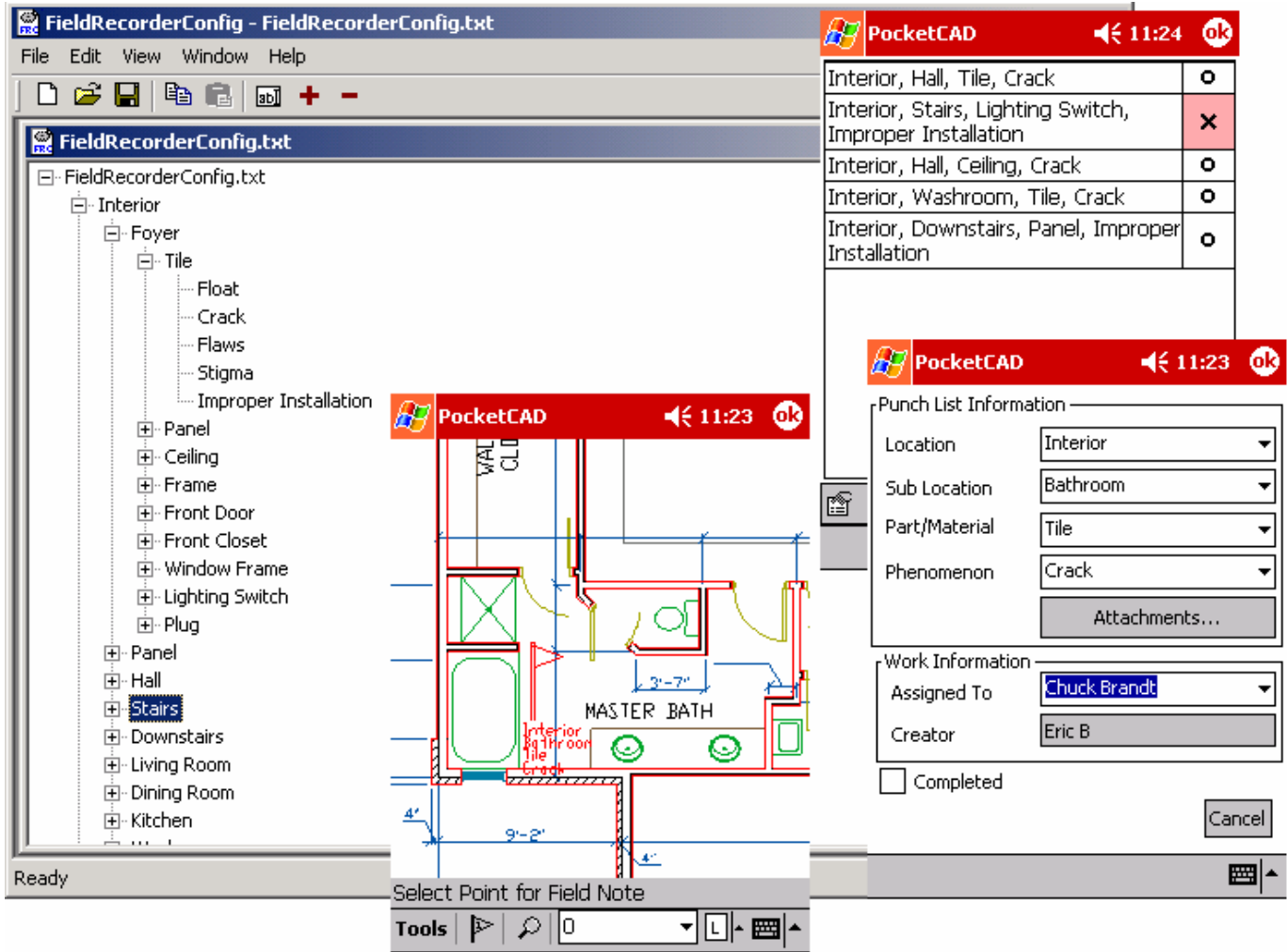


PocketCAD® PunchList

THE MOBILE CAD STANDARD™



User Guide

PocketCAD® PunchList
 Version 1.0
 October 2002

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Overview

PocketCAD PunchList is software that runs inside PocketCAD PRO. It is designed to allow users to build up descriptions of field conditions and then flag a specific location in a drawing file with that condition. These descriptions are hierarchical in that the first list establishes what will be displayed in the following lists. The goal is to eliminate the user from having to type anything; they can quickly document conditions in a standardized format.

The type of collected data consists of:

1. Field conditions, based on user defined lists
2. The location within a drawing of where that condition exists
3. Whether or not the condition been addressed, i.e. has the problem been fixed?

The system requires the use of a PC to extract the data as well as a Windows CE PocketPC device. There are six parts to the software; four of which run on the desktop, the other two run on the PocketPC (PPC).

The six parts to the software are:

Parts	Location	Description
PocketCAD PunchList Addin	PocketPC	This is the Addin to PocketCAD, which provides the PunchList capability.
PocketCAD	PocketPC	CAD application that displays drawing files on the PocketPC. Also has the PunchList Addin to allow flags to be placed in the drawing file.
PunchList Configuration Tool	PC	This is the application that allows you to modify what's in the Drop-down lists in the PunchList Addin. This application runs on the PC and creates or modifies the PunchListConfig.txt file.
CAD Exchange	PC	This application allows you to move files from your desktop to your PocketPC by converting DWG/DXF/DGN files to .CAD files which can be used by PocketCAD.
CSV addition to CAD Exchange	PC	This extends CAD Exchange's ability to extract PunchList data from the PPC and format it so that Excel can read it.
Microsoft ActiveSync.	PC	This is supplied by Microsoft and comes on a CD when you purchase you device. CAD Exchange requires ActiveSync to connect the PPC and the PC. PunchList requires ActiveSync to copy the PunchList Configuration files to the PPC.

The following assumptions are made in this User Guide:

1. Microsoft ActiveSync and CAD Exchange are installed and operating correctly.
2. AutoCAD, MicroStation or some other compatible desktop CAD system is available.
3. PocketCAD and the PunchList Addin are installed on the PPC.
4. PunchList items are organized and setup on the PPC.

In general, the functionality within the system is designed to facilitate the following process:

1. Copy a drawing file to your PPC using CAD Exchange.
2. On the PPC, use PocketCAD (with the Addin loaded) to open the converted file.
3. As you move through the property, you “Flag” items that need attention by using the PunchList tool. You select from the pull-down list to build up a standard description of the problem.
4. Repeat Step 3 until you have inspected the desired areas.
5. Upon docking the PPC use CAD Exchange to merge the flags into the original drawing file and create a CSV (comma separated) file that contains the data stored in the flags in the drawing.

The CSV file can then be read with spreadsheet or database software for additional processing.

Another method calls for the creation of a new drawing file with that contains the flags within it. This method allows you to capture the flag information without adding to the original file. The system allows you to capture whom recorded the problem as well as who is assigned to resolve it.

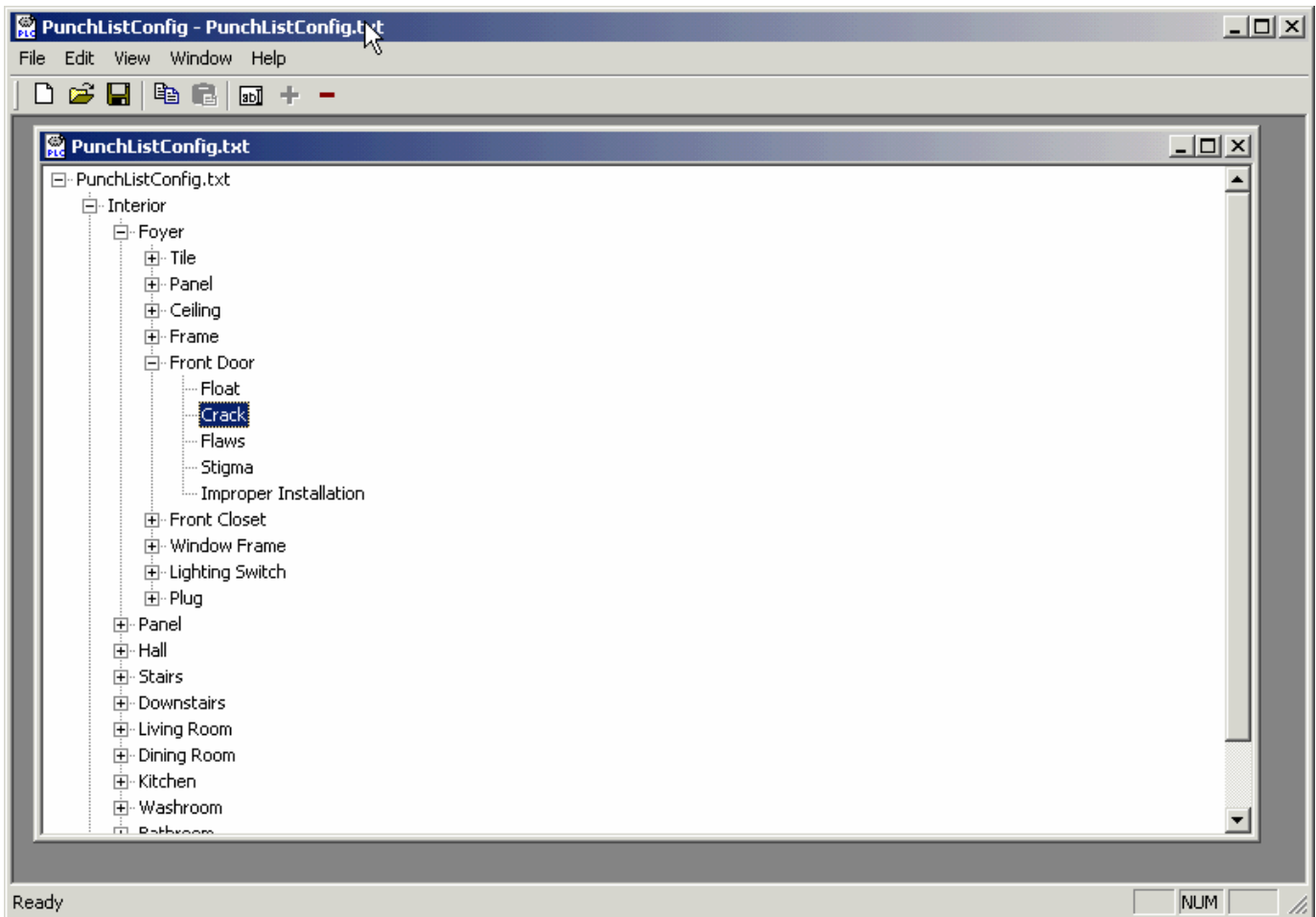
Basic Operation

In general the process is:

1. Setup Drop-down Lists
2. Add Flags to drawing files
3. Sync Drawing Data
4. Create Spreadsheet file
5. Repeat steps 2 thru 4 until project is completed

There are two modes of basic operation: Administration and Operation.

Administration is basically the activities required to setup the Drop-down lists and copying that setup file to the PPC. All other activities fall into the operation of the program. Administration happens the first time you set up and as you see the need to update your Drop-down lists to accommodate your needs.



Using the PunchList Config. Tool (PunchListConfig.exe) you build up and control what is contained in the PunchListConfig.txt file. This file is used by the PunchList Addin for PocketCAD and provides the contents of the drop-down lists used to build up descriptions. The PunchListConfig.exe is a Windows application designed to run on a desktop PC.

A tree control is used to display the current list and its dependencies. From here you can navigate the higherarchy, adding and deleting entries as you require. While manipulating the hierarchy, remember that an entry will be added to all subsequent lists UNLESS the operator specifies the item to be added to the current list only.

Once the PunchListConfig.txt file is built, it can be updated as required. ActiveSync is used to move the file from the PC to the PPC. You can also use CAD Exchange to drag and drop the PunchListConfig.txt to the My Documents file on your PPC. Use CAD Exchange to copy your drawing to the PPC as well.

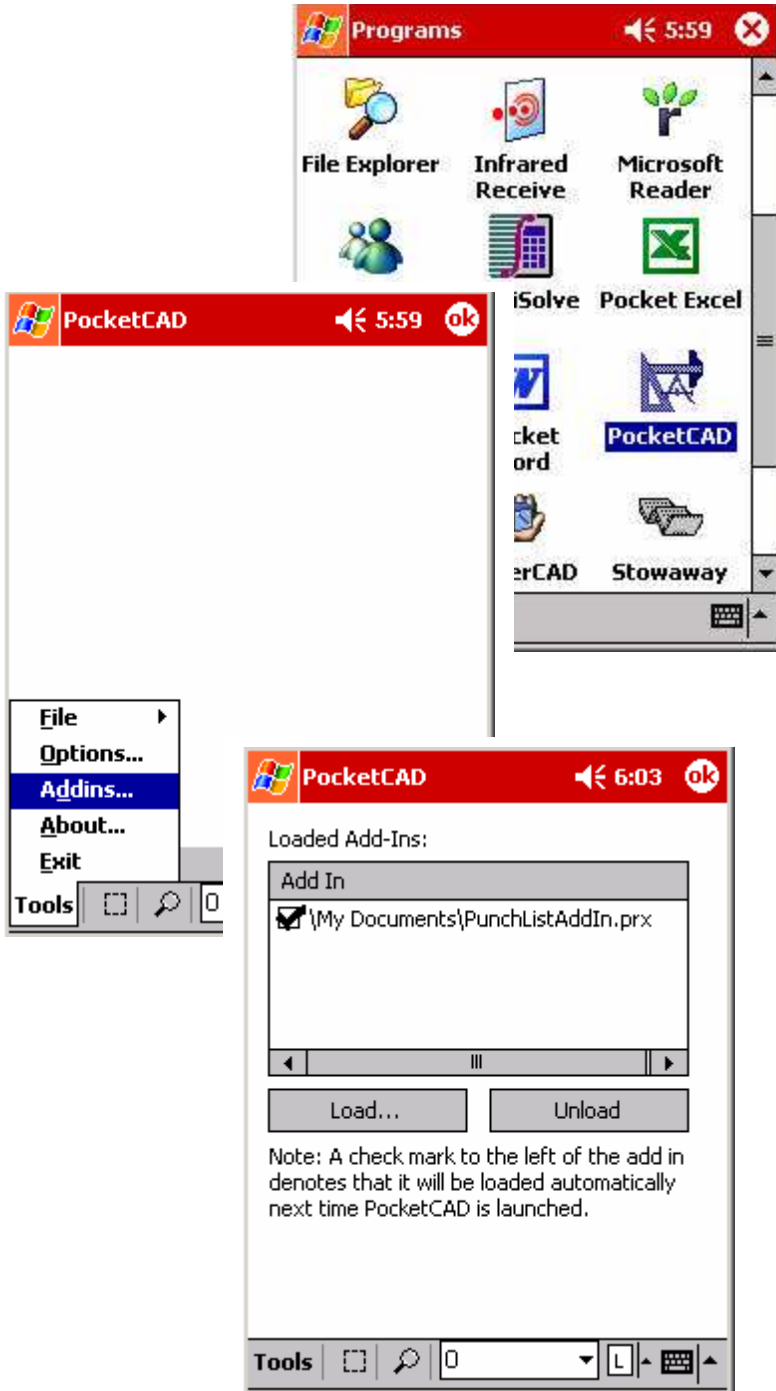
PocketCAD can then be used to open the drawing file for editing. Use the pan and zoom tools to control the display. To flag a trouble spot, use the FieldNote button to display a page that contains your PunchListConfig lists. Use the drop-down lists to select items that reflect the conditions you wish to record. Hit OK to place a flag in the file that contains the selected conditions.

You can also associate attachments to flags. Attachments, such as previously recorded messages or digital images, can be referenced along with the drop-down information. When copied across to the PC, the Flag blocks have a field which refers to a file name if an attachment was used.

After working in the field and adding flags to your drawing, you will want to sync your data with your desktop. When you connect your handheld to the PC, use CAD Exchange to merge your flags into the desktop drawing file. Then, use CAD Exchange to extract a CSV file that contains the flagged data and open it up in Excel.

Components

PocketCAD PunchList Addin





The Punchlist Addin is an extension of PocketCAD, which means that in order to be used, it must first be loaded.

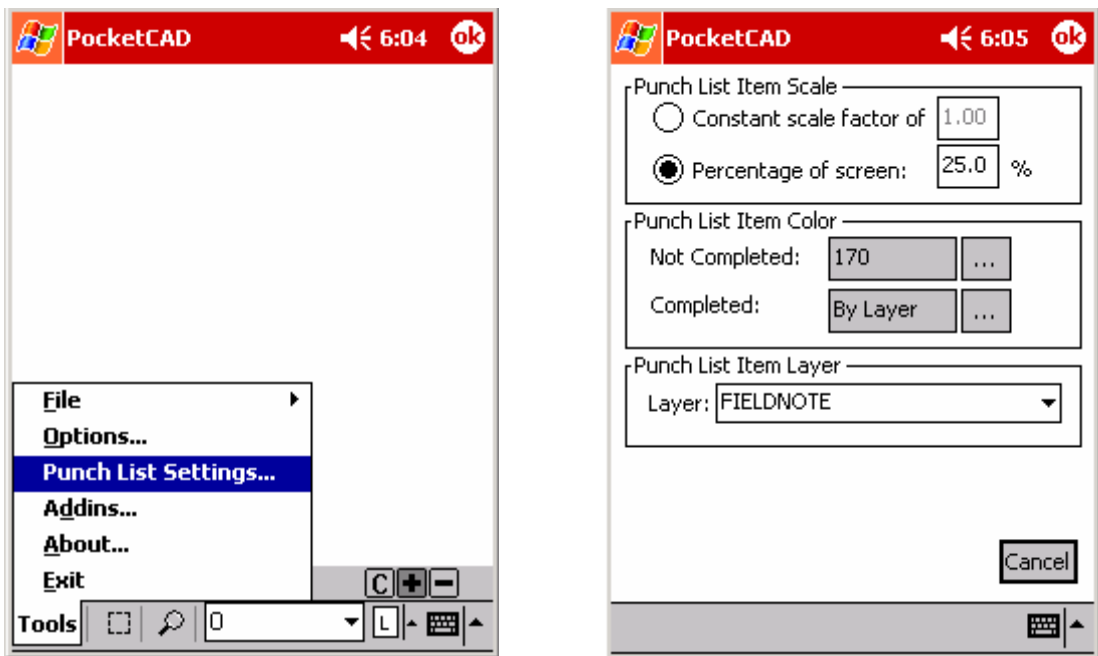
To load the Punchlist Addin:

1. Start PocketCAD from the Programs page by picking the PocketCAD icon.
2. From the Tools Popup Menu, pick the Addins.. choice
3. From the Loaded Addins page, hit the Load button and select the PunchListAddin.prx file.
4. Make sure that there is a Check Mark next to the file name. This will insure that the Addin gets loaded every time PocketCAD is started.

NOTE: Once the Addin has been loaded this step does not need to be repeated.

Check to see that the Addin is properly loaded by making sure the Punch List Item and the Punch List buttons   in the toolbar.

The user has control over a couple of different aspects of how PunchList will look. From the PunchList Setting page, the user can setup how the Flags used during the inspection process will be displayed. A control is provided for the scale of the flags to be brought in, the color of the flags that will be displayed and what layer in which the flags will appear.

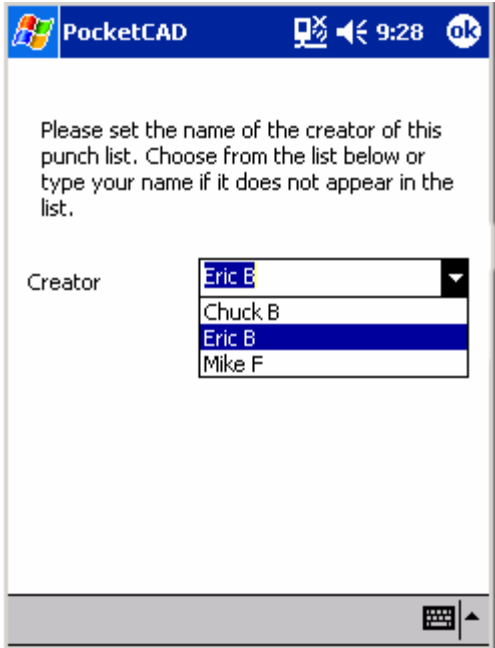


PunchList Item Scale. This section determines at what scale the flag block will be inserted into the file. The user has the choice of using a constant scale factor or one based on what is in the display when the flag is created.

PunchList Item Color. This section allows the user to set what color a Not Completed flag will display. To change the Color, hit the [...] button and pick a different color from the color picker.

PunchList Item Layer. This pull-down controls the Layer in which the flags will be placed as they are inserted into the drawing. The drop-down menu lists all of the layers in the drawing. Simply pick the layer where flag blocks will be inserted when they are placed.

When you first start PunchList you will be required to Login. This will track who is marking up the drawing, which is important when creating reports.



Login Page

The main goal of the Login Page is to record ‘who’ is currently operating the system. This is required for reporting purposes. All actions performed will be recorded as being done by the person who is logged in. To change Login, you must Exit PocketCAD, restart and then come back to perform PunchList tasks.

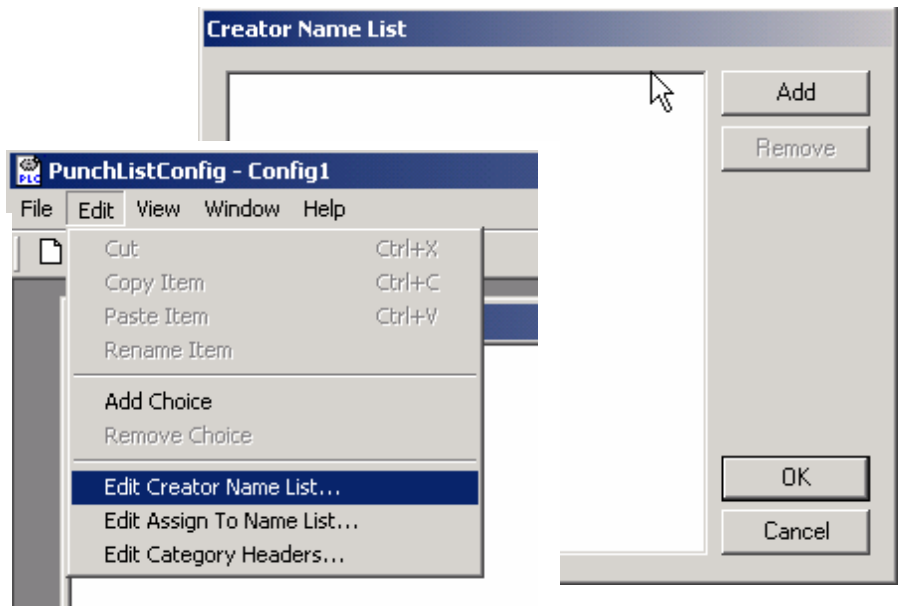
“Performed by” is recorded when PunchList Items are added to the list as well as when Items are check off as being completed.

NOTE: You can type in any name you want to get past the Login Page.

(Figure 3)

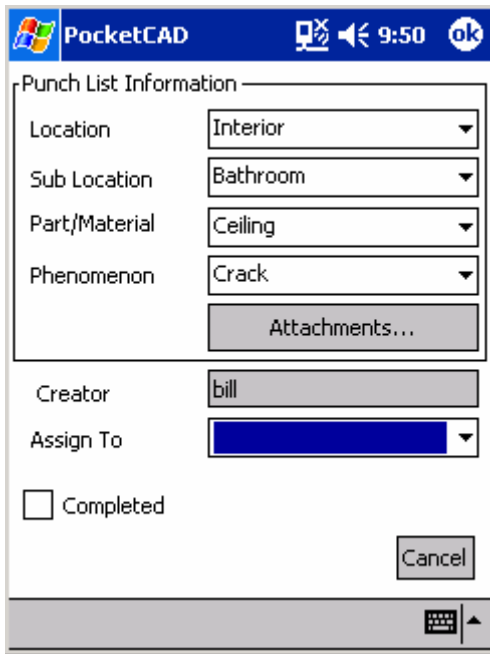
To add new entries to the list of Creators use the Punchlist Configuration Tool.

1. From the Edit Pull-down, pick ‘Edit Creator Name List...’
2. Hit the Add Button to insert a new name in to the list
3. Hit OK to save off your changes



Page, pick the


in PocketCAD Toolbar. This will display the page shown on the left. Its function is to speed up the collection of data by letting the user pick from predefined lists instead of typing in values.



Descriptions are built up using the PunchList Configuration Tool that runs on your PC. That information is stored in the PunchListConfig.txt, which is then copied to the My Documents folder on your PocketPC.

The lists are hierarchical in that one list sets up what is to be displayed in the lists below. PunchList always remembers your last settings to minimize the re-entering data.

At any time you can override the drop down lists and type in any value you want. This value will not be added to the lists until you use the PunchList Configuration Tool on your PC to add it permanently to the lists. Also, all values below the affected entry will change to NA since there is no information associated with the new entry.

To edit existing flags, simply select a flag and hit the PunchList Item button. . This will popup the PunchList Information Page with the values set as defined in the flag. Make your changes and hit OK to update the flag.

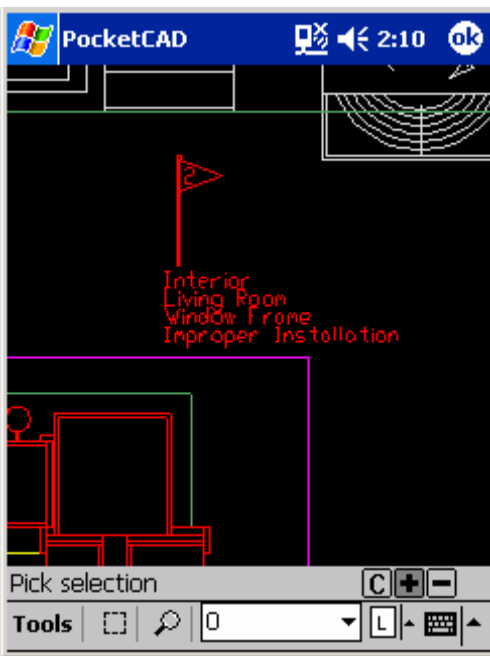
The creator field is a read-only value showing you who is logged in and recording the item.

'Assign To' is a drop down list that allows you to assign a PunchList item to a specific person.

The 'Completed' box allows the users to input whether or not the item has been completed. The date, time and creator will be associated with the completion date.

The 'Attachments' button provides a way for users to assign additional documents to an item. Attachments can be graphic files, documents or sound files.

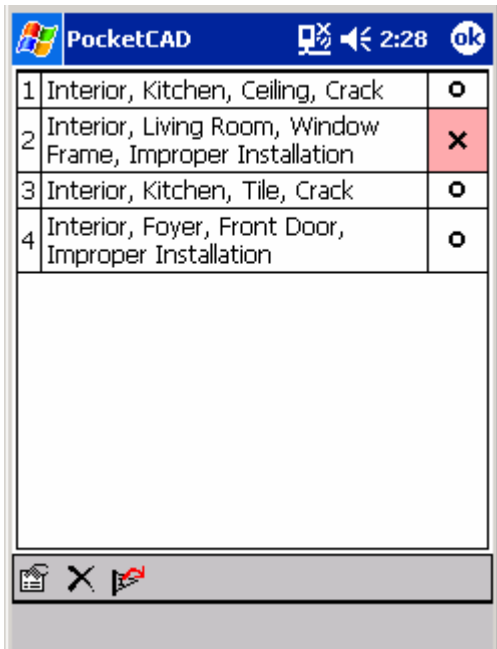
Once the fields are set, hit the OK button to insert the flag at the specified location.



(Figure 4)

Notes on Flags:

1. PunchList uses a FlagNote.cad file located in the \Program Files\PocketCAD directory of your PocketPC. You can modify the look of the flag block by simply making edits to that file. You will need to copy the file to you're My Documents directory, modify it, then copy it back to the \Program Files\PocketCAD directory.
2. The item numbers in the flags are automatically generated. If a flag is erased or deleted the number used for the next flag will be one number higher than the current highest number. Flags are not automatically renumbered.
3. Flags can be edited using Standard PocketCAD commands such as move and delete. Copying a flag will result in an exact duplicate including flag number. The recommended method is to use PunchList to create a new PunchList Item.



PunchList Page

The main goal of the PunchList page is to provide the user with an easy read listing of what has been flagged in the file. Access to tools to edit the item, plus tools to control PocketCAD's display are provided as well.

Items are listed in numerical order based on Flag number. Flag number is determined simply by when the flag was inserted relative to the other flags.

A checkbox next to an item means that someone has checked the Complete box for that item. By picking on the area you can toggle the state between completed and not completed.

You can tap the OK button the upper right hand corner to close the PunchList page.



Edit Item – This button will open the PunchList information Page with the data of the selected item displayed. It can then be edited and saved.



Delete Item – This button will delete the selected PunchList Item from the List and remove the flag block from the drawing. **NOTE:** Using PocketCAD's delete command and erasing the flag will perform the same task.



Restore View – This button will restore the View in the CAD window to exactly as was used when the flag was placed.

NOTE: All options are also available by selecting the item from the listing and holding the Pen down. The result will be a popup list that provides the user with access to the above functionality.



Attachments Page

The main goal of the Attachments page is to give the user the ability to associate other files with flag items. Files such as Notes, JPG's, and Word documents can be associated with a flag.

To attach a file, hit the **Attachments...** button on the PunchList Information Page. That will bring up the Attachments page.

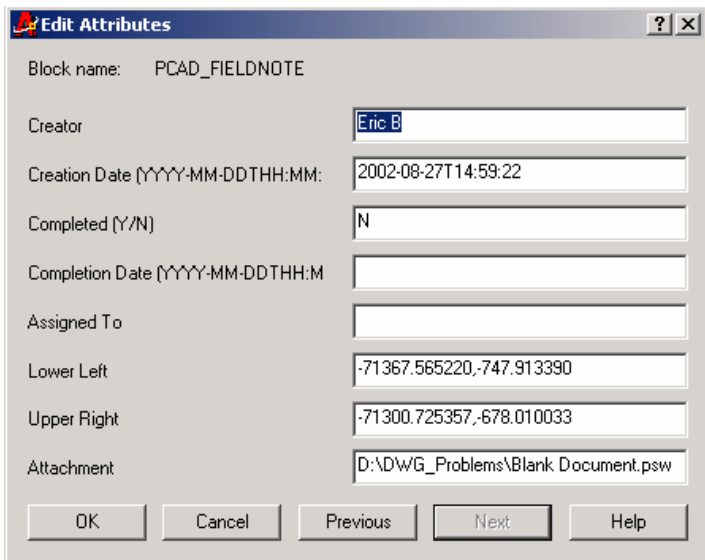
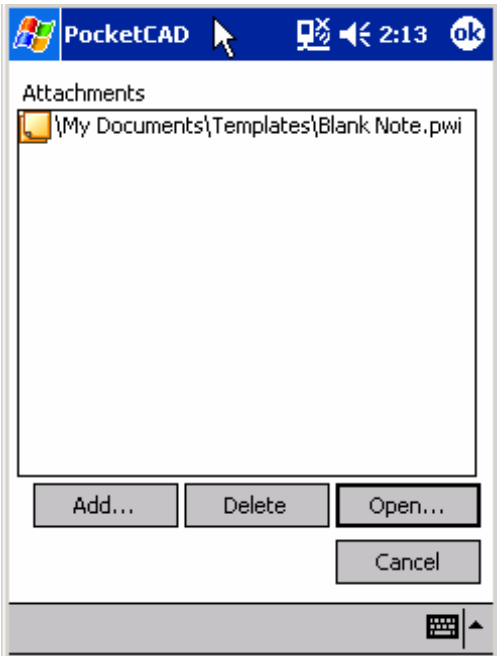
Add... This button starts the File Open Dialog box and selects a file to be added to this flag. Multiple files can be associated with a single flag.

Delete This button removes the selected attachment from the list.

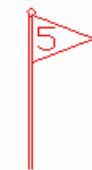
Open... This button will open the selected file in the application associated with its file extension. For example JPG files open in PocketIE, PWI files open in Pocket Word and so on.

Cancel This button closes this page and discards all changes.

Hit the OK button in the upper right hand corner to record



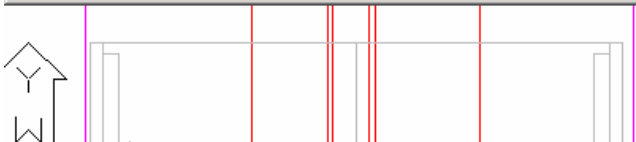
Installation



Interior
Bathroom
Ceiling
Crack

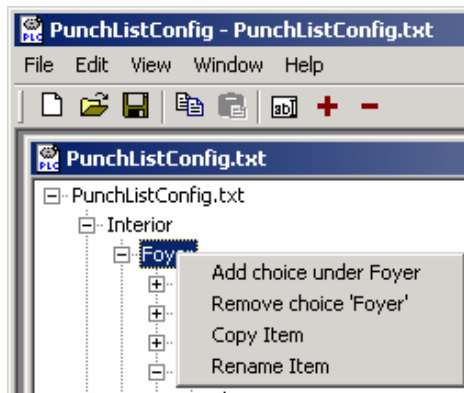
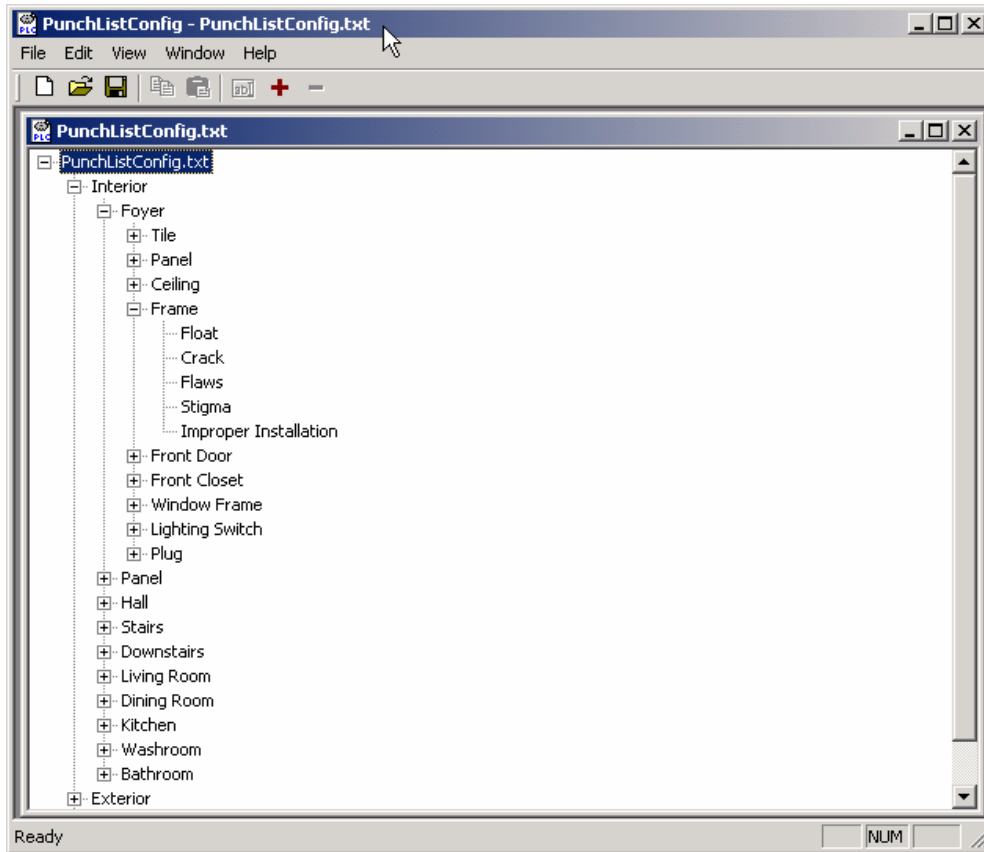
Attachments are brought back if CAD Exchange is setup to do so. See Section on CAD Exchange for settings.

If files are brought back their location is referenced in the Attachment Attribute of the flag block. The location of the attachment will be that same as the desktop drawing file.



PunchList Configuration Tool

The PunchList Configuration Tool (PCT), located on your PC, can be started by double clicking on the program icon shown below. The purpose of the PCT is to provide the user with an easy way to structure embedded lists for use with PocketCAD PunchList on the PocketPC.



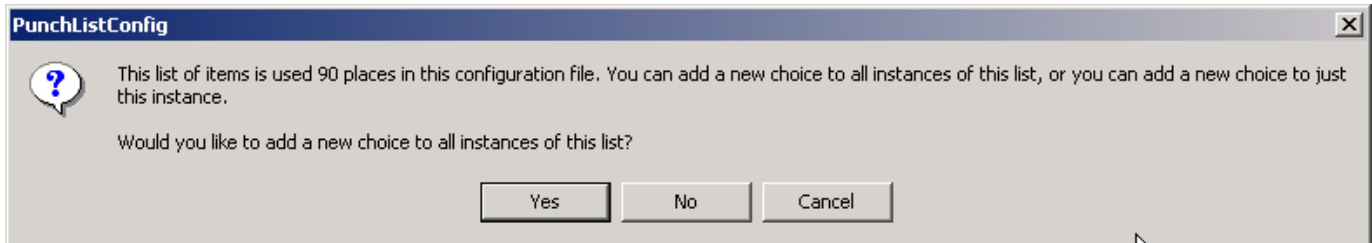
NOTE: All of the edit capabilities are available via pull-down menus, right click popup menus or from the toolbar.

NOTE: You must save your file in order to have your edits recorded.

NOTE: You must manually move the PunchListConfig.txt file from your PC to your PPC.

Add Choice

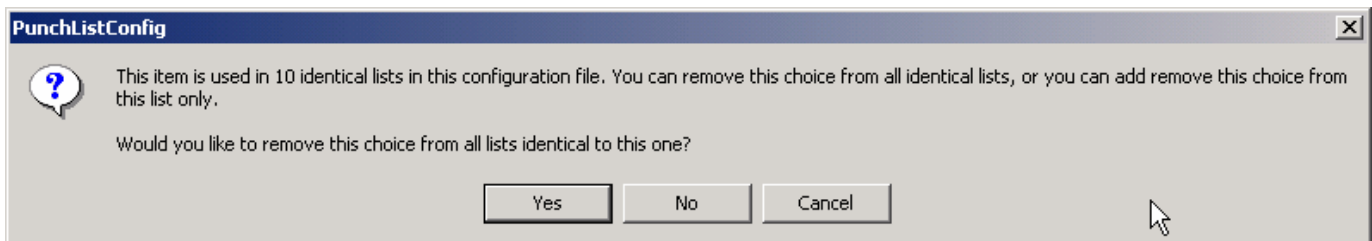
To add additional choices to your lists use one of the Add Choice methods. Simply highlight the choice in the tree where you wish to insert your new Item and pick Add Choice either from the 'Edit' pull-down menu, right mouse click menu or use the + button from the Toolbar.



Adding a new item will result in the above question. Do you want this entry for just this list or all lists that are at the same level? In this way we prevent the need to enter the same value in all the lists.

Remove Choice

To remove an item from your lists use one of the Remove Choice methods. Simply highlight the choice in the tree where you wish to insert your new Item and pick Remove Choice either from the 'Edit' pull-down menu, right mouse click menu or use the - button from the Toolbar.



Removing a new item will result in the above question. Do you want this entry removed for just this list or all lists that are at the same level? In this way we prevent the need to remove the same value in all the lists.

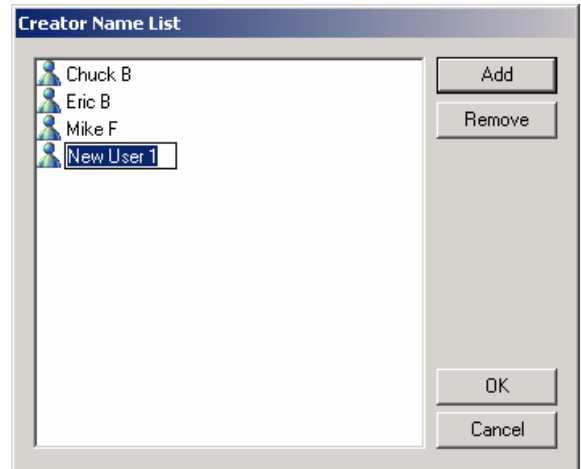
Edit Creator Name List

This list is used at PunchList Login, which occurs every time you start a drawing session and at the first time you initiate a PunchList command.

To Add a name hit the Add button and type in the value you want.

To Remove a name, highlight the name and hit the Remove button.

To Edit a value simply double click the name in the list and type in the value you want.



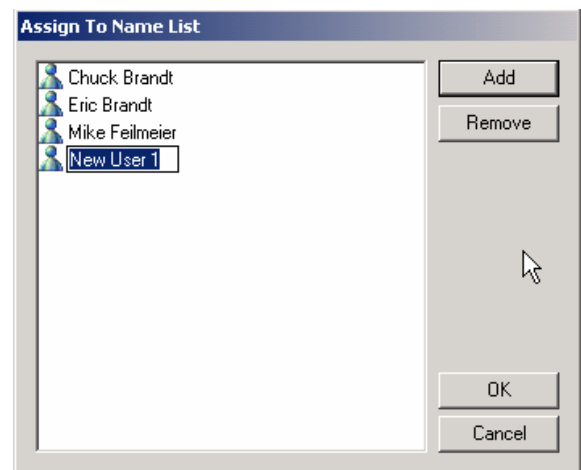
Edit Assign to Name List

This list is used when PunchList Items are added or edited. These values are displayed in the Assign to drop down list.

To Add a name hit the Add button and type in the value you want.

To Remove a name, highlight the name and hit the Remove button.

To Edit a value simply double click the name in the list and type in the value you want.



Edit Category Headers

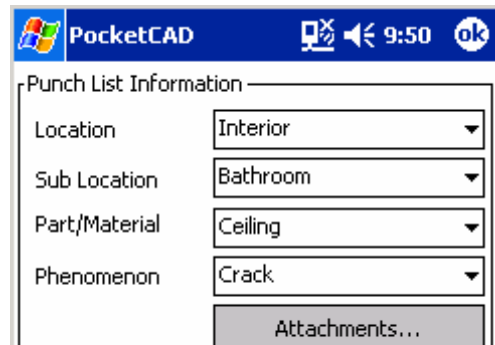
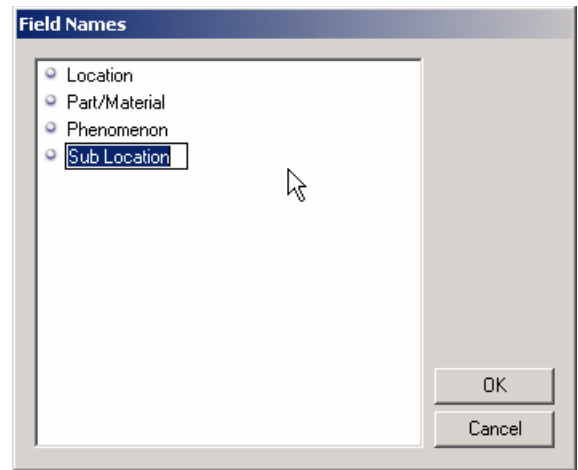
This list is used as headers for the drop down lists as well as headers for the resulting spreadsheet columns. The design allows the description and structure of lists.

To Edit a value simply double click the name in the list and type in the value you want.

A couple of other examples of how these could be structured are:

Location
Sub-Location
Problem
Severity

Location
Problem
Severity
Priority

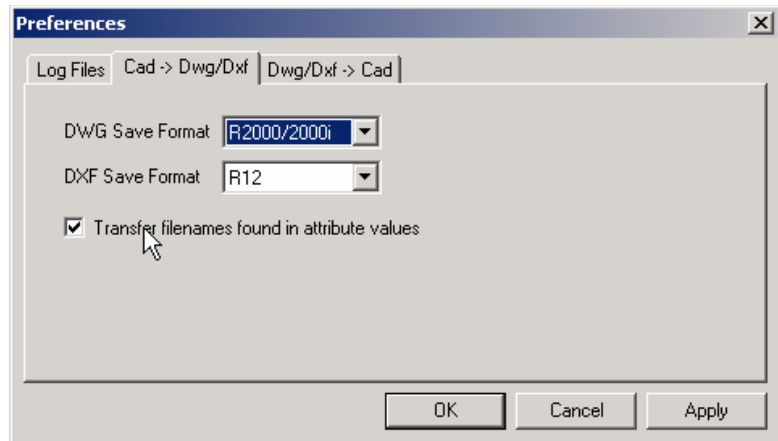
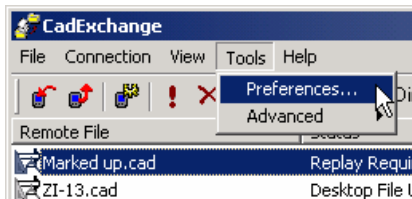


CSV Addition to CAD Exchange

The CSV Addition to CAD Exchange provides the user with a way to extract the data from the flags in the PocketCAD file so that you can see them in a spreadsheet format. Converting to a CSV file means that a CSV (short for comma separated format) will be created on your PC in the same directory, as the drawing file is, however you can specify a different location. Spreadsheet programs such as Excel for further processing can then use that file.

Flag	Location	Sub Location	Part/Material	Phenomenon	Assigned To	Completed	Completion Date
1	Interior	Kitchen	Ceiling	Crack		N	
2	Interior	Living Room	Window Frame	Improper Installation		Y	2002-08-27T14:38:42
3	Interior	Kitchen	Tile	Crack		N	
4	Interior	Foyer	Front Door	Improper Installation		N	

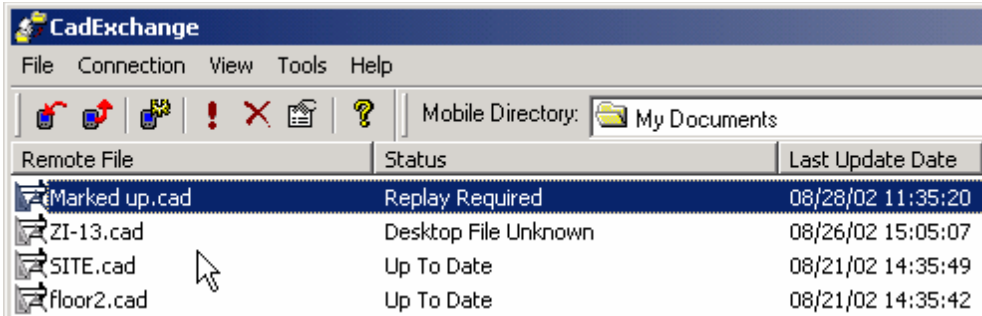
Along with flag data, any attachment that was associated with a flag will be brought across as well. In order to facilitate the transfer make sure the following CAD Exchange setting is set:



Use the Tools Pull-down and pick Preferences. Then set the Tab to CAD->Dwg/Dxf and make sure the Transfer filenames found in attribute values is set.

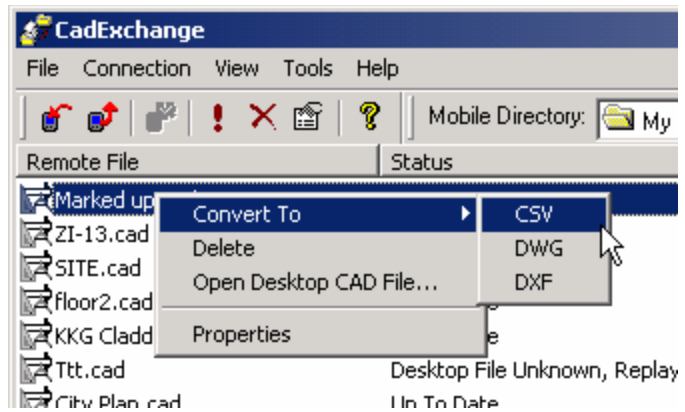
How to Create CSV files

The process works similar to creating desktop drawing files from those created in PocketCAD.

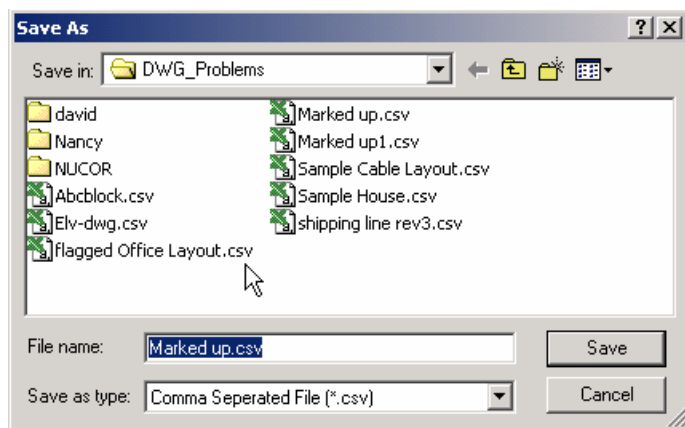


To create a CSV file:

1. Use CAD Exchange to view the files on your PPC. Highlight the file you wish to process.
2. Hit the right mouse button and select Convert To -> CSV
3. When presented the Save As dialog box supply a file name. You can change the location of the file if needed.



The result will be a CSV file that can be opened and worked on by most popular spreadsheet programs.



Files Used

On the PocketPC the following table describes the support files used by PocketTrueTrac.

File Extension or Name	Description	Location
PunchListConfig.exe	Desktop application for creating and editing drop-down Items	In the same directory as the User Guide on the PC. Default directory = \Program Files\PocketCAD PRO
FieldRecorderExcelFilter.dll	Used to create the CSV files.	In the same directory as the User Guide on the PC. Default directory = \Program Files\PocketCAD PRO
PunchListConfig.txt	File containing the values for PunchList	On the PPC in \My Documents
PunchListAddIn.prx	PocketCAD Addin that makes up the PunchList commands	On the PPC in \My Documents
FlagNote.cad	Flag Block used to store data and show location.	In the same directory as PocketCAD on the PPC. Default directory = \Program Files\PocketCAD