Palm Solutions

When you're finished changing, you're finished.
Benjamin Franklin

1. Introduction

Palm OS handhelds and smartphones went a long way. Once dominating platform is now struggling and hoping for a revival. The author of these lines was also quietly accepting the statement that the Palm OS is an inferior OS, but as we are now moving closer to the Pocket PC platform, the things do not look that bad.

From the programming point of view Palm OS is still a good platform capable of realizing very interesting things. Yes, there are limits, but on the other hand lots of things can be done simpler and the result is often very efficient. And – possibly surprising – there are things where Palm OS takes over the PPC platform.

And the user point of view? You have a real computer in your pocket equipped with power that the previous generation could just dream of. It's not a feature phone - so much popular today, neither an iPhone. But you have a choice of 30,000 applications – enough to create YOUR device adjusted to YOUR needs. All you need is a bit of courage to try new ways.

Of course, this text was written with the intent to recommend the usage of Resco products. Whether you like them or not you hardly can deny that they provide huge amount of functionality hardly found anywhere else in the Palm OS world.

Anyway, we hope that the following text will help you to use your device better. It consists of two parts – a bit of theory and selected use cases. If the first part is boring to you, then skip it. Hopefully the examples will be more interesting.

2. Useful gadgets

Although this document deals with software, we want to suggest two gadgets that will increase your productivity.

2.1. Get a card reader

A small investment allows you to access the card both on your Palm PDA and on the desktop PC.[1] You will be able to browse the card and freely manipulate the files, e.g. install images, mp3 songs or Office documents. You will be able to backup your data or for example investigate card problems.

Simply a card reader offers you options that exceed by far features available with the traditional Hotsync technology.

2.2. Get a Bluetooth dongle for your PC

Another cheap investment allows connecting your Palm PDA with a PC. Opens a range of possibilities for your Palm PDA:

Palm PDA can browse the web over the connected PC. This usually means **browsing for free**.

You can run web applications. For example your newsreader can pre-fetch news feeds in advance, or you can use FTP to exchange the data with a remote site.

Palm PDA can browse the PC and even the whole LAN network. You will have to build the network connection (difficult) and then use either Resco Explorer or WiFile application; these programs allow managing PC drives from a handheld in the same way as the card files. This covers complete file management, replay of remote mp3's or installation of downloaded applications to your Palm device. (Hotsync replacement.)

Even without a network connection you can use at least simple Bluetooth Send operation. This enables for example:

- Sending images, documents etc. from Palm to Windows /My Documents
- Sending images from a PC to the default viewer on the Palm device.

[1] Make sure the card reader supports your card format. For example older card readers do not recognize SDHC cards.

3. Techniques

3.1. Downloading a file

Using Blazer

Type the download link (URL) into Blazer address bar and press Go. Blazer will download the file and either save it to the card or pass it to the suitable application. The latter means for example - a .prc file will go to the launcher (i.e. it will be installed), a .pdf file will go to the PDF reader.

Disadvantage:

1. Blazer (usually) first opens the default web page.
2. Blazer does not allow selecting the card folder.

Using Resco Explorer

It is mainly simpler: Open the Download dialog, type the download link, select the download folder and tap Download. That's all.

3.2. Beam, Send (OBEX)

Both beam (Infrared) and send (Bluetooth) use identical mechanism, commonly denoted as OBEX. (OBject EXchange) It is something like "data exchange for dummies", i.e. it allows sending known file types. The receiving device decides what will be done with the file.

OBEX does not talk about either files or folders, e.g. an image is passed to the default viewer and a document to the Office package.

If you want to send an unknown file type, you are out of luck: The file MyFile.xyz will be refused because the receiver does not know .xyz files.

To overcome this limitation you can launch Resco Explorer on the receiving device. Explorer is able to receive unknown file types; moreover, it allows you to specify the folder, where the file has to be copied.

However, one disadvantage remains: OBEX is not suited to transfer large files. (Palm OS receives files into a memory cache.) If you need to send an mp3, you should better look for other possibilities.

3.3. Bluetooth

Bluetooth technology allows devices to communicate with each other wirelessly over short distances. There are Bluetooth handhelds, Bluetooth headsets, PCs with Bluetooth cards, Bluetooth phones etc.

If your computer is equipped with Bluetooth and supports the DUN (Dial-Up Networking) profile, you can use your Treo (Centro…) as a wireless modem to access the Internet – browse the web, access your e-mails etc.

To set up your smartphone as a wireless modem, you create a trusted pair between your smartphone and your computer and then enable dial-up networking on both your computer and your smartphone.

Bluetooth pairing

Bluetooth pairing is the process allowing two devices to talk together over Bluetooth. It typically consists of these steps:

- Turn on the BT for both devices. Many users keep the BT switched off to a) save the battery (BT is a significant power consumer), b) increase the security.
- Put the devices into discoverable mode so that they can see each other.
- Now you can for example send an image between the devices. But before the real data transfer begins, a kind of shared code (**passkey**) must be exchanged. (The users at both sides will have to type this code as an added security measure.)
- Now the connection is established and the real data transfer starts.

To avoid this process in the future, you can mark the partner device as **trusted**.

For security reasons you should set up your device as non-discoverable and pay attention to the pairing process, i.e. avoid pairing on public places and always refuse unknown pairing requests.

Bluetooth applications

We mentioned already the simplest Bluetooth application – the OBEX transfer. More complex examples can be found among Resco Explorer documents:

- ExplorerBluetoothFTP.pdf explains how you can access your PC, Nokia phone etc. over the Bluetooth as if it was just another expansion card.
- ExplorerNetworking.pdf deals primarily with LAN network connections, but contains one interesting example of connecting over the Bluetooth. As before, Explorer will allow you to access your PC (and other computers in the same network) as if they were local cards on your PDA.

3.4. Accessing the Web

Treo/Centro users have the web connectivity, i.e. they can browse the web using Blazer, NetFront or whichever browser they use. The advantage is that this connection is preset. At the same time it is (at least GPRS) slow and (mostly) expensive.

Luckily, we have other options. Perhaps the most common case is building a network connection to the desktop computer. What you gain, is

- Cheap web access (you will in fact use PC Internet connection)

- Access to the LAN network (you will be able to manage PC files from your PDA)

There are several options how to build the connection, for example:

- WiFi connection
- Bluetooth connection to a PC
- Cradle connection to a PC

Connection setup is not easy and we advice you to search the web for the user guides for the particular connection type you have in mind. Those who want to know more may also read Resco Explorer documentation – the document ExplorerNetworking.pdf.

A specific case present Virtual Private Networks (VPN) enabling access to the company resources. Universities and other companies providing this service for their employees will offer also the concrete instructions.

Examples how can you use the network connection:

- Browsing the web.
- Reading news feeds, listening to podcasts
- Accessing web services such as weather forecast or Google Maps
- Using remote data storage (Resco Backup Pro and NVBackup provide backup to FTP server)

4. Using the Card

4.1. Understanding the card structure

Card is organized into folders and files and while you are free to organize it your way, preserving certain rules will help the applications to find the data.

Root folder is the card entry point. It contains further subfolders and may contain the files, too. However, you should limit the use of the files in the root folder as the FAT file system allows only limited number of entries for the root.

/Audio – This folder (and its subfolders) should store mp3's and other audio files. You can store these files elsewhere, but then it can happen that some programs will not see them. Similar argument holds true also for other recommended folders.

/DCIM – folder for images. Mainly the digital cameras respect this standard. (DCIM = Digital Camera Images)

/PALM – Folder used by Palm OS and Palm OS applications.

/PALM/Launcher – Folder containing apps installed on the card. If you copy a prc file here, it is as if you installed respective application on the card.

/PALM/programs – Each application can create a subfolder here to store its card data. If you uninstall an application, you sometimes may need to delete its card folder manually.

Long file names are allowed, but they are less efficient. (FAT file system internally uses 8.3 file names and long names must be adjusted using some tricks.)

4.2. VFS, drivers, large cards

There is a common misconception among the users leading to the statements such as "Your application does not support my new card, while the old card was supported."

Be assured that more than 99.9% of the applications do not deal with the card directly (the rest up to the 100% are the drivers), but use Palm OS services through so-called Virtual File System (VFS) layer. This means:

- The application does not know anything about the card used.
- All card-specific work is done on the driver level. If there is a problem, then most probably it is a driver problem.

While some users happily use large cards, many others report problems. The answer whether you can use large card or not depends on your card driver.

FAT file system

LifeDrive, TX, Treo 680 and higher and Centro use FAT32 driver. This driver supports multi GB cards. Palm OS itself cannot work with numbers exceeding 4G, i.e. it will incorrectly report the card size for very large cards. (Despite it allows using the whole card.)

Older Palm devices use FAT16 driver supporting cards up to 2 GB.

SD cards vs. SDHC cards

At present SD cards stopped at 4GB size, while newer SDHC cards can have up to 32GB.

Despite the cards look identical from outside, they are not. SDHC cards are supported by Treo 680 and higher and by Centro. All remaining Palm devices need SDHC driver. (http://www.palmpowerups.com/readarticle.php?article_id=11)

Notice that older card readers may not support SDHC cards.

4.3. Card repair

Card corruption

Palm cards use FAT file system. The card is partitioned into blocks with constant size, usually 4-64K. FAT files are made up of these blocks chained together by links. A crash during a write operation can cause that data is written to a new block, but the link to the next block failed to be saved. (Never interrupt card writes!)

These and similar errors usually lead to a local card corruption. You may see one program having problems, while the other one writes data as if nothing happened.

Checking the card

If you observe card-related problems (read errors, freezing), it is a good idea to check the card. All known ways of checking the card are based on the old good MS-DIS utility chkdsk.[2]

1. Attach the card to a PC. There are various ways to achieve this:
   - Use a card reader.
   - There are a number of software solutions that achieve similar effect:
     - T5 owners have preinstalled Drive Mode utility
     - Advanced users can install Drive Mode on TX/Z22 handhelds as described in http://tamspalm.blogspot.com/2005/10/give-your-tx-or-z22-internal-drive.html
     - CardExport application
     - Sony DataImport or MSImport applications

2. Open Windows command prompt window and run the chkdsk utility with the option /F. (*chkdsk /?* lists all possibilities.)

4.4. Moving data between the cards

There are many occasions when you need it. Until the release of Centro the situation was rather simple as most Palm OS devices used the same card type – SD card. You would insert one card, copy part of the data to the device RAM, then swap the cards and perform the copy in the opposite direction.

[2] Resco Explorer 2009 will include card check, too.

But the Centro designers decided for micro SD format… On top of that the cards are getting larger, which makes the iterative copy a too tedious process.

Perhaps the easiest solution represents already mentioned card reader. Some desktop computers might have it. If not, you can get for example an USB card reader.[3]

When you insert a card into the card reader, it gets mounted as a new desktop drive. Then you can use any file manager to copy the data between the PC and the card – in either direction.

[3] Pay attention that it supports all card formats you need.

5. Images

Palm handhelds come with pre-installed image software and people often do not realize how severely limited it is. In fact its only good property is support for some rarely used image formats. Apart from that it is terribly slow and offers close to nothing.

5.1. Comparison of the viewers

Although there are many viewers on the market, there are just 3 really interesting options:

Built-in viewer
(+) Support for various exotic image formats
(-) Terribly slow
(-) Can handle only small image sets
(-) Limited feature set, can see only standard image locations

SplashPhoto[4]
(+) Fast jpeg viewer
(+) Image synchronization with desktop
(+) Can be used as external viewer for Resco Explorer, Zlauncher etc.
(-) No additional image types
(-) Very small feature set, can see only standard image locations

Resco Viewer
(+) Many formats supported (fax incl.)
(+) Fast
(+) Complete image management; can handle huge image sets
(+) Image editing
(+) Best slideshow
(+) Can be used as external viewer for Resco Explorer, Zlauncher etc.

5.2. What can you do with the Resco Viewer?

- Preview images taken by your digicam or built-in camera.
- Read faxes (also multi-page)
- View png, bmp, and gif images and even gif animations
- Present images in a slideshow
- Build complex holiday presentations – sequence of images, text comments and music
- Edit images (rotate, scale, crop, change colors)
- Prepare images for sending as MMS attachments
- Create images for your contacts

[4] Latest SplashPhoto update added some of the missing features.

- Encrypt or hide sensitive images
- Study image details (Exif info, histogram)
- Annotate images
- Exchange images
- Organize images into categories and Favorites
- Do a complete image management on the whole card
- Search for images
- Use as external viewer for Zlauncher, Resco Explorer etc.
- Use to preview e-mail attachments
- Powerpoint presentations can be converted to Resco albums (Windows only)

5.3. Image Installation

Using a card reader

Insert the card into the card reader, attach the card reader to a PC and use any file manager on your desktop computer to copy the images onto the card.

Software card readers (Card Export etc.) offer similar options.

Keep in mind that many Palm OS applications will only look under /DCIM for images.

Using Hotsync

1. Add image(s) to the Palm Install Tool (Quick Install)
2. Make sure the images are queued for the card installation.
3. Hotsync
4. Images get copied to the folder determined by your default viewer.

Remarks:

- Only known image types are accepted. (Those supported by your viewer.)
- You can use Resco Explorer to modify the card folder used for Hotsync or to allow new image types. You will need to Hotsync these changes before transferring any files. (The PC has to know that your Palm can now handle more file types.)

Beam, Send

Images sent via Bluetooth or Infrared are received by the default viewer, who also decides what will be done – usually the image is stored into the predefined folder.

Remarks:

- Sending a huge image may fail due to memory limitations.
- E-mail programs use identical mechanism for the image preview.

Desktop synchronization

If you want to have desktop images synchronized with your card, then use SplashPhoto. This is a Hotsync-based solution that keeps in sync selected desktop folder with a fixed card folder.

Resco Album Generator

Another high-level tool for Windows desktops. Allows image pre-processing and image installation over Hotsync.

Other possibilities

Out of many possibilities here are a few examples:

- Resco Explorer offers a number of options such as browsing Nokia phones over Bluetooth, downloading images over FTP or from connected LAN drives.
- Resco Viewer can access images that are otherwise private to other programs. An interesting example is the Flickr images downloaded through Resco Neeews.

6. News, blogs, podcasting, podcatching

The ability of being informed as soon as possible is critical in many professions. Read what you can do in order to become one of those having this privilege.

RSS feeds

Maybe you know "News Alerts" - e-mails delivered by Google. This is a small fraction of what RSS offers. RSS feeds are used by nearly every blog and news site to automatically share headlines and articles.

Big newspapers recognized that they cannot fight against web and started using it to their advantage. They produce RSS feeds as a tool to break the news and the print edition actually expands on this material.

RSS stands for Really Simple Syndication - and it is just that. You subscribe to feeds acc. to your choice and instead of tedious searching for information, the news is coming to you.

What can you subscribe to?

- Sections on news Web sites of your interest.
- Interesting blogs
- Web searches such as Google News

Blogs

Blogs are a phenomenon of the last years. They are usually written as a kind of online journal, often contain analytical material and comments – either from the author or from the readers.

Many journalists publish their blogs to get user feedback. If you have your favorite journalist, it makes sense to read his blog – you might get less formal and richer information than finally gets published.

Finding right blogs may take a while. A good starting point is Technorati, but there are also other means of the blog search. (Some of them offered by Resco Neeews as well.)

Blogs are published as RSS feeds with varying update periodicity.

Web 2.0

This term refers to Web sites that build their value from the user actions. These sites (also called social sites) include e.g. Flickr, YouTube, MySpace, Wikipedia, del.icio.us etc.

As far the news area is concerned the stars are Digg, SlashDot, Reddit, Newsvine. What these sites actually publish is not directly news, but rather information that wins the user voting. (Newspaper portals do something similar when publishing most popular articles.)

RSS feeds provide a mean how to get this information onto your PDA.

Podcasts

(Podcast = Playable On Demand + broadcast; vodcast = video podcast)

Podcasts became popular together with news feeds, offering podcasts as attachments and hiding thus technical details from the user view. (The user simply replays the attachment.)

Dozens of newspapers are podcasting, including NY Times and Washington Post. There are many technological sites offering podcasts; PDA users might know 1src.com podcasts, for example.

Podcast is basically an audio file, formatted usually as mp3. To listen to it, you need to download it and pass it to an mp3 player.

Better players allow you to listen to the podcast as it gets downloaded. This is called streaming. (Internet Radio is based on the same principle.) More complex players can do **podcatching**, which enables you not only to play back the audio tracks, but also save them, schedule the download etc.

Institutional feeds

Many institutions (notably universities) use RSS feeds to convey the actual information to the users, employees, students etc. Take library news, events announcements, important updates etc. Simply the RSS expands to ever-new areas.

Resco Neeews

Resco Neeews belongs under the category of the so-called newsreaders. What makes it unique is the broad coverage of various techniques and tools. For example you will be able to use:

- 500+ of high quality predefined feeds you can select from: newspapers, sports news, technological sites, business feeds, blogs etc.
- News aggregators (Google News, Windows Live) let you search for news in a similar manner as you perform web searches – i.e. you write a phrase such as "NBA news" and Google News (etc.) will regularly deliver news on that subject.
- Social sites (Digg, Reddit, Newsvine, Flickr, del.icio.us): As above, you select a phrase and you get related information – this time based on its popularity among the users.

Resco Neeews offers streaming audio player, specifically targeted to the podcasts coming as part of the news feeds. Translated into simpler language:

You can start listening the audio attached to the particular news item – even without downloading it first. You can interrupt the download/listening and resume it later.

Of course, more complex podcatching is supported as well; for example you can schedule podcast download.

7. Security

An average businessperson uses his device to carry around a lot of sensitive data - the documents, passwords etc. Of course, that would be a great target for crackers if they could get in. So which possibilities do you have to safeguard your data? Here are a few tips that we subsequently discuss in greater detail:

1. Use built-in security: Assign a password and let the device auto-lock periodically
2. Hide or mask private records
3. Use a password keeper application
4. Use backup programs supporting safe encryption
5. Use secure storage program for protecting sensitive card data

Device locking

There are dozens of applications that password-protect your device; Palm OS itself offers this ability, too. All these apps block the device access unless the user knows the password. While these apps are helpful, they do not provide the true security. Moreover, they do not provide any security for the card data at all.

The built-in security

Built-in Security application (or security panel in the Prefs application) allows marking records as private. However, this just means setting a flag – the actual contents is not encrypted and any file application ignoring this flag will show the private contents. In other words, the built-in security is not secure at all. (Not mentioning the fact that it completely ignores the card data.)

Data protection (secure storage)

There exist a lot of applications that offer secure storage. They typically allow two actions – encrypting the data file and the opposite action. The disadvantage is a tedious workflow with secret documents:

1. Decrypting
2. Processing (preview, edit)
3. Encrypting

This workflow itself presents a security risk as it leaves the manipulation with non-encrypted file up to the user.

Password keepers

These apps serve for specific protection purpose – safeguarding passwords, web logins and similar simple information.

Protection on the driver level

There is no known successful implementation. The only known trial - CryptDrive from Alex Pruss – seems to have problems with FAT32. Moreover, there is another drawback – the card safeguarded this way can be used only under Palm OS.

How secure are these techniques?
Well, from the enterprise point of view - mostly not too much. A good security requires modern encryption techniques, such as AES.

Can you use encrypted data on another device?
The answer depends on the employed security tool:

- Password keepers use to provide desktop programs for this purpose
- Resco applications use to rely on open standards, e.g. you can use WinZip to open encrypted data.

Resco Explorer

Since v4.01 RE contains Secure Storage for card data. It provides

a) High security (based on the industrial standard AES)

b) Open interface (you can use WinZip etc. to reclaim encrypted data)

c) Secure workflow. (Images, mp3's, PDF and other office documents can be opened directly from the secure storage without a need for manual decryption/encryption.)

The basic idea is simple:

Secure Files folder is a shortcut to the card folder */Secured*. If you work with the underlying card folder then you can do the same things as with any other folder. Of course, that's not the purpose.

Files copied to the *Secure Files* folder get encrypted; files copied in the opposite direction get decrypted. This provides a primitive secure mechanism that can be used in the above-described way, i.e. 1. Decrypt, 2. Process, 3. Remove or Encrypt.

This is already significant help as it

a) Introduces common storage and unified workflow

b) Simplifies the work with encrypted documents. (No need to use zipper dialogs.)

However, the best point is the support of common file types (office documents etc.). If you "secure" these files, then you don't need more but a single tap to open the file. Explorer takes care about the other activities we mentioned before.

The above process works with these applications: Documents To Go, Mobi Office, Repligo, Aero Player, Pocket Tunes, Resco Viewer, mOcean, TCPMP, mmPlayer, Palm PDF and several browsers and document readers.

Other security features offered by Resco Explorer:

- If you use secure VPN connection (concerns business users mainly), you can use Explorer as front end and browse your remote data. All you need to do is to define the network connection to the remote server.
- Explorer supports important security aspects of the FTP – secure login and SSL.

Resco IDGuard

IDGuard covers the security features offered by two applications: SplashID and Resco Explorer. Everything what was written about Resco Explorer holds true also for IDGuard, just the interface is different – most people would say simpler.

In particular:

- IDGuard serves as a password manager. It can store all your passwords, PINs and other secrets in a reliably protected database that can't be accessed by anybody without the knowledge of your password. Yes, you need a password, but only one password in place of many others stored in the database.
- On top of that IDGuard can store attachments of any kind – documents, notes, images, whatever. The common attachments (office documents, pdf files etc.) can be opened and edited with a single click, while still observing security measures.
- IDGuard v2 includes also the desktop component that allows sharing of the sensitive data between the PC and PDA.

Resco Viewer

Offers image encryption. It is not as secure as AES, but has important advantages – it is very fast and fully transparently integrated into the viewer.

Moreover, Resco Viewer offers also simple hiding of images or folders marked as private. That's often all what you need.

8. Backup

8.1. Why should you backup?

The general reason is clear – prevention of the data loss. Too many things requiring a hard reset can happen…

Ok, that's clear. But why Hotsync-based backup is not sufficient? Many people believe it is. However, that's rather an illusion:

- Hotsync does not save all device data. (Databases with the backup bit off.)
- The web is full of complaints about the Hotsync problems. (Cable problems, problems in conduits, crashes caused by corrupted databases.)
- Hotsync is unable to save specifically formatted databases. (Example: NetFront)
- Performing Hotsync frequently might be severely limiting.
- Hotsync maintains only one past state that could already be compromised.
- You can't perform a Hotsync if you are away from your PC.

As a matter of fact a growing number of Treo/Centro users do not use Hotsync, or use it rarely. Author of this document does not use Hotsync as he finds network connection more powerful.

8.2. How to compare backup programs?

There is no general rule as different people use various criteria. However, the following points provide good guidelines:

- Feature Set: Backup should do more than a simple copy of your data. There is a wide range of tools the users might want starting from the scheduling, through verification up to various special tools.
- Consider self-checking backup software that compares the backup to the original to verify accuracy (backup verification).
- Look for backup software with a range of backup choices: full, incremental, differential and individual file backups.
- Consider backup software that can compress data.
- If security is an issue, then look for the encryption.
- Ease of Use: Users should be able to install and use the backup software without help. The backup should be simple to set up and easy to restore.
- Help documentation, developer support, product web page etc.

8.3. What do the backup programs offer?

While there are many Backup utilities for Palm OS, there are just a few serious options:

- 3 commercial titles: BackupMan, BackupBuddy and Resco Backup, and
- NVBackup – a freeware.

All these programs saved the user data a huge number of times. And all of them experienced occasional problems. Sometimes the problems can be attributed to the backup program, but even more often they are caused by external factors.

That does not mean you cannot use another backup program. You can – if you don't mind performance and feature set.

Let's start from the end:

NVBackup is a popular solution – as any relatively good freeware. It covers the basics, but nothing more. Some people will argue that it supports FTP uploads. Well, if you want insecure, slow solution with weak error treatment, then it is your risk…

Nevertheless, NVBackup has one interesting advantage: It can't be crashed so easily by misbehaving background applications[5]. The point is that it bypasses official Palm API's and works with internal memory structures instead[6].

Resco Backup is considered as the most advanced tool. It offers nearly all the features you'll find at other backup programs and a few more. Here are some interesting features:

- All kinds of bells and whistles the user might expect from a backup program (full/partial backup/restore, scheduler etc.)
- Projects serve to implementation of various backup policies (daily/weekly backups, extra care for critical data)
- Additional level of security. RBackup not only watches for detectable errors, it also allows for additional checks of the result.
- Plus the advanced tools for power users that allow for thorough analysis of your data.

The owners of RBackup Pro gain even better tools (for example analysis of the preferences), but mainly secure AES encryption and secure and efficient FTP backup that:

- Minimizes the network traffic (!)
- Performs additional integrity measures

[5] Full explanation is too complex. In case of interest see the Resco Backup documentation.
[6] Future compatibility problem (but: will Palm ever deliver next Palm OS version?). Cross-restore among various devices might not work, too.

9. File Management

Let's start with Ali Flowers from MyTreo.net:

> *When it comes to file management, all I can say is "wow." Resco has put together everything you can think of in one tight little package, and just like its Windows counterpart, Resco Explorer allows you total access to your files.*

Well, when it comes to the File Management as a software category, it used to be a crowded field full of competing products. Today – there are just two of them left:

- FileZ, for many users the best Palm OS freeware ever written, and
- Resco Explorer replacing FileZ and dozens of other utilities with various purpose.

When it comes to basic file management, FileZ will do its work. This represents things such as card/RAM browsing, copy, rename, delete, send and limited preview/edit. That's it, more or less – if you need more, you are out of luck.

Unlike FileZ, the file management represents just a small portion of the Explorer functionality. You may not realize it right at the beginning, but subsequently you will discover features such as:

- The zipper allows you to work with compressed files as if it was a card folder. You can even launch zipped applications or preview zipped images.
- Explorer can be used on most LAN/VPN networks. If you have network access, you can work with the remote files as if they resided on the local card.
- You can access Nokia phones over Bluetooth, preview remote images or play remote songs.
- You can explore FTP servers. (For the starters Explorer includes a 1GB account at DriveHQ with your purchase.)
- You can preview images, play mp3 files, launch documents, edit text files, password-protect sensitive data, perform backup, edit associations and alarms, synchronize with the world clock, perform http downloads, clean the memory, edit preferences etc. etc.
- That all is combined with techniques such as multi-selection, drag/drop, copy&paste, context menu, tabs etc.

Let's finish with Ali Flowers once more:

> *Resco Explorer has replaced numerous small utilities on my Treo. It is one of the most robust and full-featured applications available for Palm OS.*

10. Use cases

10.1. Image News (Neeews + Flickr)

Let us demonstrate the work with dynamic feed:

I've just heard about the new X6 model from BMW and as an automobile fan I would like to see some images of this car. Let's see how Resco Neeews can help! Of course I'll use a dynamic feed. You don't need more but a few clicks:

While creating new newspaper I'm choosing the option to add a new dynamic feed.

As I'm interested in pictures, my search engine will be Flickr, large database of various public photos. I've chosen the search query *BMW X6* and the feed name *X6*. I confirm (*OK*) and on the following screen I click *Next*.

Next options are the same as for all other newspapers. I turn on the option to show images (images are automatically downloaded), to show newspaper in Launcher (I want easy access), set the number of articles and press *Finish*.

One update and the results are here. To see the original image in your Viewer (Neeews downscales the images to fit the screen), just tap the image. You should better use Resco Viewer or the image will be passed through memory cache.

10.2. DJ News (How to use podcasts)

Podcasting is becoming very popular among bloggers. Using RSS technology, they can easily share their favorite records, music or videos. Even well-known radio channels use podcasts to offer their listeners records of their famous broadcasts.

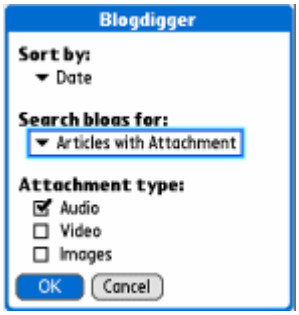
Let us show you one example of how Resco Neeews helps.

I'm a DJ and news as well as fresh tracks from the world of club music means a lot to me. A professional has to be always up to date with new music.

I created a newspaper with two feeds found on the net that informs me about fresh club hits and lets me listen to the samples (**podcasts)**, so that I can judge if they fit to my club.

I called the newspaper "**DJ News**" and switched on *Show images* and *Download podcasts*. Podcasts are being downloaded just like images.

It took less than 2 minutes and I can start listing and listening to new tracks I was waiting for.



If you don't know suitable podcast feeds, try Dynamic Feeds and the search engine **Blogdigger**. Open advanced options and choose to search for articles with attachments (audio/video).

For faster and more transparent access to all downloaded podcasts Resco Neeews offers a simple **Podcast Manager**.

10.3. Communication with Nokia N95

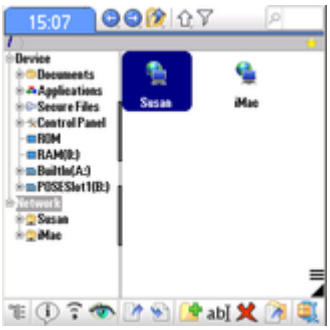
My girlfriend owns a Nokia N95 smartphone. This model supports micro SDHC cards offering high capacities. She keeps an 8 GB card – far more than my good old Treo 650 with 1 GB SD card. For me it's enough, but my girlfriend keeps taking pictures of everything and always wants to have hundreds of mp3s to listen to.

We were on our trip to Prague and in the evening when I wanted to see her images, she fell asleep while listening to her favorite songs. With the help of Resco Explorer this banal situation was solved – I just had to get running the Bluetooth connection.

Bluetooth gives me an opportunity to see her card on my phone just as another storage drive. As if it was my own card I can list her folders, preview images and then copy to my card just those worth of it. Of course, I'm able to do it the opposite way as well, i.e. copy my images to her card.

To install the connection go to Explorer menu->tools->BT connections. Choose *Add* (make sure your friend's Bluetooth is switched on), then select his phone (you'll perhaps need to write down a pairing code to both devices), press *OK*, press *Done* and that's it! In general, the communication is not limited to the card; you can also list the internal memory of the remote phone.

As we were traveling back home by train, both of us spent the time listening to music. My Deep Purple didn't even come close to her Madonna. Nevertheless, what had the songs in common was the source. I simply misused the Bluetooth connection built the previous day and listened songs from the N95 card. Funny - until I tried it, I wouldn't believe it's possible.



I am browsing Susan's N95 and her *My Photos* folder.

I can preview her images (do you recognize the silhouette?) and then copy those I like to my Treo. It is not exactly a fast operation, hence the multi-selection comes handy – I don't need to pay attention to every transfer individually.

Here is what you need to do to define the connection.

When you press *Device* you get the list of BT devices as for any other BT transfer. I selected the Nokia phone.

I can now access all Nokia drives, but I wanted just the card. As I found by browsing that it was the drive C:, I returned to BT Connection setup and entered the remote path *C:/* and labeled the connection as *Susan*.

You see the simplified tree on the left. (And I could finally start listening.)

BTW, do you know that the little gray things in the Player form let you switch between the songs? The first one performs random selection, the other one a regular sequence.

10.4. Browsing

Here are some tips and tricks that might improve your browsing experience. They are written for Blazer – the default browser on the Palm OS handhelds, but the material is mostly applicable to any browser.

- Blazer Preferences:
  - Set *Start With* **Blank Page**. In most cases you do not want to wait until the default page is loaded from the web – even if it is as simple as www.google.com.
  - *Disable JavaScript* – this may be a bit controversial as it not only blocks many ads (those that are written using JavaScript) and reduces the work done in the page loading, but may sometimes block useful services.
  - Try fast mode (if your browser allows it). It is up to you which functionality will be disabled in the fast mode – for example images or cascading styles.
- Bookmark frequently visited web pages. Note that you can add web links also to your Palm PDA Favorites application!
- Use www.google.com/m (**Google Mobile**): Tap on *Settings* and select *Format web pages for your phone*.

Use web compression. There are several services that attempt to remove unnecessary information from the web page and optimize it for the mobile use:

- mowser.com
- skweezer.com
- mlvb.net

These services have Spartan interface reminding Google and they work like a proxy. They take the original web page, strip out the garbage (effects, [some] ads; they may even downscale the images) and let the browser download simplified content.

These services not only save you time and money – in many cases Blazer is not even able to display original web page!

Note that Resco Neeews lets you use web compression automatically. You only need to select the compression engine in *General Options* > *Tools*.

Use of Proxy. In case you need to use a custom Proxy server, you can do so in Blazer settings. Resco products (Explorer, Neeews) will take over proxy settings from Blazer.

Viewing offline html files. This can be done if you find the trick – how to write the file path into the Blazer address bar. It is usually something like

file://<card_name>/path

Resco Explorer offers far easier way: Just tap the html file and it gets opened in the browser.

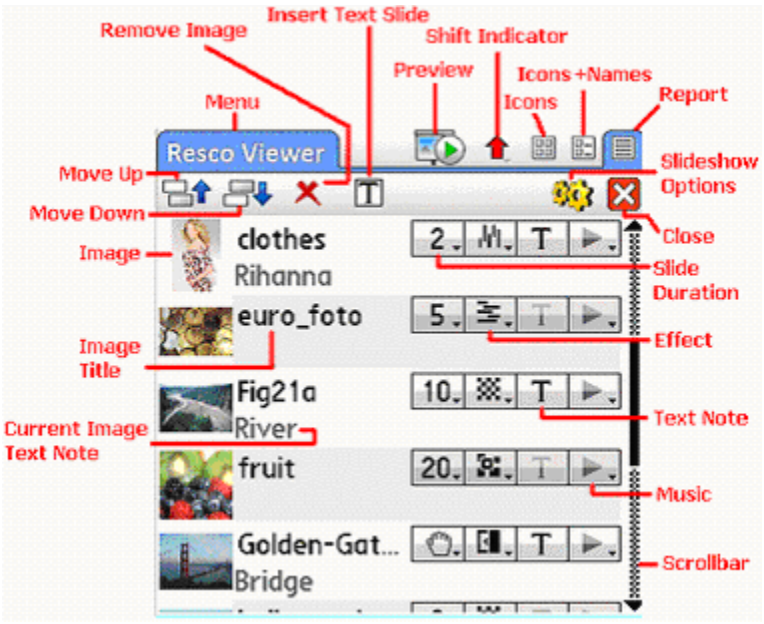
More Blazer tips and tricks
http://forum.brighthand.com/showthread.php?t=252620&highlight=resco+explorer

10.5. Image show

Did you ever wanted to demonstrate your holiday pictures with your PDA? No big deal, every viewer offers so-called slideshow, where you can watch the images in a regular sequence. Provided you collected suitable images under a single folder[7], launching a slideshow costs you a single tap.

But what if you wanted greater control over the images? A specific order or particular music? Resco Viewer offers feature called custom slideshow that goes way beyond the conventional implementation.

Let us say right at the beginning, that it is not quite easy. The following figure illustrates what you can use to create a presentation:



Custom slideshow lets you:

- Select images and their order,
- Specify transition effects, duration the particular image is shown,
- Annotate images or insert text slides,
- Define the background music. You can even specify songs that play for a particular image group.

Resco Viewer co-operates with common audio players, but it has also own mp3 player. (Except of some older Palm OS models.)

[7] This is a problem in itself: Most users will think about a file manager here. However, Resco Viewer offers complete image management and no external task is needed.

10.6. Secret Documents

Let's demonstrate the easiest possibility how you can handle a secret document in IDGuard.

Use main menu to select *New Document*.

Of course, you could have used any other record and add an attachment, but the described way is simpler.

Select file and press OK.

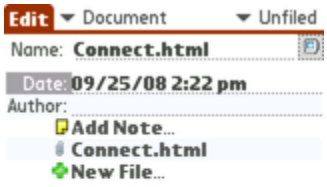
That's it. IDGuard now shows the document icon (see next figure) and when you tap it, the document gets opened.

Everything under the control and safe. IDGuard can even import eventual edit changes.

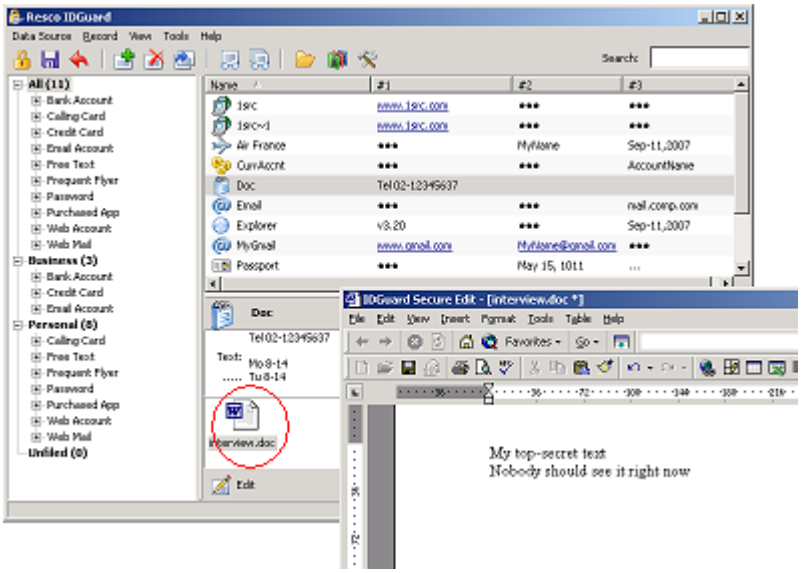
Remark related to the supported file types:

If you select an image or txt file, IDGuard will handle it itself. For other file types you will need an editor on your PDA. Some of the most common combinations:

- DocsToGo or MobiOffice for office files,
- PalmPDF for pdf files
- Blazer for html files. (our case)



The document record is like any other record so that you can add notes, other attachments etc.



As the above figure shows, IDGuard desktop supports safe document storage, too, and the document processing is even simpler than for the PDA.

On top of that IDGuard will automatically synchronize stored documents during a Hotsync.

10.7. Downloading zip files onto your PDA

Zip files have one basic advantage – they compress the data. This is important for example for the web downloads. However, there's a cost – more difficult handling. For example downloading and installing a zipped application consists of these steps:

- Finding the zip installer on the web,
- Download,
- Unzip (getting the prc file from the zip),
- Installation.

Downloading from Blazer

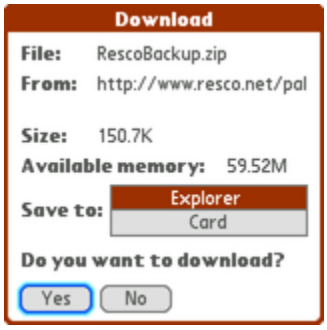
Launch Blazer, navigate to the particular web site, find the zip link and tap it. In turn Blazer will download the zip file and save the file to the card folder */Palm/Blazer/Download*.

Now you need to launch your zipper, extract the zipped contents and (for example) install the prc file.

Using Blazer and Explorer

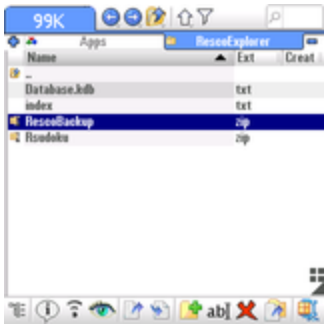
(Note that this procedure may fail for large zip files due to insufficient memory.)

Start phase is the same – you need to open the web site and tap the zip link.



But now the Blazer will offer the possibility to save to Explorer.

- Accept it and wait for the download to complete.
- Explorer will save the file to the card.



When you launch Explorer next time, it will open on the saved file. Tap the file to open it.

Open the context menu for the prc file. (Tap&hold the pen on the file.)

Select the context menu option *Install to RAM*.

That's it – installation is complete.

Remark:
Explorer lets you launch zipped application even without the installation. All you need to do is to tap the prc file.

Using Explorer only

You don't need Blazer at all. Simply start Explorer and select the menu option *Download File*.

This method minimizes the network traffic, as you do not need to download any web page.

Type the web address (URL) of the downloaded file. (To get the URL – open the web page in the desktop browser and right-click the link to display its properties.)

Then select the output folder and tap *Download*. The rest is as above.

10.8. FTP is simple

At least it is easy to try if you have Resco Explorer. All you need is web connectivity. It means if you can use Blazer to browse the web, you will be able to use FTP as well.[8]

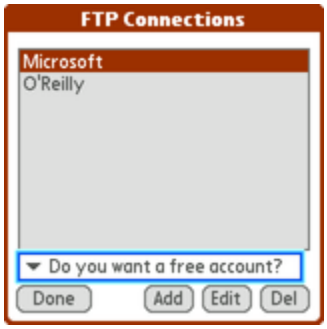
FTP stands for File Transfer Protocol and is used to exchange the files between the FTP client (your PDA) and FTP server (a remote site).

Let's do a simple exercise that will make use of the DriveHQ FTP server.

Explorer presets two FTP servers so that you can try the remote connection. They are so-called public servers. You can read most directories, but you are not allowed to do any changes. (Try and see.)

These servers serve for demonstration purposes only and you can remove them from FTP. (Later.)

Now to the more serious work. Open the *FTP Connections* dialog as shown in the picture.



(BTW, this is the place where you can get rid of preinstalled servers. The *Del* button serves for this purpose.)

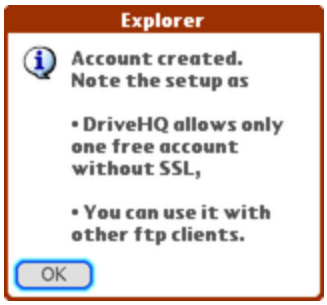
Our goal is to create a free account at the FTP hosting service DriveHQ. This is something like gmail except it is oriented towards ftp.

Tap the question under the blue focus.

[8] Unless your Internet connection is limited.

You need to fill basic data.

You should use real e-mail account – you may need it in the future if you forget your password.



That's what you get if everything works - a free account with respectable limits:

1GB storage and 1 GB download/month - parameters that are hard to beat.

If you need more or you want secure connection, you have to go to the DriveHQ web site and apply for premium services.

You can start working with remote site – upload/download files, organize directories etc. More or less everything you can do on the card.

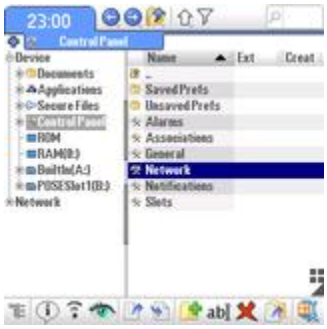
What you will notice soon is lower speed as compared to the real expansion card and automatic connection drop after some period of inactivity. But in principle there is nothing really new you wouldn't know so far.

To complete the above story, you can go to DriveHQ web site and access the data from your desktop.

Advanced users may want to work with other ftp servers (home server, company server), but that's another story. DriveHQ is easy and does not require any special knowledge.

10.9. What's the time now?

I mean exact time, of course…



Maybe a funny feature, but how can you be sure that you won't need it tomorrow?

Ok, here is what you can do to synchronize your PDA time with a World Time Server.

To start – open the Explorer and go to the Network Control Panel.

As you see, there are a couple of tools that might be appreciated by network professionals. Forget about them for the time being and tap the *Time* button.

Next dialog lets you select the time server. However, most of us will be happy with the default server listed.

As next – tap the *Check* button.

And here is the result. If you now tap *Save*, your device time gets corrected.

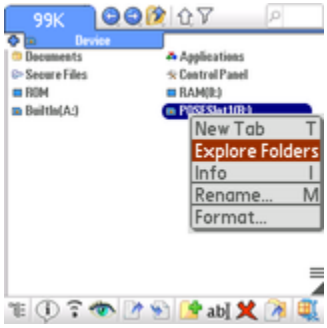
That's all.

10.10. Cleaning the card

If you want to free some space on the card, better find a tool that will provide you with some analysis, at least count the folder sizes:

- If you mount the card as a desktop drive, you will find plenty of such tools.
- There is a nice Palm OS freeware called VFSUsage that provides a graphical view of your card.

Here is how can Resco Explorer help:



If you enter the card from the context menu command *Explorer Folders*, Explorer will count folder sizes. If it takes too long, you can interrupt the counting by doing any action.

If you need more information about particular folder, you can use its context menu and the *Info* command.

10.11. Interesting Links

Clever stuff DAs etc. by wozofoz
http://forum.brighthand.com/showthread.php?t=245644&highlight=resco+explorer

More Blazer tips and tricks by wozofoz
http://forum.brighthand.com/showthread.php?t=252620&highlight=resco+explorer

Six Security Holes/Issues for Palm Users
http://forum.brighthand.com/showthread.php?t=224634

Use Your Palm To The Extreme (in 8 easy steps!)
http://drhaisook.wordpress.com/2007/05/07/use-your-palm-to-the-extreme-in-8-easy-steps/

Putting Videos On Your Palm - A Guide
http://forum.brighthand.com/showthread.php?t=244793

PalmDiscovery blog
http://palmdiscovery.com/
Full of excellent tutorials and reviews.

TamsPalm-the Palm OS Blog
tamspalm.tamoggemon.com
Palm news & opinion from a well known Palm enthusiast.