4.0	PRE-0	9012	TBD	1.3	0.0	0.0	1.3		DALEY, BILL
1BD02200	1	PD	LJO	FC	DECNET/PCSA DOS CLIENT V4.0	PRE-0	9012	TBD	1.1	0.0	0.0	1.1		CARCHIDI JOE

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD02300	1	PD	LJO	FC	MS-DOS FTAM V1.0	PRE-0	9012	TBD	0.3	0.0	0.0	0.3		DALEY, BILL
1BD02400	1	PD	LJO	FC	OS/2 FTAM V1.0	PRE-0	9012	TBD	0.6	0.0	0.0	0.6		DALEY, BILL
1BD02500	1	PD	LJO	FC	MS-DOS VTP V1.0	PRE-0	9012	TBD	0.2	0.0	0.0	0.2		DALEY, BILL
1BD02600	1	PD	LJO		OS/2 VTP V1.0	PRE-0	9012		0.3	0.0	0.0	0.3	NAC	DALEY, BILL
1BD02B00	1	PD	LJO	FC	MAC SNA API V1.0	PRE-0	9009	TBD	0.1	0.0	0.0	0.1		DALEY, BILL
1BD02C00	1	PD	LJO	FC	OS/2 OSAK V1.0	PRE-0	9103	TBD	0.3	0.0	0.0	0.3		DALEY, BILL
1BD02D00	1	PD	LJO	FC	MS-DOS OSAK V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		DALEY, BILL
1BD02E00	1	PD	LJO	FC	RPC OS/2	PRE-0	9012	TBD	0.1	0.0	0.0	0.1		DALEY, BILL
1BD02F00	1	PD	LJO	FC	DNS OS/2	PRE-0	9012	TBD	0.1	0.0	0.0	0.1		DALEY, BILL
1BD02H00	1	PD	LJO	FC	DASS DOS	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		DALEY, BILL
1BD02I00	1	PD	LJO	FC	DASS OS/2	PRE-0	9012	TBD	0.1	0.0	0.0	0.1		DALEY, BILL
1BD02J00	1	PD	LJO		RSM OS/2	PRE-0	9103		0.1	0.0	0.0	0.1	NAC	DALEY, BILL
1BD02K00	1	PD	LJO		DECNET-OS/2 V3.0	PRE-0	9206		0.2	0.0	0.0	0.2	NAC	DALEY, BILL
1BD02L00	1	PD	LJO		DECNET-DOS V5.0	PRE-0	9206		0.2	0.0	0.0	0.2	NAC	DALEY, BILL
1BD03100	1	PD	LJO	FC	DOS X.25 GATEWAY ACCESS V1.0	PRE-0	9009	TBD	0.2	0.0	0.0	0.2		DALEY, BILL
1BD03200	1	PD	LJO		DOS X.25 GATEWAY ACCESS V1.1	PRE-0	9106		0.4	0.0	0.0	0.4	NAC	DALEY, BILL
1BD03300	1	PD	LJO	FC	OS/2 X.25 GATEWAY ACCESS V1.0	PRE-0	9012	TBD	0.2	0.0	0.0	0.2		DALEY, BILL
1BD03400	1	PD	LJO		OS/2 X.25 GATEWAY ACCESS V1.1	PRE-0	9109		0.2	0.0	0.0	0.2	NAC	DALEY, BILL
1BD03500	1	PD	LJO	FC	MAC X.25 GATEWAY ACCESS V1.0	PRE-0	9006	TBD	0.2	0.0	0.0	0.2		DALEY, BILL
1BD03600	1	PD	LJO		MAC X.25 GATEWAY ACCESS V1.1	PRE-0	9106		0.4	0.0	0.0	0.4	NAC	DALEY, BILL
1BD03X00	1	PD	LJO		DECNET/PCSA CLNT/SVR FOLLOW-ON	0	TBD		6.9	0.0	0.0	6.9		CARCHIDI, JOE
1BD03Y00	1	PD	LJO		DEC-WINDOWS	2	TBD		1.3	0.0	0.0	1.3		CARCHIDI, JOE
1BD03Z00	1	PD	LJO		PC LAN SERVERS	2	TBD		1.0	0.0	0.0	1.0		CARCHIDI, JOE

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD04100	1	PD	LJO		COMMUNICATIONS GATEWAY	0	TBD		1.0	0.0	0.0	1.0		CARCHIDI, JOE
1BD04200	1	PD	LJO		DECSTATION	0	TBD		1.0	0.0	0.0	1.0		CARCHIDI, JOE
1BD04300	1	PD	LJO		OSI	0	8903		1.0	0.0	0.0	1.0		CARCHIDI, JOE
1BDZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
	Chart	1	In-House Funded Proposed Project Totals						43.4	16.7	17.7	9.7		
	Chart	1	Externally Funded Proposed Project Totals						15.6	0.7	0.0	13.1		
	Chart	1	Proposed DESKTOP INTEGRATION						59.0	17.4	17.7	22.8		
	Chart	1	In-House Funded Incremental Project Totals						21.4	0.0	0.0	21.4		
	Chart	1	Externally Funded Incremental Project Totals						1.8	0.0	0.0	1.8		
	Chart	1	Incremental DESKTOP INTEGRATION						23.2	0.0	0.0	23.2		
	Chart	1	Totals for DESKTOP INTEGRATION						82.2	17.4	17.7	46.0		
1BD04R00	2	PS	LJO		NON-RECURRING ENGINEERING	NA	NA		1.3	0.4	0.4	0.5		CARCHIDI JOE
1BD04S00	2	AD	LJO		ADVANCED DEVELOPMENT	NA	NA		0.8	0.2	0.3	0.3		CARCHIDI JOE
1BD04T00	2	PM	LJO	NA	OPS/PRODUCT MANAGEMENT	NA	NA	NA	7.4	2.2	2.5	2.7		STOWE BILL
1BD04U00	2	PM	LJO		EXTERNAL RELATIONS	NA	NA		1.6	0.5	0.6	0.6		NA BURR GEOFF
1BD04V00	2	PM	LJO	NA	PCI PROGRAM OFFICE	NA	NA	NA	2.3	0.8	0.8	0.8		THAKUR, VIJAY
1BD04W00	2	PS	LJO		VALBONNE	NA	NA		3.1	1.0	1.0	1.1		NA FREEDMAN BOB
1BD05300	2	PS	LJO	NA	CHART I MAINT - PCI	NA	NA	NA	1.3	0.0	1.4	0.0		CARCHIDI JOE
1BD05400	2	PS	LJO	NA	CHART I MAINT - NAC	NA	NA	NA	0.0	0.0	0.0	0.0		NA DALEY, BILL NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				17.8	5.1	7.0	6.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed DESKTOP INTEGRATION				17.8	5.1	7.0	6.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental DESKTOP INTEGRATION				0.0	0.0	0.0	0.0		
	Chart	2			Totals for DESKTOP INTEGRATION				17.8	5.1	7.0	6.0		
					In-House Funded Proposed Project Totals				61.2	21.8	24.7	15.7		
					Externally Funded Proposed Project Totals				15.6	0.7	0.0	13.1		
					Proposed DESKTOP INTEGRATION				76.8	22.5	24.7	28.8		
					In-House Funded Incremental Project Totals				21.4	0.0	0.0	21.4		
					Externally Funded Incremental Project Totals				1.8	0.0	0.0	1.8		
					Incremental DESKTOP INTEGRATION				23.2	0.0	0.0	23.2		
					Totals for DESKTOP INTEGRATION				100.0	22.5	24.7	52.0		
					In-House Funded Project Totals				61.2	21.8	24.7	15.7		
					Externally Funded Project Totals				15.6	0.7	0.0	13.1		
					Proposed for DESKTOP INTEGRATION				76.8	22.5	24.7	28.8		
					In-House Funded Incremental Project Totals				21.4	0.0	0.0	21.4		
					Externally Funded Incremental Project Totals				1.8	0.0	0.0	1.8		
					Incremental DESKTOP INTEGRATION				23.2	0.0	0.0	23.2		
					Grand Totals for DESKTOP INTEGRATION				100.0	22.5	24.7	52.0		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: DSTIG					Sub Group: DESKTOP INTEGRATION									
1BD01400	1	PD	LJO	FC	MS DOS SPD ISC PROGRAM	3	TBD	TBD	4.5	0.9	1.0	1.9		CARCHIDI JOE
Certification of of DECnet-DOS and PCSA new DECstation models and ISC machi identified by Product Mgmt in support of our strategic alliances.														
1BD01500	1	PD	LJO	FC	DECNET-DOS V3.0	0	8912	8911	2.1	1.8	0.3	0.0		DALEY, BILL ANITA UHLER
DECnet Phase IV end-node implementation for IBM PC's and selected industry standard compatible systems using the MS-DOS or variants. The major purpose is to reduce user memory requirements. Support of 3Com Etherlink Plus (3C505) intelligent controller and/or expanded memory are theproposed methods for memory reduction.														
1BD01B00	1	PD	LJO	FC	MS-DOS 3270 DS V1.0	PRE-0	9006	TBD	0.1	0.0	0.1	0.0		DALEY, BILL
3270 Data Stream programming interface will allow MS-DOS users to write applications to communicate with IBM 3270-type applications.														
1BD01E00	1	PD	LJO	FC	VAX/VMS SVCS V3.1	PRE-0	9006	TBD	0.9	0.0	0.9	0.0		CARCHIDI, JOE ANITA UHLER
Maintenance release of VAX/VMS svcs. Provides bug fixes and minor functional enhancements.														
1BD01F00	1	PD	LJO	FC	VAX/VMS PC LAN SVR V3.1	PRE-0	9006	TBD	0.3	0.0	0.3	0.0		CARCHIDI, JOE RON GEMMA
Maintenance release of the PC LAN Svr. Corresponds with VAX/VMS Svcs. V3.1.														
1BD01G00	1	PD	LJO	FC	3RD PARTY ETHERNET CARDS	PRE-0	9003	TBD	0.1	0.2	0.1	0.0		LIU,JIM JOE YANOSHPOLSKY

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

Certification of the DEMAC. The DEMAC is a non-intelligent Ethernet adapter that connects Apple Macintosh (NBus) pcs to Ethernet local area networks. The DEMAC will be a 3rd party product resold by Digital.

Certification of the DEMIA. The DEMIA is an intelligent, multi-buffered Ethernet adapter that connects IBM PS/2 Micro Channel bus personal computers to Ethernet local area networks. The DEMIA will be a 3rd party product resold by Digital. The 3COM Etherlink/MC+ (3C525) is the projected 3rd party controller to be offered for resale.

Certification of the DEPIA. The DEPIA is an intelligent multi-buffered Ethernet adapter that connects PCs to Ethernet local area networks. The DEPIA is a 3rd party product resold by Digital. The 3COM Etherlink Plus (3C505) is the planned 3rd party intelligent controller to be offered for resale.

1BD01J00	1	PD	LJO	FC	VAX/VMS SVCS FOR MAC V1.0	PRE-0	9007	TBD	0.7	0.5	0.3	0.0		CARCHIDI JOE DAVE GLASSON

This product will provide VMS-based file, print, terminal access and DECnet/Appletalk Gateway communications services to MAC Clients. The product will be based on Appletalk for VMS V3.0 (Apple); AlisaShare File and Print Server (Alisa Systems); and an Appletalk/DECnet Gateway, Terminal Port Driver, and misc. installation, setup, and misc utilities (Digital).

1BD01K00	1	PD	LJO	FC	VAX/VMS SVCS F/MAC V1.1	PRE-0	9012	TBD	0.9	0.0	0.4	0.5		CARCHIDI JOE DAVE GLASSON

Maintenance release of VAX/VMS Services for MAC. This release will include bug fixes, minor functional enhancements, and performance improvements.

1BD01L00	1	PD	LJO	FC	DECNET-OS/2 V1.0	PRE-0	8909	TBD	1.5	1.2	0.3	0.0		DALEY, BILL CAROL GREENFIELD

DECnet Phase IV implementation for IBM PCs and selected industry standard compatible systems using the OS/2 standard edition or variants. Assumes functionality similar to that of DECnet-DOS V2.1. Includes DECnet-DOS system and regression testing of supported Personal Computers.

1BD01M00	1	PD	LJO	FC	DECNET-OS/2 V1.1	PRE-0	9006	TBD	0.1	0.0	0.1	0.0		DALEY, BILL CAROL GREENFIELD

This is a maintenance release.

1BD01N00	1	PD	LJO	FC	DECNET PCSA OS/2 CLIENT V1.0	2	9003	TBD	2.7	1.0	1.7	0.0		CARCHIDI JOE MARLENE STEGER

Provide a system platform for OS/2 which includes DECnet-OS/2, PCSA Networks, Microsofts LAN Manager, Presentation Manager, Utilities and Digital propietary OS/2 Extensions.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD01O00	1	PD	LJO	FC	OS/2 ISC SPD PROGRAM	PRE-0	8901	TBD	0.7	0.0	0.2	0.5		CARCHIDI JOE

Certification of DECnet-OS/2 and PCSA-OS/2 on new DECstation models and ISC machines identified by Product Management in support of our strategic alliances.

1BD01P00	1	PD	LJO	FC	OS/2 X SERVER	PRE-0	9003	TBD	0.5	0.1	0.4	0.0		CARCHIDI JOE

Provides access to applications executing on all DECwindows X client platforms from a personal computer running OS/2. Provides the display and user I/O capabilities. It is a goal to implement this server so that it will operate under OS/2 both with and without the Presentation Manager.

1BD01Q00	1	PD	LJO	FC	DECNET/PCSA OS/2 CLIENT V1.1	PRE-0	9009	TBD	1.3	0.0	0.3	1.0		CARCHIDI JOE MARLENE STEGER

Maintenance release of DECnet PCSA OS?2 Client v1.0.

1BD01R00	1	PD	LJO	FC	GOLD KBDS ON PS/2	PRE-0	8901	TBD	0.5	0.0	0.1	0.3		CARCHIDI JOE

This project is to provide the support of Gold keyboards (LK250 and/or LK301) to function on IBM PS/2 and clones. Most of the work will be testing the keyboards and fixing up ROM in the LK250.

1BD01U00	1	PD	LJO		386/OSF SVCS F/PCS V1.0	PRE-0	9009		0.9	0.0	0.7	0.0		CARCHIDI JOE

This product will provide basic file, disk, print, remote boot, and mail services to both DOS and OS/2 Clients. It will be based on the OSF/ULTRIX base products being developed for 386 DECstations. This product should suit the low end server need (4-8 user environment) and allow us to compete on a direct price/performance basis with companies such as Novell.

1BD01V00	1	PD	LJO	FC	386/OSF SVCS F/PCS V1.1	PRE-0	TBD	TBD	1.9	0.0	1.2	0.7		CARCHIDI JOE JANE MURPHY

This release corresponds with the V1.1 release of the PMAX/OSF sersver. I adds virtual disk and remote boot services to the V1.0 product. It may also add mail services depending on the availability of a base mail product for the 386/OSF operating system.

1BD01W00	1	PD	LJO	FC	MS-DOS SNA API V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		DALEY, BILL

This is a base SNA programming interface on OS/2 Systems that will enable third parties to develop, and sell any other IBM SNA applications layered on this base. Third parties will be able to develop the wide range of SNA applications that we provide today on VMS for the OS/2 platform.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD01X00	1	PD	LJO	FC	OS/2 SNA API V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.1		DALEY, BILL

This is a base SNA programming interface on OS/2 Systems that will enable third parties to develop, and sell any other IBM SNA applications layered on this base. Third parties will be able to develop the wide range of SNA applications that we provide today on VMS for the OS/2 platform.

1BD01Y00	1	PD	LJO	FC	DECNET-OS/2 V2.0	PRE-0	9012	TBD	1.7	0.0	0.3	1.4		DALEY, BILL CAROL GREENFIELD

DECnet Phase Va end-node implementation for IBM PC's and selected industry standard compatible systems using the OS/2 standard edition or variants.

1BD02700	1	PD	LJO	FC	DECNET MAC CONSULTING	PRE-0	9106	TBD	0.4	0.0	0.1	0.3		DALEY, BILL

Provide technical consulting on DECnet to Technology Concepts, Inc. in the development of DECnet-Mac. Help TCI bring their current DECnet product up to Digital standard and quality, and transition TCI's DECnet product to Phase V. The funding is for NAC resources.

1BD02800	1	PD	LJO	FC	TCI SERVER PRODUCT V1.1	PRE-0	9006	TBD	0.5	0.0	0.5	0.0		CARCHIDI JOE DAVE GLASSON

This project will define the incremental work necessary to support the DECnet/PCSA Client:MAC product (the TCI Community MAC product). Most of this work falls into the areas of SMB extensions, printing enhancements, and client configuration.

1BD02900	1	PD	LJO	FC	DECNET SVR PRODUCT V1.0	PRE-0	9006	TBD	0.7	0.3	0.5	0.0		CARCHIDI JOE CAROL GREENFIELD

This project will define the incremental work necessary to support the DECnet/PCSA Client:MAC product (the TCI Community MAC product). Most of this work falls into the areas of SMB extensions, printing enhancements, and client configuration.

1BD02A00	1	PD	LJO	FC	DECNET MAC CLIENT V1.0	PRE-0	9007	TBD	0.8	0.1	0.6	0.0		CARCHIDI JOE DAVE GLASSON

This project will define the incremental work necessary to support the DECnet/PCSA client for MAC product (the TCI Community MAC product). Most of this work is to manage the project, provide consulting to TCI as well as testing and certifying the TCI product.

1BD02M00	1	PD	LJO	FC	VAXPC F/VMS V2.0	PRE-0	9003	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE

This release of the VMS-based software coprocessor will contain bug fixes from the V1.1 release, performance enhancements, ease of use features, support for new industry PC hardware, DOS V4.0, and DOS v4.0 LAN Manager.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD02N00	1	PD	LJO	FC	VAXPC F/VMS V2.1	PRE-0	9012	TBD	0.4	0.0	0.0	0.4		CARCHIDI JOE
1BD02NC0	1	PD	LJO	FC	VAXPC F/VMS V2.1	PRE-0	9012	TBD	0.0	0.5	0.0	0.0	WKSYS	CARCHIDI JOE
Maintenance release of the VAX/VMS based software coprocessor.														
1BD02O00	1	PD	LJO	FC	MAXPC V1.0	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
Implementation of the Phoenix PC/DOS emulator on a PMAX hardware platform. This is essentially a porting of the VAXpc for ULTRIX to the PMAX platform. This involves a new code generator module (Phoenix) and additional testing/product qualification.														
1BD02P00	1	PD	LJO	FC	MAXPC V1.1	PRE-0	9009	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
This release of the PC/DOS emulator for the PMAX contains bug fixes, performance enhancements, and full PCSA support.														
1BD02Q00	1	PD	LJO	FC	VAXPC F/ULTRIX V1.0	PRE-0	8909	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
Implementation of the VAXpc for ULTRIX. No PCSA support. This project includes the productization of the Phoenix PC emulator under ULTRIX plus the development/porting of management utilities (SETUp and PCDISK)														
1BD02R00	1	PD	LJO	FC	VAXPC F/ULTRIX V1.1	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
This release of the VAXpc for ULTRIX will contain bug fixes, minor enhancements and full PCSA support.														
1BD02S00	1	PD	LJO	FC	DECNET/PCSA DOS CLNT V3.0	PRE-0	8912	TBD	2.4	0.9	1.4	0.0		CARCHIDI JOE
Provide support for DEcnet-DOS V3.0, memory optimization for PCSA network s/w, support for MIcrosoft's DOS version of LAN manager, MS-Windows 386, MS-DOS V4.0, omproved printing services and installation. Also includes maintenance of DOS X server, including performance and memory improvements, X protocol upgrade, TCP/IP support, exit-to-DOS capability.														
1BD02U00	1	PD	LJO	FC	VAX/VMS SERVICES V3.0	3	8912	8911	2.6	0.9	1.5	0.0		CARCHIDI, JOE ANITA UHLER
Provides support for Microsoft LAN Manager and OS/2 workstations. Major redesign of the server in order to provide significant file service performance improvements.														
1BD02V00	1	PD	LJO	FC	VAX/VMS PC LAN SVR V3.0	2	8912	TBD	0.3	0.0	0.3	0.0		CARCHIDI, JOE RON GEMMA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Provides support for Microsoft LAN Mgr and OS/2 workstations. Based on PVAX technology platform. Also supports MV2000 platform. Essentially the same software as found in VAX/VMS Services V3.0 with packaging and installation customizations for turnkey startup and management.														
1BD02X00	1	PD	LJO	FC	3270 TERMINAL EMULATOR V2.0	PRE-0	8909	8909	0.4	0.3	0.1	0.0		DALEY, BILL
This is a follow-on to MS-DOS TE V1.0 that emulates IBM's graphic terminal (3192G).														
1BD02Y00	1	PD	LJO	FC	DECNET-DOS V3.1	PRE-0	9006	TBD	0.2	0.0	0.2	0.0		DALEY, BILL
DECnet Phase IV end-node implementation for IBM PC's and selected ISC systems using the MS-DOS operating system or variants. This is a maintenance release. This project also includes DECnet-DOS system and regression testing of supported PCs.														
1BD02Z00	1	PD	LJO	FC	DECNET/PCSA DOS CLNT V3.1	PRE-0	9006	TBD	0.9	0.0	0.9	0.0		CARCHIDI JOE ANITA UHLER
Maintenance release of PCSA DOS Client V3.0.														
1BD03800	1	PD	LJO	FC	SERVER PERFORMANCE TESTING	PRE-0	TBD	TBD	1.7	0.0	0.8	0.9		CARCHIDI, JOE
Performance testing will provide information that allows us to understand where our own server platforms perform most effectively and where they perform against the competition.														
1BD03900	1	PD	LJO	FC	ISV NETWORK	PRE-0	8907	TBD	0.7	0.0	0.0	0.7	COREAPP	HAM RON
1BD03900	1	PD	LJO	FC	ISV NETWORK	PRE-0	8907	TBD	0.0	0.1	0.0	0.0		HAM RON
The ISV network will provide a cross country, high-speed netwrok link for ISV's. Also included are two (East and West Coast) network hubs. The hubs will be used to provide technical support to the ISV's (i.e. Notes files, mail, application testing, ...).														
1BD03A00	1	PD	LJO	FC	ISV SEED AND LOANER PROGRAM	PRE-0	8907	TBD	0.8	0.0	0.0	0.8	COREAPP	HAM RON
1BD03A00	1	PD	LJO	FC	ISV SEED AND LOANER PROGRAM	PRE-0	8907	TBD	0.0	0.1	0.0	0.0		HAM RON
The ISV seed and loaner program will provide certified ISV's withloaner hardware and software. the hardware and software will be used for applications development by the ISV. The first 50 ISV's will be qualified for free equipment. Those beyond the first 50 requiring equip. and software will be allowed to purchase pre-configured systems from Digital at an OEM discounted price.														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD03B00	1	PD	LJO	FC	ISV BASE SUPPORT	PRE-0	8907	TBD	7.2	0.0	0.0	3.0	COREAPP	HAM RON
1BD03B00	1	PD	LJO	FC	ISV BASE SUPPORT	PRE-0	8907	TBD	0.0	1.5	0.0	0.0		HAM RON

The ISV base suport plan will consist of three components; Technical support, Account Management, and Overhead. Technical support will be provided by software engineers over the ISV network. Account managers will be dedicated to individual ISV's (approx 10 ISV's per AM).

1BD03C00	1	PD	LJO	FC	DMS PROGRAM (BASE ACTIVITY)	PRE-0	8907	TBD	1.0	0.2	0.0	0.8	COREAPP	HAM RON
1BD03C00	1	PD	LJO	FC	DMS PROGRAM (BASE ACTIVITY)	PRE-0	8907	TBD	0.0	0.0	0.0	0.0		HAM RON
1BD03D00	1	PD	LJO	FC	DMS PROGRAM (MERCHANDISING)	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON

The merchandising efforts in the DMS program will consist of a semi-annual software application catalog, direct mailings, vendor product promotions and other joint marketing activities.

1BD03E00	1	PD	LJO	FC	CD PROGRAM MANAGEMENT	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON

The CD program is primarily focused on the distribution of application software via CD ROM. Projects such as NAC's Neptune, DSS PC License server and PCSA support of CD ROM applications are included in this project's management.

1BD03F00	1	PD	LJO	FC	CD ROM PROJECT FUNDING TO NAC	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON

This component of the CD ROM program represents those dollars to be used by NAC engineering for development of CD ROM application distribution technology.

1BD03G00	1	PD	LJO	FC	ISV SUPPORT ACTIVITY I	PRE-0	8907	TBD	1.0	0.0	0.0	1.0	COREAPP	HAM RON

This ISV support activity is similar to the ISV base support project. The ISV base support project will allow PCI to provide technical support and account management for up tp 75 ISV's. This project provides the account management and technical support necessary for an additional 25 ISV's.

1BD03H00	1	PD	LJO	FC	ISV DEVELOPMENT EXPORT/IMPORT	PRE-0	8907	TBD	0.1	0.0	0.0	0.1	COREAPP	HAM RON

ISV base projecs via external ISV engineering. Export/Import for single application file convert

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD03I00	1	PD	LJO	FC	BOOK READER ISV DEVELOPMENT	PRE-0	8907	TBD	0.2	0.0	0.0	0.2	COREAPP	HAM RON

This project represents the funding needed to contract for the development of an on-line bookreader for appliction software documentation distributed by CD ROM. The Engineering of such a project will likely be done by an ISV, although internal engineering resources could be used.

1BD03J00	1	PD	LJO	FC	HETERO- PC LAN "GIVEAWAY"	PRE-0	8907	TBD	0.3	0.0	0.0	0.2	COREAPP	HAM RON
1BD03J00	1	PD	LJO	FC	HETERO- PC LAN "GIVEAWAY"	PRE-0	8907	TBD	0.0	0.1	0.0	0.0		HAM RON

One heterogeneous PC LAN "give away" Project will develop and distribute (at a low/no cost) one application for a PCSA environment. The application will be used to demonstrate the Heterogeneous environment allowed under PCSA and encourage ISV's and market acceptance of such products.

1BD03K00	1	PD	LJO	FC	ISV APPLICTION DEMO	PRE-0	8907	TBD	0.2	0.0	0.0	0.2	COREAPP	HAM RON

The ISV application demo will consist of 50-200 ISV developed applications demo's on a single CD ROM. The CD will be distributed to potential customers. The customer will be allowed to run the demos for each product free of charge.

1BD03L00	1	PD	LJO	FC	EXTERNAL ISV ENGINEERING	PRE-0	8907	TBD	0.3	0.0	0.0	0.3	COREAPP	HAM RON

This project allocates the resources necessary to provide a base level of support for PCI's leveraged engineering efforts via ISV's. Funded projects will be managed by the ISV group.

1BD03M00	1	PD	LJO	FC	LAN APPLICATION PERFORMANCE DT	PRE-0	8907	TBD	0.4	0.0	0.0	0.4	COREAPP	HAM RON

This project will provide competitive performance benchmarks for PC LAN applications. Applications will consist of existing off the shelf applications, ISV developed and DEC developed software.

1BD03N00	1	PD	LJO	FC	NEW API SUPPORT AND FT SOFTWAR	PRE-0	8907	TBD	1.7	0.0	0.0	1.7	COREAPP	HAM RON

New API support and Field test software support to PC ISV's for these API's Assumes 2 senior engineers per API - (i.e. SQL, X.400, Mail, RPC..CDA, X11,..).

1BD03O00	1	PD	LJO	FC	START-UP OF FIELD SUPPORT	PRE-0	8907	TBD	0.5	0.0	0.0	0.5	COREAPP	HAM RON
1BD03P00	1	PD	LJO	FC	PRODUCT/ACCOUNT MANAGEMENT	PRE-0	8907	TBD	0.2	0.0	0.0	0.2	BOIS	HAM RON

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Groups external to PCI, dealing with ISV's or software applications will be able to fund the ISV group to manage the strategic and administrative aspects of the account.														
1BD03Q00	1	PD	LJO	FC	EXTERNAL ISV ENGINEERING	PRE-0	8907	TBD	0.1	0.0	0.0	0.3	NAC	HAM RON
Funded external engineering projects via ISV's. Projects such as VT universal terminal PC B-Trieve DEC Printer Support appl. EIA(AR-API) to IBM Access Support will fall under this project.														
1BD03R00	1	PD	LJO	FC	DECNET/OSF 386 SERVER V1.0	PRE-0	TBD	TBD	0.3	0.3	0.0	0.0		DALEY, BILL JANE MURPHY
DECnet 386 Server for Ultrix.														
1BD04400	1	PD	LJO		ISV BASE SUPPORT FY91	PRE-0	8907		0.0	0.0	0.0	1.8	COREAPP	HAM RON
THIS PROJECT IDENTIFIES THE RESOURCE NEEDS TO ADD AN INCREMENTAL 75 ISV'S TO THE FY90 ISV PROGRAM. INCREMENTAL RESOURCES INCLUDE TECHNICAL SUPPORT AND ACCOUNT MANAGERS.														
1BD04500	1	PD	LJO	FC	DECSTATION 210 SUPPORT	3	8901	TBD	0.3	0.3	0.0	0.0		BURR, GEOFF
1BD04600	1	PD	LJO	FC	DECSTATION 316 SUPPORT	3	8901	TBD	0.3	0.3	0.0	0.0		BURR, GEOFF BOB MONTEMERLO
1BD04700	1	PD	LJO	FC	DECSTATION 320 SUPPORT	3	8901	TBD	0.3	0.3	0.0	0.0		BURR, GEOFF BOB MONTEMERLO
1BD04A00	1	PD	LJO	FC	DECSTATION 316 SX	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		BURR, GEOFF
The DECstation SX is an Intel 386 (32 bit internal/16 bit external) based PC with associated options. It is intended to provide comparable performance to the DECstation 316 at a lower cost. The SX also addresses problems in the virtual space known to exist on 286 based PC's.														
1BD04B00	1	PD	LJO	FC	DECSTATION 212	PRE-0	TBD	TBD	0.9	0.0	0.9	0.0		BURR, GEOFF BOB MONTEMERLO

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
This product provides a performance upgrade for the DS210 (10MHZ to 12MHZ).														
1BD04C00	1	PD	LJO	FC	DECSTATION 100	PRE-0	9003	TBD	0.0	0.0	0.0	0.0		BURR,GEOFF BOB MONTEMERLO
This product is a low end 286 based PC with associated options intended as an entry level network PC which requires some local compute power, network capability and small footprint at a < cost.														
1BD04D00	1	PD	LJO	FC	OS/2 FOR D/S FAMILY	PRE-0	8909	TBD	0.0	0.0	0.0	0.0		BURR,GEOFF BOB MONTEMERLO
OS/2 operating system software for the DECstation PC Family.														
1BD04E00	1	PD	LJO	FC	MS/DOS V4.0 FOR D.S. FAMILY	PRE-0	8905	TBD	0.0	0.0	0.0	0.0		BURR,GEOFF BOB MONTEMERLO
This is an operating system upgrade for the DECstation PC Family. The present version of MS-DOS shipped with the DECstation is V3.3.														
1BD04F00	1	PD	LJO	FC	DECSTATION PORTABLE P.C.	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		BURR,GEOFF BOB MONTEMERLO
An Intel 286 based laptop portable PC.														
1BD04G00	1	PD	LJO	FC	DECSTATION 386/25 SERVER	PRE-0	9009	TBD	0.0	0.0	0.0	0.0		BURR,GEOFF BOB MONTEMERLO
The 386/25 provides a low cost / high performance server hardware platform for the 3860SF/Unix services software.														
1BD04H00	1	PD	LJO	FC	UNIX FOR D.S. FAMILY	PRE-0	9009	TBD	0.0	0.0	0.0	0.0		BURR,GEOFF BOB MONTEMERLO
SCO XENIX operating system for the DECstation Family.														
1BD04K00	1	PD	LJO	FC	EUROPEAN PC FAMILY PLUS OP/SYS	PRE-0	TBD	TBD	1.0	0.0	1.0	0.0		BURR,GEOFF BOB MONTEMERLO
1BD04Y00	1	PD	LJO	FC	INTERNATIONALIZE DECSTATIONS	PRE-0	TBD	TBD	0.5	0.3	0.0	0.0		BURR,GEOFF BOB MONTEMERLO
1BD05100	1	PD	LJO	FC	FY91 DECSTATION PRODUCTS	PRE-0	TBD	TBD	1.7	0.0	0.0	1.7		BURR,GEOFF BOB MONTEMERLO
1BD05200	1	PD	LJO	FC	UNIX 386	PRE-0	TBD	TBD	0.2	0.0	0.2	0.0		DALEY, BILL JANE MURPHY
UNIX 386 Server														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD05500	1	PD	LJO	FC	PC FONTS FOR DECWINDOWS	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		CONKLIN, PETER

0 DECwindows 60x80 pixel screen fonts (EGA,HGA).

0 DECtech, DECmath for PC aspect ratio.

0 Basic publishing set for PC aspect ration.

0 MLP and TC = TBD

1BD05600	1	PD	LJO	FC	VT420 TERMINAL EMULATOR FOR PC	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		CONKLIN, PETER

DECwindows - DECterm- style terminal emulator for Pc's.

MLP and TC= TBD

1BD03S00	1	PD	LJO		NAS-PCSA/DOS CLIENT V2.1	4	8812		0.8	0.8	0.0	0.0		CARCHIDI, JOE

Enhancements to v2.0 including DECnet/DOS v2.1, Microchannel Ethernet Support on PS/2's. Additional Clone support and support for > 4 LAD drives. Includes MS-Windows v2.0.

1BD03T00	1	PD	LJO		NAS-PCSA/DOS CLIENT V2.2	2	8904		2.0	2.0	0.0	0.0		CARCHIDI, JOE

Enhancements to v2.1, VT320 emulation, X-servers for DOS support, selected 386 clone support, printing improvements, PC Mail and other miscellaneous functionality improvements.

1BD03U00	1	PD	LJO		TERM EMULATORS VT220/VT240	4	8807		1.0	1.0	0.0	0.0		CARCHIDI, JOE

1BD03V00	1	PD	LJO		NAS-PCSA/VAX SERVER V2.2	2	8904		0.7	0.7	0.0	0.0		CARCHIDI, JOE

Enhancements to v2.1 include Mail Server, VMS Configuration Aide, VMS NETBOIS, improved system management.

1BD03W00	1	PD	LJO		NAS-PCSA PACKAGED SERVERS	0	8906		0.7	0.7	0.0	0.0		CARCHIDI, JOE

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Packaged Server v1.0 achieved FCS on 8810. V2.0 includes enhancements and bug fixes to the v1.1 Packaged Server. Majors changes include PVAX Server or Teammate II and the addition of X.400 compliant Mail.														
1BD01S00	1	PD	LJO	FC	PMAX/OSF SERVICES FOR PCS V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		CARCHIDI JOE
Implementation of the PMAX-based PC file server for the OSF/ULTRIX platform. This layered product will support both DOS and OS/2 clients. It will provide file services, print services, disk services, remote boot service, and mail services.														
1BD01T00	1	PD	LJO	FC	PMAX/OSF SVCS F/PCS V1.1	PRE-0	9012	TBD	1.0	0.0	0.0	1.0		CARCHIDI JOE
Implementation of the PMAX-based PC file server for the OSF/ULTRIX platform. This layered product will support both DOS and OS/2 clients. This release adds support for virtual disk services, remote boot, and mail services to the VI>0 product. It also provides bug fixes and minor enhancements to file, print, and management services.														
1BD01Z00	1	PD	LJO		DECNET/PCSA OS/2 CLIENT V2.0	PRE-0	9103		3.4	0.0	0.0	3.4		CARCHIDI JOE
Support of DECnet Phase V														
1BD02100	1	PD	LJO	FC	DECNET-DOS V4.0	PRE-0	9012	TBD	1.3	0.0	0.0	1.3		DALEY, BILL
DECnet Phase Va end-node implementation for IBM PC's and selected industry standard compatible PCs using the MS-DOS operating system or variants. Support OSI Transport (TP4), Network Management, and Routing architecture.														
1BD02200	1	PD	LJO	FC	DECNET/PCSA DOS CLIENT V4.0	PRE-0	9012	TBD	1.1	0.0	0.0	1.1		CARCHIDI JOE
This project will provide support for DECnet-DOS V4.0 which is a DECnet Phase Va implementation and any new version of DOS from Microsoft.														
1BD02300	1	PD	LJO	FC	MS-DOS FTAM V1.0	PRE-0	9012	TBD	0.3	0.0	0.0	0.3		DALEY, BILL
This product will allow MS-DOS users to exchange files in an OSI network using DECnet OSI. The functionalities will be based on VAX FTAM V2.0. The ULTRIX FTAM code will be ported to MS-DOS.														
1BD02400	1	PD	LJO	FC	OS/2 FTAM V1.0	PRE-0	9012	TBD	0.6	0.0	0.0	0.6		DALEY, BILL
This product will allow OS/2 users to exchange files in an OSI network (multivendor) using DECnet OSI. The functionalities will be based on VAX FTAM v2.0. The ULTRIX FTAM code will be ported to OS/2.														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BD02500	1	PD	LJO	FC	MS-DOS VTP V1.0	PRE-0	9012	TBD	0.2	0.0	0.0	0.2		DALEY, BILL

Produce an OSI terminal access product for MS-DOS users. Provide basic, scroll and Telnet terminal profiles. ULTRIX VTP v1.0 code will be ported to MS-DOS.

1BD02600	1	PD	LJO		OS/2 VTP V1.0	PRE-0	9012		0.3	0.0	0.0	0.3	NAC	DALEY, BILL

Produce an OSI terminal access product for OS/2 users. Provide basic, scroll and telnet terminal profiles. ULTRIX VTP V1.0 code will be ported to OS/2.

1BD02B00	1	PD	LJO	FC	MAC SNA API V1.0	PRE-0	9009	TBD	0.1	0.0	0.0	0.1		DALEY, BILL

This is a base SNA programming interface on MAC systems that will enable third parties to develop, and sell any other IBM SNA applications layered on this base. Third parties will be able to develop the wide range of SNA applications that we provide today on VMS for the MAC platform.

1BD02C00	1	PD	LJO	FC	OS/2 OSAK V1.0	PRE-0	9103	TBD	0.3	0.0	0.0	0.3		DALEY, BILL

To develop OSI programming interface for OS.2 platforms. The functions will be based on VAX OSAK v2.0.

1BD02D00	1	PD	LJO	FC	MS-DOS OSAK V1.0	PRE-0	9006	TBD	0.0	0.0	0.0	0.0		DALEY, BILL

To develop OSI programming interface for MS-DOS platforms. The functions will be based on VAX OSAK V2.0.

1BD02E00	1	PD	LJO	FC	RPC OS/2	PRE-0	9012	TBD	0.1	0.0	0.0	0.1		DALEY, BILL

Remote Procedure Call (RPC) V1.0 will incorporate RPC, authentication and provide a DEC Windows interface. RPC V1.0 will implement the DEC RPC architecture on VMS, ULTRIX MS-DOS and OS/2.

1BD02F00	1	PD	LJO	FC	DNS OS/2	PRE-0	9012	TBD	0.1	0.0	0.0	0.1		DALEY, BILL

DNS provides name service on VMS for DECnet Phase V. The project includes: rewriting the server data base for improved performance and maintenance and portability to Unix, Phase V session and removt management.

1BD02H00	1	PD	LJO	FC	DASS DOS	PRE-0	8912	TBD	0.0	0.0	0.0	0.0		DALEY, BILL

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Distributed Authentication System Service will provide the technology base for network-wide cryptographic based authentication. It will support a limited set of applications initially, and provide node-to-node authentication. The applications currently being targeted include VMS Services for MS-DOS and OS/2, DFS V2.0, and terminal servers.														
1BD02I00	1	PD	LJO	FC	DASS OS/2	PRE-0	9012	TBD	0.1	0.0	0.0	0.1		DALEY, BILL
Distributed Authentication System Service will provide the technology base foir network-wide cryptographic based authentication. It will support a limited set of applications initially, and provide node-to-node authentication. The applications currently being targeted include VMS Services for MS-DOS and OS/2, DFS V2.0, and terminal servers.														
1BD02J00	1	PD	LJO		RSM OS/2	PRE-0	9103		0.1	0.0	0.0	0.1	NAC	DALEY, BILL
RSM will focus on scalability and heterogeneity. It will increase the number of client systems one system manager can support and provide PC client (MS-DOS or OS/2) support. It will provide enhanced scheduling flexibility, especially for software distribution. Users will be allowed to compose sequences of operations.														
1BD02K00	1	PD	LJO		DECNET-OS/2 V3.0	PRE-0	9206		0.2	0.0	0.0	0.2	NAC	DALEY, BILL
DECnet Phase Vb end-node implementation for IBM PCs and selected industry standard compatible systems using the OS/2 standard edition or variants. This project also includes DECnet-DOS system and regression testing of supported PCs and the development and maintenance of semi-automated test scripts/procedures.														
1BD02L00	1	PD	LJO		DECNET-DOS V5.0	PRE-0	9206		0.2	0.0	0.0	0.2	NAC	DALEY, BILL
DECnet Phase Vb end-node implementation for IBM PC's and selected industry standard compatible PCs using the MS-DOS operating system or variants. This project also includes DECnet-DOS system and regression testing of supported PCs and the development and maintenance of semi-automated test scripts/procedures.														
1BD03100	1	PD	LJO	FC	DOS X.25 GATEWAY ACCESS V1.0	PRE-0	9009	TBD	0.2	0.0	0.0	0.2		DALEY, BILL

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

An application programming interface composed of a socket domain AF_CCITT and associated protocol families CCITTPROTO_GAP and CCITTPROTO_GAPS. An access server which implements the Gateway Access Protocol (GAP), an OSI level 7 protocol. A spawner which routes incoming connections to the X25-SERVER destination. A library of routines for establishing connection and obtaining information on network management databases. An implementation of the X25-ACCESS, X25-SERVER, and X29-SERVER modules of DECnet Phase IV network management for building and maintaining databases of available gateways and destinations. A host-based packet assembler/disassembler (PAD) client application for accessing remote DTEs as an X.29 terminal.

1BD03200	1	PD	LJO		DOS X.25 GATEWAY ACCESS V1.1	PRE-0	9106		0.4	0.0	0.0	0.4	NAC	DALEY, BILL

Maintenance release which fixes bugs reported in the initial release of the product. Does not include any new functionality.

1BD03300	1	PD	LJO	FC	OS/2 X.25 GATEWAY ACCESS V1.0	PRE-0	9012	TBD	0.2	0.0	0.0	0.2		DALEY, BILL

An application programing interface composed of a socket domain AF_CCITT and associated protocol families CCITTPROTO_GAP and CCITTPROTO_GAPS. An access server which implements the Gateway Access Protocol (GAP), and OSI level 7 protocol. A spawner which routes incoming connections to the X-25-SERVER destination. A library of routines for establishing connection and obtaining information on network management databases. An implementation of the X25-ACCESS, X25-SERVER, and X29-SERVER modules of DECnet Phase IV network management for building and maintaining databases of available gateways and destinations. A host-based packet assembler/disassembler (PAD) client application for accessing remote DTEs as an X.29 terminal.

1BD03400	1	PD	LJO		OS/2 X.25 GATEWAY ACCESS V1.1	PRE-0	9109		0.2	0.0	0.0	0.2	NAC	DALEY, BILL

Maintenance release which fixes bugs reported in the initial release of the product. Does not include any new functionality.

1BD03500	1	PD	LJO	FC	MAC X.25 GATEWAY ACCESS V1.0	PRE-0	9006	TBD	0.2	0.0	0.0	0.2		DALEY, BILL

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
An application programming interface composed of a socket domain AF-CCITT and associated protocol families CCITTPROTO_GAP and CCITTPROTO_GAPS. An access server which implements the gateway access protocol (GAP), an OSI level 7 protocol. A spawner which routes incoming connections to the X25-SERVER destination. A library of routines for establishing connection and obtaining information on network management databases. An implementation of the X25-ACCESS, X25-SERVER, and X29-Server modules of DECnet Phase IV network management for building and maintaining databases of available gateways and destinations. A host-based packet assembler/disassembler (PAD) client application for accessing remote DTEs as an X.29 terminal.													
1BD03600	1	PD	LJO		MAC X.25 GATEWAY ACCESS V1.1	PRE-0	9106		0.4	0.0	0.0	0.4	NAC	DALEY, BILL
Maintenance release which fixes bugs reported in the initial release of the product. Does not include any new functionality.														
1BD03X00	1	PD	LJO		DECNET/PCSA CLNT/SVR FOLLOW-ON	0	TBD		6.9	0.0	0.0	6.9		CARCHIDI, JOE
Enhancements, bug-fixes and follow-on projects to DECnet/PCSA Client and Server products.														
1BD03Y00	1	PD	LJO		DEC-WINDOWS	2	TBD		1.3	0.0	0.0	1.3		CARCHIDI, JOE
Enhancements to the PCSG (PC related) components of the corporate DEC-Windows program consisting of MS/Windows X-Server, MS/DOS X-Server, and OS/2 X-Server products.														
1BD03Z00	1	PD	LJO		PC LAN SERVERS	2	TBD		1.0	0.0	0.0	1.0		CARCHIDI, JOE
1BD04100	1	PD	LJO		COMMUNICATIONS GATEWAY	0	TBD		1.0	0.0	0.0	1.0		CARCHIDI, JOE
A VAX/VMS gateway for Appletalk networks. It provides access to the VAX/VMS file system and printers from the MAC/Appletalk interface.														
1BD04200	1	PD	LJO		DECSTATION	0	TBD		1.0	0.0	0.0	1.0		CARCHIDI, JOE
1BD04300	1	PD	LJO		OSI	0	8903		1.0	0.0	0.0	1.0		CARCHIDI, JOE
1BDZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	1			In-House Funded Proposed Project Totals				43.4	16.7	17.7	9.7		
	Chart	1			Externally Funded Proposed Project Totals				15.6	0.7	0.0	13.1		
	Chart	1			Proposed DESKTOP INTEGRATION				59.0	17.4	17.7	22.8		
	Chart	1			In-House Funded Incremental Project Totals				21.4	0.0	0.0	21.4		
	Chart	1			Externally Funded Incremental Project Totals				1.8	0.0	0.0	1.8		
	Chart	1			Incremental DESKTOP INTEGRATION				23.2	0.0	0.0	23.2		
	Chart	1			Totals for DESKTOP INTEGRATION				82.2	17.4	17.7	46.0		
1BD04R00	2	PS	LJO		NON-RECURRING ENGINEERING	NA	NA		1.3	0.4	0.4	0.5		CARCHIDI JOE
1BD04S00	2	AD	LJO		ADVANCED DEVELOPMENT	NA	NA		0.8	0.2	0.3	0.3		CARCHIDI JOE
1BD04T00	2	PM	LJO	NA	OPS/PRODUCT MANAGEMENT	NA	NA	NA	7.4	2.2	2.5	2.7		STOWE BILL NA
1BD04U00	2	PM	LJO		EXTERNAL RELATIONS	NA	NA		1.6	0.5	0.6	0.6		BURR GEOFF
1BD04V00	2	PM	LJO	NA	PCI PROGRAM OFFICE	NA	NA	NA	2.3	0.8	0.8	0.8		THAKUR, VIJAY NA
1BD04W00	2	PS	LJO		VALBONNE	NA	NA		3.1	1.0	1.0	1.1		FREEDMAN BOB
1BD05300	2	PS	LJO	NA	CHART I MAINT - PCI	NA	NA	NA	1.3	0.0	1.4	0.0		CARCHIDI JOE NA
1BD05400	2	PS	LJO	NA	CHART I MAINT - NAC	NA	NA	NA	0.0	0.0	0.0	0.0		DALEY, BILL NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				17.8	5.1	7.0	6.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed DESKTOP INTEGRATION				17.8	5.1	7.0	6.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental DESKTOP INTEGRATION				0.0	0.0	0.0	0.0		
	Chart	2			Totals for DESKTOP INTEGRATION				17.8	5.1	7.0	6.0		
					In-House Funded Proposed Project Totals				61.2	21.8	24.7	15.7		
					Externally Funded Proposed Project Totals				15.6	0.7	0.0	13.1		
					Proposed DESKTOP INTEGRATION				76.8	22.5	24.7	28.8		
					In-House Funded Incremental Project Totals				21.4	0.0	0.0	21.4		
					Externally Funded Incremental Project Totals				1.8	0.0	0.0	1.8		
					Incremental DESKTOP INTEGRATION				23.2	0.0	0.0	23.2		
					Totals for DESKTOP INTEGRATION				100.0	22.5	24.7	52.0		
					In-House Funded Project Totals				61.2	21.8	24.7	15.7		
					Externally Funded Project Totals				15.6	0.7	0.0	13.1		
					Proposed for DESKTOP INTEGRATION				76.8	22.5	24.7	28.8		
					In-House Funded Incremental Project Totals				21.4	0.0	0.0	21.4		
					Externally Funded Incremental Project Totals				1.8	0.0	0.0	1.8		
					Incremental DESKTOP INTEGRATION				23.2	0.0	0.0	23.2		
					Grand Totals for DESKTOP INTEGRATION				100.0	22.5	24.7	52.0		

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: DESKTOP INTEGRATION

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1BD01400	CLONE	TBD	TBD	TBD	
1BD01500		8911	8912	8912	ANITA UHLER
1BD01B00		TBD	9006	TBD	
1BD01E00		TBD	9006	TBD	ANITA UHLER
1BD01F00		TBD	9006	TBD	RON GEMMA
1BD01G00		TBD	9003	TBD	JOE YANOSHPOLSKY
1BD01J00		TBD	9007	TBD	DAVE GLASSON
1BD01K00		TBD	9012	TBD	DAVE GLASSON
1BD01L00		TBD	8909	TBD	CAROL GREENFIELD
1BD01M00		TBD	9006	TBD	CAROL GREENFIELD
1BD01N00		TBD	9003	TBD	MARLENE STEGER
1BD01O00		TBD	8901	TBD	
1BD01P00		TBD	9003	TBD	
1BD01Q00		TBD	9009	TBD	MARLENE STEGER
1BD01R00		TBD	8901	TBD	
1BD01U00			9009		
1BD01V00		TBD	TBD	TBD	JANE MURPHY
1BD01W00		TBD	9006	TBD	
1BD01X00		TBD	9006	TBD	
1BD01Y00		TBD	9012	TBD	CAROL GREENFIELD
1BD02700		TBD	9106	TBD	
1BD02800		TBD	9006	TBD	DAVE GLASSON
1BD02900		TBD	9006	TBD	CAROL GREENFIELD
1BD02A00		TBD	9007	TBD	DAVE GLASSON
1BD02M00		TBD	9003	TBD	
1BD02N00		TBD	9012	TBD	
1BD02O00		TBD	8912	TBD	
1BD02P00		TBD	9009	TBD	
1BD02Q00		TBD	8909	TBD	
1BD02R00		TBD	9006	TBD	
1BD02S00		TBD	8912	TBD	
1BD02U00		8911	8912	8912	ANITA UHLER
1BD02V00		TBD	8912	TBD	RON GEMMA
1BD02X00		8909	8909	8909	
1BD02Y00		TBD	9006	TBD	
1BD02Z00		TBD	9006	TBD	ANITA UHLER
1BD03800		TBD	TBD	TBD	
1BD03900		TBD	8907	TBD	
1BD03A00		TBD	8907	TBD	
1BD03B00		TBD	8907	TBD	
1BD03C00		TBD	8907	TBD	
1BD03D00		TBD	8907	TBD	
1BD03E00		TBD	8907	TBD	
1BD03F00		TBD	8907	TBD	
1BD03G00		TBD	8907	TBD	
1BD03H00		TBD	8907	TBD	
1BD03I00		TBD	8907	TBD	

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: DESKTOP INTEGRATION

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1BD03J00		TBD	8907	TBD	
1BD03K00		TBD	8907	TBD	
1BD03L00		TBD	8907	TBD	
1BD03M00		TBD	8907	TBD	
1BD03N00		TBD	8907	TBD	
1BD03O00		TBD	8907	TBD	
1BD03P00		TBD	8907	TBD	
1BD03Q00		TBD	8907	TBD	
1BD03R00		TBD	TBD	TBD	JANE MURPHY
1BD04400			8907		
1BD04500		TBD	8901	TBD	
1BD04600		TBD	8901	TBD	BOB MONTEMERLO
1BD04700		TBD	8901	TBD	BOB MONTEMERLO
1BD04A00		TBD	8912	TBD	
1BD04B00		TBD	TBD	TBD	BOB MONTEMERLO
1BD04C00		TBD	9003	TBD	BOB MONTEMERLO
1BD04D00		TBD	8909	TBD	BOB MONTEMERLO
1BD04E00		TBD	8905	TBD	BOB MONTEMERLO
1BD04F00		TBD	9006	TBD	BOB MONTEMERLO
1BD04G00		TBD	9009	TBD	BOB MONTEMERLO
1BD04H00		TBD	9009	TBD	BOB MONTEMERLO
1BD04K00		TBD	TBD	TBD	BOB MONTEMERLO
1BD04Y00		TBD	TBD	TBD	BOB MONTEMERLO
1BD05100		TBD	TBD	TBD	BOB MONTEMERLO
1BD05200		TBD	TBD	TBD	JANE MURPHY
1BD05500		TBD	8912	TBD	
1BD05600		TBD	8912	TBD	
1BD03S00			8812		
1BD03T00			8904		
1BD03U00			8807		
1BD03V00			8904		
1BD03W00			8906		
1BD01S00		TBD	9006	TBD	
1BD01T00		TBD	9012	TBD	
1BD01Z00			9103		
1BD02100		TBD	9012	TBD	
1BD02200		TBD	9012	TBD	
1BD02300		TBD	9012	TBD	
1BD02400		TBD	9012	TBD	
1BD02500		TBD	9012	TBD	
1BD02600			9012		
1BD02B00		TBD	9009	TBD	
1BD02C00		TBD	9103	TBD	
1BD02D00		TBD	9006	TBD	
1BD02E00		TBD	9012	TBD	
1BD02F00		TBD	9012	TBD	
1BD02H00		TBD	8912	TBD	

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: DESKTOP INTEGRATION

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1BD02I00		TBD	9012	TBD	
1BD02J00			9103		
1BD02K00			9206		
1BD02L00			9206		
1BD03100		TBD	9009	TBD	
1BD03200			9106		
1BD03300		TBD	9012	TBD	
1BD03400			9109		
1BD03500		TBD	9006	TBD	
1BD03600			9106		
1BD03X00			TBD		
1BD03Y00			TBD		
1BD03Z00			TBD		
1BD04100			TBD		
1BD04200			TBD		
1BD04300			8903		
1BDZZZZZ			9012		

MicroVAX Group

I. STRATEGY STATEMENT

A. MISSION

The MicroVAX PBU mission is to bring the power and functionality of Digital VAX and RISC solutions to a broad spectrum of user business environments. Ours are the "go anywhere systems", designed to go where they are needed and perform efficiently and effectively - in the office,lab, or branch bank, as well as on the shop floor.

From a product standpoint, we are systems integrators, providing standard setting general purpose and multiuser systems and servers which are cost effective, conveniently packaged, powerfully networked, and easily managed.

On another dimension, we are "business integrators", working with our Digital business partners to provide flexible, integrated programs and solutions for our customers.

B. GOALS

Our goal is to continue the corporate direction of extending compatibility and high quality, guaranteeing customer satisfaction through investment protection and matching perception and expectations. It is our goal to make our products as popular in the commercial applications as in the engineering and manufacturing environments.

C. FUTURE (FY93)

Over the past several months, we have been reviewing our past and reshaping our Mission and Goals for the future. Much of this discussion will continue throughout the LRP process, but the following "basics" seem clear:

We will continue to be "systems integrators", relying critically on the underlying semiconductor, storage, and other key system technologies. Our focus on time to market and quality will increase.

We will also be "business integrators" - working with our cross-functional partners across the Corporation to identify and satisfy market needs.

The Client Server model of computing will continue to grow in importance; we will address our customers' needs in this area.

The RISC market is fast growing and strategic; we will address the "heart" of Digital's RISC strategy

Flexibility - the ability to "go anywhere and do anything" will continue to be essential - in terms of our products, our services, and our business philosophy.

We will provide cost-effective timesharing platforms for customers best served by this computing style.

Note: More details on our evolving Mission and Goals will be forthcoming during the LRP process.

D. KEY BUSINESS STRATEGIES

Work to strengthen our internal business partnerships, with particular emphasis on our ties with the Geographies, Services, and Marketing.

Interact directly with customers on an ongoing basis to better understand their needs and reflect them in our offerings.

Stress predictability and accountability - meet our commitments in terms of products, programs, and profitability.

Actively support the Field with product information and training.

Leverage the rapid introduction of new semiconductor CPU, memory peripheral, storage, and enclosure technology by growing system performance and/or reducing entry cost.

Develop a winning RISC strategy in support of Corporate direction.

Contribute to the success of Digital's networking and cluster strategy.

Maintain time-to-market focus

Plan, manufacture, and distribute MVB systems achieving worldwide customer satisfaction and competitive financial results with focus on the following:

- Reduced cycle time (order administration through distribution)
- Maintaining weekly ship commits and daily measurements
- Customer satisfaction improvements to attain 100% problem free installation
- Contributions to achievement of gross margin

Continue to grow and communicate a marketing strategy stressing:

- New market development
- Cost of ownership studies
- Product performance characterization
- Competitive analyses

Work with Services to drive an integrated set of customer solutions characterized by:

- Seamless integration of system design and service delivery
- Competitive service pricing based on a continuing effort to drive down service delivery costs
- System level quality/reliability goals based on customer perception.
- Value added enterprise level service solutions.

II. MAJOR OPPORTUNITIES

Strengthen our internal business management and communications processes to ensure delivery on our product, program, and profit commitments.

Grow indirect distribution channels through cooperative programs with the Channels Marketing organization.

Nurture our Entry Level Systems "mini-PBU" headquartered in Ayr, Scotland as part of our internationalization efforts.

Capitalize on our large installed base by developing and delivering profitable upgrade programs in support of our customers' requirement for investment protection.

Position ourselves to capture opportunities presented by the evolving Xwindows Terminal program and its successors.

Accelerate our penetration into the Open Systems marketplace through the enhancement of our RISC-based offerings, such as the addition of VME applications.

Leverage the Client Server computing model, as well as Digital's unique LAVc capabilities.

Participate in the definition and implementation of the EVAX technology; factor the impacts of this technology into our VAX and RISC plans.

Incorporate leading edge storage technology in our offerings, including RDAT for fast, economical backup and CDROM for efficient, cost effective distribution of SW and documentation.

Increase our ability to provide factory loaded software.

Utilize CDROM, DECwindows terminal, and an evolution of "Desktop VMS" to address our system management market requirement.

III. MAJOR DEPENDENCES & KEY ISSUES

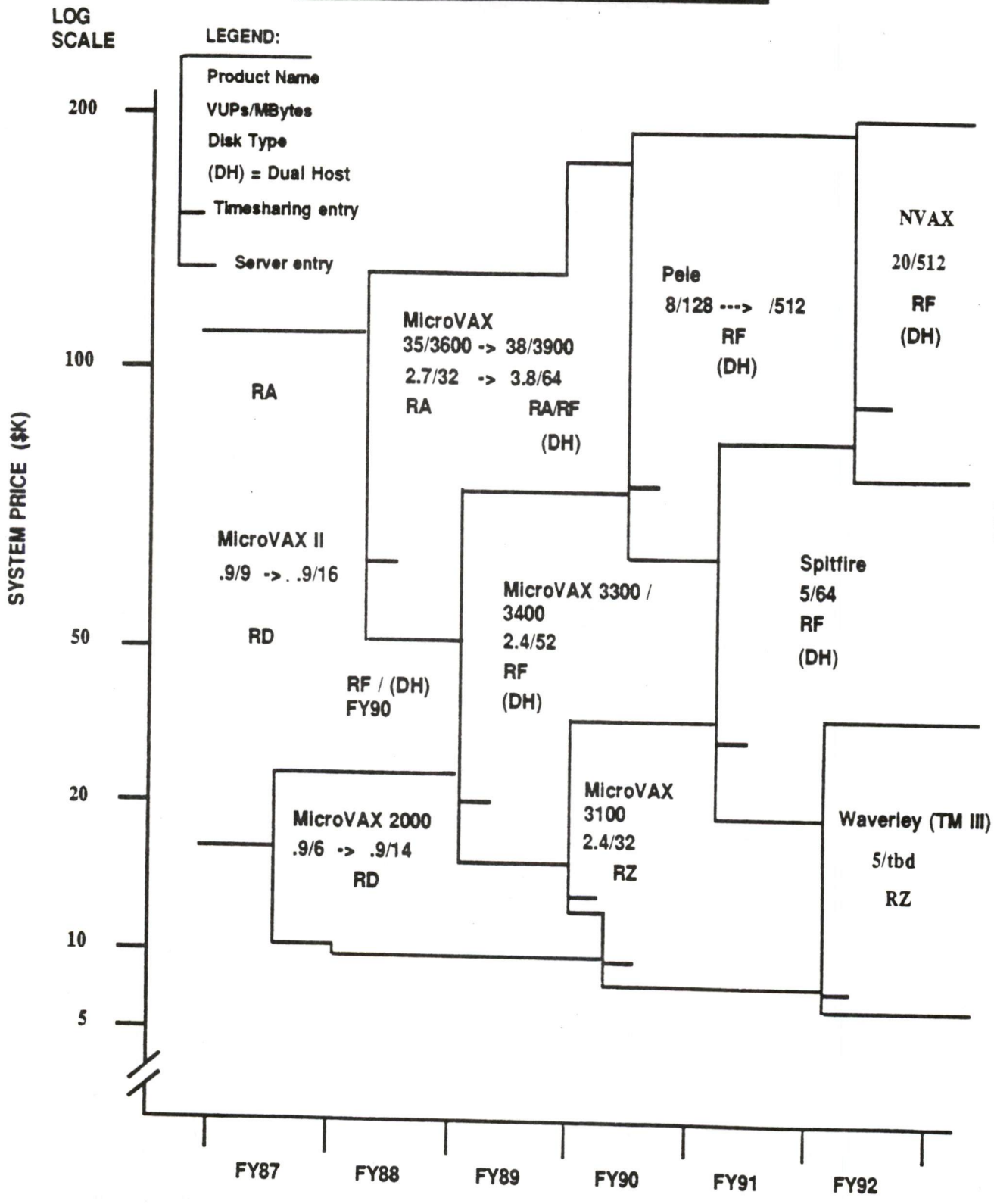
Our major dependencies are:

Key Technologies: As systems integrators, we depend up several complex technologies to provide critical systems components, such as:
- Semiconductors
- Storage
- Software
- Networking HW & SW

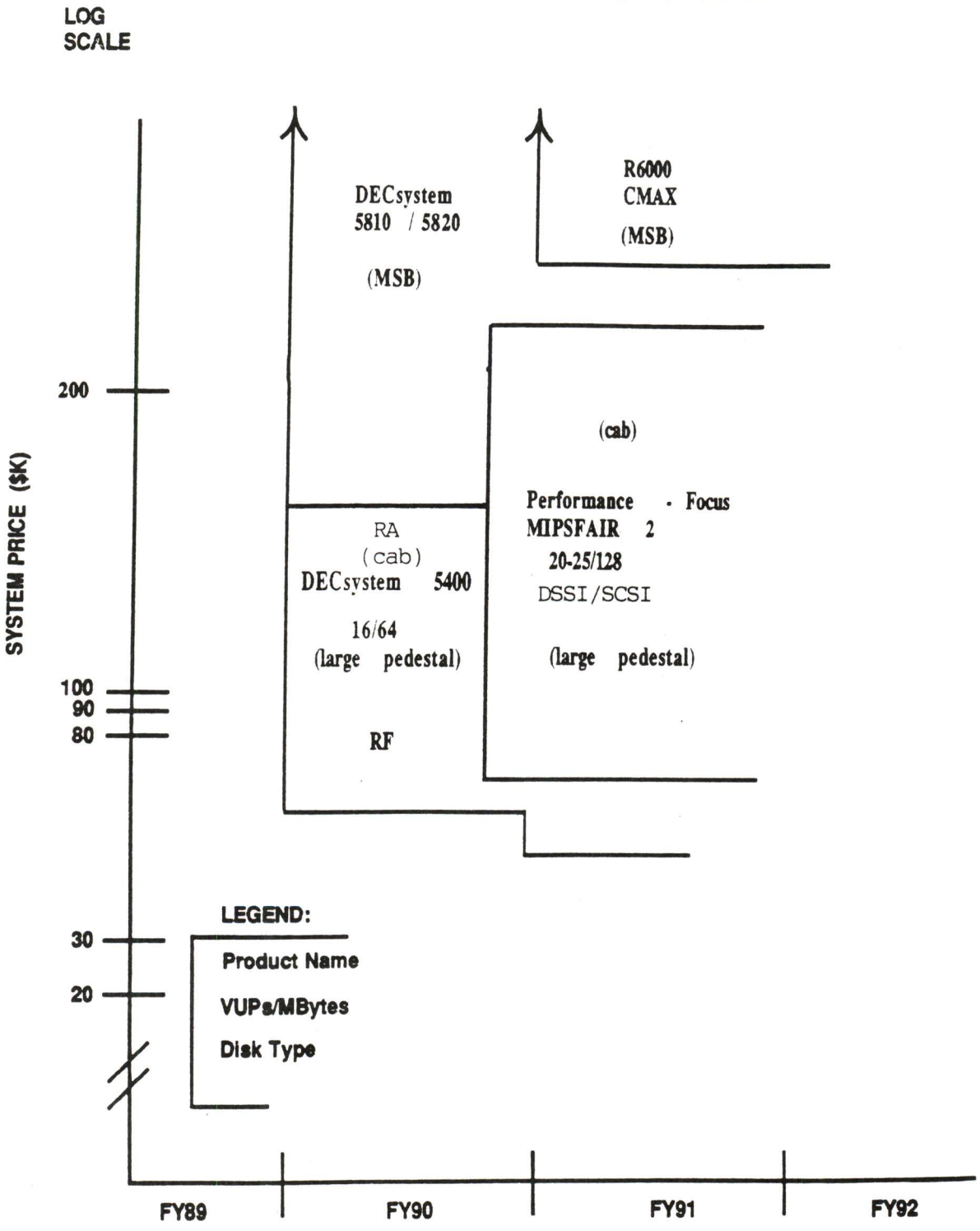
Business Partners: As business integrators, we depend on our teammates in the major functions to develop and implement joint plans and programs. These partners include:
- Geographies
- Services
- Manufacturing
- Marketing
- Sales & Sales Support
- Component Engineering

Our People: We depend on a business and technical team which is:
- Skilled
- Motivated
- Supported

MicroVAX Systems Evolution



Mipsfair Systems Evolution



Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: MVAX					Sub Group: MICROVAX									
1B101100	1	PD	MLO	FC	PELE	2	9005	9004	12.5	3.9	6.7	0.2		NICHOLS, JAY NICOLE BENECASA
1B101300	1	PD	MLO	NA	MICROVAX SYSTEMS	4	TBD	TBD	25.1	3.4	3.6	3.8		KREIDERMACHER, LEN LOU PHILIPPON
1B101500	1	PD	MLO	FC	SPITFIRE	0	9007	9007	7.0	0.2	3.4	2.7		NICHOLS, JAY KATHLEEN A. CONNORS
1B101600	1	PD	AYO	FC	TEAMMATE 2	4A	8908	8907	3.8	3.0	0.8	0.0		ALEXANDER, LEX BILL HANLEY
1B101A00	1	PD	MLO	FC	MIPSFAIR 1	4A	8909	8907	3.5	2.4	1.0	0.0		ELASSY, FAY SUSAN BLOUNT
1B101B00	1	PD	MLO	FC	MIPSFAIR 2	1	9004	9004	7.7	0.2	4.4	2.2		ELASSY, FAY SUSAN BLOUNT
1B101D00	1	PD	MLO	NA	SYSTEMS INTEGRATION	4	TBD	TBD	16.2	4.7	2.1	4.8		DON DEROME DON DEROME
1B101H00	1	PD	MLO	FC	BA440 PELE ENCLOSURE	1	9005	9004	8.2	3.8	3.9	0.0		CROCKER, ERNIE NOREEN PIAZZA
1B101K00	1	PD	MLO	NA	BF311	PRE-0	9012	TBD	0.0	0.0	0.0	0.0		CROCKER, ERNIE
1B102600	1	PD	AYO	FC	WAVERLEY	0	TBD	TBD	4.2	0.0	2.3	1.9		ALEXANDER, LEX TBD
1B102700	1	PD	MLO	NA	UNALLOCATED	PRE-0	TBD	TBD	0.0	0.0	2.1	31.3		KREIDERMACHER, LEN NA
1B102C00	1	PD	MLO	NA	COMPLETED PRODUCTS	4	TBD	TBD	58.7	10.9	0.0	0.0		KREIDERMACHER, LEN NA
1B102E00	1	PD	MLO	FC	R440F	1	9105	9105	2.0	0.0	2.0	0.0		HITZ, GEORGE NOREEN PIAZZA
1B102F00	1	PD	MLO	FC	SCSI ADAPTER	0	9007	TBD	0.6	0.0	0.5	0.1		GAGNE, ROGER
1B102G00	1	PD	MLO	NA	NDM FUNDING	PRE-0	9008	TBD	0.0	0.0	0.0	0.0		ROZETT
1B1ZZZZZ	1	PM	?	NA	STF ADJUSTMENT	5	TBD	TBD	0.0	0.0	0.0	0.0		STF NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	1			In-House Funded Proposed Project Totals				149.5	32.5	32.8	47.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed MICROVAX				149.5	32.5	32.8	47.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental MICROVAX				0.0	0.0	0.0	0.0		
	Chart	1			Totals for MICROVAX				149.5	32.5	32.8	47.0		
1B101L00	2	AD	MLO	NA	PRODUCT 94	NA	NA	NA	1.4	0.0	0.0	0.4		NICHOLS, JAY NA
1B102100	2	AD	MLO	NA	ADVANCED DEVELOPMENT	NA	NA	NA	0.0	1.0	0.3	0.3		SCOTT NA
1B102400	2	EC	MLO	NA	ECO	NA	NA	NA	0.0	0.4	0.4	1.1		KREIDERMACHER, LEN NA
1B102800	2	AD	MLO	NA	MICROVAX FOLLOW-ON	NA	NA	NA	0.0	0.2	1.9	1.0		NICHOLS, JAY NA
1B102900	2	AD	MLO	NA	MIPSFAIR FOLLOW-ON	NA	NA	NA	0.0	0.1	0.4	0.4		ELASSY, FAY NA
1B102A00	2	AD	MLO	NA	ENCLOSURE A/D	NA	NA	NA	0.0	0.0	1.9	1.4		HITZ, GEORGE NA
1B102H00	2	TL	MLO	NA	TOOL AND PROCESS DEVELOPMENT	NA	NA	NA	0.0	0.0	0.0	0.8		PENNEY, VIC NA
	Chart	2			In-House Funded Proposed Project Totals				1.4	1.7	4.9	5.4		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed MICROVAX				1.4	1.7	4.9	5.4		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental MICROVAX				0.0	0.0	0.0	0.0		
	Chart	2			Totals for MICROVAX				1.4	1.7	4.9	5.4		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Proposed Project Totals				150.9	34.2	37.7	52.4		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed MICROVAX				150.9	34.2	37.7	52.4		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental MICROVAX				0.0	0.0	0.0	0.0		
					Totals for MICROVAX				150.9	34.2	37.7	52.4		
					In-House Funded Project Totals				150.9	34.2	37.7	52.4		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for MICROVAX				150.9	34.2	37.7	52.4		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental MICROVAX				0.0	0.0	0.0	0.0		
					Grand Totals for MICROVAX				150.9	34.2	37.7	52.4		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: MVAX					Sub Group: MICROVAX									
1B101100	1	PD	MLO	FC	PELE	2	9005	9004	12.5	3.9	6.7	0.2		NICHOLS, JAY NICOLE BENECASA
Develop a QBUS CPU using the CMOS-2 Rigel chip set, SHAC and SGEC; Integrate it into the BA440 pedestal systems using the most current DSSI devices.														
1B101300	1	PD	MLO	NA	MICROVAX SYSTEMS	4	TBD	TBD	25.1	3.4	3.6	3.8		KREIDERMACHER, LEN LOU PHILIPPON
Product and operations management of all MicroVAX Systems in production: MicroVAX II, 2000, and 3000 series. Also included are management of manuals, MSD quality program management and MDM development and support.														
1B101500	1	PD	MLO	FC	SPITFIRE	0	9007	9007	7.0	0.2	3.4	2.7		NICHOLS, JAY KATHLEEN A. CONNORS
Develop a QBUS CPU using CMOS-3 CVAX System On a Chip (SOC); Integrate it into the BA215 and BA430 pedestal enclusures using the most current DSSI devices.														
1B101600	1	PD	AYO	FC	TEAMMATE 2	4A	8908	8907	3.8	3.0	0.8	0.0		ALEXANDER, LEX BILL HANLEY
Develop a bounded system (no QBUS), based on the PVAX 0 systems using the large and small box.														
1B101A00	1	PD	MLO	FC	MIPSFAIR 1	4A	8909	8907	3.5	2.4	1.0	0.0		ELASSY, FAY SUSAN BLOUNT
Develop a CPU using the MIPs R3000 chip set and integrate it into BA213 pedestal and H9644/BA213 cabinet. ULTRIX only.														
1B101B00	1	PD	MLO	FC	MIPSFAIR 2	1	9004	9004	7.7	0.2	4.4	2.2		ELASSY, FAY SUSAN BLOUNT

Project ID	Ch	Act Cde	Loc Cde	Int	St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Develop a CPU using the MIPS R3000 chip set, SHAC, and SGEC; and integrate it into BA440 pedestal systems using expanders and the most current DSSI devices. ULTRIX and VAXELN only.															
1B101D00	1	PD	MLO	NA		SYSTEMS INTEGRATION	4	TBD	TBD	16.2	4.7	2.1	4.8		DON DEROME DON DEROME
Integrate options into existing MVB expandable systems and adapt enclosures for new systems. Options include (but not limited to): TK70 loader, TF85, TF85 loader, RF31, RF72 and RRD40. Enclosure adaptations include: BA440/TF85; MIPSfair 1 and 2; Spitfire. Integrate RZ24 and RRD40 into Teammate II. Integrate RZ56 into Teammate I box for Teammate II.															
1B101H00	1	PD	MLO	FC		BA440 PELE ENCLOSURE	1	9005	9004	8.2	3.8	3.9	0.0		CROCKER, ERNIE NOREEN PIAZZA
Develop a pedestal enclosure for Pele that uses the current and future DSSI devices.															
1B101K00	1	PD	MLO	NA		BF311	PRE-0	9012	TBD	0.0	0.0	0.0	0.0		CROCKER, ERNIE
This project has been canceled. Support CSS in developing a 5.25 or 10.5 rack mount enclosure using BA2XX/4XX technology including handles, backplane, and power.															
1B102600	1	PD	AYO	FC		WAVERLEY	0	TBD	TBD	4.2	0.0	2.3	1.9		ALEXANDER, LEX TBD
Develop a system using the CMOS-3 Logic, System On a Chip (SOC) and intertate it into the MicroVAX 3100 (Teammate 2) enclosures along with current SCSI devices. (FY91 FRS)															
1B102700	1	PD	MLO	NA		UNALLOCATED	PRE-0	TBD	TBD	0.0	0.0	2.1	31.3		KREIDERMACHER, LEN NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
FY91 unallocated funding for product development of follow on products to Pele (using NVAX chip set), Spitfire, Waverly, MIPSfair and enclosures based on FY90 advanced development.														
1B102C00	1	PD	MLO	NA	COMPLETED PRODUCTS	4	TBD	TBD	58.7	10.9	0.0	0.0		KREIDERMACHER, LEN NA
FY89 spending for completed products.														
1B102E00	1	PD	MLO	FC	R440F	1	9105	9105	2.0	0.0	2.0	0.0		HITZ, GEORGE NOREEN PIAZZA
Pele mass storage expander. Adapt the BA440 to be an expander with 7 mass storage cavities.														
1B102F00	1	PD	MLO	FC	SCSI ADAPTER	0	9007	TBD	0.6	0.0	0.5	0.1		GAGNE, ROGER
Develop an adaptor to allow for the substitution of SCSI devices for DSSI devices.														
1B102G00	1	PD	MLO	NA	NDM FUNDING	PRE-0	9008	TBD	0.0	0.0	0.0	0.0		ROZETT
Canceled.														
1B1ZZZZZ	1	PM	?	NA	STF ADJUSTMENT	5	TBD	TBD	0.0	0.0	0.0	0.0		STF NA
		Chart	1		In-House Funded Proposed Project Totals				149.5	32.5	32.8	47.0		
		Chart	1		Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Proposed MICROVAX				149.5	32.5	32.8	47.0		
		Chart	1		In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Incremental MICROVAX				0.0	0.0	0.0	0.0		
		Chart	1		Totals for MICROVAX				149.5	32.5	32.8	47.0		
1B101L00	2	AD	MLO	NA	PRODUCT 94	NA	NA	NA	1.4	0.0	0.0	0.4		NICHOLS, JAY NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
AD of an integrated product and manufacturing process. The product will be a generic MVB product for 1994 and the process will be the process used to produce it.														
1B102100	2	AD	MLO	NA	ADVANCED DEVELOPMENT	NA	NA	NA	0.0	1.0	0.3	0.3		SCOTT NA
AD of FDDI concepts.														
1B102400	2	EC	MLO	NA	ECO	NA	NA	NA	0.0	0.4	0.4	1.1		KREIDERMACHER, LEN NA
Includes ECO's for all MVB Funded systems and options.														
1B102800	2	AD	MLO	NA	MICROVAX FOLLOW-ON	NA	NA	NA	0.0	0.2	1.9	1.0		NICHOLS, JAY NA
AD and predevelopment of MicroVAX Systems for FY92 FRS including a follow on to Pele using the CMOS-4 NVAX chip set and a follow on to Spitfire.														
1B102900	2	AD	MLO	NA	MIPSFAIR FOLLOW-ON	NA	NA	NA	0.0	0.1	0.4	0.4		ELASSY, FAY NA
AD and predevelopment of MIPs based systems to be the MIPSfair 2 follow-on. Monitor and CAD tools.														
1B102A00	2	AD	MLO	NA	ENCLOSURE A/D	NA	NA	NA	0.0	0.0	1.9	1.4		HITZ, GEORGE NA
AD and predevelopment of new system packaging concepts including thermal, acoustics, power supplies, distribution, environment, and ease of use. Predevelopment of a set of enclosures for FY92 products including NVAX, Spitfire FO, and Mipsfair FO (pedestal, half pedestal, expander) that are extensions of the BA2XX and BA4XX. They will support future devices, busses and options.														
1B102H00	2	TL	MLO	NA	TOOL AND PROCESS DEVELOPMENT	NA	NA	NA	0.0	0.0	0.0	0.8		PENNEY, VIC NA
MSD Quality (CAD, Design Assurance, and LSEE) tool and process development.														

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				1.4	1.7	4.9	5.4		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed MICROVAX				1.4	1.7	4.9	5.4		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental MICROVAX				0.0	0.0	0.0	0.0		
	Chart	2			Totals for MICROVAX				1.4	1.7	4.9	5.4		
					In-House Funded Proposed Project Totals				150.9	34.2	37.7	52.4		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed MICROVAX				150.9	34.2	37.7	52.4		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental MICROVAX				0.0	0.0	0.0	0.0		
					Totals for MICROVAX				150.9	34.2	37.7	52.4		
					In-House Funded Project Totals				150.9	34.2	37.7	52.4		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for MICROVAX				150.9	34.2	37.7	52.4		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental MICROVAX				0.0	0.0	0.0	0.0		
					Grand Totals for MICROVAX				150.9	34.2	37.7	52.4		

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: MICROVAX

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1B101100	PELE	9004	9005	9005	NICOLE BENECASA
1B101300	MICROVAX SYSTEMS MGT	TBD	TBD	TBD	LOU PHILIPPON
1B101500	SPITFIRE	9007	9007	TBD	KATHLEEN A. CONNORS
1B101600	MICROVAX 3100	8907	8908	8908	BILL HANLEY
1B101A00	DECSYSTEM 5400	8907	8909	8909	SUSAN BLOUNT
1B101B00	MIPSFAIR II	9004	9004	TBD	SUSAN BLOUNT
1B101D00	SYSTEMS INTEGRATION	TBD	TBD	TBD	DON DEROME
1B101H00	BA440 (PELE BOX)	9004	9005	9005	NOREEN PIAZZA
1B101K00		TBD	9012	TBD	
1B102600	WAVERLY	TBD	TBD	TBD	TBD
1B102700	UNALLOCATED	TBD	TBD	TBD	NA
1B102C00	COMPLETED PROJECTS	TBD	TBD	TBD	NA
1B102E00	R440F	9105	9105	9105	NOREEN PIAZZA
1B102F00	SCSI ADAPTOR	TBD	9007	TBD	
1B102G00		TBD	9008	TBD	
1B1ZZZZZ	STF ADJ.	TBD	TBD	TBD	NA

DIGITAL RESTRICTED DISTRIBUTION

Micro Systems Development Group

CORPORATE REALTIME ENGINEERING PROGRAM

GOAL

- Enhance sales of standard Digital systems in realtime applications.

MARKETING STRATEGY

- The corporate marketing strategy is to provide realtime solutions through our CSO partners and through in-house application engineering groups in end-user organizations.

ENGINEERING STRATEGY

- The corporate engineering strategy is to provide tools that:
  - Enhance the partner's solutions.
  - Simplify application development.
  - Integrate solutions with the Enterprise-wide network.

IMPLEMENTATION

Realtime product development is focused on three key areas:

- Application Development Tools:
  - Continued development of VAXELN for dedicated applications.
  - Development of realtime functionality for ULTRIX/OSF by adding the POSIX 1003.4 realtime extension to ULTRIX.
  - Improvement of VMS and VAXELN realtime functionality by the addition of the POSIX 1003.4 realtime extensions.
  - Continued development of VAXLAB and DECLAB for laboratory applications.

- Realtime Platforms:
  - Extend rtVAX family downwards to rtVAX 300.
  - Extend rtVAX family upwards to VAX6400 systems.
  - Support MIPS platforms with realtime ULTRIX/OSF.

- Open Bus:
  - Support corporate strategies for implementing VME and Futurebus on new systems and workstations.
  - Provide ports to industry standard I/O busses through CSS or third parties.

The implementation of this product strategy is a joint effort of MSD, LDP, CMPD and CSS engineering groups.

PDP-11 BUSINESS

MISSION

- Successfully manage a profitable, mature PDP-11 product and service business for the remainder of its useful life.
- Keep the PDP-11 customers and their revenue stream for Digital.

GOALS

- Achieve an operating profit exceeding 16% from the PDP-11 products business.
- Develop and implement a viable PDP-11 plan that will maintain this level of operating profit to the mid 1990's.
- Maximize the total Digital revenue stream from PDP-11 customers. This includes migrating and upgrading PDP-11 customers to Digital replacement products and maintaining the ongoing PDP-11 service revenues.
- Maximize customer satisfaction by continuing to understand their requirements and provide as many of the requested products and services as possible while managing a mature business with limited investments.

PRODUCT STRATEGY

- Provide a profitable PDP-11 product line which meets ongoing customer requirements:
  - Integrate new cost effective, high performance options and devices into the PDP-11 product offering (systems and software) in a timely manner
  - Continue the focus on high quality and reliability as primary goals
  - Minimize product costs by leveraging engineering investments in VAX
  - Continue to simplify the product offering.
- Fit within the Digital corporate product strategy by providing PDP-11 products which address the target niche markets and applications in which the PDP-11s are still active.
- Provide consistent, cost effective, predictable software maintenance.

- Provide growth paths for PDP-11 customers who have outgrown their PDP-11 systems by supporting coexistence with and migration to selected Digital replacement products, primarily VAX:
  - Any development decisions for PDP-11 software systems will be towards compatibility with VMS
  - Provide the capability for PDP-11 systems to participate in Digital networks
  - Provide a clear and realistic coexistence roadmap
  - Enhance PDP-11 upgrades and PDP-11 to VAX migration aids.

- Develop relationships with third party vendors as a means to enhance PDP-11 offerings with minimal investment by Digital.

- Manage end-of-life for a small number of carefully selected PDP-11 hardware and software products with minimal disruption to customers.

- Address the risks inherent in the approaching PDP-11 patent expirations by:
  - developing a detailed understanding of the potential business and product impact and Digital's options, and
  - exploring every possibility to patent a new third party PDP-11 board/system offering.

- Potential future PDP-11 system directions:
  - There is customer demand for both lower entry price and higher performance/capacity PDP-11 systems.
  - The demand for higher performance/capacity PDP-11 systems is being addressed today using new peripherals and options.
  - MSD is actively pursuing a higher performance PDP-11 system that meets the current constraints of low Digital investment and short time to market.
  - Two desirable results of the third party program are higher performance PDP-11 boards and software enhancements.
  - When the patents expire, unrestricted sales of current PDP-11 models at the component level.

DIGITAL STANDARD MUMPS (DSM)

MISSION

- Develop and communicate Digital's architecture, products, and strategy for MUMPS-based systems.
- Maintain Digital's leadership position in the development and delivery of MUMPS-based systems.

GOALS

- Be the technology leader in MUMPS-based systems by leveraging functionality of VAX and VMS.
- Deliver price/performance leadership products.
- Integrate MUMPS products into Digital's PC strategy.

PRODUCT DESCRIPTION

VAX DSM is a multi-user data management system that includes Digital Standard MUMPS (DSM) and an application development tool set called DASL (DSM Application Software Library). The DSM language is a superset of the ANSI MUMPS specification X11.1. VAX DSM operates under the VMS operating system and fully utilizes the capabilities of VMS.

PRODUCT STRATEGY

- Provide compatibility between DSM-11 and VAX DSM, which includes co-existence for both products, and a migration path from DSM-11 to VAX DSM.
- Port DSM to MIPS/ULTRIX to bring DSM into the next generation of processor technology and to gain further price/performance competitiveness.
- Continue to improve performance.
- Continue development of the application generation tools (DASL) with particular emphasis on incorporating SQL and DECwindows.

- Modify VAX DSM to be conveniently callable by other VMS layered products.
- Implement new ANSI MUMPS standards as soon as they become finalized.

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 SUBMISSION SUMMARY REPORT
GROUP: PDP-11 AND REALTIME

27-Oct-1989
Page 1

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: PDP-11					Sub Group: PDP-11									
1B711100	1	PD	MLO	FC	PDP-11/Q-BUS SYST INTEGRATION	2	9006	9006	11.6	1.3	1.8	1.8		DEROME,DON
1B711200	1	PD	MLO	FC	PDP11/UNIBUS SYST INTEGRATION	2	9006	9006	2.0	0.4	0.6	0.5		HAMBLIN, C./LANE, A.
1B711300	1	PD	ZKO	WA	PDP-11 C LANGUAGE	2	9001	8909	1.2	1.0	0.2	0.0		DEROME, DON PAQUIN, GEORGE MULVEY, JOE KUPCHUNAS, FRANK
		Chart	1		In-House Funded Proposed Project Totals				14.8	2.7	2.6	2.3		
		Chart	1		Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Proposed PDP-11				14.8	2.7	2.6	2.3		
		Chart	1		In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
		Chart	1		Incremental PDP-11				0.0	0.0	0.0	0.0		
		Chart	1		Totals for PDP-11				14.8	2.7	2.6	2.3		
1B711400	2	PS	ZKO	NA	RSX MAINTENANCE	NA	NA	NA	6.0	2.0	1.9	2.1		FRANKS, CHARLES
1B711400	2	PS	PKO	NA	RSX MAINTENANCE	NA	NA	NA	0.0	1.0	0.8	0.8	MSPG	NA
1B711500	2	PS	MKO	NA	RSTS/ATSE MAINTENANCE	NA	NA	NA	8.4	3.2	2.5	2.7		FRANKS, CHARLES
1B711500	2	PS	PKO	NA	RSTS/ATSE MAINTENANCE	NA	NA	NA	0.0	0.8	0.4	0.4	MSPG	NA
1B711600	2	PS	ZKO	NA	PDP-11 LANGUAGES MAINTENANCE	NA	NA	NA	5.8	1.5	2.1	2.2		LABA, PAUL
1B711600	2	PS	PKO	NA	PDP-11 LANGUAGES MAINTENANCE	NA	NA	NA	0.0	1.1	1.6	1.8	MSPG	NA
1B711700	2	PS	MRO	NA	DSM-11 MAINTENANCE	NA	NA	NA	1.2	0.5	0.4	0.3		MULVEY, JOE
1B711800	2	PS	MLO	NA	RT-11 MAINTENANCE	NA	NA	NA	6.6	2.2	2.2	2.2		NA
1B711900	2	PS	MLO	NA	MP/P MAINTENANCE	NA	NA	NA	0.7	0.5	0.2	0.0		HERRING, BARRY
1B711A00	2	PM	MLO	NA	PDP-11 THIRD PARTY PROGRAM	NA	NA	NA	0.4	0.1	0.1	0.2		NA
1B711C00	2	PS	MLO		PRO PRODUCT SUPPORT	NA	NA		0.3	0.3	0.0	0.0		PARM, BILL
														NA
														JOHNSON, MAUREEN
														NA
														MOLLIN, RICHARD
														NA
														SLAYBACK, JEFF

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B711D00	2	PS	MKO		SMALL BUSINESS MAINTENANCE	NA	NA		0.2	0.2	0.0	0.0		TURLEY, CHARLES
	Chart 2				In-House Funded Proposed Project Totals				29.6	10.5	9.4	9.7		
	Chart 2				Externally Funded Proposed Project Totals				0.0	2.9	2.8	3.0		
	Chart 2				Proposed PDP-11				29.6	13.4	12.2	12.7		
	Chart 2				In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart 2				Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart 2				Incremental PDP-11				0.0	0.0	0.0	0.0		
	Chart 2				Totals for PDP-11				29.6	13.4	12.2	12.7		
					In-House Funded Proposed Project Totals				44.4	13.2	12.0	12.0		
					Externally Funded Proposed Project Totals				0.0	2.9	2.8	3.0		
					Proposed PDP-11				44.4	16.1	14.8	15.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental PDP-11				0.0	0.0	0.0	0.0		
					Totals for PDP-11				44.4	16.1	14.8	15.0		
*** Sub Group Code: REALTIME					Sub Group: REALTIME									
1B721A00	1	PD	MLO	NA	RTVAX300	1	9004	9002	3.4	0.8	1.5	1.1		DEROME, DON
1B721D00	1	PD	MLO	FC	REALTIME/OSF	PRE-0	9103	9103	2.5	0.0	1.1	1.4		GOLDHUSH, DOUG JOHNSON, MAUREEN COMSTOCK, DREW

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	1			In-House Funded Proposed Project Totals				5.9	0.8	2.6	2.5		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed REALTIME				5.9	0.8	2.6	2.5		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental REALTIME				0.0	0.0	0.0	0.0		
	Chart	1			Totals for REALTIME				5.9	0.8	2.6	2.5		
1B721600	2	PS	MLO	NA	VAXELN MAINTENANCE	NA	NA	NA	11.8	2.6	4.5	4.7		JOHNSON, MAUREEN
1B721700	2	AD	MLO	NA	REALTIME ADVANCED DEVELOPMENT	NA	NA	NA	1.0	0.4	0.2	0.4		NA
1B721800	2	PS	MLO	NA	REALTIME SYSTEM PERFORMANCE	NA	NA	NA	6.7	1.5	0.5	0.5		SCOTT, JIM
1B721C00	2	PS	MLO	NA	REALTIME STRATEGY INTEGRATION	NA	NA	NA	0.8	0.2	0.3	0.3		NA
1B721E00	2	PS	MLO	NA	REALTIME FIELD SUPPORT	NA	NA	NA	1.9	0.0	0.8	1.1		JURGEN, BOB
														NA
	Chart	2			In-House Funded Proposed Project Totals				22.2	4.7	6.3	7.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed REALTIME				22.2	4.7	6.3	7.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental REALTIME				0.0	0.0	0.0	0.0		
	Chart	2			Totals for REALTIME				22.2	4.7	6.3	7.0		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Proposed Project Totals				28.1	5.5	8.9	9.5		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed REALTIME				28.1	5.5	8.9	9.5		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental REALTIME				0.0	0.0	0.0	0.0		
					Totals for REALTIME				28.1	5.5	8.9	9.5		
*** Sub Group Code: VAX DSM					Sub Group: VAX DSM									
1B731100	1	PD	MRO	NA	VAX DSM NEW FEATURES	0	9006	9006	5.0	0.9	1.3	1.8		HERRING, BARRY DAVIS, DIANNE
	Chart 1				In-House Funded Proposed Project Totals				5.0	0.9	1.3	1.8		
	Chart 1				Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart 1				Proposed VAX DSM				5.0	0.9	1.3	1.8		
	Chart 1				In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart 1				Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart 1				Incremental VAX DSM				0.0	0.0	0.0	0.0		
	Chart 1				Totals for VAX DSM				5.0	0.9	1.3	1.8		
1B731200	2	PS	MRO	NA	VAX DSM MAINTENANCE	NA	NA	NA	2.2	0.8	0.6	0.8		HERRING, BARRY NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				2.2	0.8	0.6	0.8		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed VAX DSM				2.2	0.8	0.6	0.8		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental VAX DSM				0.0	0.0	0.0	0.0		
	Chart	2			Totals for VAX DSM				2.2	0.8	0.6	0.8		
					In-House Funded Proposed Project Totals				7.2	1.7	1.9	2.6		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed VAX DSM				7.2	1.7	1.9	2.6		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental VAX DSM				0.0	0.0	0.0	0.0		
					Totals for VAX DSM				7.2	1.7	1.9	2.6		
					In-House Funded Project Totals				79.7	20.4	22.8	24.1		
					Externally Funded Project Totals				0.0	2.9	2.8	3.0		
					Proposed for PDP-11 AND REALTIME				79.7	23.3	25.6	27.1		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental PDP-11 AND REALTIME				0.0	0.0	0.0	0.0		
					Grand Totals for PDP-11 AND REALTIME				79.7	23.3	25.6	27.1		

DIGITAL RESTRICTED DISTRIBUTION

DIGITAL EQUIPMENT CORPORATION
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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: PDP-11					Sub Group: PDP-11									
1B711100	1	PD	MLO	FC	PDP-11/Q-BUS SYST INTEGRATION	2	9006	9006	11.6	1.3	1.8	1.8		DEROME,DON HAMBLIN, C./LANE, A.
					Ongoing integration of new storage, comm, and other options, including appropriate third party offerings, into PDP-11 systems. Ongoing upgrades of 11/53/73/83 configurations, packages and system diagnostics.									
1B711200	1	PD	MLO	FC	PDP11/UNIBUS SYST INTEGRATION	2	9006	9006	2.0	0.4	0.6	0.5		DEROME, DON PAQUIN, GEORGE
					Ongoing upgrades of PDP-11/84 systems.									
1B711300	1	PD	ZKO	WA	PDP-11 C LANGUAGE	2	9001	8909	1.2	1.0	0.2	0.0		MULVEY, JOE KUPCHUNAS, FRANK
					Development of C Language for RT-11, RSTS/E and RSX.									
	Chart	1			In-House Funded Proposed Project Totals				14.8	2.7	2.6	2.3		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed PDP-11				14.8	2.7	2.6	2.3		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental PDP-11				0.0	0.0	0.0	0.0		
	Chart	1			Totals for PDP-11				14.8	2.7	2.6	2.3		
1B711400	2	PS	ZKO	NA	RSX MAINTENANCE	NA	NA	NA	6.0	2.0	1.9	2.1		FRANKS, CHARLES
1B711400	2	PS	PKO	NA	RSX MAINTENANCE	NA	NA	NA	0.0	1.0	0.8	0.8	MSPG	NA FRANKS, CHARLES NA
1B711500	2	PS	MKO	NA	RSTS/ATSE MAINTENANCE	NA	NA	NA	8.4	3.2	2.5	2.7		LABA, PAUL
1B711500	2	PS	PKO	NA	RSTS/ATSE MAINTENANCE	NA	NA	NA	0.0	0.8	0.4	0.4	MSPG	NA LABA, PAUL NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B711600	2	PS	ZKO	NA	PDP-11 LANGUAGES MAINTENANCE	NA	NA	NA	5.8	1.5	2.1	2.2		MULVEY, JOE NA
1B711600	2	PS	PKO	NA	PDP-11 LANGUAGES MAINTENANCE	NA	NA	NA	0.0	1.1	1.6	1.8	MSPG	MULVEY, JOE NA
1B711700	2	PS	MRO	NA	DSM-11 MAINTENANCE	NA	NA	NA	1.2	0.5	0.4	0.3		HERRING, BARRY NA
1B711800	2	PS	MLO	NA	RT-11 MAINTENANCE	NA	NA	NA	6.6	2.2	2.2	2.2		PARM, BILL NA
1B711900	2	PS	MLO	NA	MP/P MAINTENANCE	NA	NA	NA	0.7	0.5	0.2	0.0		JOHNSON, MAUREEN NA
1B711A00	2	PM	MLO	NA	PDP-11 THIRD PARTY PROGRAM A "CMP" type of program for third party PDP-11 products which will enhance the Digital PDP-11 product offerings. Leverage non-Digital investments in PDP-11 technology and options to complement and protect our own investments.	NA	NA	NA	0.4	0.1	0.1	0.2		MOLLIN, RICHARD NA
1B711C00	2	PS	MLO		PRO PRODUCT SUPPORT	NA	NA		0.3	0.3	0.0	0.0		SLAYBACK, JEFF
1B711D00	2	PS	MKO		SMALL BUSINESS MAINTENANCE	NA	NA		0.2	0.2	0.0	0.0		TURLEY, CHARLES

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				29.6	10.5	9.4	9.7		
	Chart	2			Externally Funded Proposed Project Totals				0.0	2.9	2.8	3.0		
	Chart	2			Proposed PDP-11				29.6	13.4	12.2	12.7		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental PDP-11				0.0	0.0	0.0	0.0		
	Chart	2			Totals for PDP-11				29.6	13.4	12.2	12.7		
					In-House Funded Proposed Project Totals				44.4	13.2	12.0	12.0		
					Externally Funded Proposed Project Totals				0.0	2.9	2.8	3.0		
					Proposed PDP-11				44.4	16.1	14.8	15.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental PDP-11				0.0	0.0	0.0	0.0		
					Totals for PDP-11				44.4	16.1	14.8	15.0		
*** Sub Group Code: REALTIME					Sub Group: REALTIME									
1B721A00	1	PD	MLO	NA	RTVAX300	1	9004	9002	3.4	0.8	1.5	1.1		DEROME, DON GOLDHUSH, DOUG
					Develop rtVAX300 (Ethernet and CVAX chipset) for integration into factory and laboratory controllers.									
1B721D00	1	PD	MLO	FC	REALTIME/OSF	PRE-0	9103	9103	2.5	0.0	1.1	1.4		JOHNSON, MAUREEN COMSTOCK, DREW

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					Develop realtime capabilities for ULTRIX/OSF by implementing the POSIX 1003.4 realtime extensions for ULTRIX. Investigate improvements to the ULTRIX/OSF kernal to enhance realtime performance on MIPS systems.									
	Chart		1		In-House Funded Proposed Project Totals				5.9	0.8	2.6	2.5		
	Chart		1		Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Proposed REALTIME				5.9	0.8	2.6	2.5		
	Chart		1		In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart		1		Incremental REALTIME				0.0	0.0	0.0	0.0		
	Chart		1		Totals for REALTIME				5.9	0.8	2.6	2.5		
1B721600	2	PS	MLO	NA	VAXELN MAINTENANCE	NA	NA	NA	11.8	2.6	4.5	4.7		JOHNSON, MAUREEN NA
					Ongoing maintenance of the VAXELN toolkits and layered products including VAXELN Toolkit, E/PASCAL, VAX RTA, VAXELN/ADA, RDB/ELN.									
1B721700	2	AD	MLO	NA	REALTIME ADVANCED DEVELOPMENT	NA	NA	NA	1.0	0.4	0.2	0.4		SCOTT, JIM NA
					Realtime RISC architecture evaluation, performance measurements and evaluation, high speed fiber optic advanced development.									
1B721800	2	PS	MLO	NA	REALTIME SYSTEM PERFORMANCE	NA	NA	NA	6.7	1.5	0.5	0.5		JURGEN, BOB NA
					Characterize and analyze realtime performance of VAX and MIPS systems running VMS, VAXELN and ULTRIX operating systems. Publish results in realtime application guides.									
1B721C00	2	PS	MLO	NA	REALTIME STRATEGY INTEGRATION	NA	NA	NA	0.8	0.2	0.3	0.3		STEINFELD, ED NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					Develop and articulate one Realtime Strategy for Digital in conjunction with Marketing and Field groups as well as other Engineering groups. Then develop and monitor performance of an integrated implementation plan for all functions.									
1B721E00	2	PS	MLO	NA	REALTIME FIELD SUPPORT	NA	NA	NA	1.9	0.0	0.8	1.1		JURGEN, BOB NA
					Provide engineering backup to realtime sales activities, especially in applications of the rtVAX300. Investigate opportunities to migrate PDP-11 applications to VAX.									
	Chart	2			In-House Funded Proposed Project Totals				22.2	4.7	6.3	7.0		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed REALTIME				22.2	4.7	6.3	7.0		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental REALTIME				0.0	0.0	0.0	0.0		
	Chart	2			Totals for REALTIME				22.2	4.7	6.3	7.0		
					In-House Funded Proposed Project Totals				28.1	5.5	8.9	9.5		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed REALTIME				28.1	5.5	8.9	9.5		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental REALTIME				0.0	0.0	0.0	0.0		
					Totals for REALTIME				28.1	5.5	8.9	9.5		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: VAX DSM					Sub Group: VAX DSM									
1B731100	1	PD	MRO	NA	VAX DSM NEW FEATURES	0	9006	9006	5.0	0.9	1.3	1.8		HERRING, BARRY DAVIS, DIANNE
					New versions will provide high availability, shared data base with PC, DECWINDOWS support, ULTRIX based DSM, increased performance and compatibility features.									
	Chart	1	In-House Funded Proposed Project Totals						5.0	0.9	1.3	1.8		
	Chart	1	Externally Funded Proposed Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Proposed VAX DSM						5.0	0.9	1.3	1.8		
	Chart	1	In-House Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Incremental VAX DSM						0.0	0.0	0.0	0.0		
	Chart	1	Totals for VAX DSM						5.0	0.9	1.3	1.8		
1B731200	2	PS	MRO	NA	VAX DSM MAINTENANCE	NA	NA	NA	2.2	0.8	0.6	0.8		HERRING, BARRY NA
	Chart	2	In-House Funded Proposed Project Totals						2.2	0.8	0.6	0.8		
	Chart	2	Externally Funded Proposed Project Totals						0.0	0.0	0.0	0.0		
	Chart	2	Proposed VAX DSM						2.2	0.8	0.6	0.8		
	Chart	2	In-House Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	2	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	2	Incremental VAX DSM						0.0	0.0	0.0	0.0		
	Chart	2	Totals for VAX DSM						2.2	0.8	0.6	0.8		

Project ID	Act Ch	Loc Cde	Int Cde	St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Proposed Project Totals				7.2	1.7	1.9	2.6		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed VAX DSM				7.2	1.7	1.9	2.6		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental VAX DSM				0.0	0.0	0.0	0.0		
					Totals for VAX DSM				7.2	1.7	1.9	2.6		
					In-House Funded Project Totals				79.7	20.4	22.8	24.1		
					Externally Funded Project Totals				0.0	2.9	2.8	3.0		
					Proposed for PDP-11 AND REALTIME				79.7	23.3	25.6	27.1		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental PDP-11 AND REALTIME				0.0	0.0	0.0	0.0		
					Grand Totals for PDP-11 AND REALTIME				79.7	23.3	25.6	27.1		

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PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1B721A00	RTVAX300	9002	9004	TBD	GOLDHUSH, DOUG
1B721D00	REALTIME FOR ULTRIX	9103	9103	TBD	COMSTOCK, DREW
1B711100	MICROPDP-11 (Q-BUS)	9006	9006	9006	HAMBLIN, C./LANE, A.
1B711200	PDP-11/84	9006	9006	9006	PAQUIN, GEORGE
1B711300	PDP-11 C	8909	9001	8912	KUPCHUNAS, FRANK
1B731100	VAX DSM	9006	9006	9006	DAVIS, DIANNE

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Design and Process Engineering

D&PE BUSINESS STRATEGY

GROUP MISSION

Ensure that LES has the capability to capture market share for the desktop and beside-the-desk systems to enter strategic markets, with the timely introduction of leadership clustered or locally integrated Low End System products.

D&PE will accomplish this by maintaining our positon as the engineering group of choice in the areas of:

- Electrical Design (CAE, PCB, Simulation)
- Regulatory Design and Approval
- Test Design
- Product Development Process
- Low End Clustered/Network System Engineering
- Base Platform Systems Engineering

DIGITAL EQUIPMENT CORPORATION
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GROUP: DESIGN AND PROCESS ENG

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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: DPE					Sub Group: DESIGN AND PROCESS ENG									
1B801J00	1	PD	MLO	NC	LOW END SCSI TO FDDI INTERFACE PRE-0	9007		9006	2.7	0.0	1.9	0.8	NAC	BELANGER, DICK PARIKH, ANAND
	Chart	1	In-House Funded Proposed Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Externally Funded Proposed Project Totals						2.7	0.0	1.9	0.8		
	Chart	1	Proposed DESIGN AND PROCESS ENG						2.7	0.0	1.9	0.8		
	Chart	1	In-House Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Incremental DESIGN AND PROCESS ENG						0.0	0.0	0.0	0.0		
	Chart	1	Totals for DESIGN AND PROCESS ENG						2.7	0.0	1.9	0.8		
1B801800	2	TL	MLO	NA	DESIGN FOR TESTABILITY	NA	NA	NA	0.0	0.9	0.5	0.6		KATZIF, JEFF NA
1B801900	2	AD	MLO	NA	REGULATORY ENGINEERING	NA	NA	NA	0.0	0.6	0.6	0.8		DEKNIS, DANIEL NA
1B801A00	2	TL	MLO	NA	SYSTEM SIMULATION	NA	NA	NA	0.0	3.0	1.6	2.5		KING, JIM NA
1B801C00	2	RE	MLO	NA	ENGINEERING PROCESS & TECH.	NA	NA	NA	0.0	1.2	1.0	1.6		CANNIZZARO, JOE NA
1B801F00	2	PM	PKO	NA	NTWK PLAN/CLUSTER & PERF. TEST	NA	NA	NA	0.0	0.0	1.2	1.6		BELANGER, DICK NA
1B801N00	2	PM	PKO	NA	LES BASE PLATFORM SYSTEMS ENG.	NA	NA	NA	10.3	2.5	3.8	4.0	PMG	BELANGER,DICK NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	5.7	4.9	7.1		
	Chart	2			Externally Funded Proposed Project Totals				10.3	2.5	3.8	4.0		
	Chart	2			Proposed DESIGN AND PROCESS ENG				10.3	8.2	8.7	11.1		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental DESIGN AND PROCESS ENG				0.0	0.0	0.0	0.0		
	Chart	2			Totals for DESIGN AND PROCESS ENG				10.3	8.2	8.7	11.1		
					In-House Funded Proposed Project Totals				0.0	5.7	4.9	7.1		
					Externally Funded Proposed Project Totals				13.0	2.5	5.7	4.8		
					Proposed DESIGN AND PROCESS ENG				13.0	8.2	10.6	11.9		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental DESIGN AND PROCESS ENG				0.0	0.0	0.0	0.0		
					Totals for DESIGN AND PROCESS ENG				13.0	8.2	10.6	11.9		
					In-House Funded Project Totals				0.0	5.7	4.9	7.1		
					Externally Funded Project Totals				13.0	2.5	5.7	4.8		
					Proposed for DESIGN AND PROCESS ENG				13.0	8.2	10.6	11.9		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental DESIGN AND PROCESS ENG				0.0	0.0	0.0	0.0		
					Grand Totals for DESIGN AND PROCESS ENG				13.0	8.2	10.6	11.9		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: DPE					Sub Group: DESIGN AND PROCESS ENG									
1B801J00	1	PD	MLO	NC	LOW END SCSI TO FDDI INTERFACE PRE-0	9007		9006	2.7	0.0	1.9	0.8	NAC	BELANGER, DICK PARIKH, ANAND

This product is part of the overall FDDI program funded by NaC, and will provide a cost-effective FDDI connection for PMAX and other Low End workstations and systems which implement SCSI interface.
This need for a fiber optic connection is relatively new; however; it is certain to grow very rapidly as the newer and more powerfull workstations saturate the communications bandwidth provided by Ethernet. These new workstations and servers run applications that require transfer of very large amounts of data at very high speeds. Additionally, this product will focus on the low end of the CPU market which is price sensitive.

Chart 1	In-House Funded Proposed Project Totals	0.0	0.0	0.0	0.0	
Chart 1	Externally Funded Proposed Project Totals	2.7	0.0	1.9	0.8	
Chart 1	Proposed DESIGN AND PROCESS ENG	2.7	0.0	1.9	0.8	
Chart 1	In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0	
Chart 1	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0	
Chart 1	Incremental DESIGN AND PROCESS ENG	0.0	0.0	0.0	0.0	
Chart 1	Totals for DESIGN AND PROCESS ENG	2.7	0.0	1.9	0.8	

1B801800	2	TL	MLO	NA	DESIGN FOR TESTABILITY	NA	NA	NA	0.0	0.9	0.5	0.6		KATZIF, JEFF NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

Because of the increasing complexity of added Microprocessors such as NVAX, SOC2, and RISC microprocessors (4MAX), we need to develop new Diagnostic and Test techniques based on the Digital Common Test Architecture and IEEE P1149 standard. These standards require tests to be integrated in chips and modules which are developed both internally and externally. This effort will lead to reduced Test Vector generation and reduced qualification time and cost, as well as a reduction in Diagnostic/Test Design time. Another benefit of this program will be to reduce test equipment and programming costs in Manufacturing. Specific deliverables for FY90 include:

- Develop a LES DFT Architecture encompassing: JTAG, CTA and IEEE P1149 testability standards.
- Integrate DFT Analysis and Design tools within the Minuteman Process.
- Develop a Design and Simulation Library of test structures.

1B801900	2	AD	MLO	NA	REGULATORY ENGINEERING	NA	NA	NA	0.0	0.6	0.6	0.8		DEKNIS, DANIEL NA

This program has two components:

. EMC DOMAIN -
Provide the external interface for Digital on EMC Standards and Technology define the internal standards and processes for EMC testing and approvals; maintain and communicate EMC status and approval documentation for all DEC products and coordinate new EMC technologies and processes.

- Maintain the DEC standards for EMC (DEC103) and agency submittals (DEC 62-2).
- Provide clarification and interpretation on EMC regulatory matters relative to DEC103.
- Manage the Corporate EMC database which provides product EMC-regulator status information and documentation to Agencies, OEM's, and customers
- Maintain information for VDE test; file FTZ license numbers and DBP approvals; write and submit FCC certification reports; file FCC grants and extensions; write and submit EMC test site filings; VCCI (Japan) approvals.

. DESIGN FOR COMPLIANCE -
Predict PCB EMC compliance before boards are built. This will reduce the number of design passes from today's average of 2-3 to an evenutal 1 pass compliance. Primary focus will be MVB, MSD, and DSG products.
Deliverables for FY90:

- PCB Layout Guidelines and tool(PEARL) which will be based upon heuristi data to be applied at a very early stage of a product's design.
- Investigate PCB EMI perdictability and develop tools.
- Site automation will quickly assess system attributes.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B801A00	2	TL	MLO	NA	SYSTEM SIMULATION	NA	NA	NA	0.0	3.0	1.6	2.5		KING, JIM NA

Continuation of the Systems Simulation program begun in FY87.

Focal points for FY90 will be:
- Simulation acceleration of 12x by Q4FY90.
- Generic modeling to allow models/libraries to be shared by different simulators and simulation algorithms.
- Tool selection to reduce ASIC test vector generation.
- Integration of current diagnostic tools into the Simulation Tool Suite to allow Diagnostic Design/Validation to take place earlier in the product development cycle. Diagnostic tools to be integrated include DVS (Design Verification System), LANSA (Local Area Network Service Application), AIRPORT (Assisted Interpretation of Power Up Self Test Execution), QDUS (Qualification of Diagnostics Under Simulation), and the Pin Wiggling Test.
- Completion of the Analog and Architectural product(NFS) started in FY89.

The results of these activities will be to:
- Reduce the systems simulation process from today's 40-day average cycle to 30 days in FY91 and 20 days in FY92.
- Add capability to do system simulation versus module simulation.
- Add capability to simulate new Microprocessors with the complexity 8 times that of Microvax by FY92.
- Reduce hardware debug time for a project by an average of 5 weeks by FY92.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B801C00	2	RE	MLO	NA	ENGINEERING PROCESS & TECH.	NA	NA	NA	0.0	1.2	1.0	1.6		CANNIZZARO, JOE NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

There are two components to this program:

- Define and lead the implementation of a product development process which will allow LES to achieve an average TTM of 7-15 months by FY92. (Simultaneous Development Process)
  Deliverables:
  - Complete implementation of SDP-1 on Teamate 3 through product concept phase.
  - Publish draft of improved qualification process.
  - Apply qualification process improvements on Teamate 3.
  - High level definition and begin implementation of SDP-2 environment.
  - Measure LES pprogress on redcuing TTM.

- Ensure that technical inventions resulting from research and product development are adequately protected and recognized.(Patent Office)
  Deliverables:
  - Patent filings and disclosures.
  - Patent recognition and awards program.

1B801F00	2	PM	PKO	NA	NTWK PLAN/CLUSTER & PERF. TEST	NA	NA	NA	0.0	0.0	1.2	1.6		BELANGER, DICK NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

There are 2 components to this program:

1. Low End Network Planning:
   This function will determine networking requirements for Microvax, DSG and Worksystem customers and influence Digital Engineering (NAC, UEG, SSG) product development plans to implement the appropriate functionality.

Deliverables for FY90:
Prepare, publish and maintain a Network and Communications Strategic plan for Worksystems, DSG and Microvax PBU's.
- LES LAN requirements documents for WSG and MVB.
- Communications for Ultrix and RISC based systems.
- FDDI for high performance workstations.

2. Low End Cluster/Systems Performance Testing

This program will provide performance testing for newly announced Low End products and, focused ownership and business perspective for Low End Clustered products which will be marketed as system solutions for Networked Applications. Our program activity will address RISC and/or VMS clusters; as well as cluster of clusters products such as Distributed Systems Services.

Deliverables for FY 90:
- Product performance testing and documentation of to be used for product announcements and competitive positioning.
- Provide cluster product planning and strategies by understanding customer cluster requirements and communicate these needs to appropriate product development groups.
- Increase the Field's knowledge of configurations, performance measurement, cluster resource management and tuning.

1B801N00	2	PM	PKO	NA	LES BASE PLATFORM SYSTEMS ENG.	NA	NA	NA	10.3	2.5	3.8	4.0	PMG	BELANGER,DICK NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

This program is the continuation of the LES Base Systems Engineering activities begun in FY89. This program encompasses system level Design and Testing focused on multi-node, distributed, client-server type systems such as LAVC's, NFS, and PCSA environments. Our approach will result in the following:

- Performance characterization with respect to variation of servers, satellites, tuning, parameters, and applications.
- Data resulting from our testing activities will be(is) used to generate field-level documentation to aid in selecting, configuring, installing, and maintaining systems. Example of output is LAVC Server Sizing Guide.
- Influence PMG Systems Engineering and other application oriented groups, to design Base Platform Systems around application environments, and then characterize and document examples.
- One-time development of generic workload scripts.

Chart	2	In-House Funded Proposed Project Totals	0.0	5.7	4.9	7.1
Chart	2	Externally Funded Proposed Project Totals	10.3	2.5	3.8	4.0
Chart	2	Proposed DESIGN AND PROCESS ENG	10.3	8.2	8.7	11.1
Chart	2	In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart	2	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart	2	Incremental DESIGN AND PROCESS ENG	0.0	0.0	0.0	0.0
Chart	2	Totals for DESIGN AND PROCESS ENG	10.3	8.2	8.7	11.1

In-House Funded Proposed Project Totals	0.0	5.7	4.9	7.1
Externally Funded Proposed Project Totals	13.0	2.5	5.7	4.8
Proposed DESIGN AND PROCESS ENG	13.0	8.2	10.6	11.9
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental DESIGN AND PROCESS ENG	0.0	0.0	0.0	0.0
Totals for DESIGN AND PROCESS ENG	13.0	8.2	10.6	11.9

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Project Totals				0.0	5.7	4.9	7.1		
					Externally Funded Project Totals				13.0	2.5	5.7	4.8		
					Proposed for DESIGN AND PROCESS ENG				13.0	8.2	10.6	11.9		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental DESIGN AND PROCESS ENG				0.0	0.0	0.0	0.0		
					Grand Totals for DESIGN AND PROCESS ENG				13.0	8.2	10.6	11.9		

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: DESIGN AND PROCESS ENG

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1B801J00	DEFWA	9006	9007	9007	PARIKH, ANAND

DIGITAL RESTRICTED DISTRIBUTION

Electro Mechanical Design and Support

Mission

The EMD&S mission is to provide to our clients a high level of competitive and predictable services and technology which offer product differentiation and competitive advantage in:

- design and human factors engineering
- mechanical engineering and technology
- power supply design and technology
- shipping package engineering and technology

Provide to the Corporation leadership in our technical domains:

- acoustic and thermal engineering
- mechanics
- materials
- power conversion
- industrial and graphic design
- human factors

Maintain Corporate standards to meet Digital's quality, world market, and business needs.

Goals

The goals for EMD&S in FY90 are to support product development through providing top of the line:

- Leadership
- Time-To-Market
- Cost Competitveness
- Quality Products

Strategic Investments

EMD&S plans to invest in the following strategic areas to meet the goals established for FY90:

TECHNOLOGY

- Mechanical Engineering Domain and Standards
- Power Supply Engineering Technology and Tools
- Packaging Modeling/Concepts
- Productivity Tools
- Human Interface
- Design For Manufacturing

MANAGEMENT DISCIPLINES

- Business and Technology Metrics
- Packaging Architecture Documentation
- Productivity Practices
- Design For Manufacturing

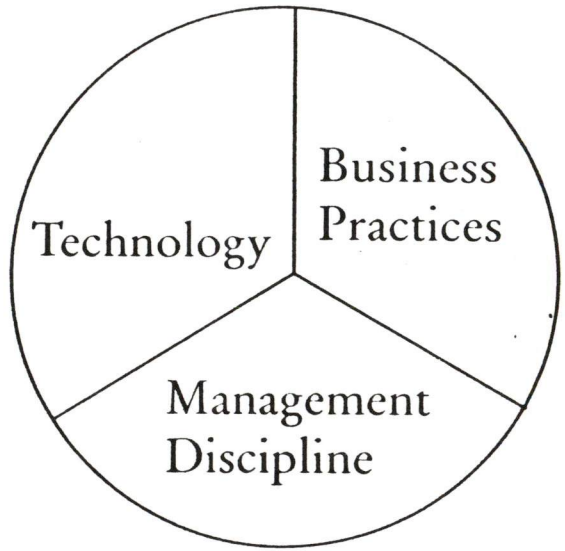
BUSINESS PRACTICES

- Customer/Client Needs Assessments
- University Seeding
- Human Capital Development and Recognition
- Joint Advanced Development Efforts
- Performance Assessments
- Competitive Evaluations

GOALS

- Leadership
- Time-To-Market
- Cost Competitiveness
- Quality Products

STRATEGIC INVESTMENTS



Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: EMDS					Sub Group: ELECTOR/MECH DESIGN SUPPORT									
1B2ZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
	Chart	1			Totals for ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
1B201100	2	AD	MLO	NA	HUMAN INTERFACE	NA	NA	NA	0.0	0.9	0.7	0.9		BENIGNI, PAUL
1B201200	2	TL	MLO	NA	PACKAGING TECH/DOMAIN TOOLS	NA	NA	NA	0.0	1.6	1.6	2.7	NA	GRIMALDI, FRANK
1B201300	2	TL	MLO	NA	PRODUCTIVITY	NA	NA	NA	0.0	0.4	0.4	2.0	NA	GROSS, STEVE
1B201400	2	AD	MLO	NA	POWER ELECTRONICS	NA	NA	NA	0.0	1.4	1.4	1.8	NA	BERTETTI, DAVE
1B201500	2	AD	MLO	NA	MECHANICAL PACKAGING TECHNOLOG	NA	NA	NA	0.0	0.5	0.5	1.5	NA	GONZALES, DICK
1B201600	2	PM	MLO	NA	EUROPEAN DISTRIBUTED DESIGN	NA	NA	NA	0.0	0.3	0.2	0.3	NA	FOWLER, LORI

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
	Chart	2			In-House Funded Proposed Project Totals				0.0	5.1	4.8	9.2		
	Chart	2			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Proposed ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		
	Chart	2			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	2			Incremental ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
	Chart	2			Totals for ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		
					In-House Funded Proposed Project Totals				0.0	5.1	4.8	9.2		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
					Totals for ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		
					In-House Funded Project Totals				0.0	5.1	4.8	9.2		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
					Grand Totals for ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: EMDS					Sub Group: ELECTOR/MECH DESIGN SUPPORT									
1B2ZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
	Chart	1			Totals for ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
1B201100	2	AD	MLO	NA	HUMAN INTERFACE	NA	NA	NA	0.0	0.9	0.7	0.9		BENIGNI, PAUL NA

Increase market opportunities, product desirability and user effectiveness by positioning Digital to quickly and accurately identify, design and qualify consistent Human Interface technologies.

- Establish Human Interface Forum and focus to lead the development of a Corporate architecture and strategy.
- Conduct competitive assessments and establish appropriate metrics.
- Develop design processes/environments which prototype and evaluate designs with users earlier in the design phase.
- Identify, prototype, and test improved hardware devices and capabilities.
- Improve/enhance the look and feel of direct manipulation graphic interfaces.

1B201200	2	TL	MLO	NA	PACKAGING TECH/DOMAIN TOOLS	NA	NA	NA	0.0	1.6	1.6	2.7		GRIMALDI, FRANK NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					Keep every packaging deliverable off the criticl path. Maintain Corporate standards to meet Digital quality, world market, and business needs. - Invest in tools and technologies for domain leadership. - Influence external standards and regulatory bodies in Digital's interests. - Develop packaging enclosure strategy to guide alternative solutions for future products.									
1B201300	2	TL	MLO	NA	PRODUCTIVITY	NA	NA	NA	0.0	0.4	0.4	2.0		GROSS, STEVE NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					Continue to improve EMD&S productivity by reducing development cost, time to market, and transfer cost, while improving quality and accuracy. Provide technology and processes which make evaluation of design alternatives visible in realtime. Help clients improve program productivity by building early consensus, quickly. Support EMD&S in developing products with enhanced packaging, which are more appropriate to customer/ end-user needs. - Increase Engineering productivity dramatically by continuing to integrate domain specific tools. Invest in technology which allows development of increasingly more complex products in less time for less money. - Establish the Packaging Application Center, which will help clients visualize solution alternatives and build early consensus. - Achieve maximum leverage of MCAE investments by participating in collaborative programs with other centers for CAD expertise. Continue to participate and influence review committees such as SYS DEV 90, SSM Efforts, and CAD Managers Forums. - EMD&S leadership in the application of third generation MCAE tools/technologies and their integration into all phases of the product definition and development process. Leverage this capability via collaboration with selected Digital marketing groups. - Gather, assemble, and analyze quantitative information about the perception of Digital's products in an EMD&S controlled Demo Center, and through DECUS symposiums.									
1B201400	2	AD	MLO	NA	POWER ELECTRONICS	NA	NA	NA	0.0	1.4	1.4	1.8		BERTETTI, DAVE NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr

Develop competitive power platforms based upon single and multiple output DC/DC converters characterized by power densities approaching 50 watts per cubic inch.

Reduce the design/test time envelope for new power supply modules and increase their reliability.

Evolve a Corporate-wide strategy for eliminating computer down time related to power line disturbances.

Provide technical communication between the various power conditiong design/manufacturing/support groups within Digital and gather competitive metrics essential to maintaining a leading position in power techology.

- Pursue an integrated program utilizing internal and university resources to develop producible high density DC/DC converters that incorporate state-of-the-art topologies and manufacturing processes.
- Continue the development and evaluation of analysis/simulation CAX products focused on increasing the productivity and quality of the engineering effort expended upon power architectures.
- Participate in industry wide conferences and committees that focus on power line purturbations and regulatory issues. Assimilate this information and apply it to Digital's computer products and systems.
- Track internal and external developments in power technology and disseminate the relevant findings via regularly published materials and monthly technical seminars.

1B201500	2	AD	MLO	NA	MECHANICAL PACKAGING TECHNOLOG	NA	NA	NA	0.0	0.5	0.5	1.5		GONZALES, DICK NA

Develop and transfer future technologies that anticipate the requirements of our clients' systems for mechanical packaging.

- Enhance start-of-the-art design and provide prototype concepts by building relationships with clients, creating demonstration test vehicles, and analyzing the best examples of consumer products.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1B201600	2	PM	MLO	NA	EUROPEAN DISTRIBUTED DESIGN	NA	NA	NA	0.0	0.3	0.2	0.3		FOWLER, LORI NA

Support international product development by providing leadership in the consulting/design domains at strategic engineering sites.

- Collaboration with product design teams.
- Initiation and participation in advanced development.
- Deliver quality local services and cost effective design solutions.
- Maintenance/leadership of Corporate domains.
- Involvement with international and industry requirements.

Chart 2 In-House Funded Proposed Project Totals	0.0	5.1	4.8	9.2
Chart 2 Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart 2 Proposed ELECTOR/MECH DESIGN SUPPORT	0.0	5.1	4.8	9.2
Chart 2 In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Incremental ELECTOR/MECH DESIGN SUPPORT	0.0	0.0	0.0	0.0
Chart 2 Totals for ELECTOR/MECH DESIGN SUPPORT	0.0	5.1	4.8	9.2

In-House Funded Proposed Project Totals	0.0	5.1	4.8	9.2
Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Proposed ELECTOR/MECH DESIGN SUPPORT	0.0	5.1	4.8	9.2
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental ELECTOR/MECH DESIGN SUPPORT	0.0	0.0	0.0	0.0
Totals for ELECTOR/MECH DESIGN SUPPORT	0.0	5.1	4.8	9.2

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Project Totals				0.0	5.1	4.8	9.2		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental ELECTOR/MECH DESIGN SUPPORT				0.0	0.0	0.0	0.0		
					Grand Totals for ELECTOR/MECH DESIGN SUPPORT				0.0	5.1	4.8	9.2		

Electro Mechanical Design and Support

Low End Networks Component

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: LENAC					Sub Group: LOW END NETWORKS									
1BM11200	1	PD	MLO	NA	WORK GROUP BRIDGE	1	9009	9008	0.0	0.0	1.3	0.0		DAVE PAOLINO
1BM11300	1	PD	MLO	NA	DEMMR	2	9010	9009	0.0	0.0	1.5	0.0		ALICE HASSEY JOHN FERRARA
1BM11800	1	PD	MLO	NA	LOW COST TERMINAL SERVER	1	9007	9006	0.0	0.0	2.3	0.0		PAT HORGAN GARY VACON
1BM11C00	1	PD	MLO	NA	DEPCA II	1	9003	9002	0.0	0.0	0.4	0.0		PAT HORGAN DAVE PAOLINO
1BM11D00	1	PD	MLO	NA	DEPCA III	1	9003	9002	0.0	0.0	0.8	0.0		JOE YANUSHPOLSKY DAVE PAOLINO
1BM11E00	1	PD	MLO	NA	DEMCA	1	9003	9002	0.0	0.0	0.4	0.0		JOE YANUSHPOLSKY DAVE PAOLINO
1BM11G00	1	PD	MLO	NA	DECCONNECT SYSTEM II	0	9005	9005	0.0	0.0	0.6	0.0		JOE YANUSHPOLSKY JERRY BOURQUE
1BM11J00	1	PD	MLO	NA	BACKPLANE	0	9010	9006	0.0	0.0	0.4	0.0		JOHN LEWANDOWSKI GARY VACON
1BM11K00	1	PD	MLO	NA	DEMMR TPE	0	9011	9010	0.0	0.0	0.6	0.0		JOHN LEWANDOWSKI REMI LISEE
1BM11M00	1	PD	MLO	NA	FIBER OPTIC BACKBONE	2	9002	9001	0.0	0.0	0.4	0.0		PAT HORGAN JERRY BOURQUE JOHN LEWANDOWSKI
	Chart	1	In-House Funded Proposed Project Totals						0.0	0.0	8.7	0.0		
	Chart	1	Externally Funded Proposed Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Proposed LOW END NETWORKS						0.0	0.0	8.7	0.0		
	Chart	1	In-House Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Externally Funded Incremental Project Totals						0.0	0.0	0.0	0.0		
	Chart	1	Incremental LOW END NETWORKS						0.0	0.0	0.0	0.0		
	Chart	1	Totals for LOW END NETWORKS						0.0	0.0	8.7	0.0		
1BM11500	2	PS	MLO	NA	DECCONNECT TECH APP CENTER	NA	NA	NA	0.0	0.0	0.4	0.0		JERRY BOURQUE
1BM11600	2	PS	MLO	NA	CABLE	NA	NA	NA	0.0	0.0	0.1	0.0		NA JERRY BOURQUE
1BM11700	2	VP	MLO	NA	DTAC FUNDING	NA	NA	NA	0.0	0.0	0.3-	0.0		NA JERRY BOURQUE
1BM11H00	2	AM	MLO	NA	LENAC ADMINISTRATION	NA	NA	NA	0.0	0.0	0.3	0.0		NA GARY VACON NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BM11900	2	AD	MLO	NA	LOW COST THIN REPEATER	NA	NA	NA	0.0	0.0	0.2	0.0		REMI LISEE
1BM11A00	2	AD	MLO	NA	TA 4000	NA	NA	NA	0.0	0.0	0.1	0.0		NA
1BM11B00	2	AD	MLO	NA	LOW COST TPE REPEATER	NA	NA	NA	0.0	0.0	0.2	0.0		JERRY BOURQUE
1BM11F00	2	AD	MLO	NA	ENET DESIGN CORNER	NA	NA	NA	0.0	0.0	0.2	0.0		NA
1BM11I00	2	AD	MLO	NA	DEC 423	NA	NA	NA	0.0	0.0	0.1	0.0		REMI LISEE
														NA
														DAVE PAOLINO
														NA
														JERRY BOURQUE
														NA

Chart 2 In-House Funded Proposed Project Totals	0.0	0.0	1.3	0.0
Chart 2 Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart 2 Proposed LOW END NETWORKS	0.0	0.0	1.3	0.0
Chart 2 In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2 Incremental LOW END NETWORKS	0.0	0.0	0.0	0.0
Chart 2 Totals for LOW END NETWORKS	0.0	0.0	1.3	0.0

In-House Funded Proposed Project Totals	0.0	0.0	10.0	0.0
Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Proposed LOW END NETWORKS	0.0	0.0	10.0	0.0
In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Incremental LOW END NETWORKS	0.0	0.0	0.0	0.0
Totals for LOW END NETWORKS	0.0	0.0	10.0	0.0

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 SUBMISSION SUMMARY REPORT
GROUP: LOW END NETWORKS

1-Nov-1989
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Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Project Totals				0.0	0.0	10.0	0.0		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for LOW END NETWORKS				0.0	0.0	10.0	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental LOW END NETWORKS				0.0	0.0	0.0	0.0		
					Grand Totals for LOW END NETWORKS				0.0	0.0	10.0	0.0		

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: LENAC					Sub Group: LOW END NETWORKS									
1BM11200	1	PD	MLO	NA	WORK GROUP BRIDGE	1	9009	9008	0.0	0.0	1.3	0.0		DAVE PAOLINO ALICE HASSEY
WGB (Work Group Bridge), is a Low End, ETHERNET/802.3 LAN Bridge which will provide a cost effective means of connecting a work group's LAN to an extended LAN or Backbone. The WGB will isolate the work group LAN from traffic that does not have to traverse that LAN, thereby increasing the effective bandwidth of the work group LAN. The WGB also supports features that will enable network managers to control LAN traffic. The cost reduction in the WGB will be achieved by implementing functionality using ASIC technology and a low cost microcontroller. The product will utilize the new low cost networking package.														
1BM11300	1	PD	MLO	NA	DEMMR	2	9010	9009	0.0	0.0	1.5	0.0		JOHN FERRARA PAT HORGAN
Produce a 16 port thinwire repreater which is 10BaseT compliant. The repeater will be capable of accepting the network management capability to be developed in parallel. There will also be significant cost reduction.														
1BM11800	1	PD	MLO	NA	LOW COST TERMINAL SERVER	1	9007	9006	0.0	0.0	2.3	0.0		GARY VACON PAT HORGAN
Also called POTS, this is a low cost, easy to use, 8-line terminal server in a very small package. It supports 8 async line at up to 38.4 KBPS, using a DEC 423 interface. It connects to ethernet via Thinwire (10BASE2). It allows terminal users, printers, and other async devices to connect to computers through an ethernet LAN.														
1BM11C00	1	PD	MLO	NA	DEPCA II	1	9003	9002	0.0	0.0	0.4	0.0		DAVE PAOLINO JOE YANUSHPOLSKY

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
Digital Ethernet PC Adaptor Module (DEPCA II) is a cost reduction in engineering the Ethernet/802.3 Local Area Network Controller for us in an 8-bit personal computer. The module will be a cost effective replacement for the existing DEPCA module.														
1BM11D00	1	PD	MLO	NA	DEPCA III	1	9003	9002	0.0	0.0	0.8	0.0		DAVE PAOLINO JOE YANUSHPOLSKY
DEPCA III (Digital Ethernet P.C. Adapter Module) is high performance Ethernet/802.3 Local Area Network Controller for use in the AT Based Personal Computers. The module will provide a 16 biy bus interface, and target the 16 bit PC market.														
1BM11E00	1	PD	MLO	NA	DEMCA	1	9003	9002	0.0	0.0	0.4	0.0		DAVE PAOLINO JOE YANUSHPOLSKY
DEMCA (Digital Ethernet Micro Channel Adaptor) is a high performance ethernet/802.3 Local Area Network Controller for use in micro-channel based personal computers. The DEMCA allows integration of IBM PC/2's and compatibles into a DECNET/Ethernet computing environment.														
1BM11G00	1	PD	MLO	NA	DECCONNECT SYSTEM II	0	9005	9005	0.0	0.0	0.6	0.0		JERRY BOURQUE JOHN LEWANDOWSKI
To develop a new product set (i.e. components) that will support the new E.I.A. 8-wire building wiring standards (industry standard), and to update existing decconnect documentation in support of above, and the decconnect fiber optic network program.														
1BM11J00	1	PD	MLO	NA	BACKPLANE	0	9010	9006	0.0	0.0	0.4	0.0		GARY VACON JOHN LEWANDOWSKI
Work on this project is to product a multi-system power supply and ethernet distribution package for the LENAC satellite equipment room (SER) products.														
1BM11K00	1	PD	MLO	NA	DEMMR TPE	0	9011	9010	0.0	0.0	0.6	0.0		REMI LISEE PAT HORGAN

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					Produce a 16 port twiested pair repeater which is 10BaseT compliant. The repeater will be capable of accepting the network management capability to be developed in parallel. There will also be significant cost reduction.									
1BM11M00	1	PD	MLO	NA	FIBER OPTIC BACKBONE	2	9002	9001	0.0	0.0	0.4	0.0		JERRY BOURQUE JOHN LEWANDOWSKI
					Develop the Fiber Optic topology design (for network connections - i.e. ring, start, etc), and provide the documentation necessary to support both existing communication and FDDI (industry standard technologies).									
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	8.7	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed LOW END NETWORKS				0.0	0.0	8.7	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental LOW END NETWORKS				0.0	0.0	0.0	0.0		
	Chart	1			Totals for LOW END NETWORKS				0.0	0.0	8.7	0.0		
1BM11500	2	PS	MLO	NA	DECCONNECT TECH APP CENTER	NA	NA	NA	0.0	0.0	0.4	0.0		JERRY BOURQUE NA
					This project is used for engineers assisting the field with real time engineering problems at customer sites.									
1BM11600	2	PS	MLO	NA	CABLE	NA	NA	NA	0.0	0.0	0.1	0.0		JERRY BOURQUE NA
					This project is to reduce the number of cables for Corporate projects; from 1600 to 800 cables.									
1BM11700	2	VP	MLO	NA	DTAC FUNDING	NA	NA	NA	0.0	0.0	0.3-	0.0		JERRY BOURQUE NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
This project is used to capture indirect funding from cost centers without project numbers. It is used for accounting purposes only.														
1BM11H00	2	AM	MLO	NA	LENAC ADMINISTRATION	NA	NA	NA	0.0	0.0	0.3	0.0		GARY VACON NA
Administrative support for the advanced development group. Work charged here is not of a technological nature.														
1BM11900	2	AD	MLO	NA	LOW COST THIN REPEATER	NA	NA	NA	0.0	0.0	0.2	0.0		REMI LISEE NA
This project is to produce a low cost multiport Ethernet Thinwire repeater in the new tiny package.														
1BM11A00	2	AD	MLO	NA	TA 4000	NA	NA	NA	0.0	0.0	0.1	0.0		JERRY BOURQUE NA
Work is performed on this project to combine two existing DEC products, h4005 (Ethernet Transceiver) and DESPR (Digital Ethernet Single Pair Receiver) into one product.														
1BM11B00	2	AD	MLO	NA	LOW COST TPE REPEATER	NA	NA	NA	0.0	0.0	0.2	0.0		REMI LISEE NA
This project is to produce a low cost multiport ethernet twisted pair repeater in the new tiny package.														
1BM11F00	2	AD	MLO	NA	ENET DESIGN CORNER	NA	NA	NA	0.0	0.0	0.2	0.0		DAVE PAOLINO NA
This project is to develop a test chip focusing on the development of ethernet design to reduce cost, power consumption, and parts count. This is a precursor to the low cost DEMPR project.														
1BM11I00	2	AD	MLO	NA	DEC 423	NA	NA	NA	0.0	0.0	0.1	0.0		JERRY BOURQUE NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
A chip development project to specifiy and qualify a new DEC 423 receiver chip (DEC's version of EIA423, industry standard) to replace existing chips with near end crosstalk/ failsafe issue. If an error with the new chip, the new technology will have ability to remedy the problem by taking various courses of action.														
	Chart	2			In-House Funded Proposed Project Totals					0.0	0.0	1.3	0.0	
	Chart	2			Externally Funded Proposed Project Totals					0.0	0.0	0.0	0.0	
	Chart	2			Proposed LOW END NETWORKS					0.0	0.0	1.3	0.0	
	Chart	2			In-House Funded Incremental Project Totals					0.0	0.0	0.0	0.0	
	Chart	2			Externally Funded Incremental Project Totals					0.0	0.0	0.0	0.0	
	Chart	2			Incremental LOW END NETWORKS					0.0	0.0	0.0	0.0	
	Chart	2			Totals for LOW END NETWORKS					0.0	0.0	1.3	0.0	
					In-House Funded Proposed Project Totals					0.0	0.0	10.0	0.0	
					Externally Funded Proposed Project Totals					0.0	0.0	0.0	0.0	
					Proposed LOW END NETWORKS					0.0	0.0	10.0	0.0	
					In-House Funded Incremental Project Totals					0.0	0.0	0.0	0.0	
					Externally Funded Incremental Project Totals					0.0	0.0	0.0	0.0	
					Incremental LOW END NETWORKS					0.0	0.0	0.0	0.0	
					Totals for LOW END NETWORKS					0.0	0.0	10.0	0.0	

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Project Totals				0.0	0.0	10.0	0.0		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for LOW END NETWORKS				0.0	0.0	10.0	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental LOW END NETWORKS				0.0	0.0	0.0	0.0		
					Grand Totals for LOW END NETWORKS				0.0	0.0	10.0	0.0		

DIGITAL EQUIPMENT CORPORATION
BEIGE BOOK FY90 PRODUCT DELIVERABLE/ANNOUNCEMENT CALENDAR
Group: LOW END NETWORKS

PROJECT ID	PRODUCT NAME	ANNC DATE	FRS DATE	PHASE 1 FRS	PRODUCT MANAGER
1BM11200		9008	9009	TBD	ALICE HASSEY
1BM11300		9009	9010	8901	PAT HORGAN
1BM11800		9006	9007	TBD	PAT HORGAN
1BM11C00		9002	9003	8909	JOE YANUSHPOLSKY
1BM11D00		9002	9003	8909	JOE YANUSHPOLSKY
1BM11E00		9002	9003	TBD	JOE YANUSHPOLSKY
1BM11G00		9005	9005	TBD	JOHN LEWANDOWSKI
1BM11J00		9006	9010	TBD	JOHN LEWANDOWSKI
1BM11K00		9010	9011	TBD	PAT HORGAN
1BM11M00		9001	9002	8909	JOHN LEWANDOWSKI

DIGITAL RESTRICTED DISTRIBUTION

Base Product Marketing and Planning

Base Product Marketing and Planning

MISSION

The LES Base Product Marketing and Planning Mission is to integrate, coordinate and manage LESs marketing and planning organizations to ensure that Digital maximizes it's low end investments and realizes maximum world-wide potential from the products we develop and offer in the Low End space.

STRATEGY

* Be the content experts in order to create and implement clear, consistent, and accurate information that makes it easy for customers to decide what to purchase and for Sales and Channels to sell LES systems and products.

* Provide Digital with the market, customer and competitive information necessary to identify. develop, position, support, and market leadership products and services world-wide.

* Work closely with Digital's Marketing and Sales Organizations to ensure that LES product strategies and messages are understood, integrated and directed at the proper audiences.

* Develop effective, consistent charters and interfaces throughout LES BPM, especially for:

  - Competitive Analysis
  - Product Technical Support
  - Product Announcements
  - Market Analysis

* Develop, provide and manage a multi-functional Integrated Planning Process that fosters and drives the implementation of the Business Segment Organizational Model.

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: BPM					Sub Group: BPM									
1B3ZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
	Chart 1				In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart 1				Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart 1				Proposed BPM				0.0	0.0	0.0	0.0		
	Chart 1				In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart 1				Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart 1				Incremental BPM				0.0	0.0	0.0	0.0		
	Chart 1				Totals for BPM				0.0	0.0	0.0	0.0		
					In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed BPM				0.0	0.0	0.0	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental BPM				0.0	0.0	0.0	0.0		
					Totals for BPM				0.0	0.0	0.0	0.0		
*** Sub Group Code: PROGOFFP					Sub Group: PROGRAM OFFICE & PLANNING									
1BA31200	2	PM	MLO	NA	PLANNING/PRODUCT MANAGEMENT	NA	NA	NA	0.0	0.6	0.8	0.8		KOCHAN, MATT NA
1BA31300	2	BPM	MLO	NA	LES MARKETING COMM. PROGRAMS	NA	NA	NA	0.0	6.0	7.0	7.0		KOCHAN, MATT NA
1BA31400	2	PM	MLO	NA	LES PROGRAM OFFICE	NA	NA	NA	0.0	1.4	1.3	1.3		KOCHAN, MATT NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BA31500	2	BPM	MLO	NA	LES BASE PRODUCT MARKETING	NA	NA	NA	0.0	7.0	8.3	8.3		KOCHAN, MATT
1BA31600	2	PM	MUS	NA	LES EUROPE PRODUCT REQUIREMENT	NA	NA	NA	0.0	1.0	1.0	1.0		NA KOCHAN, MATT
1BA31800	2	BPM	MLO	NA	LES MARKETING COMM. STAFF	NA	NA	NA	0.0	3.9	3.0	3.0		NA KOCHAN, MATT NA
Chart	2	In-House Funded Proposed Project Totals							0.0	19.9	21.4	21.4		
Chart	2	Externally Funded Proposed Project Totals							0.0	0.0	0.0	0.0		
Chart	2	Proposed PROGRAM OFFICE & PLANNING							0.0	19.9	21.4	21.4		
Chart	2	In-House Funded Incremental Project Totals							0.0	0.0	0.0	0.0		
Chart	2	Externally Funded Incremental Project Totals							0.0	0.0	0.0	0.0		
Chart	2	Incremental PROGRAM OFFICE & PLANNING							0.0	0.0	0.0	0.0		
Chart	2	Totals for PROGRAM OFFICE & PLANNING							0.0	19.9	21.4	21.4		
In-House Funded Proposed Project Totals									0.0	19.9	21.4	21.4		
Externally Funded Proposed Project Totals									0.0	0.0	0.0	0.0		
Proposed PROGRAM OFFICE & PLANNING									0.0	19.9	21.4	21.4		
In-House Funded Incremental Project Totals									0.0	0.0	0.0	0.0		
Externally Funded Incremental Project Totals									0.0	0.0	0.0	0.0		
Incremental PROGRAM OFFICE & PLANNING									0.0	0.0	0.0	0.0		
Totals for PROGRAM OFFICE & PLANNING									0.0	19.9	21.4	21.4		

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Project Totals				0.0	19.9	21.4	21.4		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for PROGRAM OFFICE				0.0	19.9	21.4	21.4		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental PROGRAM OFFICE				0.0	0.0	0.0	0.0		
					Grand Totals for PROGRAM OFFICE				0.0	19.9	21.4	21.4		

DIGITAL RESTRICTED DISTRIBUTION

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
*** Sub Group Code: BPM					Sub Group: BPM									
1B3ZZZZZ	1	PM	?		STF ADJUSTMENT	5	9012		0.0	0.0	0.0	0.0		STF
	Chart	1			In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Proposed BPM				0.0	0.0	0.0	0.0		
	Chart	1			In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
	Chart	1			Incremental BPM				0.0	0.0	0.0	0.0		
	Chart	1			Totals for BPM				0.0	0.0	0.0	0.0		
					In-House Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed BPM				0.0	0.0	0.0	0.0		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental BPM				0.0	0.0	0.0	0.0		
					Totals for BPM				0.0	0.0	0.0	0.0		
*** Sub Group Code: PROGOFFP					Sub Group: PROGRAM OFFICE & PLANNING									
1BA31200	2	PM	MLO	NA	PLANNING/PRODUCT MANAGEMENT	NA	NA	NA	0.0	0.6	0.8	0.8		KOCHAN, MATT NA

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
1BA31300	2	BPM	MLO	NA	LES MARKETING COMM. PROGRAMS	NA	NA	NA	0.0	6.0	7.0	7.0		KOCHAN, MATT NA
1BA31400	2	PM	MLO	NA	LES PROGRAM OFFICE	NA	NA	NA	0.0	1.4	1.3	1.3		KOCHAN, MATT NA
1BA31500	2	BPM	MLO	NA	LES BASE PRODUCT MARKETING	NA	NA	NA	0.0	7.0	8.3	8.3		KOCHAN, MATT NA
1BA31600	2	PM	MUS	NA	LES EUROPE PRODUCT REQUIREMENT	NA	NA	NA	0.0	1.0	1.0	1.0		KOCHAN, MATT NA
1BA31800	2	BPM	MLO	NA	LES MARKETING COMM. STAFF	NA	NA	NA	0.0	3.9	3.0	3.0		KOCHAN, MATT NA

Chart 2	In-House Funded Proposed Project Totals	0.0	19.9	21.4	21.4
Chart 2	Externally Funded Proposed Project Totals	0.0	0.0	0.0	0.0
Chart 2	Proposed PROGRAM OFFICE & PLANNING	0.0	19.9	21.4	21.4
Chart 2	In-House Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2	Externally Funded Incremental Project Totals	0.0	0.0	0.0	0.0
Chart 2	Incremental PROGRAM OFFICE & PLANNING	0.0	0.0	0.0	0.0
Chart 2	Totals for PROGRAM OFFICE & PLANNING	0.0	19.9	21.4	21.4

Project ID	Ch	Act Cde	Loc Cde	Int St	Project Name	Curr Phas	FRS Date	Annc Date	Life Exp	FY89 Budg	FY90 Prop	FY91 Prop	Ext'nl Funder	Proj Owner/ Prod Mgr
					In-House Funded Proposed Project Totals				0.0	19.9	21.4	21.4		
					Externally Funded Proposed Project Totals				0.0	0.0	0.0	0.0		
					Proposed PROGRAM OFFICE & PLANNING				0.0	19.9	21.4	21.4		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental PROGRAM OFFICE & PLANNING				0.0	0.0	0.0	0.0		
					Totals for PROGRAM OFFICE & PLANNING				0.0	19.9	21.4	21.4		
					In-House Funded Project Totals				0.0	19.9	21.4	21.4		
					Externally Funded Project Totals				0.0	0.0	0.0	0.0		
					Proposed for PROGRAM OFFICE				0.0	19.9	21.4	21.4		
					In-House Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Externally Funded Incremental Project Totals				0.0	0.0	0.0	0.0		
					Incremental PROGRAM OFFICE				0.0	0.0	0.0	0.0		
					Grand Totals for PROGRAM OFFICE				0.0	19.9	21.4	21.4		

Base Product Marketing and Planning