

# TealInfo User's Manual



Program Version 4.39  
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# Introduction

Thank you for trying TeallInfo, the powerful information database and reference application for PalmOS.

## Contents

This archive contains the following files:

Program files:	TEALINFO.PRC	The TeallInfo program file
	MKTLINFO.EXE	The TeallInfo folio creation utility
	TPSETUP	The TeallInfo easy-installer (for Windows)
Document files:	INFODOC.PDF	This manual in Adobe Acrobat (PDF) format
	INFODOC.HTM	This manual in HTML format (sans images)
	INFODOC.PRC	This document in TealDoc format
	REGISTER.HTM	TealPoint Registration form in HTML format
	REGISTER.TXT	TealPoint Registration form in text format
Sample folios:	SALESTAX.PDB	Sales Tax Calculator folio
	TIPS.PDB	Tip Calculator and Guide folio
	METRICON.PDB	Metric converter folio
	TODOLIST.PDB	Handy, configurable to-do list folio
	PHONEBK.PDB	Handy, configurable phone book folio
	INFOREF.PDB	Reference folio for folio development
	INFOREF.TXT	Source text file for reference folio
Bonus folios:	USPOSTGE.PDB	US Postage rates folio
	8BALL.PDB	Magic fortune-telling folio
	BMI.PDB	Body-Mass Index calculator folio
	ELEMENTS.PDB	Periodic table of elements folio
	RGBTOY.PDB	Color selection tool
	PINOUTS.PDB	Folio of common computer connector pinouts

**Download other folios for free from [www.tealpoint.com](http://www.tealpoint.com)**

## ***Installation***

### **Windows:**

Use the TealPoint setup installer by double clicking on the **TPSETUP.EXE** installer program, and following the on screen prompts.

### **Other Systems:**



Use the Palm Installer (Quick Install) to install the program file **TEALINFO.PRC**. It will appear on the Palm Computing device after the next HotSync.

This manual is also provided in this archive as the PalmPilot document **INFODOC.PRC**, which can be viewed with our application TealDoc.

Instructions on how to use the Palm installer are in the Palm Handbook that came with your Pilot, PalmPilot, Visor or WorkPad.

### **Folios Files:**

To use the program, you'll also need to install some folio files, available on the TealPoint website at [www.tealpoint.com](http://www.tealpoint.com) MemoWare ([www.memoware.com](http://www.memoware.com)).

Included in this archive are a few sample reference folios. Use the Palm Installer to install these files.

See the section 'Included folios' below for more information.

# Chapter 1 – Getting Started

## Introduction



Use TeallInfo to open and read interactive documents called “folios”. TeallInfo Folijs are like mini applications, displaying data in tables, lists, and windows that are linked together with advanced user interface elements such as outlines, images, forms, hyperlinks and popup lists.

Folios can be downloaded from the ever-growing library of available titles (most are free), or created from scratch using a text editor and the command-line utility MkTlInfo. Folios can be easily created with the included tools and a text editor, but build powerful screens that look and feel like custom applications.

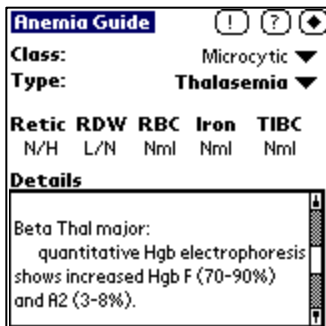
Advanced developers can use TeallInfo to create their own reference tools, calculators, and mini applications, all with no programming.

## Using the Program

TeallInfo is easy to use, and consists of two basic interface screens, the **Folio List Screen** and the **Folio Browsing Screen**.



The *Folio List* screen lists the folios installed on the handheld, and allows you to move and manage them.



The *Folio Browsing* screen, on the other hand, displays an interface defined by the folio that you have opened for viewing.

## Chapter 2 – Managing Folios



The **Folio List Screen**, appears when you first run TealInfo. On it is a list of all the installed folio files in the current category.

### Categories

Select or edit categories by tapping on the category selection pick-list in the upper right hand corner of the screen.

### Folios

Tap on a listed folio to open or modify it. To select which action is performed, tap on the corresponding action-selection buttons at the bottom of the screen before clicking on an entry in the list. By doing this, you can open the folio, rename it, change its category/location, or delete it permanently from memory.

### Images

You can also perform similar operations with TealPaint-format image files by changing the "Info" pick-list at the bottom right from "Folios" to "Pic". These picture databases are sometimes bundled with folios to be used as source imagery for the folio. If you choose to "open" a picture database, TealPaint will automatically be started if it is installed on your organizer. You'll need to manually load up the correct image database, however.

## Menus

The following functions are accessible from the Folio List screen using the system menu button in the silk-screened Graffiti writing area or device status bar:

### Backing up files

During HotSync, the Palm Desktop program automatically maintains a backup of files that have their PalmOS "backup bit" set. Files backed up in this way can be restored if you lose power to your handheld.

The *Backup All in List* menu turns on the backup bits for folios listed in the current category. This forces the folios to be backed up into your backup directory each time you HotSync. Choosing *Backup None in List*, on the other hand, resets all the bits to zero. After HotSyncing to back your files, you'll probably want to reset the bits, or the Palm HotSync system will scan the file looking for changes every time you HotSync, slowing down your HotSync sessions.

### Setting Preferences



The following options can be set under the "Preferences" menu item.

#### Alphabetize Folio List

By default, the folio list is sorted alphabetically. You can turn off this feature to increase response time if you have many folios installed.

#### Check Folio Version

By default, TealInfo will automatically check the version numbers of any folios you open, warning you if any were made with a newer version of TealInfo. You can turn off this feature, but note that you may encounter unpredictable results running newer folios with an older copy of TealInfo should the new folios require features not supported in your version.

#### Hide Folios Starting with ~ (tilde)

In certain applications it may be desirable to create a series of interlinked folios where some of the sub folios are hidden from view and only accessible from other folios. To do this, name the folios starting with a tilde character (~) and set this option in preferences.



### Run in Grayscale Mode

When set, this option runs TealInfo in grayscale mode on a monochrome handheld instead of the default black and white mode. When color TealPaint images are displayed in folios with this mode on, they are automatically converted to shades of gray. TealInfo support a four-shade grayscale mode on basic PalmPilot models and a 16-shade grayscale models running OS 3.3 or higher.

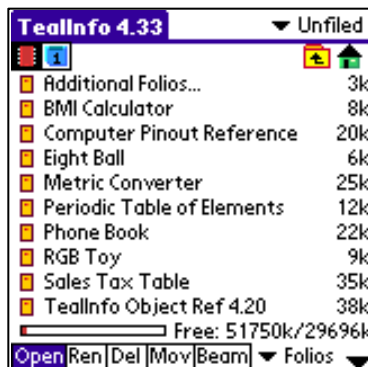
### Remember Last Category

When set, TealInfo remembers the last category you were viewing and returns to it the next time to run the program. Otherwise, the current category is reset to "All" each time you return.

### Remember Last Device

When used with external storage cards, TealInfo returns to the last device visited each time you visit the program. When this option is turned off, TealInfo always starts in RAM.

## External Media Devices



TealInfo supports reading folio files directly from external storage cards.

**NOTE:** Supported devices include the Sony Memory Stick, Palm SD/MMC cards, and both the Compact Flash (CF) and SD/MMC slots on HandEra organizers. In addition, support has been added for Portable Innovation MemPlug Springboard modules and Kopsis Engineering's add-on VFS library.

When a card is detected, an extra row of icons will appear along the top of the Folio List Screen. On the left are the device icons, used to select the current card or location to list files. The first icon is the **memory** icon, and is followed by one numbered **card icon** for every expansion card found. Most devices will support at most one external storage card, and will thus only have one card icon. The HandEra 330 and Tapwave Zodiac handhelds, however, can support two simultaneous data cards; so two card icons can be present if both slots are occupied.

To show the files on an external card, simply tap on the corresponding card icon. External file devices support a hierarchical folder system, which replaces the Palm category system. Thus, the "category" selector in the upper right corner disappears and is replaced with a "folder" button when an external card is selected. The "Beam" button also disappears, as files can only be beamed directly from internal memory.

If sub-folders are present in the current folder, simply tap on them to move "down" into the sub-folder to see its contents. To the right of the device icons is a display showing the current directory on the card, followed by two folder navigation buttons. Use the first **parent** icon to move up one level to the folder that contains the current folder. Tap on the last **root** icon to move all the way back up to the topmost folder.

## Managing Files

To copy or move files between categories in RAM, or to move them between RAM and an external card or between folders on the same card, tap on the **Mov** pushbutton and tap on the name of the file to move or copy. Either the **RAM File Manager** or **Card File Manager** window will open, depending on your current device.

### RAM File Manager

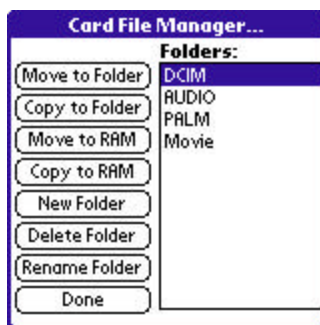
The RAM file manager allows you to change the category of a Folio stored in RAM. If the expansion device supports VFS, then you can also copy or move the file to the external card. When either option is selected, the file is moved to the last card and sub-folder viewed.



**NOTES:** The MemPlug system software does not support the VFS-standard interface for moving of files between Card and RAM, so the move-to-card options will not be available when directly accessing a MemPlug device.

Also, Sony CLIE handhelds running older versions of PalmOS, moving files is permitted; copying files outside the standard "MSSONY" folder, however, is not. Sub-folders can be made and used within the MSSONY folder however.

### Card File Manager



The card file manager window is similar to the RAM File Manager, except that the list of categories is replaced with a list of folders in the current location.

A **current** (.) entry in the list indicates that you want to copy a file into the listed location. If the current location is not the Root of the card, then additional **parent** (..) and **root** (\) folders also appear in the list. These folder entries allow you to select a location in which to copy or move the selected file. To change the current location, double-tap on the folder entry.

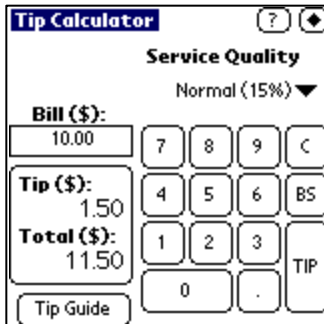
On VFS-systems, **Move to RAM** and **Copy to RAM** options appear. To move or copy a file, select the target location in the folder list and tap on the move or copy button.

An additional three buttons for creating, deleting, and renaming folders is also present in the card file manager. These three options can also be reached by tapping on the **folders** button on the Folio List screen. Care should be used

when deleting folders, because if non-folio files are present in the folder, they will not be listed in TealInfo and can be accidentally deleted. Some VFS implementations will delete a folder even if it is not empty, while others will simply not delete the folder.

**NOTE:** Move operations are not supported directly by the MemPlug system software. Also, the Sony CLIE version of VFS does not support copying files outside the MSONY folder. Lastly, only Palm-format files can be copied or moved to RAM. Text files and other non-palm files cannot be stored in RAM.

## Chapter 3 – Browsing Folios



When you open a folio for browsing, you are brought to the **folio-browsing screen**, whose interface depends on the folio. The one common element is the close button in the upper right corner of most folios, but some may override this button as well. In any case, you can always close a folio and return to the Selection Screen by selecting the *Close* menu item.

### Menus

#### Details



The *Details* window allows you to set two parameters for the current folio. The *Backup* bit determines whether the file is backed up during each HotSync, while the *Private* item determines whether the file is listed in the folio Section screen when private records are globally hidden in the Palm security settings.

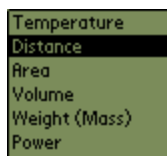
#### Checkmark All / Checkmark None

Sets or clears, respectively, all entries in presently shown CHECKMARK and CHECKLIST items. Use this to quickly reset or set a commonly used task list, for instance.

### Folio Controls

TealInfo folios can have many interface elements already familiar to PalmPilot owners. These include:

#### Lists



Vertical lists of selectable elements, scrollable with a scroll bar if there are too many selections to fit on one view.

## Tables

12	0C	014	FF
13	0D	015	CR
14	0E	016	S0
15	0F	017	S1
16	10	020	DLE
17	11	021	DC1
18	12	022	DC2
19	13	023	DC3
20	14	024	DC4
21	15	025	NAK
22	16	026	SYN
23	17	027	ETB

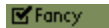
Tables resemble lists, but display information on a grid. While lists can contain columns that look similar to tables, tables allow the selection of a single rectangle in the grid, while lists always select the entire row.

## Windows



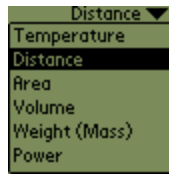
Freely wrapping scrolling text windows

## Checkboxes



Lists with selectable boxes for each item

## Popup Lists



Fields that show the current selection but pop up a selection list when you click on them.

## Edit fields



Regions where you can click inside and enter or edit text. Unlike the system equivalent, these may take on more advanced formatting when not being edited.

## Outlines



Like lists, but featuring an outline-like tree hierarchy, subsections of which can be collapsed (hidden) or expanded (shown) under user control. To expand or contract an outline item, **tap on the control triangle** next to the item name.

### Popup Windows

Pushbuttons that bring up a window of text when tapped.

### Goto Buttons

Buttons that open up another folio, if present, Doc files in TealDoc, Movie files in TealMovie, or open databases in other supporting applications.

### Print Buttons

Buttons which output textual data or report to a supported printing through the program TealPrint.

### Images

Picture imbedded in a folio or stored from TealPaint image databases

### Popup Images

Pictures that display themselves when a button is tapped

### Animations

Page-flipped images, providing simple cycling animation.

### Cycling Text

Windows with changing text messages for warnings or advertising messages.

### Passwords



Ability to ask for passwords when entering a folio for security or registration purposes.

### Hyperlinks

Specially marked text that you can tap on to jump to other folios or popup windows, pictures, and lists.

### Object Linking

Ability to link the contents or behavior of a window, image, or list to the current selection of one to eight other lists, outlines or checkboxes.

## Chapter 4 – Using Included Folio Files

A number of folios are included with TealInfo. These are just a small sample of the folios available. A huge library of additional folios is available for free download online from tealpoint.com.

### METRICON

**Metric Converter** ? ↕  
Category: Power ▼  
Show: KWatts to Horsepower ▼  
KWatts to Horsepower  
Horsepower to KWatts  
Original Value  
1.00  
Result  
1.34

A metric conversion folio. Choose conversion type and units from the popups at the top of the folio to display an appropriate conversion table.

### SALESTAX

**Sales Tax Calculator** ? ↕  
Subtotal Tax Rate: 5¼% ▼  
\$1.00  
\$2.00  
\$3.00  
\$4.00  
\$5.00  
\$6.00  
\$7.00  
\$8.00  
\$9.00  
\$10.00  
Tax: \$0.16

A simple calculator for sales taxes from 3-11% in ¼ percent increments. Choose your tax rate from the popup and pre-tax subtotal in the list on the left.

### TIPS

**Tip Calculator** ? ↕  
Service Quality  
Normal (15%) ▼  
Bill (\$): 10.00  
Tip (\$): 1.50  
Total (\$): 11.50  
Tip Guide

A simple tip calculator, choose the pre-tax total from the left to calculate an appropriate tip. Also includes a helpful tip guide giving general guidelines for common situations.

## USPOSTGE

**US Postal Calculator** ?

Weight: 1 oz, 2 oz, 3 oz, **4 oz**, 5 oz, 6 oz, 7 oz, 8 oz, 12 oz

Service: Global Priority 1

GPM Zone 1 (Canada)  
Country Zones

Flat rate envelopes:  
6 x 10 inch: \$4  
9½ x 12½ inch: \$7

Cost \$ **11.00**

\* Rates updated Feb 13, 2002

A US postage calculator which calculates USPS First class, Priority Mail, and Express Mail postage, as well as international letter postage including Canada and Mexico.

## BMI

**BMI Calculator** ?

Units: Metric

Height (cm): 165

Weight (kilograms): 65

Body Mass Index: 23.9

Guide

Calculate your Body Mass Index (BMI), an indicator for weight status in adults. This tool supports both Imperial English and Metric units and includes a handy chart to evaluate your results.

## ELEMENTS

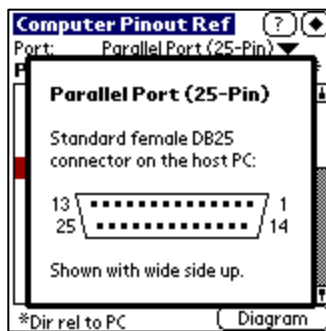
**Periodic Table** Notes ?

Element	Sym	Num	Weight
Actinium	Ac	89	(227.028)
Aluminium	Al	13	26.981
<b>Americium</b>	<b>Am</b>	<b>95</b>	<b>(243.061)</b>
Antimony	Sb	51	121.760
Argon	Ar	18	39.948
Arsenic	As	33	74.922
Astatine	At	85	209.987
Barium	Ba	56	137.327
Berkelium	Bk	97	(247.070)
Beryllium	Be	4	9.012

Valence: 3,4,5,6 Table

Data from Periodic Table of Elements, including symbol, atomic number, atomic weight, and valence. Also includes simple popup graphic table.

## PINOUTS



Pinout reference tables for PC cards, devices, and connectors. Includes pin designations, connector types, and pin assignments. Updated to include USB, Cat-5 Ethernet, and connector diagrams.

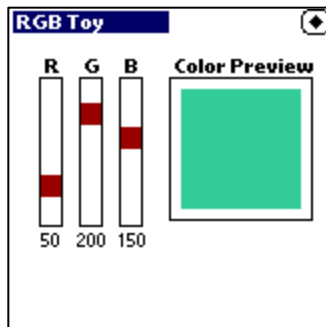


## 8BALL



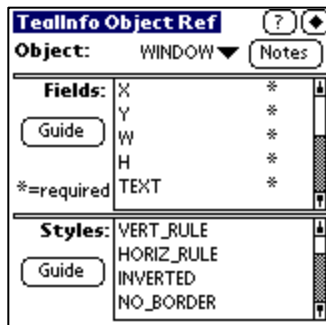
Answer any of life's questions (the yes/no ones, anyway) with this magical artifact of 70's era technology.

## RGBTOY



Preview the simple RGB colors supported by TeallInfo 4.0's new drawing functions. Also demonstrates interactive sliders and drawing in TeallInfo.

## INFOREF.PDB



This folio provides a useful quick reference for building TeallInfo folios. It lists the FIELD and STYLE tags supported by each TeallInfo object. Chose an object type from the popup list at the top of the folio. Its corresponding FIELDS and TAGS will appear in the windows below.

## TODOLIST.PDB

A handy to-do list folio. Click on the 'Edit' button to insert your own entries. Unchecked items appear on lines preceded by a minus (-), while checked-off items are preceded by plus (+) signs. A line with neither symbol will simply appear as an un-checkable label. To load more than one copy of this folio, rename the original folio on the **Folio Selection Screen** and use the Palm Install tool to install the TODOLIST.PDB file again.

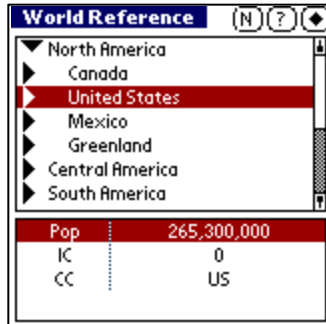
## PHONEBK.PDB

A handy phone book folio. Click on the 'Edit' button to edit the current page of phone number entries. Use a single tab stroke to separate data intended for each nine and the 'return' stroke to separate lines. Change the list of categories using the 'categories' button, entering each category on a separate line.

# Chapter 5 – Downloading More Folios

Countless other folios are available for free download from TEALPOINT.COM. A sampling of a few popular titles include:

## World Reference



Folio of very useful information about countries and cities around the world. Lists city, longitude, latitude, time zone, and phone prefix.

## Area Codes

Look up Area codes by code both forwards and reverse by region. Covers current US area codes and special prefixes.

## Horoscope

A complete overview of the 12 zodiac signs in the Zodiac. Get personality profiles, favored elements, ruling planets, chosen stone and lucky colors, all in one handy folio.

## Anniversary Gifts

Folio to help keep track of what to get your spouse on a given anniversary. Returns both modern and traditional themes for anniversary gifts given the correct number of years.

## Conversion Factors

A large collection of conversion factors for various units.

## ASCII Character Sets

This folio shows the following ASCII character sets: DOS, WIN (Windows-32 Ariel), POS (Palm OS font 0)

## JavaScript Reference

Reference for JavaScript 1.2 object properties, methods, and events.

## Craps Odds

The odds for different bets on a Craps table, and the result of any given roll on each bet.

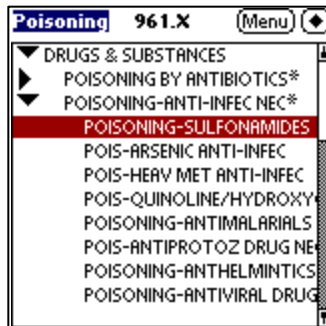
## Ham Radio UHF/VHF Band Plan

A handy folio for Ham Radio hobbyists, listing the allocated VHF and UHF frequencies from 60 Meters to 10.5 Ghz.

## Immunization Guide

An immunization guide with information on the 1999 AAP immunization schedule, plus info on each of the vaccines. It now has the year 2000 American Academy of Pediatrics immunization recommendations. For more info, visit the Pediatric Pilot Page at <http://www.keepkidshealthy.com/pedipilot.html>.

## ICD-9 Diagnosis Codes



Demo of the commercial folio STAT ICD-9 Coder. Also available at <http://www.statcoder.com/ICD9/icd9.zip>.

## Lab Values

Common medical lab values for hormones, fluids, etc. It can be used by MD's, EMT's, nurses, or anyone attempting to read their medical chart.

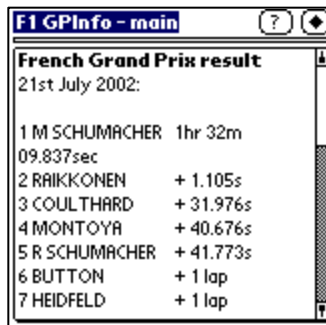
## Dirt/Stone Construction Calculator

An invaluable construction calculator that computes the volume of dirt or weight of sand, stone, gravel, crusher run, or rip rap needed to fill a specified area to a required depth. A must for architects, contractors, or other construction professionals. Supports both Imperial and Metric units.

## Compressible Flow

Compressible flow tables for both 1-D isentropic flow and 1-D normal shock flow. This folio should be a useful reference for engineers and scientists working in the field of compressible gas dynamics.

## F1 GrandPrixInfo

A screenshot of a software window titled "F1 GPInfo - main". The window displays the "French Grand Prix result" for the 21st of July 2002. The results are listed as follows:

Rank	Driver	Time
1	M SCHUMACHER	1hr 32m 09.837sec
2	RAIKKONEN	+ 1.105s
3	COULTHARD	+ 31.976s
4	MONTOYA	+ 40.676s
5	R SCHUMACHER	+ 41.773s
6	BUTTON	+ 1 lap
7	HEIDFELD	+ 1 lap

A main folio and sub-folios for TeallInfo giving information on teams, circuits, drivers and current championship standings for the current Formula 1 season. The sub-folios contain information on the history of results for Grand Prix races and the drivers' and constructors' championships; driver, team and circuit details.

## Airports

Folio listing worldwide airports, their location and abbreviation.

## Chapter 6 – Creating New Folios

Like TealDoc files, TealInfo folios are created first as text files that then get converted to a pilot-recognizable format using a conversion program. For TealInfo folios, the MkTlInfo conversion tool is included for this purpose.

### ***Compiling a Folio***

On a PC, run MkTlInfo from a DOS box with the following format:

```
MKTLINFO <input text file> <output .PDB file> <folio title> <image database>
```

If any of the file names or titles has spaces, they should be enclosed in quotes. The image database (optional) is the name of a TealPaint image database in the current folder to insert into the folio to be used as an embedded source of imagery.

You can also run MkTlInfo without arguments and you'll be prompted to input the necessary file names.

### ***Additional Resources***

#### **TealInfo Dev Kit**

If you're planning to make your own folios, we recommend downloading the TealInfo Dev Kit, available on our web site. It contains sample source text files and documentation to help in making folios, as well as a folio decompiler for reverse-converting unprotected folios.

#### **Previewing Folios**

When making a folio, you'll no doubt need to quickly preview changes, particularly when positioning on-screen objects. We recommend using POSE, the Palm OS Emulator, or the Palm Simulator, both available at Palm's web site <http://www.palm.com>. This program simulates a Palm organizer on your computer desktop, allowing you to nearly instantly load new version of a folio for quick previewing.

## Source File Format Overview

### Defining Objects

MkIIInfo takes plain text files with the following basic format: Objects are defined by a line with the name of the OBJECT, followed by lines containing FIELDS describing the object. Each field is followed by one or more VALUES on the same line, though TEXT fields may have VALUES on subsequent lines as well. VALUES can be numbers, expressions, keywords, or quoted text, depending on the type of FIELD.

```
(OBJECT1) (ID)
(FIELD1) (VALUE1A) (VALUE1B...)
(FIELD2) (VALUE2A) (VALUE2B...)
...

(OBJECT2) (ID)
(FIELD1) (VALUE1A) (VALUE1B...)
(FIELD2) (VALUE2A) (VALUE2B...)
...
```

where (OBJECT) is a keyword defining an on-screen interface element such as a list, label, or button, and (FIELD) is the name of an adjustable parameter for that object. Each (FIELD) is followed by one or more values, depending on the particular (FIELD). Refer to the appendix for a full listing of supported objects and how to define them.

### Comments

Comment lines are indicated with a pound (#) sign. Any lines beginning with a '#' are ignored by the folio converter.

### Example

This example creates a simple form with one scrolling object:

```
#
# This is a simple scrolling list
#

LIST
X 10
Y 20
W 140
H 130
TEXT "The Man Trap"
      "Charlie X"
      "Where No Man Has Gone Before"
      "The Enemy Within"
      "Mudd's Women"
      "What are Little Girls Made of?"
      "The Naked Time"
STYLE HRULE
FONT 1
```

## Advanced Features

### Placing Objects

#### Coordinate System

Objects are placed on screen using x,y coordinates relative to the upper left corner of the browsing window. They are placed in PalmOS "standard" coordinates, which map a range of values 0 to 160 in either direction in a standard square screen. Objects have an x,y position and a width and height, which you set using the following tags:

```
X Y W H
```

Coordinates of the current object (must be defined on a previous line to be used)

```
BX BY BW BH
```

Coordinates of the current object's activation button

#### Relative Coordinates

When placing objects in a folio, you're not limited to using just numbers. You can use simple math expressions and can even define an object's coordinates relative to another object, making them easy to align or move as a group. To help do so, numerical values can be entered as simple math expressions, and a number of predefined symbols can be used in the expressions, substituting for numbers:

```
PREVX PREVY PREVW PREVH
```

Coordinates of the previous object

```
PREVBX PREVBW PREVBH
```

Coordinates of the previous object's activation button

#### Example:

For instance, to define a column of checkmark objects, one might write:

```
CHECKMARK
X 10
Y 15
W 100
H 12
TEXT "One "
CHECKMARK
X PREVX
Y PREVY+12
W PREVW
H PREVH
TEXT "Two "
```

**SPECIAL NOTE:** mathematical expressions used for coordinate positioning currently supports five operators: addition (+), subtraction (-), multiplication (\*), division (/), and modulus (%). Expressions are evaluated strictly from left to right, currently ignoring any mathematical precedence rules. Thus,  $2+3*5$  is evaluated as 25, not 17.

## Specifying Default Filenames

Three special tags exist which don't affect the contents of the folios directly, but rather are used to pass parameters and file names to MkTInfo, so they don't have to be specified every time the folio is compiled.

### PNTFILE

While images for IMAGE and POPIMAGE objects can remain as separate TealPaint databases, it's often more convenient to ship a folio as a single file with the images imbedded inside. An entire TealPaint image database can be included inside a folio with PNTFILE tag. For example,

```
PNTFILE PICTURES.PDB
```

will imbed the image database "Pictures.pdb" (should be in the current folder) into a created folio. Any references to the picture database by IMAGE or POPIMAGE objects should then use the name of the folio as it appears on the PalmPilot instead of the image database name. Only one picture database can be imbedded in a folio.

### OUTFILE and OUTNAME

MkTInfo supports the use of special tags in the source file to pre-specify output and database (as seen on PalmPilot) file names. This latter name is especially important if the database is required to have a specific name because it's referred to by links from other folios or from internal references to imbedded TealPaint images.

Examples:

```
OUTFILE MYFOLIO.PDB
OUTNAME "My little folio"
```

## Adding Inline Font and Underline Styles

TealInfo supports changing fonts and underlining inside a body of text for a WINDOW or POPWINDOW object. Other objects may be less predictable. Font changing is done via HTML-like tags imbedded with the text of the object. For best results, font and underline tags should not bridge lines of the text. For example:

```
TEXT
```

```
"This is some <$FONT=1>bold</$FONT> text."
```

```
"This is some <$UNDERLINED>underlined</$UNDERLINED> text."
```

The <\$FONT> tag selects a font, while the </\$FONT> tag reverts it back to the original font. Unlike HTML, tags of the same type cannot be nested, so a </\$FONT> tag will always revert back to the original font, even if preceded by two <\$FONT > tags.

Note that the original font defined in the object definition governs the spacing of text in a TealInfo object. Thus, you usually don't want to change fonts to one taller than the original font, or subsequent text lines will clip that text.

## Adding Inline Hyperlinks

You can also insert hyperlinks in text to open a named folio or activate a named button to pop up a window or picture. For example:

```
TEXT
  "Just tap <$LINK="My Folio">here</$LINK> to go to the index folio."
  "Just tap <$LINK="Info">here</$LINK> to show more information."
```

The link text can be the name of a folio to open or the name of a button to activate. The actual text of the button should be included, not the button object's name in the source file. Note that you can place the button entirely off-screen by using large coordinates (such as BX=200 BY=200), leaving the hyperlink as the only way to activate it.

## Creating Scrolling objects

TeallInfo supports scrollable, oversized, text and image objects. The oversized width of text objects are defined by creating columns wider than the objects, while heights are defined by the number of lines of content. Image widths and heights are defined by their source imagery. To create a horizontally scrolling WINDOW object, use the TABS field to create a column wider than the object itself.

```
WINDOW
  X 10
  Y 10
  W 50
  H 50
  TABS 75
  TEXT
    "This is an example of a text window with" \
    "horizontal scrolling"
```

Text objects appear with on-screen scrolling bars. In addition, for both types of objects, mapping the hardware up/down scrolling buttons can do scrolling and/or combinations for the four application launch buttons to vertical and/or horizontal movement. This is done using one of the BUTTON\_SCROLL style flags.

By mapping scrolling behavior to different buttons for different objects, some folios can be made which operate largely pen-free.



## Linking Objects

LINK fields are one TeallInfo's most powerful features. They allow you to control one object with another, and are typically used to create category pick lists and similar controls.

Adding a LINK field to an object allows that object to take on alternate contents depending on the current selection (value) of one or more other objects. For instance, to make a WINDOW object take on different contents depending on the selection of a category LIST, you add a LINK object to the WINDOW, passing it the name of the LIST object that controls it. For clarification purposes, we refer to the controlled object as the "child" and the controller object as the "parent". A child object links back to each of its parents.

### Defining alternate contents in child

The child object should contain multiple TEXT fields, each with different content. By linking that object to other objects, the actual TEXT block used will depend on the selections of the controlling objects.

### Naming parent objects

To link to a parent, first identify the objects you're linking-to by giving each of them a unique ID name (with no spaces) following the object tag. For instance, the following identifies a list object as a parent object called 'choice\_list'.

```
LIST choice_list
  X 5
  Y 5
  ...
```

### Linking to parent objects

Then, refer to this parent object in the child object using the LINKS tag

```
WINDOW info
  LINKS choice_list
  TEXT "text one"
  TEXT "text two"
  TEXT "text three"
```

A child object can only be linked to parent objects that **appear before it** in a source file. The child object must also have enough TEXT fields defined for it to handle all of the possible selections of its parents.

### Calculating which TEXT object is used

The TEXT field that is actually used at any given moment is determined by the current selections of all of its parents, multiplied out using the formula (example for 3 objects):

$$\text{index} = ((\text{valueA} * \text{maxB}) + \text{valueB}) * \text{maxC} + \text{valueC}$$

where maxA, maxB, and maxC represent the respective number of selections parent objects A, B, and C can take on. This guarantees that for any combination of valueA, valueB, and valueC, a unique TEXT object will be selected. In this example, you must have (maxA \* maxB \* maxC) number of TEXT fields defined to cover all the possible values of the three parent objects.

### Simple Example:

```
LIST id_difficulty
  X 90
  Y 15
  W 60
  H 100
  TEXT
    "Easy"
    "Hard"
LIST id_speed
  X 10
  Y 15
  W 60
  H 100
  TEXT
    "Off"
    "Slow"
    "Med"
    "Fast"
WINDOW
  X 10
  Y 120
  W 140
  H 20
LINKS id_difficulty id_speed
  TEXT "This is Easy and Off"
  TEXT "This is Easy and Slow"
  TEXT "This is Easy and Med"
  TEXT "This is Easy and Fast"
  TEXT "This is Hard and Off"
  TEXT "This is Hard and Slow"
  TEXT "This is Hard and Med"
  TEXT "This is Hard and Fast"
```

### Using parent objects that are also children

The above example assumes that any combination of the parent objects will create a unique index number for the child object to lookup. It works because the maximum value of each of the two parent objects is a fixed number. This can break down, however, if one of the parent objects is itself a child object, and can thus change contents to different TEXT blocks with different number of lines.

If the contents of a parent can change, the math will not come up predictably if it is not the first item linked, because its maximum value will be variable, and more than one combination of selections can end up with the same index. This commonly occurs when trying to chain two category selectors together when the second "sub" category can have a different number of values depending on the selection of the first category. If a WINDOW object tries to link to both category selectors, it can't index to the correct entry because the maximum value of the subcategory can change.

```
LINKS category sub
```

```
index = (value_of_category * max_of_sub) + value_of_sub
```

To keep this from happening, we add a MAXVAL tag to the subcategory parent object. The MAXVAL tag tells TealInfo to use a fixed (non-changing) value when calculating the index of any children linking to that parent.

Place the MAXVAL tag in the definition of objects that are both a parent and a child. Set MAXVAL equal to the largest maximum value it will ever have with any TEXT object it contains. Then in the child object that links to it, add extra blank TEXT objects as if that parent object really did have that many choices.

### Complex Example:

```
# List of continents (category)

LIST continents
  TEXT
    "Europe"
    "Asia"
    "North America"

# List of countries (sub category, links to continents)
# Add MAXVAL here because our maximum value can change

LIST countries
  LINKS continents
  MAXVAL 3
  TEXT
    "England"
    "France"
    "Germany"
  TEXT
    "India"
  TEXT
    "United States"
    "Mexico"

# List of countries (links to both continent and country)

WINDOW locations
  LINKS continents countries
  TEXT "London, Devonshire"
  TEXT "Paris"
  TEXT "Hamburg, Colon, Frankfurt"

  TEXT "New Delhi"
  TEXT ""
  TEXT ""

  TEXT "Houston, Seattle, Ukiah"
  TEXT "Mexico City, Mazatlan"
  TEXT ""
```

For more info on how to do multiple dependencies, download our TEALINFO DEV KIT for examples.

## Using Text Resources

Text Resources allow a folio to minimize duplicated text by allowing multiple objects to point to a common text block. They also allow you to place more text in an object. Due to PalmOS limitations, an object cannot contain more than 64k of text or data, including all TEXT objects it needs. By using text resources, objects can contain point to multiple text resources, each of which can contain up to about 64k of text.

### Defining a text resource

Using a TRES tag, define an object with a single TEXT field. Be sure to give the TRES object a unique ID.

### Referencing a text resource

To use a text resource, replace an object's text with the text resource ID preceded by an '@' (at sign). Do not enclose it in quotes

### Example

```
TRES id_notfound
    TEXT "Sorry, no information is available about this
    device."

WINDOW
    X 5
    Y 14
    W 80
    H 100
    LINKS id_device id_class
    TEXT "4-5 Miles"
    TEXT "3 Miles"
    TEXT @id_notfound
    TEXT @id_notfound
    TEXT "15 Miles (estimated)"
```

**NOTE:** a TRES object add about 50 bytes of overhead, so space savings will only occur with text of sufficient length, but text resource still allow easy editing of commonly-used text.

## Creating Password-Protected Folios

When creating a commercial folio, you may wish to use some of TeallInfo's security features to keep your folio from being illicitly copied, decompiled, or used. As a first step, you can use the PASSWORD tag to lock the folio to a keyword. You can set up the keyword to be required to open the folio, or only if someone tries to decompile it. With the former option, using a numerical keyword or one that is not easily remembered, can keep the folio from being casually copied by someone unless they keep the keyword with them.

As a second level of protection, you create a custom version of the folio for every customer, using a key they wouldn't want to give out, like their credit card number.

Finally, if you collect the customer's HotSync user name, you can create a folio keyed to only work with their PalmPilot using the PASSWORD tag with the LOCKOUT style option but an empty ("") TEXT field. See the TeallInfo Object Reference in the Appendix for more information.

## Using TeallInfo for Forms Applications

With a little work, TeallInfo can be used for simple forms applications using POPEDIT, EDITWINDOW, POPLIST, CHECKLIST, and CHECKMARK objects. For the latter three objects, the REGISTER style flag is typically used to keep any choices permanent. To make EDITWINDOW changes permanent, the EDITWINDOW text must be stored in a separate TRES block,

To load the data back to the desktop, the folio "backup" option should be set in the details dialog for the folio. The folio will then be copied back to the user's Palm backup folder on HotSync. At that point, the folio decompiler "UntlInfo" (in the TeallInfo Dev Kit) can be used to convert the folio back to text format suitable for parsing by a database script or converter program.

Future versions of TeallInfo may include tools to help make such forms functionality available to general users and other non-programmers.

## Using MATH Objects

One of the most powerful features of TeallInfo is ability to create and use MATH objects. MATH objects display the results of a mathematical expression, which can combine data from other objects and their selections. MATH objects can be displayed or themselves be used as values for other MATH objects or LINK fields.

### Expressions

Mathematical expressions can be specified in simple, intuitive form. They are currently evaluated strictly from left to right. Thus, the expression:

$$1+2*3$$

will evaluate to 9, instead of 7, which follows the accepted convention of performing multiply operations before additions and subtractions. To avoid confusion, parentheses should be used to specify left-to-right order when mathematical precedence would normally dictate otherwise.

$$(1+2)*3$$

The parentheses will be ignored, but this will maintain compatibility with future versions of TeallInfo that may add support for both parentheses and precedence.

### RPN Notation

Complex equations can also be specified using RPN (Reverse Polish Notation) popularized by HP calculators. The benefit of RPN is that it can evaluate any equation from left to right order without parentheses. While this document cannot go into a full explanation or tutorial of using RPN, the concept is simple:

RPN operates on the concept of a list of numbers, commonly called a “stack”. When a number appears in an RPN expression it is simply added to the stack. When an operator (such as + or -) appears, it simply pulls the last two items off the stack, performs math on them, and places the result back onto the stack.

In evaluating a “normal” math expression (like 1+1), we normally start with a number, store it in our minds, then add an operator, remember it too, and then wait until we get another number to evaluate the expression. With complex expressions, we end up saving a whole bunch of numbers and operators and the order to evaluate them along the way to getting an answer.

RPN is much more efficient because you only store numbers. Operations occur immediately when you get the operator, so it’s much more efficient. The operators appear in the order you would normally evaluate them, not the order they appear in the expression.

Some “standard” expressions translate to RPN as follows:

1+2	becomes	1 2 +
(1+2) -3	becomes	1 2 + 3 -
1+(2-3)	becomes	1 2 3 - +
(1+2)-(3+4)	becomes	1 2 + 3 4 + -

### **Operands**

The numbers that appear in an expression, the “operands”, can simply be constant numerical values such as 1, 2, 3.1415, or .000007.

Operands can also be the name of another object, preceded with an '@' sign or a '#' sign. If the object is a LIST or other selectable object, the '#' sign will return the current “value” (selected line number) of the object, substituted in for its name. The '@' sign will instead return the value of the object’s text. If the object is a WINDOW, EDITWINDOW, other non-selectable object, or even another MATH object, then the object’s current TEXT is evaluated as an expression itself and the result inserted into the current MATH object’s expression. For LIST objects, the value of the current selection is used. For instance, a simple tip calculator could include:

```
TEXT "( @tip_rate * 0.01 + 1.0 ) * @sub_total"
```

### **Operators**

MATH objects support a number of mathematical operators, including:

#### **Floating Point Math**

Addition (+)  
Subtraction (-)  
Multiplication (\*)  
Division (/)

#### **Integer Math (fractional parts of operators are ignored)**

Modulus (%) – A%B is the leftover part after repeatedly subtracting B from A

#### **Comparison (return 1 if true, 0 if false)**

Greater-Than (>)  
Less-Than (<)  
Greater-or-Equal (>=)  
Less-or-Equal (<=)  
Equal (==)  
Not-Equal (!=)

#### **Logical (returns 1 if true, 0 if false)**

Logical And (&&)  
Logical Or (||)  
Logical Xor (^)

#### **Bit Math**

Bitwise And (&)  
Bitwise Or (|)  
Bitwise Xor (^)

#### **Special**

Truncate Digits (\) – truncates a number to a specified decimal place

Round Digits (:) – similar to truncate, but rounds up or down to the nearest result  
Duplicate on Stack (\$) – for RPN math only, duplicates the last entry on the stack

### **RPN Example**

With a little ingenuity, MATH operators can be used to create some very neat folios. For instance, suppose you want to have a tip calculator which forces a 20% tip if the party is 6 or more people. The following RPN expression could take advantage of comparison operators to calculate a grand total in a tip calculator.

```
TEXT "@tiprate @numpeople 6 < * 20 @numpeople 6 >= * + .01 * 1.0 + @subtotal **"
```

#### **@tiprate @numpeople 6 < \***

The first operand of this expression just places the tipping rate on the stack. Then it compares the number of people into the party. Remember that comparison operators evaluate to 1 if true, 0 if false. Since this result is then multiplied with the tipping rate on the stack, it has the effect of zeroing out the total if 6 or more people are present.

#### **20 @numpeople 6 >= \* +**

The next section, starting with "20", does the exact opposite. It evaluates to 0 if less than 6 people are present, or 20 otherwise. The two resulting products are added together, so the result is a rate of "tiprate" if fewer than 6 people are present or 20 otherwise. This is then multiplied by .01 to get a percentage, and added to 1 and multiplied with the subtotal to get the grand total.

### **Indexing**

When using the '@' symbol to reference text values in LIST and TABLE objects, the current selection is normally used to index to the corresponding line or cell of the LIST or TABLE. Using brackets ( [ ] ), a specific entry can be manually specified instead. This allows LIST and TABLE objects to be used as convenient storage objects for lists of numbers used in calculations. The brackets should immediately follow the object name, with the index value enclosed by the brackets. For example,

```
@choice[1]  
@choice[2]  
@choice[3]
```

reference the first three items in a LIST named "choice". Interestingly,

```
@choice[#choice]
```

is equivalent to

```
@choice
```



## **Parameters**

Sometimes, it is useful to re-use a mathematical expression defined in a referenced MATH object, but with one or two of the numbers changed from use to use. In these instances, curly braces ( { } ) can be used to pass extra values into the MATH object to be used in evaluating the expression.

In the referencing MATH object, curly braces are added after the referenced object name, containing one or more values separated by columns. The values are then read from within the referenced MATH object using the special symbols \$1, \$2... etc.

For instance if a math object called "calc\_tax" contains the following formula (rate/100+1)\*subtotal:

```
TEXT "$2 100 / 1 + $1 *"
```

It can be used to calculate the totals for different subtotal/tax combinations:

```
TEXT "@calc_tax{21.95,6.5}"
```

**Notes:** Parameters can only be used in undisplayed referenced objects. As these objects expect and use parameters, they must be hidden using a blank PAGES tag, as their value without parameters is undefined. Also, when used in combination with **indexing**, parameters and their associated curly braces must come after the indexing square brackets, not before.

## **Special Notes**

Math objects can also be used as sources for LINKs to other objects. When referenced as a LINK, only the integer portion (the part left of the decimal point) of the number is used. When referenced from an expression in another Math object, however, the full value is used.

## Using DRAW Objects

DRAW and POPDRAW objects let you draw graphics onto a rectangular area of the screen with a series of simple graphic commands. Graphics generated this way can be much more space efficient than bitmap graphics, and can also vary according to user selections when combined with MATH objects.

DRAW object commands appear in a TEXT block with one command per line. Lines beginning with a '#' sign are ignored.

The following simple example draws a holiday greeting on the screen.

```
DRAW
  X      10
  Y      20
  W     140
  H     110

TEXT
"FCOLOR 212"
"DLINE 40 90 70 20"
"DLINE 70 20 100 90"
"GLINE 100 90 40 90"
"FCOLOR 161"
"DRECT 60 60 7 7 3"
"DRECT 70 30 4 4 3"
"GRECT 50 80 7 7 3"
"GRECT 80 70 6 6 3"
"FCOLOR 255"
"DRECT 65 90 10 4 0"
"DFRAME 10 10 120 90 5 3"
"DCHARS 1 30 40 Season's Greetings"
```

See the appendix for a full list of valid commands.

Commands can also accept references to external objects in place of numerical or text parameters. Use the '#' sign followed by the object name to insert an object's current selection number into a drawing command, or '@' followed by the name to insert its current text.

# Appendix A – MkTInfo Object Reference

This appendix lists the screen objects and properties recognized by MkTInfo in making custom TealInfo folios. More comprehensive references and examples can be found in the TealInfo Developer's Kit, found on the developer's section of the TealPoint web site.

## **Basic Display Objects**

### **WINDOW**

Description:

A basic screen object, WINDOW objects define a rectangular region of the screen that contains text. The text automatically wraps lines of text if necessary, and supports vertical or horizontal scrolling and optional columns and grid lines. Text in WINDOW objects can be viewed, but not be edited or selected.

Required Fields:

X Y W H TEXT

Optional Fields:

PAGES STYLE FONT TABS LINKS CYCLE DELAY COMPRESS

Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED NO\_BORDER BOLD\_BORDER ALIGN\_RIGHT  
ALIGN\_CENTER ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START  
ALIGN\_LEFT\_END ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL  
MASK\_BUTTON\_SCROLL

Notes:

A WINDOW holds a block of text that automatically word-wraps if longer than one line. Normally, to take advantage of this feature, paragraphs should be defined as one continuous line. As MkTInfo only supports a 4000 character long line, this is typically done by appending individual lines with a continuation mark (!) at the end of lines. See the TealInfo field reference below for more information.

Columns and line rulings are supported, allowing the display of the text in tabular or columnar layout. To do so, use the TABS field to define the width of individual columns, and enter multiple quote-delimited chunks of data on each line, or separate the text for each column on a line using tab characters imbedded in the text. The VERT\_GRID and HORIZ\_GRID fields can be used to add grid lines to the columns. When VERT\_GRID is defined, columns are treated as spreadsheet-like cells, and data is truncated if necessary to fit within each column. When omitted, columns are treated like tab-stops in a word processor. Text may overflow into neighboring columns; tab characters simply advance to the next column.

By default, column entries are left justified. The ALIGN\_CENTER and ALIGN\_RIGHT styles can override this justification in all columns. In turn, the ALIGN\_RIGHT\_START and ALIGN\_RIGHT\_END, ALIGN\_CENTER\_START and ALIGN\_CENTER\_END styles can be used to set alternate justification for only the first or last columns.

Since text in a window is not selectable, WINDOW objects have no “current value” and thus cannot be used as the target of a LINK field in another object. They can themselves LINK to other objects, however, and this is a common use of WINDOW objects. For instance, by defining multiple TEXT fields and using the LINK field to target, say, a LIST object, the window can be used to display different data depending on the current selection of the LIST object.

## POPWINDOW

### Description:

A scrollable, auto-wrapping text window that comes up when a trigger button is pressed.

### Required Fields:

X Y W H BX BY BW BH BTEXT TEXT

### Optional Fields:

PAGES STYLE FONT TABS LINKS BFONT COMPRESS

### Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED BOLD\_BORDER ALIGN\_RIGHT ALIGN\_CENTER  
ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START ALIGN\_LEFT\_END  
ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL MASK\_BUTTON\_SCROLL FILLED  
SQUARE\_BUTTON

### Notes:

A variation on WINDOW objects, most of a POPWINDOW object is normally hidden. Only a small trigger button defined by BX, BY, BW, and BH is shown on screen. The button resembles a standard PalmOS text button. A BTEXT field defines its label. When tapped, the window appears, and stays on screen until tapped to dismiss it.

## LABEL

### Description:

A simple text label.

### Required Fields:

X Y TEXT

### Optional Fields:

PAGES STYLE FONT COMPRESS

### Supported Styles:

INVERTED ALIGN\_CENTER ALIGN\_RIGHT

### Notes:

LABEL objects are drawn so that the upper-left, upper-right, or upper-center of the text is aligned at the designated coordinate. Text is not wrapped and cannot scroll.

## RECT

Description:

A bare graphic rectangle, either filled or not, used as a graphic embellishment

Required Fields:

X Y W H

Optional Fields:

PAGES STYLE

Supported Styles:

FILLED ROUND\_BORDER BOLD\_BORDER

## IMAGE

Description:

Displays a graphic in TealPaint image format or subrectangle of an image in the specified rectangle

Required Fields:

X Y W H SX SY DATABASE RECORD

Optional Fields:

PAGES STYLE LINKS CYCLE DELAY

Supported Styles:

NO\_BORDER BOLD\_BORDER BUTTON\_SCROLL

Notes:

The bounding box for the image must be a multiple of 8 pixels wide. SX and SY define the offsets into the source image from which to grab the subrectangle. SX must also be a multiple of 8 pixels wide, and the source image must not be wider than 160 pixels.

DATABASE defines the name of the image database. It is case sensitive and must match the name of the Image Database as it appears in TealInfo or TealPaint. The image can also be tacked onto the end of the TealInfo folio using MkTIInfo. If the image is appended in this way, then DATABASE should hold the name of the folio instead. Note that the image will fail to draw if the folio is renamed.

RECORD defines the image number of the database to use. The first image in a database is image 0.

To create simple page flipping animation, set the CYCLE parameter equal to the number of frames of animation. TealInfo will step forward through the image databases, looping from image RECORD to image RECORD+CYCLE-1, stopping between from frames by an amount specified by DELAY, in tenths of a second.

## POPIIMAGE

### Description:

A popup-window displaying a TealPaint image or subrectangle of an image.

### Required Fields:

BX BY BW BY BTEXT X Y W H SX SY DATABASE RECORD

### Optional Fields:

PAGES STYLE LINKS CYCLE DELAY BFONT

### Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED NO\_BORDER BOLD\_BORDER ALIGN\_RIGHT  
ALIGN\_CENTER FILLED ALIGN\_LEFT\_START ALIGN\_RIGHT\_START  
ALIGN\_CENTER\_START ALIGN\_LEFT\_END ALIGN\_RIGHT\_END ALIGN\_CENTER\_END  
NO\_SCROLL MASK\_BUTTON\_SCROLL BUTTON\_SELECT STROKE\_FIND REGISTERL

### Notes:

This object has the same image and usage restrictions as an IMAGE object. As a small bonus feature, however, color or grayscale images shown in a full-screen POPIIMAGE objects will appear in 16 grey levels on a Palm V-style display (Palm V, Visor), even under OS 3.1, which does not otherwise support the 16-shade mode.

## **Interactive Selection Controls**

### **LIST**

Description:

A scrollable vertical list of selectable text items, supporting optional columns and vertical and horizontal ruled lines.

Required Fields:

X Y W H TEXT

Optional Fields:

PAGES STYLE FONT TABS LINKS DEFAULT MAXVAL COMPRESS

Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED NO\_BORDER BOLD\_BORDER ALIGN\_RIGHT  
ALIGN\_CENTER ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START  
ALIGN\_LEFT\_END ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL  
MASK\_BUTTON\_SCROLL BUTTON\_SELECT STROKE\_FIND REGISTER

Notes:

LIST objects are interactive elements. While they are defined and used like WINDOW objects, text does not automatically word-wrap, and any line in the LIST can be highlighted by the user by tapping on it.

This gives the LIST a current numerical "value" ranging from zero (the first item) to the number of items in the list (minus one). This value can be used as an operand for expressions in MATH objects, or change the contents of other objects that have LINK fields referring to us.

The entries in a LIST are specified using multiple-lines of text in a TEXT field. Each line specifies a separate entry in the list. If the LINK field is used to link the object to another object's value, multiple TEXT fields can be used to define changing contents for the LIST.

## POPLIST

### Description:

A scrollable, selectable item list triggered by popup button, resembling the PalmOS category selector

### Required Fields:

X Y W H TEXT BX BY BW BH

### Optional Fields:

PAGES STYLE FONT TABS LINKS DEFAULT MAXVAL BFONT COMPRESS

### Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED BOLD\_BORDER ALIGN\_RIGHT ALIGN\_CENTER  
ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START ALIGN\_LEFT\_END  
ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL MASK\_BUTTON\_SCROLL  
BUTTON\_SELECT STROKE\_FIND FILLED REGISTER SQUARE\_BUTTON

### Notes:

The trigger button for POPLIST objects resemble standard PalmOS category selectors. They show the text of the current selection with a triangular trigger symbol. They should be sized wide enough to fit the widest text line to be drawn without truncating the text.



## TABLE (New in 4.0)

### Description:

Nearly identical to LIST objects, TABLE objects bring up a scrollable, selectable list of text items. Columns defined by the TABS field, however, are required. Unlike a LIST, which selects an entire row of items at a time, TABLE objects allow the selection of single cells within the object. A TABLE object with a single column is equivalent to a LIST object.

### Required Fields:

X Y W H TEXT TABS

### Optional Fields:

PAGES STYLE FONT LINKS DEFAULT MAXVAL COMPRESS

### Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED NO\_BORDER BOLD\_BORDER ALIGN\_RIGHT  
ALIGN\_CENTER ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START  
ALIGN\_LEFT\_END ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL  
MASK\_BUTTON\_SCROLL\_BUTTON\_SELECT STROKE\_FIND REGISTER

### Notes:

The current "value" of a TABLE object corresponds to the current highlighted cell. Cells are numbered starting at zero from left to right and then top to bottom.

## POPTABLE (New in 4.0)

### Description:

A pop-up version of the TABLE object, POPTABLE objects bring up a Table when their trigger buttons are tapped. The trigger buttons show the contents of the current cell.

### Required Fields:

X Y W H TEXT BX BY BW BH TABS

### Optional Fields:

PAGES STYLE FONT LINKS DEFAULT MAXVAL BFONT COMPRESS

### Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED BOLD\_BORDER ALIGN\_RIGHT ALIGN\_CENTER  
ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START ALIGN\_LEFT\_END  
ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL MASK\_BUTTON\_SCROLL  
BUTTON\_SELECT STROKE\_FIND FILLED REGISTER SQUARE\_BUTTON

### Notes:

The trigger button shows the name of the currently selected item, and BX BY BW and BH define its bounds. X, Y, W, and H define the bounds of the table the trigger brings up. The button bounds must be large enough to contain the longest cell in order for it to draw correctly.

## OUTLINE

### Description:

A scrollable, selectable, hierarchical item list, this object shows a list of data in outline tree form, where subsections of the tree may be collapsed and hidden from view when desired.

### Required Fields:

X Y W H TEXT

### Optional Fields:

PAGES STYLE FONT TABS LINKS DEFAULT MAXVAL COMPRESS

### Supported Styles:

HORIZ\_RULE INVERTED NO\_BORDER BOLD\_BORDER NO\_SCROLL  
MASK\_BUTTON\_SCROLL BUTTON\_SELECT STROKE\_FIND REGISTER

### Notes:

Similar to standard LIST objects, OUTLINE objects show a list of selectable text items. Unlike a LIST, however, the items are displayed like an outline tree with items, sub-items, and sub-sub-items. Subsections can be hidden or shown by tapping on control triangles next to items in the outline.

To define an outline list's contents, create a multi-line TEXT field, preceding lines with one or more '>' or '<' characters to define it's level in the tree. Root items are bare. Subitems to root entries are preceded by one '>', sub-items to sub-items are preceded by '>>', etc. If the item in the list should appear initially when the folio is first opened, then use a '<' character instead of a '>'. The '<' character forces the control on the previous line to default to the open state.

To set up an OUTLINE object for horizontal scrolling, use a TABS field with a single value specifying the virtual width of the scrolling area in pixels. OUTLINE objects not not otherwise support columns.

The following example sets up an OUTLINE object with three levels of items:

```
OUTLINE
X 10
Y 20
W 100
H 120
TEXT "Restaurants"
    "Hotels"
    "Taxis"
    "Museums"
    ">Art"
    ">Nature"
    ">>Marine"
    ">>Land"
    "Nightclubs"
    ">Nice"
    ">Seedy"
```

## **POPOUTLINE (New in 4.0)**

### Description:

A POPOUTLINE object is pop-up version of an expanding OUTLINE object. When popped up, outline branches can be opened up or collapsed by tapping on standard outline control triangles. When tapping elsewhere on a line the list is selected and the popup window is closed.

### Required Fields:

X Y W H BX BY BW BH TEXT

### Optional Fields:

PAGES STYLE FONT TABS LINKS DEFAULT MAXVAL BFONT BTEXT COMPRESS

### Supported Styles:

HORIZ\_RULE INVERTED BOLD\_BORDER NO\_SCROLL MASK\_BUTTON\_SCROLL  
BUTTON\_SELECT STROKE\_FIND REGISTER FILLED SQUARE\_BUTTON

### Notes:

See Outline objects for instructions on defining levels in a POPOUTLINE object.

## **CHECKMARK**

### Description:

A checkmark control resembling standard PalmOS checkbox controls.

### Required Fields:

X Y W H TEXT

### Optional Fields:

PAGES STYLE FONT LINKS TARGET DEFAULT COMPRESS

### Supported Styles:

INVERTED REGISTER

### Notes:

A simple one-item checkbox, CHECKMARK controls have a current "value" corresponding to their state. When used as a LINK target or MATH operand from another object, checkmark objects assume a value of 0 when unchecked and 1 when checked.

## CHECKLIST

### Description:

A scrollable, selectable list of text items, each line of which can have an optional checkbox.

### Required Fields:

X Y W H TEXT

### Optional Fields:

PAGES STYLE FONT TABS LINKS DEFAULT MAXVAL COMPRESS

### Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED NO\_BORDER BOLD\_BORDER ALIGN\_RIGHT  
ALIGN\_CENTER FILLED ALIGN\_LEFT\_START ALIGN\_RIGHT\_START  
ALIGN\_CENTER\_START ALIGN\_LEFT\_END ALIGN\_RIGHT\_END ALIGN\_CENTER\_END  
NO\_SCROLL MASK\_BUTTON\_SCROLL BUTTON\_SELECT STROKE\_FIND REGISTER

### Notes:

CHECKLIST objects are similar to LIST objects, but can optionally show checkboxes next to specified lines. The checkboxes can be checked on and off, and will be saved in the folio if the REGISTER field is defined. The current "value" of the CHECKLIST object, like standard LIST objects, is defined as the selected line, not by the state of the checkboxes.

List entries are defined by a multi-line TEXT fields, where each line of the text field defines an item in the scrolling list. Each line should start with either a plus (+) character for items that start up pre-checked or minus (-) character for those which start out unchecked. Lines with neither show up simply as labels.

Normally, the checklist will revert back to its initial state when the object is changed or the folio is exited. If the REGISTER style flag is used, the folio is not in flash memory, \*and\* the text for the checklist is stored in a TRES text resource, checked entries are permanently saved even if you leave TealInfo and return.

## **Data Entry Controls**

### **EDITWINDOW**

Description:

An editable text window. Often used to make folios for entry form or data acquisition.

Required Fields:

X Y W H TEXT

Optional Fields:

PAGES STYLE FONT TABS LINKS COMPRESS

Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED NO\_BORDER BOLD\_BORDER ALIGN\_RIGHT  
ALIGN\_CENTER ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START  
ALIGN\_LEFT\_END ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL  
BUTTON\_SCROLL

Notes:

An editable WINDOW object, EDITWINDOW objects are text areas that can be used either to save notes on their own or to modify text resources shared with other objects. They display as WINDOW objects, but brings up an editing area when the window itself is tapped. The editing area's overlays the defined window area, giving a clean, seamless editing mode. Due to their ability to be edited, EDITWINDOW objects have limited formatting when editing.

Commonly, EDITWINDOW objects are used as single-line text fields, but multiple-lines are also supported. When used in multi-line mode, the editing and display modes do not line up as well as in single-line mode.

Otherwise, EDITWINDOW objects follow the same limitations as POPEDIT objects, including the requirement that EDITWINDOWS linked to other objects must place all of its text in TRES text resources to maintain proper formatting of all objects after editing.

## POEDIT

### Description:

An editable popup text window.

### Required Fields:

BX BY BW BH BTEXT TEXT

### Optional Fields:

PAGES STYLE FONT LINKS BFONT X Y W H COMPRESS

### Supported Styles:

FILLED HORIZ\_RULE SQUARE\_BUTTON

### Notes:

An editable text area, POEDIT objects can be used either to save notes on their own or to modify text resources shared with other objects. The text editing window is brought up with a tap on the trigger button specified by BX,BY,BW, and BH. The POEDIT object can be used to modify any TRES resource used by any other object, but unpredictable results may result if used to modify text used by other than WINDOW or POPWINDOW objects, as the POEDIT control may show special control codes normally hidden from view.

**SPECIAL NOTE:** When the contents of a POEDIT window can change because the POEDIT object is linked to other objects, the contents of the POEDIT window **must** reside in separate TRES text resource objects, or the text pre-wrapping system will get confused and mis-wrap the text after you edit one of the TEXT blocks near the top of the list of possible entries.

## INPUT (New in 4.0)

### Description:

An INPUT object creates a button that can modify or replace the contents of an EDITWINDOW object. Typically, they are used to create text-entry keys for forms or calculator folios.

### Required Fields:

BX BY BW BH BTEXT TARGET

### Optional Fields:

PAGES STYLE BFONT LINKS

### Supported Styles:

FILLED SQUARE\_BUTTON

Notes:

The behavior of the INPUT object is determined by the contents of the TARGET field, which takes on the following form:

**TARGET**    "@<editname><mode><action><text>"

where:

- <editname>**    is the **name** of the EDITWINDOW object to affect
- <mode>**        is either a colon ":" (**immediate mode**) or semicolon ";" (**delayed mode**).
- <action>**       is either a plus "+" (**add**), equals "=" (**replace**), minus "-" (**subtract**), or number sign "#" (**calculator key action**).
- <text>**         is the new text

In "*immediate*" mode, other screen objects which depend on the entry are immediately refreshed to reflect the new text. In "*delayed*" mode, the text is entered, but only the EDITWINDOW object itself is redrawn. Other objects such as on-screen math objects are not redrawn in delayed mode.

The "*add*" action appends text to the end of the specified EDITWINDOWS current contents, while the "*replace*" action replaces it entirely. The "*subtract*" action ignores any passed text and simply deletes the last character from the EDITWINDOW. The last action, the "*calculator*" action, acts either like "*add*" or "*replace*" action depending on whether a calculation is pending. If one has yet to be flushed out (due to entry using *delayed-mode* key presses, it adds the specified text. Once calculated, the next press replaces the contents.

**Common applications include:**

Calculator-style entry buttons (delayed calculation)

**TARGET** "@number ;#1"

**TARGET** "@number ;#2"

**TARGET** "@number ;#3"

Backspace

**TARGET** "@number ;-"

Enter/Calculate key (note the empty text to add)

**TARGET** "@number :+"

Clear key (sets contents to nothing)

**TARGET** "@number :="

Filling a form field

**TARGET** "@gender :=female"

**TARGET** "@gender :=male"

**New to 4.20:** If TARGET text is used with no target object (TARGET "a"), then the character(s) specified will be entered into the general input stream, simulating a user entering the characters by hand. If another object has the STROKE\_FIND style set, it will respond to the character, allowing INPUT objects to change the current selection in an external LIST object to an entry whose first letter matches the indicated letter.

## **Data Processing Controls**

### **POPMERGE (New in 4.0)**

Description:

Similar to POPWINDOW objects, POPMERGE objects bring up scrollable, auto-wrapping text windows when a specified trigger button is pressed. The contents of the windows, however, can contain text from various other windows, fields, and objects, both hidden and shown. These are “merged” into the text of the final window to produce the combined output

Required Fields:

BX BY BW BH BTEXT TEXT

Optional Fields:

PAGES X Y W H STYLE FONT TABS LINKS BFONT COMPRESS

Supported Styles:

VERT\_RULE HORIZ\_RULE INVERTED BOLD\_BORDER ALIGN\_RIGHT ALIGN\_CENTER  
ALIGN\_LEFT\_START ALIGN\_RIGHT\_START ALIGN\_CENTER\_START ALIGN\_LEFT\_END  
ALIGN\_RIGHT\_END ALIGN\_CENTER\_END NO\_SCROLL MASK\_BUTTON\_SCROLL FILLED  
SQUARE\_BUTTON

Notes:

The text appearing in a POPMERGE popup is defined using a TEXT field in the expected way. Placeholders for text pulled from other objects are inserted using the ‘@’ symbol followed by the name of an object to be included. Often, the source objects are hidden objects controlled by user selections. Sample text might look like:

TEXT “Madame sees your @problem difficulty will get much @prediction today!”

### **PRINTMERGE (New in 4.0)**

Description:

A PRINTMERGE object combines text from separate objects, but instead of displaying it in a pop up window, the text is sent to TealPrint for print out on a supported printer. This allows folios to output form documents, summaries, or receipts based on user inputs and selections.

Required Fields:

BX BY BW BH BTEXT TEXT

Optional Fields:

PAGES STYLE LINKS BFONT COMPRESS

Supported Styles:

FILLED SQUARE\_BUTTON

Notes:

TealPrint must also be installed on the handheld for PRINTMERGE objects to be functional. When selected, a PRINTMERGE object will bring up a standard TealPrint printer dialog to confirm print options prior to sending the text to the printer or spooler.



## MATH (New in 4.0)

### Description:

A math object is a simple window displaying the numerical result of a calculation. Evaluated expressions can contain references to the current (zero-based) selection of objects with a current “value” such as lists, outlines, and tables. They can also evaluate numbers or expressions found in static objects such as windows, other math objects, and other objects that cannot be selected.

### Required Fields:

X Y W H TEXT

### Optional Fields:

PAGES STYLE FONT LINKS DECIMALS DIGITS COMPRESS

### Supported Styles:

INVERTED NO\_BORDER BOLD\_BORDER ALIGN\_RIGHT ALIGN\_CENTER

### Notes:

MATH objects are one of the most complex and ambitious TeallInfo objects. They show the result of a calculation as a floating-point number. To use one, a mathematical expression (equation) is specified with a TEXT field, but the result of the evaluation of the expression is what gets displayed. The number displayed can be rounded off to a number of decimal points to the right of the decimal point using the DECIMALS field, or padded with zeroes on the left to a total number of digits using the DIGITS field.

Mathematical expressions can be specified in simple, intuitive form. They are currently evaluated strictly from left to right, and in “standard” or RPN (Reverse Polish Notation) order. See the chapter “Using MATH Objects” for more information and examples on using MATH objects.

Math objects can also be used as sources for LINKs to other objects. When referenced as a LINK, only the integer portion (the part left of the decimal point) of the number is used. When referenced from an expression in another Math object, however, the full value is used.

### Operands

The numbers that appear in an expression, the “operands”, can simply be constant numerical values such as 1, 2, 3.1415, or .000007.

Operands can also reference another object, preceded with ‘@’ or ‘#’ signs. If the object is a LIST or other selectable object, the ‘#’ (number sign) can be used to insert the current “value” of the object, which is the number of the current selection starting at zero. The ‘@’ sign is similar, except that it inserts the numerical value of the current text, which must be either numerical or a mathematical expression itself.

If the object is a WINDOW, EDITWINDOW, other non-selectable object, or even another MATH object, then the object’s entire TEXT block is evaluated as an expression and the result inserted into the current MATH object’s expression. For a LIST object, only the text of the current selection is used. For instance, a simple tip calculator could include:

```
TEXT “( @tiprate * 0.01 + 1.0 ) * @subtotal”
```

## **Operators**

MATH objects support a number of mathematical operators, including:

### **Floating Point Math**

Addition (+)  
Subtraction (-)  
Multiplication (\*)  
Division (/)

### **Integer Math (fractional parts of operators are ignored)**

Modulus (%) –  $A\%B$  is the leftover part after repeatedly subtracting B from A

### **Comparison (return 1 if true, 0 if false)**

Greater-Than (>)  
Less-Than (<)  
Greater-or-Equal (>=)  
Less-or-Equal (<=)  
Equal (==)  
Not-Equal (!=)

### **Logical (returns 1 if true, 0 if false)**

Logical And (&&)  
Logical Or (||)  
Logical Xor (^)

### **Bit Math**

Bitwise And (&)  
Bitwise Or (|)  
Bitwise Xor (^)

### **Special**

Truncate Digits (\) – truncates a number to a specified decimal place  
Round Digits (:) – similar to truncate, but rounds up or down to the nearest result  
Duplicate on Stack (\$) – for RPN math only, duplicates the last entry on the stack

## Graphics Controls

### **DRAW (New in 4.0)**

Description:

DRAW objects define a rectangular region whose contents are rendered according to simple graphics drawing commands. DRAW objects are typically used to draw graphs or charts in response to numerical input, or add extra graphic elements.

Required Fields:

X Y W H TEXT

Optional Fields:

PAGES STYLE COMPRESS LINKS CYCLE DELAY

Supported Styles:

INVERTED BOLD\_BORDER NO\_BORDER

Notes:

Powerful DRAW objects accept a series of graphics drawing commands that allow rendering of simple custom graphics or text into a folio. They can reference values in external objects, allowing them to be used to draw graphics that vary with user selections.

Commands in DRAW objects are inserted in a single multi-line TEXT block of the object definition. Each line begins with a command, followed by one or more numerical or text values needed by the command. The following commands are supported:

**DLINE** x1 y1 x2 y2

**GLINE** x1 y1 x2 y2

**ELINE** x1 y1 x2 y2

Draws a single-pixel line from coordinates (x1,y1) to (x2,y2), relative to the top-left corner of the object. The (D) option draws the line in the current foreground color (default black). The (E) option erases the line to the current background color (default white). The (G) option "grays" the line drawing it in a 50% dither pattern combining foreground and background colors.

**DRECT** x y width height corner\_radius

**GRECT** x y width height corner\_radius

**ERECT** x y width height corner\_radius

Draws, erases, or "grays" a filled rectangle of the given dimensions. The corner of the rectangle can be set sharp or rounded using a radius of 0-4 pixels.

**DFRAME** x y width height corner\_radius thickness

**EFRAME** x y width height corner\_radius thickness

Draws or erases an unfilled rectangular frame (box) of the given dimensions. The radius of the corners can be set from 0-4 pixels, while the thickness of the frame can be set from 1-4 pixels.

**DCHARS** font x y text

**ICHARS** font x y text

**ECHARS** font x y text

Draws specified text to the screen. The (D) options draws the text black-on-white, while the (I) option draws it white-on-black. The (E) options simply erases the area where text should be.

**FCOLOR** r g b

**BCOLOR** r g b

Sets the current foreground or background colors. These options only function on a color device, and are ignored on monochrome units. They allow you to change the current foreground and background drawing colors, which default, respectively, to black and white. The colors are specified as three numerical values from 0 to 255, respectively setting the red, green, or blue component of the colors.

Sample colors:

White	255 255 255
Black	0 0 0
Red	255 0 0
Green	0 255 0
Blue	0 0 255
Orange	255 200 0
Yellow	255 255 0
Purple	200 0 255
Gray	150 150 150

To substitute values from other objects into the command list use the '@' or '#' signs followed by the name of the object to insert. The '@' sign inserts the current text from the object or the numerical equivalent of that text if a number is needed. The '#' sign returns the current "value" of the object instead, which is the zero-based number of the current selection in an outline, list, or table. The '#' sign will reference the integer portion of a MATH object as well.

Example: `DLINE 10 10 @end_x @end_y`

DRAW objects expect numerical values only, and will **not** consistently evaluate expressions or external references with parameters on their own. When math operations are needed, DRAW objects should contain simple references to hidden MATH objects to perform the needed calculations.

## POPDRAW (New in 4.0)

Description:

Pop-up version of a DRAW object.

Required Fields:

BX BY BW BH BTEXT X Y W H TEXT

Optional Fields:

PAGES STYLE COMPRESS BFONT LINIKS

Supported Styles:

FILLED BOLD\_BORDER NO\_BORDER INVERTED SQUARE\_BUTTON

## **Special Controls**

### **GOTO**

Description:

A button that closes the current folio and opens another one specified by name. Can also open a specified Doc file in TealDoc, movie in TealMovie.

Required Fields:

BX BY BW BH BTEXT TARGET

Optional Fields:

PAGES STYLE BFONT TARGET LINKS

Supported Styles:

FILLED SQUARE\_BUTTON

Notes:

#### **Linking to External folios:**

TARGET, followed by the name of a folio in quotes specifies the folio to open when this control is tapped. Note that the TARGET must exactly match the name of the target folio as *it appears in TealInfo*, including capitalization and spacing.

#### **Back Buttons:**

Set TARGET to "\$BACK" to create a button which will return back to a previous folio which may have linked to you.

#### **Close Buttons:**

A GOTO object with no TARGET field replaces the standard close button in the upper right corner of the folio.

#### **External Programs:**

TARGET can also specify the name of a TealDoc document or TealMovie movie, to launch. Other programs may be launched as well if they support a global find operation, and have the same CreatorID of the document, but irregular behavior may occur if the other program is not specifically expecting to be called externally in this manner. With TealDoc and TealMovie, TealInfo will be re-launched after the movie or document is closed. Documents in VFS are also supported if they are in the same folder as the current folio, though the launched application must be loaded into RAM. This will almost certainly not work in VFS with non-TealPoint applications, however.

The TARGET field functions like standard TEXT fields, in that you can specify more than one TARGET field and use the LINK field to tie the launched document to an external selection.

## POPFIND (New in 4.20)

### Description:

Searches for an instance of a user-entered text string in a specified LIST or WINDOW.

### Required Fields:

BX BY BW BH BTEXT TARGET

### Optional Fields:

PAGES STYLE BFONT LINKS

### Supported Styles:

INVERTED SQUARE\_BUTTON

### Notes:

Specify an object to search for in the TARGET field, preceded by an '@' sign.

TARGET "@mydisplaylist"

When tapped, a POPFIND button brings up a dialog asking the user for the text to find. If the text is found in the LIST or WINDOW object specified by the TARGET field, the list or window will be scrolled to display the found text. If a list, that entry will be selected. POPFIND objects cannot find text across multiple objects or in text which is not currently loaded into a displayed object.

## SETPAGE (New in 4.0)

### Description:

TealInfo supports folios with up to 32 distinct pages. Displayed objects can be shown on any one or more of these pages or not at all. SetPage objects switch the current page when pressed.

### Required Fields:

BX BY BW BH BTEXT

### Optional Fields:

PAGES STYLE BFONT TARGET LINKS

### Supported Styles:

FILLED SQUARE\_BUTTON

### Notes:

While all objects in a folio are present in memory and can be available for LINK operations and mathematical calculations, the SETPAGE objects determines which objects are displayed and respond to screen taps. A quoted value from 1 to 32, specified in a TARGET field, determines which page is activated when the button is tapped.

Individual objects determine which pages they appear on using the PAGES field, followed by which pages they appear on. By default, objects appear on page 1 only. If PAGES is used with no numbers, the object is hidden. SetPage objects can optionally contain PAGES fields as well.

## TRES

Description:

A text resource

Required Fields:

TEXT

Optional Fields:

(none)

Supported Styles:

(none)

Notes :

TRES Text resources act as placeholder objects for holding TEXT used by other objects. They are handy to reduce file size when, say, a paragraph of text is repeatedly used in one or more objects.

TRES objects can also be used to break-up TealInfo OBJECTS from exceeding the Maximum Object Text Size (See TEXT field for more info). There is about a 50-byte overhead for using a TRES object, so you won't save much space on only a few short lines of text.

TRES objects take a single field, the TEXT field. To reference a TRES object from another object, create a TEXT block which only contains the name of the TRES object preceded by an '@' sign.

TEXT "@resname"

TRES object can only replace an entire TEXT field. They cannot be combined or used to replace only a portion of another object's TEXT field.

See the field descriptions in the next section for more details on how to use text resources.

## **RANDOM (New in 4.0)**

### Description:

A RANDOM object provides a random value to be used in math expressions or LINKS to other objects, and a button to update its value

### Required Fields:

BX BY BW BH BTEXT MAXVAL

### Optional Fields:

PAGES DEFAULT BFONT

### Supported Styles:

FILLED SQUARE\_BUTTON

### Notes:

When set, the DEFAULT field specifies the current “value” of the RANDOM object when the folio is first opened. If missing, the object will be assigned a random value from 0 to MAXVAL-1 on opening. By setting DEFAULT to MAXVAL, the Random object can start up with a value with will not be repeated when the Randomize button is tapped. This is useful to say, display an instructional prompt such as “Tap the button below to get your fortune”. The PAGES field can be used with no parameters to hide the RANDOM object entirely if only the initial randomization feature is needed.

## **YEAR (New in 4.0)**

## **MONTH (New in 4.0)**

## **DAY (New in 4.0)**

## **HOURL (New in 4.0)**

## **MINUTE (New in 4.0)**

### Description:

The Year, Month, Day, Hour, and Minute objects do not have on-screen representations, and do not accept any fields or styles. Instead, they only contain a value, which can be used as LINKS to objects or values within MATH objects using the '#' reference operator. The values are automatically updated, allowing for the creation of special calendars or clock folios.

### Notes:

All objects return values starting at 0. Values of Year objects range from 0 for the year 2000, 1 for 2001, and so on. Month objects return values from 0 (January) to 11 (December). Day objects return the day of the month minus one, ranging from 0 (day 1) to 30 (day 31). Hour objects return values from 0 to 23, minute objects from 0 to 59.



## PASSWORD

### Description:

The presence of this object in a folio forces causes a passkey to be entered when the folio is opened. This can be used to generate password-protected folios for security or sales-demo purposes.

### Required Fields:

KEY TEXT

### Optional Fields:

STYLE

### Supported Styles:

LOCKOUT REGISTER

### Notes:

#### **Used for Registration**

The password to be entered is defined by the KEY field. When the LOCKOUT style is defined, the folio cannot be entered until a correct key is entered. When no LOCKOUT field exists, the password request can simply be dismissed. This allows the development of "shareware" folios, using the password screen as a registration reminder.

#### **Saving Passkey**

When the REGISTER style is defined, the password is saved once it's entered if the folio is in RAM. If the REGISTER style is not set, the password is asked-for every time. You can have multiple PASSWORD objects in a folio, but this is not particularly useful.

#### **Decompile Protection**

If you provide empty TEXT ("") and **do not** set the LOCKOUT style keyword, then the passkey will not be required to read the folio, but one will need to enter it before the folio can be decompiled using the UnTIInfo program in the TealInfo Dev Kit. In this use, the PASSWORD tag should appear at the top of the list to prevent decompiling the tags above it.

#### **User-Specific Folios**

If you provide empty TEXT ("") and **do** set the LOCKOUT style keyword, then the folio will only open on a Palm whose HotSync user name matches the passkey. Use this to make secure folios that cannot be used on other Palm if copied or beamed there.

## GRAFFITI

### Description:

Places the graffiti shift indicator on screen. It will appear on all pages of the folio.

### Required Fields:

X Y

## Appendix B – MkTInfo Field Reference

The following list details the fields used to describe the objects in Appendix A. Fields requiring a numerical value or expression such as 20+5 are followed by "(value)". Fields requiring a text string in quotes are followed by "(string)". Lastly fields requiring specialized text keywords (not in quotes) are followed by "(Keyword)".

### ***BFONT (value)***

Defines the font to be used for an object's activation button.

### ***BTEXT (string)***

Defines text for a button or trigger.

### ***BX (value)***

Defines the pixel offset of a trigger object or button from the left edge of the screen.

### ***BY (value)***

Defines the pixel offset of a trigger object or button from the top edge of the screen.

### ***BW (value)***

Defines the width of a trigger object or button.

### ***BH (value)***

Defines the height of a trigger object or button.

### ***CYCLE (value)***

This field causes WINDOW objects to cycle through their list of TEXT fields. CYCLE indicates the number of TEXT blocks to cycle through, starting with whatever field would normally be shown. There must be at least that number of TEXT fields present. For image objects, CYCLE indicates the number of images in the database to cycle through, starting with the imaged defined by RECORD.

### ***DELAY (value)***

Indicated the rate at which cycling (if turned on) occurs. This value is in tenths of seconds between frames. Thus, a value of 10 will cause cycling a one change per second.

## ***DATABASE (string)***

Defines the name of a TealPaint image database to serve as a source for imagery.

## ***DEFAULT (value)***

Defines the initial value for a list, outline, or checkmark object (starting at 0)

## ***DECIMALS (value)***

This field fixes the displayed number of digits to the right of the decimal point for results of calculations from Math objects.

## ***DIGITS (value)***

This field fixes the total displayed number of digits for results of calculations from Math objects, padding with zeroes on the left if necessary to fill the number of digits. DIGITS and DECIMALS are mutually-exclusive.

## ***FONT (value)***

Defines the font to be used for an object's body text. 0=standard font, 1=bold font, 2=large font, 3-5=standard system symbol fonts, 6=large number font. Use a program like *FontApp* (available at [www.palmgear.com](http://www.palmgear.com)) to preview the correct fonts.

## ***KEY (keyword)***

Defines the password that must be entered to unlock a folio with a PASSWORD object.

## ***LINKS (value) (value)...***

The LINKS field can be used to link the contents of an object to current selection in one or more other LIST, POPLIST, OUTLINE, or CHECKMARK objects, each of which is identified by its name that follows the object TAG. An object using the LINKS tag **must follow all the objects** listed in its list of links. More information appears in the next appendix.

## ***MAXVAL (value) ...***

The MAXVAL field specifies the largest number of items a variable list can contain. Use this field to make the math work out when linking to objects whose contents can change.

## ***PAGES (value1) (value2)...***

This field determines which pages (1-32) that the current object appears. By default, all object appear on page 1 only. Specifying PAGES with no following numbers hides an object on all pages.

## ***RECORD (value)***

Used for IMAGE objects, this defines the number of the image (starting at 0) to be shown.

## ***STYLE (keyword) (keyword)...***

Followed by one or more style keywords like *ALIGN\_LEFT* and *NO\_BORDER*, the STYLE field determines alignment and other miscellaneous properties for screen objects.

## ***SX (value)***

For image objects, defines the horizontal offset into the source image from which the displayed image is grabbed. Must be a multiple of 8

## ***SY (value)***

For image objects, defines the vertical offset into the source image from which the displayed image is grabbed.

## ***TABS (value)***

The TABS field sets tab stop positions within an object in pixels. Up to 63 tab positions may be specified, creating 64 columns. Each tab value represents the left edge of a column measured in pixels from the left edge of the object.

If you create columns wider than the width of the object, the object will appear with a horizontal scroll bar, which can be moved to view the full width of the window, list, or outline object.

## ***TARGET (string)***

Defines the folio to open when a GOTO button is pressed, or page number for a SETPAGE object. Multiple alternate TARGET fields can be used if the GOTO object is linked to other objects. In this use, the folio opened depends on the selection of the object (typically a list) linked-to.

## ***TEXT (string) (string)...***

Defines text for this object. Text items should be quoted, with text for separate columns appearing on the same line as separate quoted groups of words. To insert a quote in a string, use two quotes together ("" ) inside the string.

Text for multiline text objects (such as lists and outlines) should appear as more quoted text on subsequent lines without the TEXT field name. Only TEXT fields allow information for the field to follow on subsequent lines after the field name itself.

A backslash '\' character at the very end of a line indicates that the text on the next line is a continuation of the current one. It should be used to break up a line of text but have it treated as if it were entered as a very long line of text, such as for a paragraph to be auto-wrapped by a WINDOW object. MkTlInfo has a maximum input line length of 4000 characters.

There is a maximum total text size of 32k for all TEXT blocks in a single screen OBJECT. To overcome this limit, text can be externally-referenced to TRES objects, effectively splitting up the text into one OBJECT per TEXT block.

EXAMPLE:

```
TEXT
```

```
"This is a line of text."  
"This is another line of text, followed by a blank line."  
" "  
"This is a paragraph of text, using the backslash " \  
"character as a line-continuation marker so that " \  
"TealInfo will know to re-wrap this block as if it " \  
"were entered as a single line. Note the extra " \  
"spaces at the end of each line."
```

## ***X (value)***

Defines the object's pixel offset from the left edge (0) of the screen.

## ***Y (value)***

Defines the object's pixel offset from the top edge (0) of the screen.

## ***W (value)***

Defines the width of the object in pixels (screen is 160 pixels wide).

## ***H (value)***

Defines the height of the object in pixels (screen is 160 pixels high).

# Appendix C – MkTIInfo Style Reference

The following are keywords supported by the STYLE field, where applicable.

## **Text Alignment**

### **ALIGN\_RIGHT**

Align all text to the right of its column.

### **ALIGN\_CENTER**

Center all text in its column.

### **ALIGN\_LEFT\_START**

Align the first column to the left, ignoring the global setting.

### **ALIGN\_RIGHT\_START**

Align the first column to the right, ignoring the global setting.

### **ALIGN\_CENTER\_START**

Align the first column in the center, ignoring the global setting.

### **ALIGN\_LEFT\_END**

Align the first column to the left, ignoring the global setting.

### **ALIGN\_RIGHT\_END**

Align the first column to the right, ignoring the global setting.

### **ALIGN\_CENTER\_END**

Align the first column in the center, ignoring the global setting.

## **Appearance**

### **INVERTED**

Draw the object with reversed colors (white text on black).

### **FILLED**

RECT: Draw it filled-in

POPLIST: Draw its button filled-in

POPEdit: Draw its button filled-in

POPIIMAGE: Draw its button filled-in

GOTO: Draw its button filled-in

### **SQUARE\_BUTTON**

Draws an activation button with square corners, not default rounded ones

## **HORIZ\_RULE**

Draw horizontal ruling lines between rows.

## **VERT\_RULE**

Draw vertical ruling lines between columns. Note that vertical rules also have a subtle effect on the behaviour of tab characters in text. Without vertical rules, tabs function as they do in a word processor, advancing the cursor to the next column to the right. If text extends past a tab stop, then next tab brings the cursor to the next tab stop to the right. When vertical rules are turned on, however, text between tabs is treated as data in a cell, truncated if necessary to fit in the available space before the next tab stop, so data never overflows into a neighboring column.

## **NO\_BORDER**

Don't draw a border around the object.

## **BOLD\_BORDER**

Draw a thicker border around the object.

## **ROUND\_BORDER**

Draw a rounded border around the object.

# **User Interface**

## **NO\_SCROLL**

Don't allow a scroll bar to appear and don't reserve pixels for one when word wrapping.

## **STROKE\_FIND**

Move the current selection to the next line whose first char matches an entered stroke.

## **BUTTON\_SCROLL**

Do page-by-page scrolling of a text object when scroll buttons are pressed. Default settings scrolls vertically with the Page Up/Down scrolling buttons. Using variations on the **BUTTON\_SCROLL** keyword, it's possible to map combinations of the four applications buttons (Datebook, Address, To Do List, and Memopad) to vertical and/or horizontal scrolling for objects.

When mapped to a folio in this way, the default behavior of the application buttons used is temporarily overridden only while the folio is open, and for **POPIIMAGE**, **POPTXT**, and **POPLIST** objects, only when the popup is shown.

When overriding such buttons, it's important to indicate the new button mapping in the folio to avoid confusing the user.

### **Other Supported Variations include:**

#### **BUTTON\_SCROLL\_A**

Vertically scroll with Page Up/Down buttons

**BUTTON\_SCROLL\_B**

Vertically scroll with Date/Addr buttons

**BUTTON\_SCROLL\_C**

Vertically scroll with Addr/ToDo buttons

**BUTTON\_SCROLL\_D**

Vertically scroll with ToDo/Memo buttons

**BUTTON\_SCROLL\_E**

Horizontally scroll with Page Up/Down buttons

**BUTTON\_SCROLL\_F**

Horizontally scroll with Date/Addr buttons

**BUTTON\_SCROLL\_G**

Horizontally scroll with Addr/ToDo buttons

**BUTTON\_SCROLL\_H**

Horizontally scroll with ToDo/Memo buttons

**BUTTON\_SCROLL\_I**

Horizontally scroll with Date/Memo buttons

**BUTTON\_SCROLL\_J**

Vertically Page Up/Down, Horizontally Date/Addr

**BUTTON\_SCROLL\_K**

Vertically Page Up/Down, Horizontally Addr/ToDo

**BUTTON\_SCROLL\_L**

Vertically Page Up/Down, Horizontally ToDo/Memo

**BUTTON\_SCROLL\_M**

Vertically Date/Addr, Horizontally ToDo/Memo

**BUTTON\_SCROLL\_N**

Vertically ToDo/Memo, Horizontally Date/Addr

**BUTTON\_SCROLL\_O**

Vertically Addr/ToDo, Horizontally Date/Memo

**BUTTON\_SELECT**

Move the current selection up or down when scroll buttons are pressed. Default settings move the current select with the Page Up/Down scrolling buttons. Using variations on the **BUTTON\_SELECT** keyword, it's possible to map combinations of the four applications buttons



(Date, Address, To Do, and Memo) to scrolling movement as well. When mapping a single button to a POPLIST object, the object acts like the category selector in the standard application, cycling through available choices. As with the BUTTON\_SCROLL variations, when overriding the application buttons, it's important to indicate the new button mapping in the folio to avoid confusing the user.

**Other Supported Variations include:**

**BUTTON\_SELECT\_A**

Change selection up/down with the Page Up/Down buttons

**BUTTON\_SELECT\_B**

Change selection up/down with the Date/Addr buttons

**BUTTON\_SELECT\_C**

Change selection up/down with the ToDo/Memo buttons

**BUTTON\_SELECT\_D**

Change selection down (looping) with the Date button

**BUTTON\_SELECT\_E**

Change selection down (looping) with the Addr button

**BUTTON\_SELECT\_F**

Change selection down (looping) with the ToDo button

**BUTTON\_SELECT\_G**

Change selection down (looping) with the Memo button

## **Special Styles**

### **COMPRESS**

The COMPRESS style forces an entire object to be stored compressed in the folio. Compression typically results in a 35-40% reduction in the size of the object. As temporary storage and decompression time is needed to work with compressed objects, compression should be used carefully to avoid performance or memory problems. In general, do not use compression for objects referenced by MATH expressions or that need to be drawn often. It is generally safe to compress popup objects, as they are used one at a time and are not accessed when they are not popped up.

### **LOCKOUT**

PASSWORD: Require the key to be correct to enter the folio.

### **REGISTER**

PASSWORD: Save a registration key once entered.

## Appendix D – Products

Visit us online at <http://www.tealpoint.com> for our complete product line, including:

**SHORTCIRCUIT ( <http://www.tealpoint.com/softshrt.htm> )**

A new twist on gameplay fused from your all time action puzzle favorite games, connect falling conduit pieces into explosive loops in this frantic race against the clock.

**SUDOKUADDICT ( <http://www.tealpoint.com/softsudo.htm> )**

Sudoku Addict brings to your handheld the addictive worldwide puzzle craze that has displaced crossword puzzles in many newspapers in Great Britain and Japan.

**TEALAGENT ( <http://www.tealpoint.com/softagnt.htm> )**

Get news, movie times, stock quotes, driving directions, web pages and more without need for a wireless connection. TealAgent fetches and formats web-based content for offline viewing.

**TEALALIAS ( <http://www.tealpoint.com/softalia.htm> )**

Free up memory and make the most of external expansion cards. Placeholder 'Alias' shortcut files automatically find, load, and launch apps and data from external SD cards, increasing free main memory.

**TEALAUTO ( <http://www.tealpoint.com/softauto.htm> )**

Track and graph automobile mileage, service, and expenses with TealAuto, the complete log book for your car or any vehicle. Extensive customization options and unmatched in features and functionality.

**TEALBACKUP ( <http://www.tealpoint.com/softback.htm> )**

Backup your valuable data with TealBackup, supporting manual and automatic backups to SD/MMC/CF cards and Memory Stick, backups through HotSync, and optional compression and encryption.

**TEALDESKTOP ( <http://www.tealpoint.com/softdesk.htm> )**

Launch applications with TealDesktop, the themed replacement for the standard system launcher screen with tabs, multiple card folders, drag and drop, and more

**TEALDOC ( <http://www.tealpoint.com/softdoc.htm> )**

Read, edit, and browse documents, Doc files, eBooks and text files with TealDoc, the enhanced doc reader. Extensive display and customization options; TealDoc is unmatched in features and usability.

**TEALECHO ( <http://www.tealpoint.com/softecho.htm> )**

Improve your Graffiti text input speed and accuracy, seeing what you write with TealEcho digital "ink". No more writing blind!

**TEALGLANCE ( <http://www.tealpoint.com/softglnc.htm> )**

See the time, date, upcoming appointments and todo items at power-up with TealGlance. The TealGlance pop-up utility and key guard comes up when you power up your handheld letting you see your day "at a glance."

**TEALINFO ( <http://www.tealpoint.com/softinfo.htm> )**

Lookup postal rates, area codes, tip tables, schedules, airports, and info from hundreds of free TealInfo databases. Create you own mini-apps; a handheld reference library.

**TEALLAUNCH ( <http://www.tealpoint.com/softlnch.htm> )**

Launch applications instantly with the TealLaunch pop-up launcher and button/stroke-mapping utility. Map applications to button presses and pen swipes so you can get to your apps quickly.

**TEALLOCK ( <http://www.tealpoint.com/softlock.htm> )**

Secure and protect your handheld with TealLock, the automatic locking program with encryption and card support. TealLock has unmatched features and customization options for personal or corporate use.

**TEALMAGNIFY ( <http://www.tealpoint.com/softlens.htm> )**

Save your eyesight with TealMagnify, an ever-ready magnifying glass that works with most any program. TealMagnify lets you enlarge the screen for those times the text is too small to read.

**TEALMASTER ( <http://www.tealpoint.com/softmstr.htm> )**

Replace Hackmaster with TealMaster, the supercharged 100%-compatible system extensions manager. TealMaster adds enhanced stability, configuration and diagnostic features and PalmOS 5.0 hack emulation.

**TEALMEAL ( <http://www.tealpoint.com/softmeal.htm> )**

Save and recall your favorite restaurants with TealMeal, the personal restaurant database. With TealMeal's handy sorting and selection options, never ask "where to eat" again.

**TEALMEMBRAIN ( <http://www.tealpoint.com/softmemb.htm> )**

Stop crashes and monitor your memory use with TealMemBrain, the application stack stabilizer. TealMemBrain boosts your stack space on OS3 and OS4 handhelds, eliminating the major cause of system instability.

**TEALMOVER ( <http://www.tealpoint.com/softmovr.htm> )**

Beam, delete, rename, and copy files with TealMover, the file management utility for SD/CF/MS cards. TealMover lets you see, move, modify, hex edit, and delete individual files.

**TEALMOVIE ( <http://www.tealpoint.com/softmovi.htm> )**

Play and convert high-quality video and synchronized sound with the TealMovie multimedia system. TealMovie includes a handheld audio/movie player and a Windows AVI/MPEG/Quicktime converter program.

**TEALNOTES ( <http://www.tealpoint.com/softnote.htm> )**

Insert freehand graphics anywhere with TealNotes "sticky notes" for Palm OS. TealNotes can be inserted into memos, to-do lists, address book entries--almost anywhere you currently have editable text.

**TEALPAINT ( <http://www.tealpoint.com/softpnt.htm> )**

Paint, sketch, or draw with TealPaint, the all-in-one graphics paint program for PalmOS. Highlights include 20 tools, 16 patterns, 24 brushes, zoom, hires, layers, multi-undo, and a desktop converter.

**TEALPHONE ( <http://www.tealpoint.com/softphon.htm> )**

Supercharge the address book with TealPhone, the contacts replacement with superior interface and options. Highlights include enhanced display, search, phone-dialing, groups, and linking.

**TEALPRINT ( <http://www.tealpoint.com/softprnt.htm> )**

Print text and graphics to IR, serial, and Windows printers with TealPrint. With numerous connection options, TealPrint, is the all-in-one text and graphic printing solution.

**TEALSAFE ( <http://www.tealpoint.com/softsafe.htm> )**

Store your passwords, credit cards, PIN numbers, and bank accounts in the TealSafe data wallet. With maximum security and encryption, TealSafe is a must for features and security.

**TEALSCRIPT ( <http://www.tealpoint.com/softscrp.htm> )**

Replace or restore Graffiti with TealScript, the text recognition system you can customize. Unlike other systems, you can make or change your own strokes for better speed and accuracy.

**TEALTRACKER ( <http://www.tealpoint.com/softtrac.htm> )**

Track time and expenses with a fast, easy to use interface that requires minimal effort. Generate reports and export data to a spreadsheet. TealTracker is your personal time clock.

**TEALTOOLS ( <http://www.tealpoint.com/softtool.htm> )**

Improve productivity with TealTools pop-up Palm Desk Accessories. TealTools includes a popup calculator, clock/stopwatch, preferences panel, editing panel, memopad, and a file/backup manager.

# Appendix E – Revision History

Release 4.39 – May 31, 2006

- Added support for running folios with dual input fields from card by increasing text cache count
- Improved accuracy of match calculations when dividing floating point numbers
- Fixed rare math error that would give wrong answer when multiplying certain floating point numbers

Release 4.35 – March 28, 2006

- Added support to browsing screen for 5-way navigator control of newer devices
- Added auto-selection of text field in registration key entry screen
- Improved accuracy of multiplication of large numbers in folios

Release 4.34 – March 24, 2006

- Added many new titles to included folio set
- Fixed file corruption when changing folio category on Samsung smartphone
- Fixed calculation of free memory on devices with non-volatile memory

Release 4.32 – September 10, 2003

- Fixed CYCLE command to work with POPUP objects
- Fixed math calculation error dividing small numbers
- Fixed number display error when overflowing decimal sizes
- Fixed crash on OS3.0 handhelds in 4.31

Release 4.30 - June 26, 2003

- Added auto-selection of list or table item when clicking on imbedded hyperlink
- Increased precision on 32-bit divide operations with large divisors
- Fixed category poplist display under OS5
- Fixed odd linking behavior and instability with TABLE objects
- Fixed folio "back" button functionality on nested link calls
- Fixed folio "back" button functionality on VFS cards
- Fixed missing Memory Stick files/folders on Sony NX70
- Fixed incorrect auto selection of entire text field in popedit objects under OS5

Release 4.21 October 22, 2002

- Fixed linking between folios with imbedded text links
- Added support for TREO jog dial in selecting files
- Added support for Arm-based Palm input controller

Release 4.20 August 29, 2002

- Added new "POPFIND" objects
- Added support for "BACK" buttons (set TARGET to "\$BACK")
- Added support for untargeted INPUT buttons for STROKE\_FIND (set TARGET to letter to seek)
- Removed flash of folio list when transitioning between linked folio
- Increased object reference maximum nesting level from 5 to 15 levels

Release 4.10 May 21, 2002

- Added color icons to list view
- Added support for OS5.0 high-resolution program and launcher icons
- Added masking of file extensions (.pdb and .prc) in SD card filenames
- Updated MKTInfo Utility to warn of downward referencing LINKS (should be up)
- Fixed double-tapping of folder names in card file manager
- Fixed centering of button text with small buttons rounding up ½ pixel

Release 4.01 March 7, 2002

- Fixed label display for POPOUTLINE objects
- Fixed display of full screen POPIMAGE objects

Release 4.00 February 1, 2002

- Added support for displaying folios directly off SD/MMC/CF flash cards
- Added preferences option to remember category
- Added preferences option to remember device
- Added support for MATH objects for calculating floating point values
- Added support hidden objects and multiple-page folios via new SETPAGE object
- Added DRAW objects for custom graphic charts and rendering
- Added TABLE and POPTABLE objects
- Added POPOUTLINE objects
- Added support for POPMERGE text-merge objects
- Added support for PRINTMERGE printing through TealPrint
- Added RANDOM object
- Added YEAR object
- Added MONTH object
- Added DAY object
- Added HOUR object
- Added MINUTE object
- Added INPUT objects to make calculator-style buttons
- Added support for text compression
- Added support for launching TealMovies and other external databases
- Added compatibility with future PalmOS versions and devices
- Updated to work with folios containing graphics under OS 4.0
- Fixed passkey functionality on CLIE
- Fixed occasional crash launching TealDoc from TealInfo folio
- Fixed display of images imbedded into folios

## Appendix F – Contact Info

TealInfo by TealPoint Software  
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TealPoint Software  
TealInfo Registration  
454 Las Gallinas Ave #318  
San Rafael, CA 94903-3618  
We look forward to hearing from you.

Please visit us at [www.tealpoint.com](http://www.tealpoint.com), or email us at [contact@tealpoint.com](mailto:contact@tealpoint.com).

## Appendix G – Registering

Registering allows you to use the program past the 30 day expiration period and turns off registration reminders.

Currently, you may register by snail mail or online with a credit card and a secured server from the store where you downloaded the software. For the first option, send the following information on a sheet of paper separate from your payment.

- Product Name
- E-Mail Address
- HotSync User ID (Pilot Name Required for Passkey generation. It can be found on the main screen of the HotSync application on the Pilot as "Welcome \_\_\_\_\_" or in the corner on a PalmIII or higher)
- Check (drawn off a US Bank) or Money Order for (\$19.95 US). No international checks or money orders please.

## Appendix H – Legal Notice

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This program may be used on a trial basis for 30 days. The program will continue to function afterwards. However, if after this time you wish to continue using it, please register with us for the nominal fee listed in the program.

Thank you.

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