

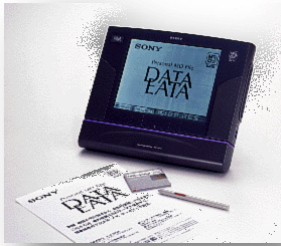
Buxton Collection Sampler



- a) **Microwriter (UK).** This is the world's first portable digital word processor. It was first shown in 1978. This unit dates from circa 1979. One types with a 6 button chording keyboard. That is, your fingers are always in "home position" and you enter text by pushing combinations of buttons, or "chords". You could stand in the subway, hold the strap for balance, and type with one hand, by holding the device against your chest. It could also be connected to your PC as a substitute for your QWERTY keyboard. It still works and the alphabet can be learned in about 60 minutes.



- b) **Sony DATA EATA PDF-5.** This is a pretty amazing device that was released by Sony in 1996 (only in Japan). At first glance, it has a lot in common with later Tablet-PCs. In fact, it uses the same pen technology as the majority of those in use today. What made it very unusual is that there is a button on the side that pops out a slot along the base of the device, below the screen, where you can feed a sheet of paper. The slot is the input for a built-in scanner. You run up to an 8 ½ x 11 sheet of paper through, and bingo, it appears on the screen where you can read it, email it, or annotate it with the pen. This integration of capabilities, coupled with extraordinary industrial design for the time, represents a very strong effort to bridge between the physical and digital worlds.



- c) **Sony PRS-500 ebook Reader.** This was Sony's second generation ebook, and the first to be released in North America (2006). It employs an e-ink reflective display. One interacts with it using buttons along the bottom of the screen as well as a few other controls below the buttons.



- d) **Amazon Kindle.** Another ebook reader. First released in Nov. 2007. It uses the same e-ink reflective B&W display as the Sony reader. However, it differs in many other ways. It incorporates a small QWERTY keyboard that enables one to annotate the document being read. The keyboard also lets you look up words in the built-in dictionary, etc. The device also has a wireless connection that lets one order ebooks pretty much



anywhere and any time in the USA, and have them delivered instantly. The keyboard facilitates this, as well, as does the tight integration with Amazon's on-line book store. What this device illustrates is that the quality of the user experience is not just about the device itself, but how that device is integrated into the larger ecosystem of reading – things like annotation, browsing titles, looking things up, and purchasing.

- e) **GRiD 2260 Pen Computer:** Released in 1992. This is an early example of a slate-format pen computer, but actually the second model released by GRiD (the first, the 1100 was released in 1989).



- f) **Orbita Mouse.** Released in 2008. <http://www.orbitamouse.com/> Is a circular mouse that can be used for pointing, but also when pointing at a video clip or an audio track, one can spin the mouse with your finger and use it to “scrub” the video or audio.



- g) **The Magellan 3D controller.** (1997). This is a special joystick device that has 6 degrees of control. It is spring loaded, so it senses the force that you exert, and the direction that it is directed: push/pull/tilt.... Not your average joystick, and this one was custom painted for me.



- h) **AST GRiDpad 2390 “Zoomer”**. The Zoomer was a predecessor to the Palm Pilot, developed by Palm on top of the [GEOS OS](#), and licensed to Casio, ([Casio Z-7000](#) released in NA Oct 1993) AST and Tandy ([Tandy Z-PDA](#)). Released in 1993 (1992?). Could connect to AOL and CompuServe. Came out right after Apple Newton (?). See also the Sharp [PT-9000](#). [1,]



- i) **Apple Newton MessagePad**. Released in 1993.



- j) **Dauphin DTR-1**. Pen Computer using Windows for Pen Computing (release 1992 – extension of Windows 3.1) which included DOS. DTR stood for Desk Top Replacement. Came with detachable keyboard. Released 1993 or 4(?). [1, 2]



- k) **iRex iLiad ebook**. Announced Dec. 2005, shipped July 2006. First e-ink based e-reader to support digital ink and pen-based annotation. Incorporated Wacom tablet technology (same as Tablet PC) to do so, thereby pushing up cost. Main advantage was larger screen size (124x165mm / 8.1”) compared to Sony (5”).



- l) **Psion Series 5 PDA.** Launched June 1997. Touch and stylus input.



Spectacular industrial design by Martin Riddiford an industrial designer for [Therefore Design](#).^[1] OS evolved in to Simbian, one of key OS's for smart phones. 32bit (!) "Series 5 shipped with a word processor that could also embed sketches and spreadsheets within a document, just like Microsoft with its OLE. It also featured a spell checker, an outliner, and multiple zoom levels. The word processor binary, however, took up just 20kb of ROM space: less than an empty Microsoft Word document — and considerably less than an ASCII file containing the 1,600 page programming guide to Microsoft's OLE." [quote from ref 1] 30 hours use on two AA batteries. Keyboard large enough for touch typing.

- m) **Casio IF-800:** Released in 1986, this is to my knowledge the first, PDA that



had a touch screen that enabled input by finger or stylus, in addition to the keyboard. The stylus let one capture quick drawings as well as perform the normal functions of a calculator, address book, calendar, note pad. In addition to the main mechanical keyboard, the inside flap of the case also had a supplementary capacitive touch keypad.

- n) **Xerox PARCtab:** This was one of the key components of the Ubiquitous



Computing Project led by Mark Weiser at Xerox PARC. Developed in 1993, the technology team was led by Roy Want. It was a networked handheld information appliance that was location sensitive (it knew what room it was in, as well as who else was in the room – that had a Tab – and

enabled others to know where you were. Its resistive film touch screen was sensitive to either finger or stylus. My main contribution was the physical design, most significantly, the arrangement of the 3 buttons in such a way as to permit them to be depressed either alone, or in a chord (like a trumpet – on which it was modeled) by the same hand that is holding the device. Thus, the other hand was free to work on the screen without access to the buttons being restricted. Still something not repeated in any PDA that I am aware of.

o) **IBM / Bell South Simon Smartphone:** First shown in 1993, this was the



world's first so-called "smart phone". It only had two buttons: on/off and volume. Access to all other capabilities was via a resistive film touch sensor that covered the display that made up the entire front of the device. This gave access to the phone, note pad (on which one could enter text with a graphical keyboard or be hand-drawn with the stylus), address book, email, fax, calendar, games, etc. Functions are accessed by touching the

associated icons on the screen. You are not alone if all of this has a note of familiarity. But don't worry. There are things that the iPhone has that the Simon does not, such as a web browser. But on the other hand, the World Wide Web did not exist when this phone came out. Not bad for 14 years before the iPhone!

p) **Casio PF-8000 Databank:** This is a wonderful PDA that I purchased in 1984,



the year it was released. It was remarkable in that one could enter data either by using the mechanical keypad, or by printing the characters, one on top of the other, on the touch pad on the right. In this latter regard, it used the same basic technology as its sibling, the Casio AT-550 Calculator Watch, which is also in my collection.