From: caroma@ai.mit.edu (Carl R. Manning)
Newsgroups: comp.sys.pen
Subject: mobile93.table: Comparison Chart, mostly from Mobile World Boston, March 1993
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While there's interest in comparison charts, here's a rough table I made up mostly after Mobile World '93 in Boston last March. Info is mostly gathered from various vendor spec sheets and news sources. No guarantees of completeness or correctness---Nigel's PDA chart has some info not here.

This posting is a maximum of 172 characters wide, so some of you may get truncated copies. (Sorry, I don't have time to try to reformat it to 80 columns.)

Cheers,

CarlManning@ai.mit.edu

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Note: This file is 172 chars wide. This file can be printed from unix with: enscript -1Gr -fCourier5 mobile.table

Specialized Hardware Platforms (runs neither Win4Pen or PenPoint), including PDAs

	Amstrad PenPad PDA600	Apple Newton	Fujitsu PoqetPad	GRID PalmPad	HP HP95LX	PI-Systems Infolio	Tandy/Casio Zoomer
o Physical							
+ size (cm)	11.5x16x2.7		24.5x11.7x3.2	22.8x15.7x4.8	15x8.64x2.54	28.5x23.5x3.2	
+ size (in)	~4"x~6"x~1"		9.7"x4.6"x1.26"	9"x6.2"x1.9"	6.3"x3.4"x1"	11.2x9.25x1.25"	4.2x6.8x1"HxWxD
+ weight (kg/lb)	0.4Kg/14oz		0.56Kg/1.2 lbs	1.3Kg/2.9 lbs	312g/11oz	1.5kg/3.4 lb	/1.0lb
+ shape		memopad	ticketpad	palmpad	checkbook	tablet/clipb'rd	
+ how carried		hand	hand	hand w/strap	hand	forearm	
+ durability					MIL-810		
o Display							
+ technology	LCD	supertwLCD	refl,supertwLCD	Transflec LCD	supertwist LCD	reflective LCD	reflective LCD
+ light				backlight			
+ physical size(cm/in)	7.0x9.3cm/	/~3x~5"	/7.25" diagonal	/6.5" diagonal		24cm/9.5" diag	8.0x10.0cm/
+ resolution (dpi)							.3mm dot pitch
+ pixels (HxV)	240x320	240x336	640x200(CGA)	640x400 (CGA?)	240x128	(640x480?)	320x256
+ colors/greylevels		B&W					
+ video out			no				
o Digitizer	yes	yes	yes	yes	no	yes	yes
+ technology	(touch)		resistive film	active induct.		passive induct.	
+ tethered/free pen	free(finger ok)		untethered	tether opt.		untethered	
+ capabilities			(125 dots/sec)	(200 pts/sec)			
+ resolution (dpi)			200 dpi	427 dpi			
o Kind(s) of Input							
+ handwriting	yes	yes(Paragraph)	yes(Nestor)	yes	no	yes	yes
+ mouse		no	no	no	no	no	
+ keypad/keyboard		no	no	kbd port	tiny qwerty	no	
o Audio	speaker						spkr+hdphjack
							DAC,Sqwv,noise
o Power/Battery							
+ main batt technology	3 AA alkaline	4 AAA	2 AA alkaline	NiCad,NiMH	2 AA, 1 CR2032	8 AArechargable	3 AA alkaline
+ backup batt tech	lithium						2xCR2032lithium
+ running time	<=40hrs		16-48 hrs			12-16 hrs	100 hrs
+ recharge time				1.5 hr			
+ ac/auto adapter			ac	ac & auto	ac	ac	ac
+ battery weight						0.2Kg/0.6 lb	
o Computational							
+ processor(s)	Zilog Z180	ARM610,20Mhz	V20HL,7Mhz(XT)	NECV20,9.54Mhz	NECV20H,5.37Mhz	MC68331,16Mhz	(Casio 80188?)
+ Specmarks							
+ current draw					(3 volt)		
o Memory							
+ cache							
+ RAM	192k(64kScrHWR)		640KB	2MB	1MB(ROM OS,App)		1MB
+ persistent cap	(192K)		4MB	20MB	128K-1MB PCMCIA	2MB	
+ persistent tech.	batt-backed RAM		SRAM,Flash	SunDisk,PCMCIA		PCMCIA	
+ ROM			1 MB		1MB(w/apps)		4MB
+ Floppy Disk		no	no	no	no	no	
o interface ports							
+ PCMCIA	1 (ver? 1)	(type 2)	2 (type 2)	1	1 (ver? 1.0)	3 ("Rel" 1)	1 (type 2)
+ serial	yes	yes	yes	yes(xor power?)	yes	yes	yes
+ parallel			yes				
+ bus			80pin (XT?)			96pin,dock	
+ other		RS422/Localtalk	bar code rdr		infrared2400bps		infrared9600bps
		pt2pt infrared					
o Communications							
+ technology			(mobidem?)	spread-spectrum	paging,mobidem	modem	
+ bandwidth				19.2Kbs	?,8Kbps		
+ range				800 ft	country,region		
+ power draw							
+ infrastructure				base station(s)	paging,pkt data	phone	
o Cost/price							
+ without wireless	($449)	(<$1000)	$2995?(too hi)				$699-895
+ with wireless					+$420,+$775		
o Operating System;	;	(NewtOS);	MS-DOS 3.3	PenRight!	MSDOS 3.22;	Proforma	Geos/Geoworks;
Development Env.;	;	NewtonScript	PenShell;		;		;
Bundled Apps	addr/phone,	dev on Macs;	PenRight! Pro		Lotus1-2-3 2.2,		AOL access,
	calendar/time,		Power PenPal		HP ApptTeleMemo,		date-,addr-,
	note/sketchpad,		padBase		HP FinanCalc,		note-books,
	calculator		PenRight! Pro		DataComm		dicts?,games?,
							Quicken?

Generalized Hardware Platforms (runs Win4Pen or PenPoint)

	Dauphin DTR-1	Dauphin D5000/D5500	EO 440;880	Fujitsu 325Point	GRID Convertible	GRID GridPad	IBM Thinkpad 710T (700T)	NCR 3125(1991)	NEC Ultralite Autograph	Samsung PenMaster	TelePad TelePad SL	Tusk Tusk386
o Physical												
+ size (cm)				29.7x22.0x2.95	29.5x23.9x4.1	29.2x23.6x3.8						
+ size (in)	9"x5.5"x1.25"	11"x9.6"x1.8"	~11x7x1;~13x9x1	11.7"x8.7"x1.2"	11.6"x9.4"x1.6"	11.5"x9.3"x1.5"	(12.4x9.4x1.5")		10.9"x9.8"x1.2"	11.5x9.3"x1.48"	11"x11"x1.3"	12.5"x10.1"x2"
+ weight (kg/lb)	/2.2 lbs	/5.6 lbs	/2.2lbs; 4 lbs	1.4Kg/3 lbs	2.5 Kg/5.5 lbs	2.5 Kg/5.4 lbs		/4.75 lbs	/3.89 lbs	/"< 5 lbs"	/4.5 lbs	/6.0 lbs
+ shape	thick pad +kbd	easle+kbd	notepad/tablet	laptop/tablet	tablet/clipb'rd	tablet/clipb'rd	tablet/clipb'rd	tablet/clipb'rd	tablet/clipb'rd	tablet/clipb'rd	clipboard	
+ how carried	hand	forearm	forearm	forearm	forearm	forearm	forearm	forearm	forearm	forearm	arm/waist	
+ durability	(screen cover)				(poor latches)							
o Display												
+ technology	LCD	LCD	LCD	Transflec LCD	LCD	transmissiveLCD	(transflec LCD)	LCD	transflec LCD	LCD	LCD	LCD
+ light	backlight	backlight	backlight	backlight	backlight	edgelite(same?)	(backlight)			backlight	backlight	backlight
+ physical size(cm/in)	/6" diagonal	/9.5" diagonal		/9.4" diagonal	/9.5" diagonal	/10" diagonal	/10" diag		/9.4"	/10"	/10"	
+ resolution (dpi)			110dpi; 85dpi									
+ pixels (HxV)	640x480	640x480	640x480	640x480	640x480	640x480	(640x480 VGA)	VGA	640x480	640x480 VGA	640x480	640x480
+ colors/greylevels	64 grey levels	64 grey levels		64 grey levels	64 grey levels	32 grey levels			64 grey levels	32 grey levels	16 grey levels	64 grey levels
+ video out	640x480,1024x768	(<-same)	no;VGA	640x480 VGA	640x480 VGA	VGA	yes?,VGA?	VGA	VGA,SVGA	VGA	VGA	VGA,SVGA [1]
o Digitizer	yes	Scriptel	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
+ technology		resistive		electromagnetic		passive induct.	(electromagn.)		electromagnetic		electromagnetic	electromagnetic
+ tethered/free pen	?	tethered	untethered	untethered	untethered	untethered	untethered	untethered	untethered	untethered	untethered	
+ capabilities												proximity
+ sampling (pts/sec)				200 pts/sec		200 pts/sec						150 pts/sec
+ resolution (dpi)		512dpi			400dpi	254 dpi			254 dpi			1000 dpi
o Kind(s) of Input												
+ handwriting	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
+ mouse	yes	yes if no kbd	no	no	no	no	(no)		yes if no kbd	no	no	no
+ keypad/keyboard	ext.9"shrunk	ext(no numPad)	kbd port	ext(no numPad)	integ(noNumPad)	kbd port		kbd port	ext.(no numPad)	kbd port	kbd port	dock, kbd port
o Audio			Mic/speaker				beep				beep	
o Power/Battery												
+ technology			NiCAD	NiCad or NiMH	NiCad, ?	NiCad	(NiCad)		NiMH,NiMHx2	NiCAD		NiMH
+ running time	2 hrs	3 hrs	4-7 hrs	3-8 hrs			3hrs	4.5 hrs	3-5hrs,6-10hrs	3hrs	3 hrs	3-8 hrs
+ recharge time			1.5hr		1.5 hr	2 hr		(1hr)	1.5 hrs	1.5 hrs	2 hrs	1 hr
+ ac/auto adapter	ac (7oz)	ac (0.4lbs)	ac & auto	ac	ac & auto	ac & auto	ac	ac	ac	ac & auto	ac	ac
+ battery weight		/0.75 lbs						/(0.8lbs?)				
o Computational												
+ processor(s)	AM486SLC,25Mhz	i386SL,25Mhz	Hobbit,20;30Mhz	AM386SXLV,25Mhz	i386SL,25Mhz	i386SL,20Mhz	ibm486,25Mhz	i386SL,20Mhz	i486SL,20Mhz	i386SL,20Mhz	i386SL,25Mhz	i386SL,25Mhz
+ MIPS			13; 20MIPS [2]									
+ current draw				(3 volt)								
o Memory												
+ cache		64KB			64KB	16KB		16KB	8KB	16-64KB	64KB	64KB
+ RAM	2-6MB	4-20MB	4-12MB(JEDEC)	4-12MB	2MB-8MB	4MB-20MB	(4-8MB)	4-20MB	4-12MB	4-20MB	4-20MB	8-20MB
+ persistent cap	20MB	80-200MB	20Mb;64Mb	5-20MB +	125MB	60MB	(20MB)	20MB	40-80Mb	60MB	80-170MB	85-180MB
+ persistent tech.	HP kittyhawk HD	HD	Kittyhk;1.8"HD	FlashRAM/1.8"HD	HD	HD	(PCMCIA SSF),HD	HD,FEPROM	HD	2.5" HD	HD	
+ FlashROM,SRAM				128K flashROM							128-258KB flash	yes
+ ROM			8MB (OS,apps)									yes
+ Floppy Disk		1.4MB,xorPCMCIA	external	no	external	external	external	external	external	external	external	
o Interface ports												
+ PCMCIA	yes(?)	1(type1),xor FD	1;2 PCMCIA 2.0	2(type1,2,or3)	1 ("ver" 2)	1 ("ver" 1)	2	?	2(type2)+1	1? PCMCIA 1.0	(option?)	
+ serial	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
+ parallel	yes	yes	yes	yes	yes (xor FD)	yes	yes	yes	yes	yes	yes	yes
+ bus		AT						?	180pin	200pin;dock:ISA		
+ other			RJ11;SCSI	phone	2 RJ-11	RJ-11					RJ11	
o Communications	(wireless:June)			Infrared (?)							(IR,RF: 9mos)	modem
+ technology	modems/ether/..	fax,modem	cellular phone?	modem/ether/..	modem	modem	modem	modem	modem/ether/..	modem	spread-spectrum	
+ bandwidth												
+ range											6 miles	
+ power draw												
+ infrastructure	phone/LAN/..	phone	cellular phone	phone/LAN/..	phone	phone	phone	phone	phone/LAN/..	phone	base station	phone
o Cost												
+ without wireless	$2500	$2995	$1999	$2995?		$2990-$4200		$3000($599@JEM)	$3999($1995dev)	$3495($2400dev)		
+ with wireless			$3298							+$800		
o Operating System; Development Env.; Bundled Apps	Win4Pen...	Win4Pen, PenPoint, PenDOS	PenPoint; ; Notetaker, DayTimer	Win4Pen, PenPoint, PenDOS; PenApps, padBase, Power Pen Pal, PenRight! Pro	Win4Pen 3.1	PenRight! Win4Pen PenPoint PenDOS	(PenPoint) PenDOS	Win4Pen, PenPoint	Multiboot: Win4Pen AND PenPoint	PIM (DOS), PenPoint, PenDOS	PenPoint, Win4Pen, PenRight! OS/2, Unix	Win4Pen, PenPoint, PenRight,

[1] SVGA -- 1280x1024   [2] a user's impression is these Hobbits are approximately equivalent to (486/33;486/50)

Software Lines

	Aha!	InkWare	Notable	PenMagic	PenWare	PenSoft	Slate
o Personal SW							
+ Scheduler+				Numero Exec		Perspective	Day-Timer
+ Notebook	Inkwriter	Notetaker	Notation				Looseleaf Notetaker
+ Spreadsheet				Numero	PenCell		At-Hand[2]
+ Word Proc				Letter Express			
o Meeting SW							
+ share screen			Shared Whiteb'd				
o Remote SW							
+ Term/download			MobileAcess				
+ fax send/rec							WinFax Pen
o Development				Numero SDK			PenApps
o Other		(fotoedit)[3]	PenCrush PenCross				PenBook LapLink Pro[2] Safety Pen[2]
o Req'd SW	PenPoint	PenPoint[1]	PenPoint, Win4Pen,...	PenPoint	Win4Pen	PenPoint	PenPoint, Win4Pen

[1] Notetaker notes can be viewed on MS Windows with InkView
[2] PenPoint only
[3] Marking up and cropping images (& faxes?) --- name missing

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Developer Tools

CIC	GO	IBM	MicroSoft	PenRight/GRID	PenPal Assoc
PenDOS (MS-DOS)	PenPoint	OS/2 w/Pen	Win4Pen (MS-DOS)	PenRight! Pro (MS-DOS)	Power PenPal (MS-DOS)
HRS					

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