Archived 3/14/04 when I finally gave up on PocketMirror Pro.

Palm/Palm Pilot: Personal Experiences and Tips

Contents

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Introduction

A resource page for Palm OS based devices (device formerly known as the PalmPilot[11]) based on my personal experience. It will be of most interest to non-developer heavy users of the Palm and licensee devices. Older versions of this page are archived in 020822_PalmPageArchive.pdf. This is a page of useful fragments, not a unified document. It will most often be found during Google searches.

Impressions

The Palm III, made in the USA, was a groundbreaking devices. It was reliable, relatively inexpensive, the right size (actually the Palm Vx is the right size, the Palm III is close), and had market share. The integration of the built-in applications with the desktop was decent, although add-on applications had weak or non-existent desktop equivalents. Battery life was quite decent, and I found Grafitti acceptable, especially with the non-standard Grafitti strokes from the O'Reilly text - *PalmPilot: The Ultimate Guide* for enhanced recognition. Only the 2MB of memory was inadequate. The Palm Vx was a solid improvement, despite some significant manufacturing defects.

Unfortunately that was the end of the first "Golden Age" of the PDA. (see also Palm Disappointments: Wrong Turns). Post-Palm III devices were less robust, with higher defect rates. Microsoft's malevolence and Palm's incompetence conspired to make Outlook/Exchange synchronization all-but-impossible -- unless one completely merged one's personal and corporate life (thereby defeating the premise of a PERSONAL Digital Assistant). Production moved overseas, and quality decreased quickly. The PocketPCs were worse. Despite beautiful screens and flashy features, PocketPCs failed everyday usability tests and were abandoned in droves. Palm forgot much of its original vision with a plethora of incompatible connectors, making it very difficult to sync more than one device per computer. Moving data and applications between generations of Palm devices became a treacherous and error prone move; each time this failed a percentage of users gave up on the PDA.

Many adopters of PDA devices were relucant to learn Grafitti or the simpler and less effective PocketPC equivalent, and used them as read-only devices. Unfortunately in as read-only devices they do not replace paper planner systems, and many early users abandoned them.

As of 2003, after a hiatus of about 2-3 years, there've been a few signs of life. The battery problems are at least no longer getting worse, though they are pretty bad. (After a year or so of use most of the LiOn batteries will have trouble making it through an 8 hour day without a charge.) The Tungsten E, for all its flaws, may be a reasonable modern heir to the Vx -- at a pricepoint consistent with its 12 month lifespan. The Treo 600 is the first phone/PDA combo that is even remotely interesting. The iPod has PDA features and a 30GB hard drive. Palm OS 6 sounds interesting, especially when paired with 2GB removable storage media. One day Bluetooth may realize the neglected promise of IrDA -- albeit at a terrible cost in battery life.

Eventually the PDA/Palm market will regroup and try again. Someday something like the Palm, in addition to being an auxiliary memory store, will replace the wallet (biometric identification with public-key encryption technology [9]), the phone [6], the key [8], the paper back and the walkman/radio. It will just take longer than we thought it would in 1998.

Using COM3 for Synching

(Last rev @ 2001)
Both of my COM ports are occupied for use with my modem. I didn't want to unplug cables, so I installed an old 8 bit ISA serial card. I set the card COM ports for COM 3 (shares IRQ4 with COM1) and COM 4 (shares IRQ3 with COM2). [I was unable to use other IRQs with this card under Win95, even though I could under DOS.]

My PnP BIOS did not recognize the new device. I used the Add Hardware control panel to add new serial ports. I did not allow Win95 to search for the devices.

After restarting, I installed the Palm software. It found my Palm III on COM 3 (make sure it's on). I can HotSync without any problem, but I cannot use my modem at the same time as I HotSync. To avoid conflicts I set HotSync Manager so that I have to start it manually, it does not startup with the system start.

Below are the COM/serial port resources used. This information is surprisingly hard to find on the Net; however these are the age-old (DOS 3.x) mappings for multiple COM ports. Note that IRQs (interrupts) are shared but i/o addresses (hex, memory) are distinct. I believe you will have problems if you try to use two serial devices that share the same interrupt at the same time; this arrangement works best when serial devices are used intermittently. (The pathetic interrupt limitations that we experience still are a direct descendant of the first IBM PC.)

Resource Utilization by COM Port

COM	IRQ	i/o port
COM1	04	03F8-03FF
COM2	03	02F8-02FF
COM3	04	03E8-03EF
COM4	03	02E8-02EF

IR HotSync with Windows 2000

(Last Rev @2001, this works better with XP and PalmOS 5.)
After years of failure I actually got IR HotSync working with a laptop. To say the least the industry's litany of problems with implementing the IRDA spec bodes ill for Bluetooth!

It is working with a Micron TransPort ZX PIII running Win2K SP2 with HotSync Manager 4.0 and PalmOS 3.5.3. This laptop was configured with COM2 disabled, I had to enable COM2 in the BIOS (auto) and restart. Windows 2000 then installed the Wireless Link control panel.

There are two important things to remember with Windows 2000 IR support:

- In the Wireless Link control panel you must disable the Image transfer (from camera) function. Otherwise the IR port is not available.
- Beam receive should be set to off on the Palm, otherwise the Palm reacts to a signal emitted from the laptop IR port and interprets in incorrectly.

Security

I think the built-in security features are inadequate. Even a shorcut to hide/show/mask private records would be an improvement. I use TealLock instead.

If you use the built-in security feature with TealLock as follows

- set everything of value to 'private'. In OS 3.5 you can "mask" private items. This is a big improvement, in the past a private appointment wouldn't display, and since I rarely turn on viewing of private items it was basically invisible. The masking feature alone is worth the 3.5 upgrade, but few people seem to have noticed it.
- always hide private (but it's easy to forget to rehide, TealLock automatically hides every time the Palm powers up)
- use a long inconvenient password for the base security system (combined with a quick lower security one for TealLock)
- usually leave the Palm unlocked with private records hidden. (or locked with TealLock as a first layer of security)
- map the security application to a button (calculator) for quick access. (In OS 3.5 the security feature is present on most system menus, so this is no longer needed.)

Installation and Device Transtion Problems

On Changing Devices

Nowadays when you sync a new device to an existing Palm desktop user account, the default behavior is a full restore. BEWARE. I moved my wife from a CLIE (ugh, buggy, unreliable) to an m515 (has its own problems). Unfortunately some OS patches and hacks on the CLIE were incompatible with the 515. It wouldn't boot. I did a warm reset, tracked down the suspicious files and deleted them, then successfully restarted.

PalmOS hardware vendors probably don't spend a lot of energy thinking about how customers will migrate between PalmOS devices.

Check the Palm site for advice on upgrades and device switches. Non-gurus should get help.

Software

Go to http://www.pilotgear.com/ to download or learn more about most of these apps. This is what I've currently paid for, or am evaluating and expect to purchase.

Acrobat Palm

Converts pdf into a format that is rendered by the Palm viewer. I'm using version 2.0, and it works pretty well. It's optimised for Acrobat 5.0, but it works well with my 4.0 documents.

DateBk5

A superb replacement for the built in date book. This application was licensed by HandSpring and it is the foundation for the Calendar+ application.. A large application, but it shows scheduled ToDo events! Uses the Datebook and ToDo databases, so very compatible. Please register this great product.

ePocrates

My wife, who is in active medical practice, uses this "free" (marketing sponsored) drug information application. It is elegant and effective. I would assume that any information provided during registration will be used, and I assume (without checking) that they monitor what medications physicians review. Each device sync delivers various marketing messages, but they are tolerable so far. I would suggest using a junk email address (see spam) when registering.

JFile Pro

I transfer limited data from my desktop FileMaker databases to JFile Pro. The 2003 versions of JFile support encryption of databases as well as hiding them (private). My password databases are hidden, encyrpted, and set to not sync with the desktop.

PocketMirror Professional 3.1.5

See Synchronizing with Outlook/Exchange

RPN

Basic RPN calculator.

TealLauch and TealMaster

These replace EasyLauch, which no longer works with OS 5. I don't like hacks, but I'm addicted to the power of this launcher.

TealLock

Palm Security. They provided a free update from the OS 4 to OS 5 version.

TealScript

Salvation for those suffering from Graffiti One withdrawal. I'm testing the OS 5 version but I full expect to register.

WordComplete

A utility by CIC, who also make Jot. Guesses words based on initial string.

Rejected software

Software I've used and give up on or have set aside for now.

AvantGo

No frames, no cookies, uses a proxy server. Can't copy text from pages one views (annoying). Simple tables and forms are ok. See also a presentation (earlier versions) on using AvantGo with the Palm III. I used this for years, but later versions became buggy and bloated. The company basically went under and I gave up on AvantGo. I do miss it. There's no real alternative.

DiddleBug

Simple sketch pad for quick notes. Set alarms for reminders. A free open-source product. Best feature is the ability to create a Grafitti note while looking at a sketch and have it transferred to another Palm app using Plug-Ins. Take it from a former BugMe user -- this feature is critical. I liked BugMe, but it seemed to me that sketches were mysteriously blanking and I need the DiddleBug's transfer feature. I tried CIC's QuickNotes, which is in some ways superior, but it there's only a 5 day evaluation period and it crashed my Palm within minutes of testing. I had problems with image drawing in OS 5 and I don't think this is an active project.

EasyLaunch

I loved this software, but it's not compatible with OS 5. If you've an OS 4 machine, try it with X-Master. Very efficient application launching.

Eudora EIS 2.0

Gave up on Palm email.

GoAmerica

I tried this one with the Minstrel V wireless modem. I'm not sure what sofware caused the problem, but whenever I launched Go.Web the GoAmerica home page would appear ... then lockup. I was very unimpressed by their password-protected web site -- the site didn't work!

Intellisync

I struggled with this software for about two years before I finally gave up on it (see Synchronizing with Outlook 2000). It's very buggy, the support site is very weak, and PumaTech essentially charges for bug fixes. I've lost count of how many Dr. Watson's this thing has given me. Of course Outlook/Exchange is such a nasty environment the fault is probably Microsoft's -- but Pumatech took my money.

Jot

I rejected this years ago, then Palm based on Grafitti 2 on Jot. I still dislike it.

OnlyMe 2.15

See Palm Security. Ended up staying with TealLock.

pdQsuite

Includes a quite decent email package that works with my desktop Eudora email, and a very simpleminded browser (no tables, no images, simple forms) that is pretty quick. I may try this again, but for now I'm not doing email on my Palm.

Backups and User File Versioning

Every time you sync your palm you create a backup. That sounds fine, especially if you also backup your desktop data files. Except ....

It's very easy to make a major editing error on the Palm, such as replacing all text in a memo with a single character. When you do this you will usually discover that the undo function that's present on all Palm menus usually doesn't work. If you don't notice your error and sync with your desktop you will overwrite the desired memo on your desktop. Imagine if this memo contained vital information ...

It's not at all convenient, but I recommend creating versioned backups of your desktop files. This is really a problem that Palm should address in the desktop application, but they have other bigger issues.

Palm Desktop 4.0

This is the January 2001 version of the Palm desktop. It has some new views and a prettier layout, but it's slower and takes more system resources. The major issues, however, is that Palm's web site says this version is for **their devices only**. I suspect that's true.

I wonder if this means that one can no longer move data from one Palm device to another? Even if the data formats do not change on the handheld, they could be altered on the desktop so as to prevent portability.

This is known as "data lock". You become locked into a vendor because they own your data's file format. Data lock, IMHO, is responsible for a great deal of Microsoft's power and fortune. Microsoft's lesson, that proprietary data formats is the key to wealth and power, has not been lost on other vendors.

NOTE: **There's no way to export Calendar items from Desktop 4.0**. If you want to move your calendar, sync with Outlook and export from there. Shame!

Moving Data Files

I like to keep my data files on a data drive that can be backed up independently of my applications. The Palm OS desktop supports this, but it's tricky. I had very bad experiences when I tried to move the data myself rather than letting the Palm desktop move it; when I moved the data the Palm desktop refused to recognize it.

1. Prepare the target directory where the data will go.
2. Start Palm OS desktop, it will use the current location.
3. In options, change the location of the data files.
4. The data files will be copied to the new location, then *deleted* from the old location. (So backup your data *before* you try this.)

Merging Categories (Tungsten|E/T3 desktop only)

If you rename a category to match an existing category, the items will merge into the existing category.

Palm Security

As best I can tell, the Palm OS and device was not designed with much attention to security. The built-in locking and private record features are awkward to use and are widely regarded as easy to defeat. A number of aftermarket products attempt to fill in the gaps, but Palm doesn't provide appropriate hooks for them to work correctly. Vendors have to hack the underlying OS, and reliability is a problem. Programs that encrypt data files, and thus protect data even if the Palm is breached, may be the best solution for now.

It's rumored that Palm will address security in Palm OS 4.0, but many Palm devices cannot be upgraded to

that OS. (I would not assume that any Palm device as of March 2001 will work well with OS 4.0).

Some security applications that attempt to protect the entire device include:

- TealLock *
- OnlyMe *
- Padlock Plus, PadlockHack
- PDABomb The Ultimate in PDA Security (very new, but quite interesting)

* I've alternated between using OnlyMe and TealLock. One or the other has worked with various versions of the Palm OS on the Vx. As of March 2001 I was getting intermittent "Memorymgr.c line 3036 chunk over-locked" that resolved when I switched from TealLock to OnlyMe, but for other reasons I later switched back to TealLock version 3.70b. I've used TealLock since then.

Graffiti Withdrawal and TealScript

In an astounding business failure, Xerox and Palm were unable to come to agreement on licensing of the Palm developed Graffiti software. (It was found to clash with a Xerox patent. I have no knowledge of the merits of the case.) Palm dumped Graffiti in favor of Jot, and renamed it Graffiti 2. Jot/G2 is relatively easy to learn, but it is very inefficient and involves a lot more pen activity than Graffiti. It is also pickier about stroke form and timing.

Mercifully, Teal SW had TealScript around. It's $20 to register. It allows use of much of the old Graffiti, with a few new strokes and some Jot strokes. You can edit/add strokes and it's trainable. In my testing it's been a life-saver too far.

I've produced a scanned document (pdf, 121K) to help remind Graffiit veterans of the G1 strokes; they are no longer available as a Palm help file.

The Tungsten E: My Impressions

I'd been nursing a Palm Vx along for years. Finally it began an accelerated digitizer death spiral -- the usual way a Vx dies. (I think some internal epoxy gives way, it's an old manufacturing defect.) Since my OTHER Vx had recently done the same thing, I had to act fast. Fortunately I'd anticipated this, and I'd researched enough to figure I'd go for a Tungsten E.

Impressions and notes below. See also My Usenet postings on the T|E.

1. There's something funky with the installer. If one doesn't sync during installation it fails to copy a lot of the smaller optional applications from the CD. If you explore you can find the "Add-Ins" (or somesuch). Everything works for my purposes without them, but it's sloppy.
2. It's a huge leap from the Vx to the T|E. In particular there have been 3 big changes, ordered here by how big an impact they've had on me:
   - Palm OS 5: small impact, had to replace EasyLaunch and X-Master with non-free (but valuable) alternatives.
   - Grafitti 2: medium-big impact, had to buy TealScript to recover.
   - Data Model changes to base applications: BIG change, I'm still working through the implications.
3. PocketMirror Pro 3.1.5 sort of works with the new Palm apps but it doesn't support the new features (larger text limits, etc). In testing I've had an unusually large number of mini-disasters when synching to both the Palm Desktop and Outlook, however I was then using an earlier version of DateBk5 (which

has since been fixed to work around bugs in the new OS and major changes to application data models). Currently, after much tweaking, I can sync Tasks (To Do) and Memos (Notes), but appointments and contacts are one way from Outlook to Palm.
The built-in Palm conduits do not support category-specific selective-synchronization -- a critical (and vastly underappreciated) requirement for synchronizing a personal PDA with a corporate Exchange server.

4. The TE is about the size of the Vx, but it's lighter and flimsier. Made in China and it feels like it. OTOH the Vx was almost $400 or 450 when it came out and the TE is $200. We'll see. It's definitely pocketable. The cover it ships with has nylon threads that make quite a mess of the front of the TE. Battery life is similar to a PocketPC, nothing like the Vx of old. The screen, the CPU, the memory, even the OS all seem to contribute. I suspect that after the first year of use, as the LiOn battery ages, the T|E will discharge after about 6 hours of unconnected regular PIM type use (eg. not music, communications, networking, etc). Since a new LiOn battery costs a significant fraction of a new PIM, and the battery is not designed to be replaced, the T|E device has a maximum lifespan of about 18 months.

   If you have a laptop at hand, keep the PDA plugged into a USB cable when not in use.

   From Palm's point of view this corrects the biggest defect of the Vx: despite their defects they still lasted too long. No recurring revenue.

   In addition to the fundamental power drains, there are software bugs and design flaws that drain the battery. Under some conditions I can't identify the TE "wakes up" from an alert then doesn't return to sleep. The front keys are not as well designed as those of the Vx or m500, besides being ergonomically less effective they are always activated when the TE is pocketed. This drains the battery and may have other obvious bad effects. You need to active the Keyguard feature. This basically disables the auto-on features of the buttons, and it even makes turning on by the power switch less effective (extra click).

   Lastly the Palm doesn't come with adequate controls to manange screen brightness. Happily Dimmer works very well and is inexpensive at about $10. It helps quite a bit. Turn off beam receive as well.

   Bottom line: it's wasteful and environmentally harmful, but one must be resigned to replacing this device every 12-18 months. All the more reason to spend $200 instead of $500 for the T3, which has similar problems.
5. The ROM is not upgradeable. So don't expect to put OS 6 on this device! Since the device has an effective lifespan of about 18 months (see battery, above) you should plan on switching to an OS 6 device in a year.
6. The Palm Desktop has changed quite a bit. The Mac version has a huge variety of ways to browse tasks (love it!) and the calendar has categories. The T|E calendar categories are compatible with the very latest beta version of DateBk5.
7. Migrating from an existing install takes some care. You need to go to the web site (link above) and carefully follow directions. Palm should have made this easier, but at least they're documenting problems that have been longstaniding and undocumented. (Going from a Palm to CLIE and vice-versa is twice the fun.)
8. The Tungsten E **power adaptor** is 8 oz. It's not as compact as a the Vx travel charger, but not as bad as I'd expected. The T|E does recharge, SLOWLY, via the USB sync cable. So if you have a laptop you could try plugging it into an "awake" (not sleeping) laptop overnight to charge. Be sure to disable "stay awake in cradle" and turn off the T|E when charging.
   - PalmOne, as of Dec. 2003, does *not* sell a replacement power adaptor, much less a travel

adaptor (adapter).

- Zip-Linq sells a mini-USB cable (see below) that works with the T|E and they sell a power adaptor that works with any USB cable. So you can slowly charge a T|E even without carrying a computer. Their mini-USB cable is included with their clever travel mouse, so I recommend buying the mouse/cable combination and/or the power adaptor. The power adaptor should work with the Palm supplied sync cable but I've not tried this.
- The T|E power adaptor is said to follow the Spring/Samsung/Kyocera "universal power adaptor" connector and power specification. (I can't find any documentation on this other than a few usenet postings). See this note.

9. Why can't Palm standardize on their #$!#$! side rails. The TE won't accept the Vx or m515 covers. Is this incompetence or a desire to squeeze more money from long suffering customers? I think a mixture of both, the margin on the cases and covers is probably very large. I miss the lovely cover I had for my Vx, it was the perfect balance of pocketability, protection, convenience and usability. The TE's rail is not well designed. After only a few weeks of use the standard cover is sliding in and out of the rail.

   OTOH, the **TE WILL accept m5xx styli**.
10. The TE will NOT work with the Palm "universal connector" (so much for their promises of eternal fealty to the connector). See #4 above. However it uses a **standard 5-pin mini-USB connector** (same as the CLIE, but I'm not sure the slightly odd looking CLIE cable will charge the T|E), so the sync cable is cheap to replace. Not bad. I've bought several cables for $6 to $10 apiece, and I use them at work, home PC, home iBook, traveling, etc. It's great to be able to buy sync cables in bulk!
11. The infrared beaming between the Palm TungstenT3/TE and the Palm VII and VIIx are not compatible. In general enough data structures on the TE have changed that beaming items to any device is somewhat problematic.
12. The bundled applications have changed quite a bit. There are relatively few in ROM applications. The CD comes with many applications from external vendors (Windows only), in many cases they replace older Palm applications. The Palm calculator and Palm Expense application have both been replaced by aftermarket items (which I like less), however they're still on the CD (X:\Palm Desktop\Device Apps Common: Calculator.prc and Expense.prc). Depending on how well your desktop installation performed (results vary) these apps may be in your desktop Add-In folder. I think there are also associated prc files for each that provide english language help files.

    Older apps, especially security and encryption apps probably won't work. TealLock gave me a free upgrade! A lot of Palm software vendors are offering free or very low cost updgrades to OS 3 applications.

    I had to upgrade a lot of my favorite Vx utilities. CIC's WordComplete, for example, TealLock, JFile, DiddleBug, DateBk5. Upgrade costs were minimal or absent. My version of WordComplete was OLD, for example, but CIC gave me a free upgrade. I did have to buy TealScript (Grafitti 1), TealMaster (OS 5 hack management) and TealLaunch (replacement for EasyLaunch); they set me back $45. (So the real cost of the T|E for me was closer to $260.)
13. DateBk is my utterly critical app. Unfortunately when Palm changed the data model for the standard applications they broke a lot of aftermarket products, including DateBk. They also apparently introduced some nasty bugs. Happily CESD (DateBk's author) has worked around most of the problems in beta versions. DateBk5 fanatics should delay purchases of the T|E or T3 until a final compatible release of DateBk5 appears.
14. Grafitti 2 sucks. Happily TealScript is one answer. It seems to work, but I've had to manually retrain a few problematic characters. TealScript and Jot/Grafitti 2 remind me of the true genius behind Grafitti 1. There's far more to G1 than meets the eye.

15. Mac users have a much better desktop app than windows users have. OTOH, Mac users lack the small tool for updating phone link scripts. Mac users can download phone link data.
16. On the Mac when you add a photo it's automatically sized to the TE display and each image is about 30KB. They look decent. On a PC the **entire image** is stored. My images are 1.5-3MB EACH, so I'll be using the Mac to put images on my TE. I created an iPhoto album called "Palm". I move photos in and out of there, and every so often I 'select all' then drag and drop them onto the Palm image/mp3 installer droplet. Very easy.

    (Yes, I know some people consider the PC approach to be preferable, but the Mac allows you to store full size photos on the Palm as well as providing the great little photo sizer.)
17. The screen is almost painfully bright. Dimmer is great (see battery life discussion, above).
18. I don't like the replacement for the up/down buttons. It looks pretty, but it's ergonomically stupid.
19. You can register Documents To Go, or you can simply install and let it get it's updates. If you register you can download the full installer for the newer version. It sounds like D2G will be one of the biggest advantages of this device; it offsets some of the things I need to replace. Get the latest version, some earlier versions causes a crash when included in the system search.
20. The TE will not sync with the standard downloadable Desktop 4.1, you need the new conduits. Both old and new conduits are installed with Desktop 4.1 on the TE and T3 CDs, you can't download this installer so don't lose the CD!
21. I experimented with associating colors with categories in the Palm Desktop. I have about 10 categories in my calendar, and midway through this process the color of the appointment text was set to the background color. In addition, I couldn't click on any appointment! It turns out nothing is "wrong", the problem is design flaw! When you bring up the categories list to assign colors to a category, you are SIMULTANEOUSLY specifiying which categories to show (ALL vs. a selected category). This mixed action mode is asking for trouble, in my case the day I looked at had no appointments in the filtered category. (The colors remain, but the text vanishes.)

Palm V/Vx Problems

The V/Vx was a dramatic product when it debuted. Not surprisingly, it has several design problems. Sadly, more recent products from Palm, HandSpring, and SONY have been even LESS reliable than the Vx. Palms m500 series had the same power switch problems as the Vx.

I think the industry needs to spend some serious time understanding these reliability issues. I think the explanation comes down to consumer psychology and the decline of the brand. Once upon a time consumers valued a brand, and would pay a premium for a trusted brand. When consumers went to buying by "features" and "price", vendors had no choice but to abandon their premium pricing, and, eventually, their brand value. Finally consumers are catching on -- we are beginning to value quality. Problem is -- there are no longer any clues to quality! All the brands (except perhaps Apple) have been completely degraded.

I expect that by the fall of 2003 we'll see a bunch of books out on "rebuilding your Brand" as we slowly and painfully come to realize that Brands and Names actually have a value that's been lost.

A few of the V/Vx problems are listed below.

Palm V/Vx Power Switch Failure

(As of 9/2002 I've seen a similar failure in a Palm m500. In that case, however, the switch was locked closed, so the device rapidly drained its batteries and appeared "dead". If this problem has really persisted

into the m500 line Palm has a lot to answer for!)

The on/off switch (button) on the V/Vx (power switch, power button) fails after several months of use. I've had three Palm Vxs, every one failed. You have to push harder and harder to toggle the power status or the backlight. Eventually it becomes worthless. Among other problems, this makes it *impossible to do a hard reset*! (You can, however, clear a user identity without a hard reset, see Using the dot 5 command to reset a Palm Vx with a defective power switch). A more subtle but everyday problem is that if your Palm blanks the screen while you're working, you can't use the power switch to return to your work. Instead you must use an application button, which switches one to the application. (Note if Palm cared about its users, they'd provide an OS patch that would cause one of the external application buttons to behave like the on switch if it were pushed when the device is off.)

So loss of the Vx power switch disables back lighting, you can't turn the device off (it will auto-off as per preferences), you can't do a hard reset, and you lose context when powering up from an application button.

At least one knowledgeable user thinks the problem is is due to a small internal plastic tab that wears away. If one presses the power switch/button in the plane of the unit (eg. not directly towards the back of the unit) that the tab wears away quickly. If you have a working Vx, be careful to only press downards, perpendicular to the plane of the unit, when using the power switch. I would advise using other methods (see below) to turn the unit off and on, and to use the power switch only when it is essential (for a hard reset, or when you need to maintain your work context when turning the unit on). The Vx power switch has a limited number of pushes in its life -- try to minimize them.

The erosion of this plastic tongue may be aggravated by dust around the switch; it may occur more quickly when a Palm V/Vx is carried in a pocket. Using a protective cover may reduce dust exposure and erosion. Some Palm users have discovered that blowing hard into the vary fine gap between the power button and the case can *transiently* restore some function to the switch. This does work for a while, and it can be critical if there's a need for a hard reset. It's a temporary fix though, eventually the tab wears so much that nothing works. Jan D. reports that sometimes if one wiggles the contrast button from side to side this may cause the power switch to work again, perhaps by moving the internal circuit board slightly. This is also a transient fix that will stop working.

There are several workarounds that partially help with a disabled power switch. Marc Abramowitz (mabramo at earthlink dot net) pointed me to EasyLaunch and Richard H pointed me to ButtonOnHack and SleepStroke. (The first comes to us from the Czech Republic, the second from Japan, and the third from Thailand. Sometimes the Internet really does live up to the dreams of its creators.)

After extensive use EasyLaunch and ButtonOnHack, used with X-Master (Hackmaster management) have worked very well. Ever few weeks some occult conflict shows up and I have to do soft reset. I've never lost data. Note that ButtonOnHack cannot support the "hard reset" function of the mechanical on/off switch; so my Vx cannot perform a hard reset. (I'd have to somehow drain the battery instead.)

Note that all of these are freeware (!), but Hynek Syrovátka, the author of EasyLaunch, likes to get postcards for a thank you.

My setup

- EasyLaunch and ButtonOnHack are installed with X-Master.
- I power on by pushing the Calendar button. Thanks to ButtonOnHack this behaves like a power on switch if the device is off, but like the usual application button if the device is on. This means I don't lose my work context every time my Palm goes to sleep.

- Power off by EasyLaunch
  - Stroke from the silk screen applicaton icon -> silk screen context menu icon: turn power off (but not lock, I use TealLock for locking).
  - Stroke from silk screen calculator icon -> silk screen find icon: beam item
- Power off and lock using TealLock's graffiti stroke.
- Assign the 'full face' stroke action to backlight toggling (Palm prefs)

Other potential solutions

- Power device on by pushing one of the standard Palm buttons. (Yes, you lose your context)
- Disable AutoOff to reduce loss of context
  You must now remember to turn off your Palm using one of the following techniques. Do this to reduce the number of times that one loses context due to an auto-off occuring. (example: Looking at note on a contact, system does auto-off, turn on by pressing the "notes" application button, have to navigate back to contact and find note, fumble phone, drop phone and Palm and ...)
  - Buy NeverOff for $1. I think this is safer, and you can change the off setting to 10 minutes, which is wiser! I have not yet tested this however.
  - Use dot-3 command: Create a new note, write Graffiti ShortCut symbol, then two dots (period), then number 3. The text [No Auto-Off] appears. Disables the Prefs setting for Auto-Off. Must do soft reset to restore preferences. **DANGER**: If you write a 5 instead of a 3 you delete your HotSync log and user name.
- Power off using SleepStroke. (A simpler fix than the powerful EasyLaunch.)
- PowerOff with a locking tool
  - Assign OnlyMe to the calculator button on the face plate mask. I tap on that button to instantly lock the device; then it powers off in my pocket but errant keystrokes from carrying a powered Vx don't cause data problems.
  - Power off and lock using TealLock's graffiti stroke.
  - Assign the 'full face' stroke action to lock and off (but then you lose backlighting)

Digitizer Drift

All PDAs using pressure sensors matched to the display can experience digitizer drift. That's why all PDAs of this class come with a digitizer alignment module. Unfortunately, after initial setup, few users know enough to recalibrate their digitizer. I think this has been a contributor to poor user experience, and PDA abandonment for many users. (It's easy to come up with some strategies to encourage user to recalibrate their devices on a regular basis; it's inexplicable why Palm has never addressed this issue).

The V/Vx series, however, can have very serious problems with digitizer drift. One expert (Andreas V) explains it this way (I'm paraphrasing below. For US repairs Andreas recommends STNE Corporation - Specializing in Palm, Handspring and Sony memory upgrades):

1. The frontside metal case lacks stability at the upper side, around the power button. It tends to press down on the digitizer, causing varying misalignment over time and eventually damage to the digitizer. (jf: I'd imagine this problem is more severe if the Vx is kept in one's pocket.) Removing the front plate and realignment is the recommended fix (jf: the Vx is NOT easily serviceable. Don't try this at home.)
2. The flat digitizer foil cable connector inside the unit tends to develop contact problems over time. It needs to have the contact springs bent into position again and have 1-2 mm cut off from the end of the

tab.

The "Vx Mad Digitizer Syndrome" has been the subject of several usenet threads. Before hardware repair or device replacement becomes inevitable, some software utilities may help, particularly if the problem shows up as severe misalignment after a soft reset.

- AutoDigi ($15)
- DigiFix v1.2-2 (freeware)

Cannot Hot Sync: No User Identified

This problem occurred to me in April 2001, and it happened every few days thereafter as long as I was using PocketMirror Professional 3.0 to sync with Outlook 2000 under Windows 2000 in the office. When I stopped doing that the problem stopped. I've seen mention of it on the Palm newsgroups, but no full explanation. I've also seen this occur with the Vx using the portable data cable, this seems to be a hardware problem. See Palm V/Vx Travel Kit Charger/Data Cable: Defective Design.

On several occasions during that time, once with a Win 2000 machine at work [14] and once with a Windows 95 machine at home, I was unable to sync because the sync process stops at the point of indentifying the user (device name, username). No log file was generated.

Through a variety of approaches (swapping cradles, devices, machines, uninstalling, installing) I ruled out most of the obvious causes (hardware problems with Palm, serial port, motherboard, cable, cradle, etc.).

I identified the following workarounds. Once the device gets through the recognition step (correct user name identified) later syncs work -- until the next random failure.

1. Set transfer rate to 9600 bps. Sometimes this works immediately. Once the username is identified I cancel and return the rate to automatic. If this doesn't work, leave the rate at 9600 bps and add step 2.
2. Switch the COM port you are syncing to, eg. from COM1 to COM2 for example. After a successful sync you can switch back to the original COM port. If this doesn't work, add step 3.
3. Look for extra copies of the users.dat file that's stored in the palm data directory. It appears that with repeat installs the registry may point to the wrong users.dat file. Delete or rename any redundant copies. If this doesn't work, add step 4.
4. Delete the Pilot registry entry and subkeys. If this doesn't work, I have no further ideas.

The problem may be related to a registry issue of some sort, several usenet postings suggest this. Uninstalling HotSync Manager does not change anything, but I have not tried installing previous versions.

Some reference USENET postings:

- Thread 1
- Thread 2

Palm Vx Lithium Battery Life Expectancy

The Lithium battery in my Palm Vx, manufactured by GS-MELCOTEC, is 1-2 years old. That battery is now charging more slowly, and it holds its charge for less time. I probably get 2-3 days of use between charges. (This actually got mysteriously better, and there are some newsgroup posts suggesting bugs in the Vx battery electronics.)

I have read that Lithium batteries show degraded performance after one year of use, and that they have a lifespan of about 300 charges. Palm claims the battery will last as long as the handheld -- an evasive answer considering that a good number of handhelds are broken or lost within one year of ownership. Palm charges $100 to replace the battery (basically a device exchange).

On the **other hand**, a knowledgeable user writes:

> In theory and in practice, a good-quality single-cell Li-ion battery, such as the one in Palm Vx ... should easily last for >1,000 charge/discharge cycles, perhaps even 2,000-3,000. I have cells like that cycled thousands of time in the lab. Phones and laptops are much tougher on the battery than B&W PDAs.

See also Batteries in a Portable World.

Palm V/Vx Travel Kit Charger/Data Cable: Defective Design

I've had longstanding problems with the Palm V/Vx travel charger using two chargers on two different Vx. I thought at first this was due to a mechanical problem with making contact, but I think now that it's a failure of the V/Vx to receive or recognize a signal that should activate a charging mode. I find that if I start charging with the Palm in a "receptive" state that it seems to work well, though I still stand the Palm upright so that its weight pushes the travel charger pins into the Palm. The trick is:

1. Plug the travel charger cable into the Vx.
2. Switch to a view that shows the battery status (on my Palm this is the "home view"). If you are charging you will see a white battery outline (in my OS) with a lightning bolt through it. If you see this you can leave the Vx to charge.
3. If you do *not* see the lightning bolt, press the charger cable into the Vx slot. I apply moderately firm pressure. You should see the battery change from the "discharging" indicator to the lightning bolt icon. At this point the Vx should continue to charge.

The travel kit data cable has similar problems, though less serious. After about a year of heavy use I began having intermittent failure of the data cable (manifests as no desktop response to pressing Hot Sync icon on Palm, or a partial response with the "User:" field remaining blank). Playing with the pins on the cable and retrying usually works. (This went away, so I can't explain what the real cause was. It might have been software related.)

Broken Vx Cradle Tabs

After about two years of routine use, one of the plastic tabs on my Vx cradle broke. The cradle is no longer very reliable, and I expect the other tab to brake shortly -- rendering it worthless.

Palm m515 Problems

Very short battery life

I was given a 515 with a very short battery life. I think it had switch problems like the Vx before it, so I jammed the swich open and I installed the software I've used to resurrect my Vx (I have two Vx devices now, one is a backup, both have bad power switches). In addition, though, the battery would only last a few hours before dying. This turns out to be a very common m515 problem (the m515 had another problem with shorting out during USB synching -- that problem requires repair under warrantee). Palm has this fix:

> If your rechargeable Palm(tm) handheld will no longer accept a charge, the battery life is

depleting, or, will no longer switch on, you will be required to hard reset the Palm whilst on the cradle. This will reset the internal connections so that a full charge may be obtained.

1. Place the Palm handheld onto the Hotsync(R) cradle and ensure the AC adapter is connected. 2. Perform a hard reset by holding down the power button, while using the reset tool (or a similar object without a sharp tip), to gently press the reset button on the back panel of the organizer. 3. Release the reset button. 4. When the 'Palm Computing Platform' logo appears on screen, release the power button. A message will appear on screen warning 'Erase all data', press the upper half of the scroll key to complete the hard reset and display the 'Digitizer' screen. 5. Leave the Palm on charge for at least two hours (if it is part of the Palm M500 series, or four hours for the older models) and then test the unit to ensure that normal operation has resumed.

I cheated. I did as above, but I did a soft reset rather than the above hard reset. I'd read somewhere that this might suffice and it did. The battery now charges and lasts my wife about a week (mild use). Apple iBooks, btw, can have similar problems with their lithium batteries.

Palm IIIxe

Palm didn't sell many of these devices, which is probably a very good thing. They were the last in the Palm III line, and the **three** IIIxe devices we've used had an *unfortunate* behavior. Two exhibited a "flashing logo crash"; they would crash and require a hard reset (full data loss) to restart them. The first one did this about once a week, the replacement did it every few weeks. I had a repair done under warrantee in January and a replacement in July. The replacement unit had a spontaneous hard reset with total data loss in the first week of use. In 2000 the Palm Vx had similar problems when they shipped with bad 8MB memory chips. Only a cynic would suspect that the unpopular and shortlived IIIxe shipped with recycled Vx memory chips with some inadequate software patch.

As of July 2001 Palm has not publicly acknowledged the problem, but I have received email from other persons experiencing this, see also newsgroup discussions.

I made one more effort with Palm in July to see if they could straighten this out. I was abandoned on hold several different ways, promised call-backs that never materialized, and finally told by a support person that they could send me yet another refurbished IIIxe if I really wanted one. Unfortunately the only comparable device Palm made was the Vx, and they were unwilling to offer that in exchange.

I won't be buying anything from Palm again, my next device will probably come from HandSpring or SONY.

SONY Clie PEG-SL10

I bought this for my wife as a replacement for the evil Palm IIIxe. It's been slightly more reliable. It's a great form factor at a great price, but SONY made the usual unfortunate quality trade-offs. We ended up giving up on it after almost a year of struggling to make it work reliably. My wife had success with a Palm III, failure with a IIIxe and a PEG-SL10, and is now on a resurrected m515.

- SONY has an evil warranty and service policy. The default warranty is 90 days, but if you register online they extend to one year. I recommend using a disposable email address, I suspect SONY does a lot of customer spamming as well as traditional junk mailing. The warranty and service descriptions on their web site lead me to suspect that SONY will make the customer service experience fairly miserable.
- The font is very thin and hard to read on the grayscale display. Some simply leave the backlight on all the time, but we've used Thin Font Fix. Many thanks to the Japanese hacker who has donated this

work.

- **Don't let the batteries run down.** Unlike the original PalmPilot, this device doesn't conserve data when battery power falls. You lose everything. This seems to be true of all the SONY CLIE devices. They probably saved $1 on each device by eliminating a capacitor. Backup data BEFORE changing batteries.
- My wife has twice lost all data from this device, though one occurence was probably due to a loose battery cover. The first data loss (no explanation) led to a Google/Usenet Thread on CLIE and PDA reliability.

Dot Commands

These are somewhat undocumented backdoors into the Palm OS. Some of them put the Palm into debug mode, where it can be controlled by an external PC running terminal software; those commands are an obvious security risk and were partially disabled in later versions of the OS.

Although some dot commands are useful, some are very dangerous. The great risk is that you'll make a data entry error and trigger a dangerous result rather than the intended result! In general, stay away from them.

The Haus--PalmOS Dot Commands has a good description of the dot commands. DBNet also has undocumented Palm tips in doc file forma, but I've not tried it.

One dot command that has been used with the Vx in particular:

> If you prefer that your black pixels remain black, Palm has added a dot-command shortcut to toggle the backlighting effect. Create a new memo in the Memo Pad, then write the shortcut stroke (draw a cursive L), then write a period (double-tap) and an 8. From now on, you're backlighting will be closer to what you're used to. Perform the same sequence to revert to the new Palm devices' default.

Using the dot 5 command to reset a Palm Vx with a defective power switch

The .5 command deletes the user identity on a Palm device, but retains data. It has long been thought to be a useless and dangerous command. It has one unique use however. If you have a Vx or m5xx with a defective power switch you can't do a hard reset. If you can't do a hard reset, you can't use a hard reset clear the user information on a Palm and make it your own. You can, however, use the .5 command.

After executing this command the Palm will no longer have an owner. Remove any password if it exists (select "lost password" in security -- this will delete any hidden items). On the desktop set HotSync so desktop overwrites device for every setting. Execute a HotSync and select the desired username.

Synchronizing a Palm Vx with an OS X iBook

I used to sync my Palm Vx with my iBook. This explains how. As of Nov 2003 I sync a Tungsten E with my iBook -- works much better! Beware iSync and the Palm portals -- I recommend using only the Palm Desktop and the Palm conduits. The material below was last revised in 2003:

My OS X iBook is my personal laptop, and my preferred traveling computer. I also travel with a Palm Vx, so being able to synchronize the Vx with the iBook is very desirable. Unfortunately the one painful surprise about the iBook is the lack of an IR port, and I knew it lacked a serial connector. I thought I'd simply by a new PalmOS device with USB sync or Bluetooth support (the latter would also require buying a Bluetooth

USB device), but I've ended up inheriting a number of Palm Vx devices, cables, and peripherals. The Vx has been reliable, some of the newer PalmOS PDA's we've bought have not been. I decided to invest in a Vx sync solution, and hold off on a new PDA until I see what Apple does and whether PalmOS and its licensees recommit to reliability.

There seem to be two choices for how to proceed with a Vx as of Jan 2003. As always the key thing is the quality of the device drivers, and that tends to be very vendor specific. You want to go with a trusted vendor.

- MadsonLine sells a USB/IR Port device for OS X: This would mean fewer cables to carry, but it's a new device and I had no reports of it working with a PDA IR sync. I had some trouble getting IR sync working on my Win2K machines, and I find IR sync to be very slow under Windows.
- Keyspan sells a USB/Serial PDA Adapter with OS X drivers. I've read reports of success with this device, Keyspan has a great reputation, the device works under Windows as well (though I don't really need it for Windows!) and it seemed simpler. Despite having yet another cable to carry, I opted for this solution.

I downloaded and installed the latest Keyspan device drivers (of course I ignored the older version on the CD) for OS. I plugged in my Vx and used the Keyspan utility to confirm the system now had a (virtual) serial port. I then downloaded and installed Palm's Desktop 4.0. The HotSync worked quite well. Palm Desktop on the Mac is a bit klunky (ugly) looking, but it seems to work.

I then experimented with iSync and iCal. The iSync installation is clunky, with a separate Palm conduit install step that disables the standard Palm conduits. I got everything working, but it felt like a hack. Usenet and Palm support forums suggested performance was miserable, and since I need to **also** sync my Palm Vx with my PC Palm Desktop **and** my workplace Exchange server I thought syncing with the **very** different iCal and Address apps was a bridge way too far. (Synching one Palm to 3 desktops on two platforms with two very different desktop applications is way beyond the bounds of sanity. It may work for me only because I have experienced all the pitfalls.) I decided to return to the Palm Desktop/Mac (for now).

Since the iSync conduit install removes the Palm conduits, I reinstalled Palm Desktop and they were restored. Subsequent synching appears to be working and the Keyspan device has been trouble free.

BTW, if you are synching a Clie with OS X you will find there's no SONY support for this. Apparently a combination of Palm Desktop 4.0 and Mark-Space · The Missing Sync will do the trick, but I have no personal experience. I may try synching my wife's SONY Clie PEG-SL10 with the iBook and Desktop 4.0 to see what happens without "They Missing Sync".

Synchronizing with Outlook 2000 & Exchange Server - Years of Painful Lessons - LEGACY

This is *a hard problem.* Unfortunately it's even worse with Palm OS 5 (introduced 2003 with the Tungsten E and T3). The notes below are legacy notes, they provide some hints and workarounds. I don't have time to fix this up, so here are the legacy notes.

The Palm applications use a very different data structure from Outlook applications; with a few exceptions Outlook is a vastly richer environment than the Palm handheld/desktop applications [10]. Simply transferring data from one data model to another is a big challenge in any industry (see healthcare, for example), but synchronization is qualitatively more difficult. In this case the data modesl are highly assymetric, so the challenge is even greater. Then there's the fact that Outlook (as in my case) may be serving as an Exchange Server client.

It's a fundamentally hard problem, but in addition there are two major confounders. The market for this software is not huge, and most of the market doesn't use the advanced features I need. Worse, Microsoft will use every tool at it's disposal to destroy the Palm platform -- and Microsoft owns Outlook. All together this may be an unsolvable problem, and considering the dominance of Outlook in the corporate world, this may be a significant threat to the Palm platform.

I have spent man-weeks of effort over the past three years dealing with problems related to synching my Palm devices with Outlook 2000 and our corporate Exchange Server. The problem is that I must use Outlook 2000 at work, but at home I sync with the Palm desktop. The handheld Palm unifies my personal and corporate calendars, but I do *not* want to put my personal data in my corporate workspace. The synchronization challenge is hard enough, but *in addition* I need to do "intelligent" (rule based) synchronization. To further complicate life, I am wedded to DateBk on the Palm.

I have used Pumatech's Intellisync, DataViz's Desktop To Go, and Chapura's PocketMirror 3.0 Professional. I am currently (still) struggling with PocketMirror. Desktop To Go lacks the ability to selectively synchronize items (other than using the private functionality, but I want to keep Private for its security functionality), so I won't discuss it further.

My 2002 recommendation is to *keep it simple*. Use Chapura PocketMirror Standard, *not* professional. Sync only with one machine and sync all your data. People who follow this strategy seem to have good results.

If, however, you are quite bonkers, then read on.

Outlook Tips

- Whatever you are using you need to keep your Outlook environment as generic as possible. Do not use object embedding or object references; the Palm cannot support them. Forget about fancy formatting, if you edit the record on the Palm that will all be lost. Don't use long notes; the Palm can't handle them.
- No synch software does very well when you switch the category on a Palm 'ToDo' item to a category that isn't being synched to the to desktop. In general you're better to duplicate the item in the new category and delete the original.
- Avoid time zone changes. I think I've had some bad things happening when changing time zones on the PC and DateBk and then syching.
- **If you purge your Palm DateBook using the Palm Desktop (archiving old appointments) and then later sync with Outlook, depending on your sync software Outlook may delete all your past appointments. If you use Outlook/Exchange you may delete them from the corporate calendar!!** RECOMMENDATION: If you use Outlook/Exchange, move your old appointments from the Exchange server to a local store. Then when you sync they should be kept in Outlook but removed from the Palm. **TEST FIRST WITH A SINGLE OLD APPOINTMENT TO ENSURE TERRIBLE THINGS DO NOT HAPPEN!!!** If you should happen to delete thousands of appointments unintentionally from the corporate server, you will find them in your deleted items folder. Don't empty that folder! Create a local folder for calendar items and copy the removed appointments there for archival purposes.

Intellisync (Pumatech)

Intellisync is by far the most powerful and programmable synchronization software on the market - when it works. Unfortunately it failed me so many times that I finally broke down and threw in the towel. I had all manners of crashes, always with cryptic and worthless error messages. I'd paid for the bug-fixes (disguised as upgrades, and not cheap), but new bugs emerged. Pumatech's web site is weak and customer support is

unresponsive and expensive.

Pumatech writes strings into the note field of Palm records to represent unsupported Outlook data types, such as categories in the DateBook (unlike PocketMirror Intellisync does not use DateBk3's categories). This worked quite well for me, I simply avoided altering that text. I used a category with every Outlook data item (I created item templates that had this category set), and I used Intellisync's rules to control synchronization by category.

In addition to a rich set of rules Intellisync supports item import/export as well as the more customary overwrite behaviors. It also has excellent date range filters. I just wish the software worked, and that the company treated its customers a bit better.

PocketMirror Professional 3.0 (Chapura)

This software is less powerful that Intellisync's, but the web site is much better (the manual, for example, is online) and the customer support person I spoke with was outstandingly good. It definitely has bugs, but it tries to support DateBk3. They have one serious design problem that I think could be fixed; fixing it would make the software much more useful for me.

I closely reviewed the online help file (if you purchase this software electronically the manual is a separate free download) and the online FAQs. In addition for specific hurdles I called tech support. I think when you read the following procedure you'll understand why I had to do so much preparatory work, and why I had to do so much experimentation.

The following description of how I've made PocketMirror work (So far! I've had a number of crashes, "exceptions", etc) begins with some key things to know about how the software works, then discussed data cleanup prior to synchronization, then describes the synchronization setup process. This material is not in the manual or on the web site. This is a very spartan description, it's strictly for experts.

This is painful and complicated. There is a high probability of disastrous data loss. If you mess up your corporate calendar you could lose your job. This will not work smoothly. You have been warned. Danger, danger ...

Things to Know about PocketMirror Professional 3.16 (PMP3)

- It syncs with the Exchange server if you are using Outlook/Exchange. Prior to every sync I push F9 to force Outlook to resync with the Exchange server - just to be safe. I've had problems with offline sync and I try to avoid it.
- My Palm Vx CD included PocketMirror 2. You can find it on the CD and install it manually from there at any time. I installed PocketMirror 2, then paid $25 for the 3.0 Professional upgrade and installed 3.0. I'm now on 3.16.
- **The only way to keep items on the Palm that do not sync to Outlook is to use the *Handheld Category = Outlook Folder (Subfolders)* option.** You can use rules based on Outlook categories to control the movement of data from Outlook to the Palm, but not the other way around.
- **You can control synchronization to subfolders, but the root folder *always* syncs to the Handeld Category of *Unfiled*.** This is a headache, and most of my work was trying to figure out how to deal with this limitation.
- **Before you can tell PocketMirror NOT to put your personal data on the corporate server, you usually (see below) have to first put your personal data on the corporate server.** After your data is there you can tell PocketMirror not to use it and the data will be removed.

- **Outlook does not deal with subfolders very well, especially when used as an Exchange Client!** If you nest folders under Calendar, for example, you get multiple calendars that don't interact with one another. If you accept an appoinment invitation from Exchange, Outlook will create it in the root (top) folder only. To Do items display in Outlook views only from the root folder, not from a To Do subfolder.
- It's very easy to blow away all your data. I made sure I had a current backup of my Palm data on my Palm Desktop at home, and I made an extra backup of my personal folder from the Palm Desktop. I created empty folders in Outlook for practice runs.
- When you create Category Links in PocketMirror (see below) the links are to the underlying objects. So if you move or rename an Outlook folder, the link persists to it. Be careful!
- I always use the slow synchronization setting, which is invoked when you tell PMP3 that you will sync from multiple clients. It's slower, but may be less error prone.
- If you change the root folder then links change to match new root folder -- this can be useful in dealing with selected problems.

Initial Data Clean-Up Process

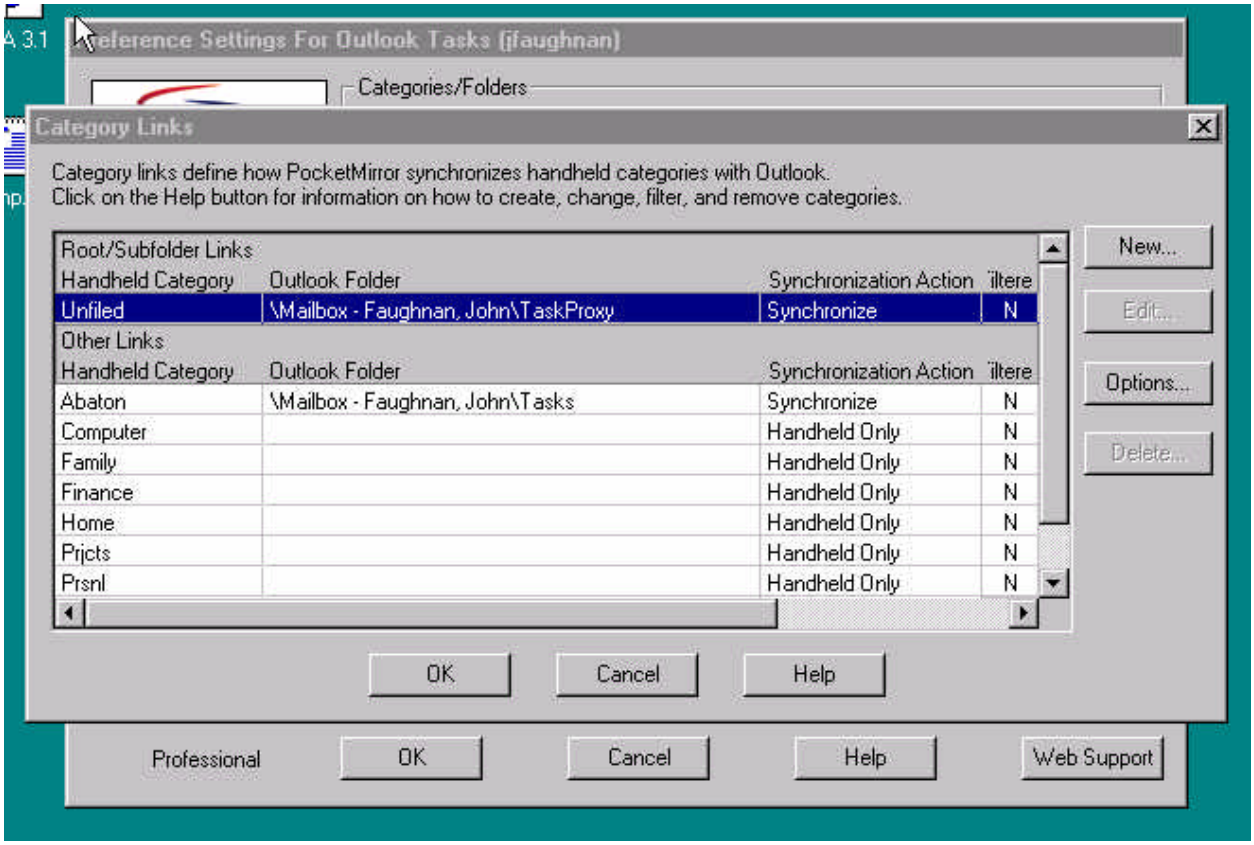
The procedure you will need to follow will vary. I actually did this several different ways for different items (calendar, To Do, etc). This list is a source of ideas only. My data was probably unusually "dirty" due to problems with Intellisync.

- If you use DateBk, run the included utility (DBScan) on yoru Palm to check for any data errors and make sure those are fixed.
- Create an empty folder of the appropriate type (eg. appointments) in outlook. Call it what you want, I used TaskProxy for example.
- To be safe, create backup folders and copy all your Task/Calendar/Memo entries there (use Outlooks row oriented views)
- Set PocketMirror to use the empty folder you created.
- Set synchronization to *Handheld Overwrite PC* and *Handheld category = user-defined field 'PalmPilot Category'*.
- Synchronize. If errors occur read the error messages and work on them. Empty the temporary Outlook folder between trials.
- If all is well then switch to *Handheld category = Outlook folder* mode and retest always using Handheld Overwrite PC.
- If this works then consider cleaning up items in Outlook as needed and now use synchronization. Check out error messages and clean up data further.

The Final Synchronization Setup

If your data is now clean, you are ready to do the real synchronization. Light candles, pray, offer a sacrifice, whatever. Just be sure you've backed up everything. This description is for Tasks/Contacts and Notes, for Calendar/Appointments I chose instead to have Outlook appointments sync from root to unfiled on the Palm, and to assign categories to all my personal appointments (see DateBk3 priority icon examples). This procedure differs from Chapura's documentation, see the help file called *How Do I Keep Personal Information Off of the Company Server?* for Chapura's method. I'll describe it for Task synchronization. **If Chapura allowed us to edit the Unfiled/Root link then we wouldn't need this complicated process and the kludgy TaskProxy folder.**

1. Note all the categories you use on your **Palm**. In this example I assume you want to sync only one of them with Outlook. If you do not yet have corporate tasks on your Palm, create a category that will hold them (in my case "Abaton") and sync after that category is created (maybe put a test task in it).
2. Create an Outlook folder you will not be using for anything. I called mine TaskProxy.
3. Set synchronization to *Handheld category = Outlook folder* mode and set the root folder to TaskProxy.
4. Go to the Category Links option (see the Help file if you don't know how to do this) and use the New ... button to create the Handheld categories you noted in #1. Set all you wish to keep on the handheld to "Synchronize Action" = "HandHeld Only". For the one category you do want to sync set it to point to Tasks Outlook Folder.



5. Cross your fingers and sync.
6. In future if you create a new category on the Palm it will sync to your desktop unless you first create a category link as above. If it does sync to the desktop go to this screen and set the link to Handheld only. The data will be removed from the desktop on your next sync.

Troubleshooting

Every so often, everything goes to pot. Uninstalling PocketMirror doesn't fix it. The only fix I've found is to delete the files that PocketMirror uses to store its sync configuration in. If these are deleted sync restarts from scratch. You have to run through the above setup again. Go into the Chapura Settings and delete the User Name, then go to the PocketMirror folder in the Outlook Folder List and delete the sticky note. You will also want to delete the sticky note from the Deleted Items folder. After deleting those items, you can HotSync. You will be prompted to "Create a new account on this PC?" and you want to click "OK" to continue. This will restore to the default settings.

In the old days PM also stored files in Palm data folders (even if one doesn't actually use the Palm desktop)

with the prefixes PM, such as PMCats.dat, PMRecs.dat, PMRels.dat, and PMSettings.dat. I used to delete the ones associated with the problem application and repeat the necessary PocketMirror setup steps (above). That may not be true for 3.16.

Input

Styli

The Palm III stylus is a bit rough. Good for writing, but hard on the screen. For me the perfect combination is to combine screen protection with an aftermarket stylus -- no screen injury and an excellent feel:

- Scotch Satin Tape 3/4": apply over the entire lower input area. One strip lasts months to years with my preferred stylus. Cost is too tiny to estimate. **Tip**: Pull out a strip about 4-5" long. Hold it at the margins (your fingerprints go there :-). Lay it down over the entry area and smooth the tape from the center outwards. Then carefully use a sharp blade, oriented away from the entry area towards the plastic rim, to trim off the two tails.
- PDA Panache Custom PDA Stylus Model P33-B. $16 from PilotGear. I'd prefer a tighter fit with the Palm III (I've lost one of these), but it's worth the steep price.
- Palm V standard stylus -- this seemed okay, but over time I think this stylus may be even more abrasive than the Palm III stylus. It's really hard.

I also love the Platinum Double Action, also from PilotGear. This is lovely piece of classic Japanese engineering and manufacture. About $8.00, fat plain plastic body, it incorporates a pen, mechanical pencil, and plastic stylus. You can't buy more quality for less money anywhere.

Keyboard

I used the GoType keyboard from LandWare with my older Palm III. It uses a 20K system patch (there's another HackMaster compatible patch) to transfer keystrokes to the Palm. I didn't seen any deterioration in system stability, but you can turn the patch off when not using the keyboard. The keyboard is reasonably small, rugged, and seems to do the job. I'm going to paste the special key combinations onto the keyboard cover -- too bad they didn't include a sticker with these one them!

Alas, this keyboard is not compatible with the Palm V or HandSpring's devices (though there is supposed to be an adapter made by HandSpring that might work).

The StowAway keyboard that's coming to market this December is supposed to fit the Palm V and Palm III form factors and maybe even HandSpring (may be a different model). It seems much superior, but early reports indicate that the small size comes with a price.

WWAN Communication and Cell Phones

I wrote an extensive section here in 1999, but then came the crash. Even before the great collapse, I'd found the WWAN results in 1999 and 2000 were not worth the effort. Sprint, in particular, couldn't deliver the service they marketed. They've since gone on to make a total hash of even simple phone based text messaging.

Handspring, 3Com, Palm, AT&T, Sprint, Nokia, Symbian, Microsoft and various phone vendors became involved in a complex set of alliances, maneuvers, and betrayals [2], most of which became moot. Of the original section, the only part I've retained as of August 2002 is the following "The Dark Secret of Palm/Cell

Phone Wireless Communication". See links for a link to archives.

Ironically, and its small consolation for Palm, of all the things I tried in 1999, web clippings worked the best. No-one was ever able to explain to me why the IR port on was always disabled on US phones; in retrospect the lack of a sensible answer for such a simple question should have warned us that disaster lay ahead.

The Dark Secret of Palm/Cell Phone Wireless Communication

It's hokum. In the 1980s years ago we used to connect computers up to analog cell phones using modems running MNP-10 protocols. We connected at 2400 to 9600 bps and reliability was poor. **Despite the hype of the late 1990s, nothing much changed when we went to digital protocols**. As of 2002 things are starting to improve, but marketing blarney wasted a lot of people's time.

Most cellular digital standards only ran at about 9600-14,400 bps, because that sufficed for voice. In other words, less bandwidth than a high speed modem gets on a copper phone line, and not much better than what we got in the 1980s using MNP-10 on analog phones.

As of the 2003, speeds are finally getting a little better. In the best networks data sometimes bursts at rates up to 144kbps, but most often it sits around 100-128kbps with good signal

[In an earlier version of this "dark secret" I claimed that the phones ran modem tones over a digital signal. After a couple of years, I received a friendly correction. The computer "thinks" it is talking to an analog modem, but that's fakery. The signal is digital from computer to radio wave.]

This explains why attaching your Palm device (or any other computer) to a cell phone is a remarkably unimpressive experience. The only thing we've gained in the past decade is that digital cell phone connection is less "noisy" than many older analog signals -- so throughput might be 10-20% higher. On the other hand, in the old days you weren't charged an exorbitant fee for "data services". ("What services?" you might ask -- and ask you should.) So -- we're actually worse off than we used to be.

What went wrong?

In 1998 there was great excitement about the "Palm economy", and appreciation of a small, simple device that worked. By 2002 the PDA market was a shambles. Compaq sold vast numbers of beautiful iPaq's, and garnered a reputation for disastrous unreliability that has affected all vendors. Everyone bet big on wireless and lost. Palm, hammered by the PocketPC onslaught and withering sales, cut to the bone. Product reliability collapsed as warrantees fell to incredibly short periods (3 months for a Clie -- isn't that a vote of non-confidence?!). Vendors learned that customers *hate* losing their contact and calendar information, and that the alternative to the PDA is paper.

When something goes wrong on this scale, there are always many contributing factors. Somewhere it goes back to local optimizations in complex adaptive systems and thus to the physics of this particular universe, but that's a bit more than our brains can handle. So more proximally I'd point to thee things, of which the first is the most important.

1. The Microsoft Monopoly, in particular
    a. The Outlook/Exchange problem
    b. The PocketPC exploit
2. The distortions and misjudgements of the .com boom. This led to a large number of misconceived business plans and wasted resources.

3. Product Management errors within the Palm company
    1. Failure to appreciate the real need for users to segregate corporate and personal data and to do machine-specific "selective synchronization" on multiple machines. In particular the need for the Palm to encompass both, but to sync all data to a personal machine and corporate-only data to a corporate machine.
    2. Lack of categories on calendar items until PalmOS 5.1 (except for HandSpring). This is actually a corrolary of the lack of appreciation of the need for selective synchronization.
    3. Panicky reaction to the PocketPC insurgence leading to poor quality control and a series of defective and unreliable devices.
    4. A plethora of connecting devices and desktop OS versions that made it very difficult for spouses to synchronize readily on one or more desktops, destroyed the peripheral/add-on market, and let to buyer disgust.. (Failure of the Palm-Family vision.)

All of these were serious issues, but #1 alone might have sufficed. When Microsoft felt briefly threatened by the PalmOS they made two moves. The first was trivial but effective. It is hard to synchronize a device to multiple desktop applications; managing different data models perfectly is impossible. Managing it acceptably is very hard. As Exchange/Outlook came to dominate the corporate setting all Microsoft had to do was be passive, to not "help" Palm sync to Outlook with selective synchronization. (In fact PocketPCs can't do this properly *either*, but almost no-one believes this until they experience it. This PocketPC failure was the first sign that Microsoft didn't intend the PocketPC to last.)

Microsoft's other move was the PocketPC. The original Compaq iPaq didn't work. The LiOn battery power management subsystem was flawed, the device drew too much power for its battery capacity, and the OS didn't manage low battery states. Within months buyers had a dead $500 device on their hands. The PocketPC OS demanded too much of late 1990s technologies -- but the OS and devices were sold at a loss and heavily marketed. With the predictable cooperation of the industry rags (albeit at a time when their influence was waning) and lots of marketing the PocketPC seemed a real threat. Palm responded with denial and then panic, sacrificing quality control in an rearguard action. By 2003 the PocketPC seems to be of little interest to Microsoft as they move on to their phone and slate devices, but the damage had been done.

Palm OS Design Problems

(Some of these were fixed in OS 5, others are slated for fix in OS 6. Too late.)

- Dated to do items don't show up in the calendar application. This is bizarre. The OS 3.5 agenda item really isn't worthwhile. See DateBk3.
- Calendar without categories.
- Notes attached to calendar entries or To Do items don't show up in the notes application.
- The clipboard capacity is very limited. It's easy to create a note that won't fit into the clipboard, requiring multiple copy and paste actions.
- There's an arbitrary 32K size limit on many Palm applications, and a 4K size limit on the notes application. This is enough to make a longtime computer user berserk. I thought I left that stuff behind with MS-DOS.
- Only 15 categories available at any one time for categorizing items. **Bad**. This causes problems during synchronization, particularly with older items. Even if you use only 10 or so categories at a time, you may have other categories used with older items. During synchronization categories over the top number will be dropped (most recent first?), resulting in items being assigned to the 'unfiled' category. Unfortunately this limit is apparently very deep in the OS (shades again of MS-DOS limits). Fixing it will take major work.

Engineering and design problems with the Palm Vx

- Palm V/Vx Travel Kit Charger: Defective Design
- Palm Security
- Palm Vx Lithium Battery Life Expectancy
- Palm V/Vx Travel Kit Charger: Defective Design
- Palm V/Vx Power Switch Failure
- the device is frequently powered on unintentionally because the power switch is exposed

Repairs, Service and Support

A Palm device is vulnerable. It's always on the move, always exposed to dust, dirt, water, grime, falls, spills, impacts, freezing cold and broiling heat. Fierce price competition limits quality and durability; these devices are not as rugged as traditional cell phones. Sooner or later you will have to deal with Palm customer support.

I suspect the average lifespan of a handheld device is about one year; if trauma doesn't kill it then loss or theft will. This is an important consideration in buying a handheld device. It suggests you should buy at the lower end, and expect to replace your device every 1-2 years. It also emphasizes why regular synching (data backup) is so critical.

Palm devices also have a fairly high rate of birth defects; the failure rate in the first few weeks of ownership is higher than at any other time [12]. If your retailer will exchange a broken device for a brand new one be sure to keep your box, documents, etc. This is the best way to handle a very early failure; it's one reason to choose a brick-and-mortar retailer.

Given all of the above, you will eventually need to contact customer support. Unfortunately Palm Inc's once excellent techical support has been, for me, unsatisfactory. Still this information may be of use to others, it applies to Palm Inc, not HandSpring and other worthy alternatives.

There are four sources of tech support, but only two are worth anything. They are:

1. **Web site**: Pretty good, but as of Jan 2001 the tech notes were still a bit weak. Only valuable for getting information.
2. **Chat service**: Absolutely worthless. A colossal waste of time.
3. **Email**: Almost worthless. Responses seem to be computer-generated and they are rarely relevant to the question asked. This is probably of some use to novices who ask questions that are addressed in the manuals.
4. **Phone support**. This is your only choice if you need service and it's the only way to get a repair or an authorized return.

The phone staff are generally reasonably good, but do not try to phone on weekends, especially following a sales promotion or a holiday. They are utterly overloaded at those times. I've had good luck in mid-week late in the evening, especially Thursday evening.

Every Palm is warranteed (except for breakage) for 1 year[13]. If your Palm needs to be serviced in that time you have two choices:

1. Advanced return: They will take your credit card number and then send you a replacement refurbished unit. You send your old device back after you receive the replacement unit. As of July 2001 they charge $25.00 for this service. This is fast, but I don't know how reliable the refurbished units are. I've gotten three due to breakage and the IIIxe debacle. One was fine, another Vx had a power button that died quickly, and a IIIxe had a crash problem.

2. They will send an Airborn Express box and repair the original device. I'm told this takes 10 days, but check to see that they have devices and parts in stock. All your data will be erased (in fact you ship without batteries, so you can be sure the data will go) - so I hope you were backing up regularly.

After that year, or if you break a device, Palm has had a somewhat unofficial, and not well advertised, replacement policy. For $100 you may be able to get refurbished device. Either ship them your broken one or give them a credit card number and do an exchange. This is a *very* worthwhile program, but I suspect it depends on how many refurbished devices they have lying around. I would guess it's a money-maker for them, but they might make more if you bought a new unit. I've used this policy with a Palm Vx I shattered.

If your Palm is a lemon (see Palm IIIxe) and under warrantee the procedure is as follows:

1. contact tech support 847-262-7256. They may issue a replacement or do a repair.
2. after the **3rd occurence** they may defer to customer care: 888-956-7256. Customer care in theory can do an upgrade replacement after the 3rd occurence, in practice I was told they wouldn't help.

If your Palm III is out of warrantee, and is not physically broken but is misbehaving so that that a hard reboot won't fix it, you might as well take it apart and clean it with compressed air. This fixed a Palm III of mine that would not respond to screen taps, but did respond to the physical buttons. Use a proper sized screwdriver to remove the four base screws; I use a Wiha 261 PH00x40. Use a slim blade to gently pry apart the plastic top/bottom section. Then without trying any further disassembly, use compressed air to clean this area. The Palm III is vulnerable to memory chip dislocation -- check to see everything is in place. Reassemble.

Palm Links

Palm

- Palm – Support - HelpNotes - Soft, Warm and Hard Reset

Basic

- PalmGear
- Calvin's PalmPilot FAQ
- O'Reilly PalmPilot Center
- Jay's Favorite Palm Web Sites: a comprehensive collection.
- Bob's Palm Links: I love this sort of resource -- a real world user's personal list of what works and what doesn't.
- Technick.net - Batteries in a Portable World
- Jim's Handheld Computing Pages

Wireless devices and the Palm

- pdQsuite
- Data mode with Sprint PCS and Samsung SCH-850: an excellent personal experience page.
- Newsgroup thread on this topic
- Aftermarket vendors: MobilePlanet, Everything Wireless, 1800Mobiles. Note that NokiaUSA's prices are pretty competitive.
- Extending the Internet - an optimistic technology review (just before the crash!)
- Mobile Data Is Set to Take Off, but Glitches Remain: Oct 1999 NYT article, before the glitches took over.
- Telecommunications - a vast personal collection of links, from a Finnish author. When it comes to telecomm, the Finns know how.
- Jakob Nielsen: telephone UI is ridiculous and Mobile Phones Europe's Next Minitel Jan. 2001).

Mac OS X

- Mark-Space · The Missing Sync: support Clie functionality with OS X sync

History

- **Nov 2003:** Added the Tungsten E, some updates, still a lot of legacy material left!
- **Jan 2003:** synching a Vx with an iBook
- **August 2002:** removed most of the wireless section, the June 2002 version is archived as 020822_PalmPageArchive.pdf
- **May 2002:** Update on Vx data/power cables.
- **Feb 2002:** cleaned out some junk
- **August 2001:** IR HotSync on Windows 2000
- **July 2001:** IIIxe and backups, the IIIxe debacle.
- **March 2001:** Security update.
- **Jan 2001:** Update on wireless
- **Nov 2000:** Outlook/Exchange synch with Chapura PocketMirror, wireless clean-up.
- **July 1, 2000:** General clean-up, except wireless.
- **May 16, 2000:** Intellisync comments
- **Nov 2, 1999:** More user experiences on Sprint data connections.
- **Oct 16, 1999:** DiddleBug entry, remove BugMe
- **Oct 9, 1999:** G3 updates, cleaned up Nokia cable information, politics of wireless is sorting itself out.
- **Sept. 29, 1999:** corrections and links
- **Sept 24, 1999:** Figuring out the politics of the wireless data world, which explains what works and what doesn't.
- **Sept 23, 1999:** corrections on pricing, more updates, CDMA vs. GSM clarifications, extensive phone revisions, push away from Nokia (alas).
- **Sept 21, 1999:** extensive revisions to wireless section following Sprint announcements.
- **Sept 12, 1999:** updated cell phone section, general updates.

- **Aug 11, 1999:** repairs section, TealLock
- **June 26, 1999:** DateBk3 custom icons
- **May 16, 1999**: styli section
- **Apr 30, 1999**: updates on disappointments.
- **mid-1998**: initial version

Footnotes

[1] I'm not sure these are really modems. After all, the phone is receiving a digital signal from the computer and it's on a digital network. I think it's acting more like a bridge or gateway.

[2] Qualcomm developed CDMA and owns the patents. Since Sprint is the major US CDMA champion (AT&T is TDMA), this goes a long way to explain why Qualcomm/Sprint are a natural pair, and why Nokia (GSM/TDMA) and AT&T seem to be much closer.

Just when the battle lines seem drawn, however, everything changes. As of Oct 1999 Palm and Symbian/Nokia have become allies. Also Symbian/Qualcomm have announced a CDMA partnership.

Overarching everything, however, is the anticipated ITU adoption of a worldwide data/voice wireless standard. The latest word expects this to be based on CDMA, so this will drive Nokia to ultimately support CDMA. This convergence is likely driving antagonistic forces together.

[3] This phone has some sort of built-in browser capability -- but it was a very early attempt and apparently doesn't work correctly. It is basically a very early version of a mini-"smart phone"; the 7001/7010 phones are a more realistic Nokia implementation.

[4] Mobitex is a packet-switched data network, quite different from the cellular digital networks discussed here. See FAQ. The future is probably voice over packet networks.

[5] The delay may relate to a need to upgrade the PRAM in the Nokia 6185 phone. It does not support WAP 1.1, and it is rumored that the phone does not work well in parts of Sprint's network that use Lucent equipment.

[6] Sometime in 2001-2005 we'll converge on the next generation palmtop/phone configuration: a wireless integrated earphone/microphone, a pager-sized receiver/transmitter, and multiple independent user-interface/presentation devices ranging in size from a wristwatch to a Palm device to a slate or larger. All of these elements will be tied together by a personal Bluetooth LAN. You'll use your UI device to initiate a call while you simultaneously use it to browse the web, review text messages and updates, and view video. The earphone/microphone handles voice. The receiver/transmitter is your Mb/sec interface to the packet switched wireless data network. The first generation of this device will be a receiver/transmitter that clips onto a HandSpring slot with a cable-based Jabra earphone/microphone. By 2004 the receiver/earphone device will cost under $70, and the handheld devices from $30 and up. By 2007 equatorial African will have significant numbers of wireless web clients.

[7] Lost in all the Bluetooth enthusiasm is an explanation of why IR was never properly used and why it often fails to work correctly. Why did such a cheap and allegedly effective serial interface go unused? I'd love to know. It works very well between Palm devices!

[8] I'm a bit surprised that no-one sells a padlock or house lock that would respond to an IR signal from a Palm.

[9] Biometric identifier could be thumbprint, or the device could include a lens to read one's iris, or it could respond to a chip implanted in one's hand. (I put a chip in my dog's belly, so putting one in my hand seems only fair.

[10] Richer, but not necessarily more useful. Outlook is a massive application of incredible complexity. I'm not sure anyone fully understands it. It's a mixture of very old and creaky components, abandoned ideas (the journaling file system) and the very latest fashions. It's also rich with hideous bugs, fiendish usability traps, and a myriad of ways to lose time and data. I suspect that the cost of Outlook/Exchange to the corporations that use it, where it to include the costs borne by users, would be absolutely shocking.

[11] [updated 2/2001 with advice from DG, a knowledgeable insider]

"PalmPilot" is the brand that wouldn't die. A company named **Palm Computing** put together an embedded operating system (PalmOS) to go with a new handheld computer, made desktop software to compliment it, designed a box, wrote a manual, and made it all pretty. They had two models: the *Pilot* 1000 and 5000. They were excited about their product when (drum roll) they ran out of money. That's when US Robotics came in. They purchased Palm Computing and gave them what they needed to get the product on the shelves. Then came the Pilot Pens lawsuit rumors, and the change of the Pilot name to the PalmPilot, which apparently wasn't good enough. The name changed to "Palm", around the time 3COM acquired US Robotics. Most of US Robotics died but the Palm products spun out as Palm Inc.

There really isn't a good name for the class of PDA devices that run the Palm OS. Despite that everyone still calls these things Palm Pilots. Maybe Palm Inc should just buy Pilot pens and get the name back! US Robotics is now largely forgotten, but their name lives on in the Windows registry: U.S. Robotic is the Key Name for the Palm Desktop.

[12] This is no less true of Visors, PocketPCs, desktop computers, etc. In fact some desktop retailers have had even higher failure rates of 30-50% -- though reliability is probably better now than 1-2 years ago. Interestingly this has not been true of cellphones, but they are simpler devices.

[13] There are extended warrantees and screen breakage warrantees, but they don't make sense to me. Too obviously ways for Palm to make money.

[14] These were things I did when I thought the problem was strictly related to the Windows 2000 work machine where PocketMirror Pro 3.0 is installed:

I verified the serial connection worked using HyperTerminal (disable HotSync Manager, set up HyperTerminal to dial up to COM1, and then push the HotSync button on the cradle). Knowing I had a backup at home, I experimented with removing the username from my Palm (shortcut stroke then dot then 4), the only effect was to cause my registered applications to fail, I had to reset the Palm Vx and reinstall at home. (Resetting was hard

because of the Palm V/Vx Power Switch Failure!)

At home I had no synching problem. Through various combinations I was able to narrow the problem down to my work PC -- either PC hardware or software. I was able to fix the problem, but I cannot say which of the following worked:

- switched to COM2 on the desktop instead of COM1. (This didn't work when it was the only thing I did, and in other testing COM1 was fine, so I don't think this was critical)
- uninstalled the Palm desktop and PocketMirror Professional, *then* used regedit to find and delete the "Pilot" key. (Uninstalling doesn't remove this registry entry)
- changed sync speed to 9600 bps
- reinstalled Palm Desktop 4.01

After doing all of these, I HotSynced and saw my username show up correctly. The Hot Sync did not abort normally, perhaps because of the slow speed. I repeated then at standard speeds and it proceeded normally. I then reinstalled PocketMirror Pro.
