CHT (Clarion Handy Tools)

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How To Use HNDCLEAN.EXE

HNDCLEAN.EXE: How To Set Up

And Use The Latest Version

This version of HNDCLEAN.EXE (Version 21.17.02.004 or later) lets you configure it in such a way, that it KNOWS about redirection locations *(alternate gen-file output directories)* that you may have configured in our Clarion .RED file.

When you configure HNDCLEAN.EXE for your normal RELEASE operations, it's necessary to tell it where your template-generated output is going. Even with a default .RED, HNDCLEAN.EXE will not assume anything about how you're configured unless you tell it explicitly.

SAMPLE SETUP WITH CO-RELATIVE SUBDIRECTORIES

HNDCLEAN.EXE takes up to four input parameters. These are as follows:

```
PARAMETER 1 -- REQUIRED ---  [P2 OPT]   [P3 OPT]      [P4 OPT]
${TargetDir}\${ItemFileName} subdir1 supdir1\subdir2 subdir1\subdir2\subdir3
```

All parameters require at least a single space between them. All directories provided are rooted in ${TargetDir}. Hence, they are *relative* directories -- relative to the value in ${TargetDir}. When directories in P3 and P4 are chained as shown, these become co-relative sub-directories meaning that each of the "subdir" parameters places itself below the prior one.

Given an input for ${TargetDir} of **"c:\test"** the full set of clean directories as configured above resolves as follow:

```
c:\test\  (This is ${TargetDir} which comes up from the IDE)
c:\test\subdir1  (Passed in, optional Parameter 2)
c:\test\subdir1\subdir2  (Passed in, optional Parameter 3)
c:\test\subdir1\subdir2\subdir3  (Passed in, optional Parameter 4)
```

SAMPLE SETUP WITH SIMPLE-RELATIVE SUBDIRECTORIES

HNDCLEAN.EXE takes up to four input parameters. These are as follows:

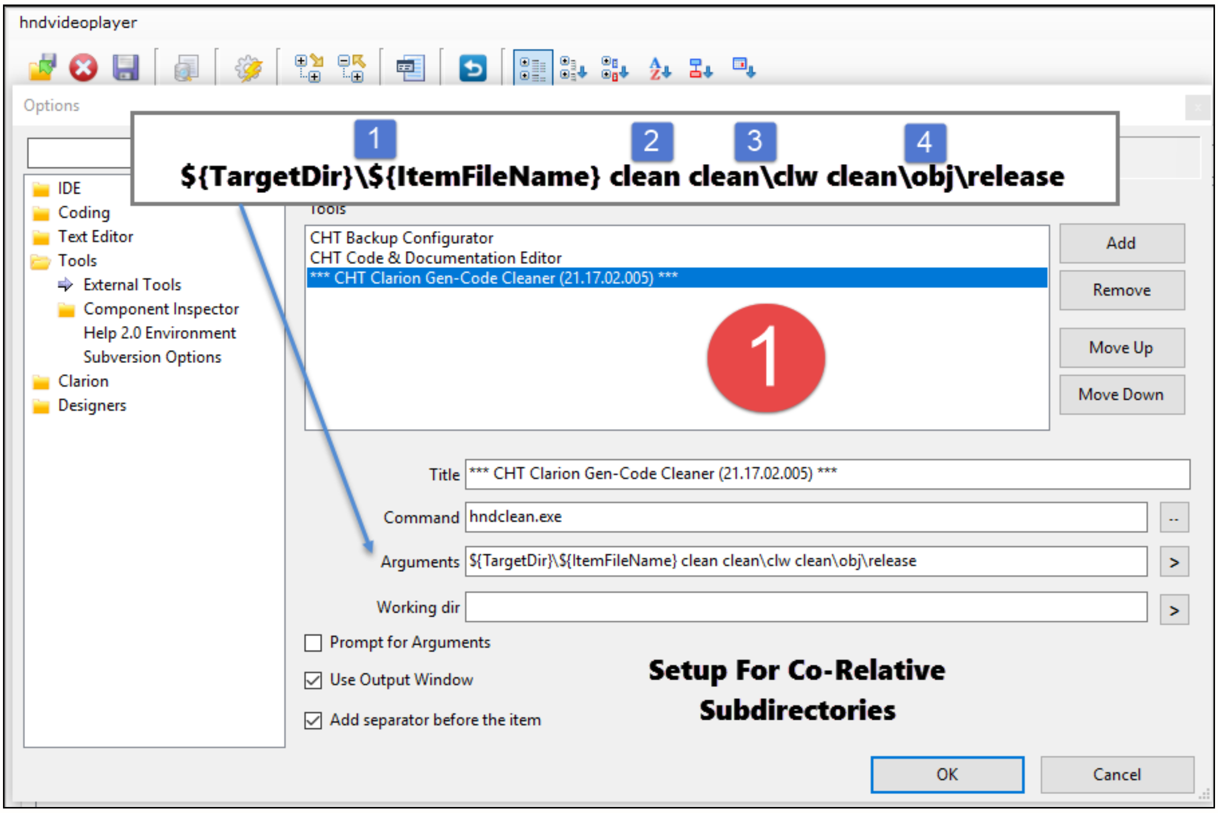
```
PARAMETER 1 -- REQUIRED ---  [P2 OPT] [P3 OPT] [P4 OPT]
${TargetDir}\${ItemFileName} subdir1 subdir2 subdir3
```

All parameters require at least a single space between them. All directories provided are rooted in the ${TargetDir}. In this case, because P3 and P4 make no reference to P2 or P3, respectively, these paths are "simple" subdirectories, all rooted in ${TargetDir}.

Given an input for ${TargetDir} of **"c:\test"** the full set of clean directories as configured above resolves as follows:

```
c:\test\  (This is ${TargetDir} and comes up from the IDE)
c:\test\subdir1  (Passed in, optional Parameter 2)
c:\test\subdir2  (Passed in, optional Parameter 3)
c:\test\subdir3  (Passed in, optional Parameter 4)
```

CHT HNDCLEAN.EXE SETUP WITH CO-RELATIVE PATHS



${TargetDir}\${ItemFileName} clean clean\clw clean\obj\release

Tools:
- CHT Backup Configurator
- CHT Code & Documentation Editor
- *** CHT Clarion Gen-Code Cleaner (21.17.02.005) ***

Title: *** CHT Clarion Gen-Code Cleaner (21.17.02.005) ***

Command: hndclean.exe

Arguments: ${TargetDir}\${ItemFileName} clean clean\clw clean\obj\release

Working dir:

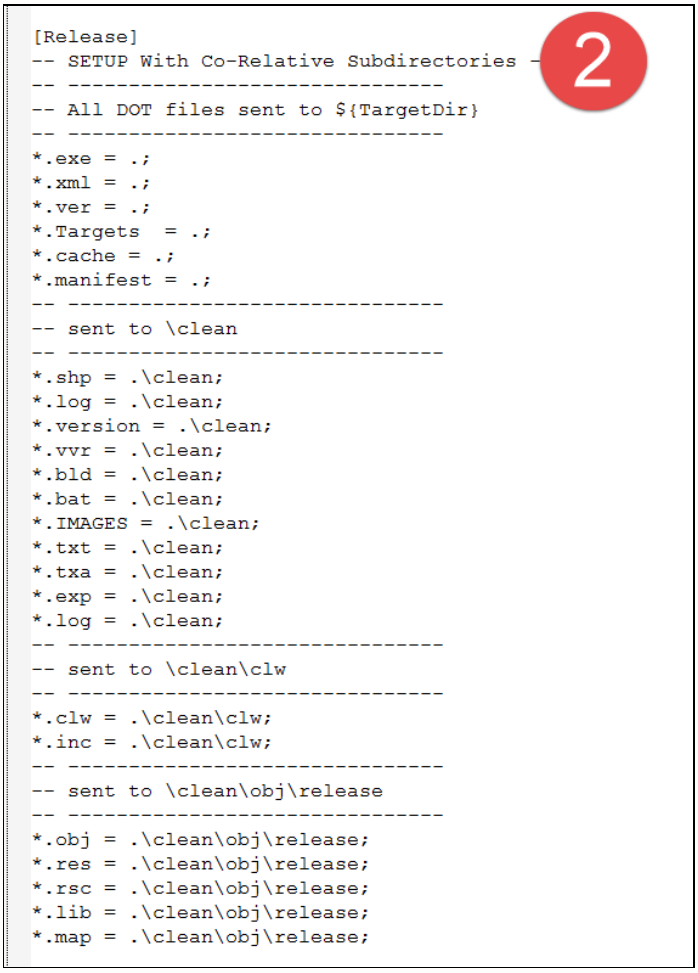
☐ Prompt for Arguments

☑ Use Output Window

☑ Add separator before the item

Setup For Co-Relative Subdirectories

CHT TEST "CLARION100.RED" FILE SETUP TO MATCH ABOVE IMAGE



```
[Release]
-- SETUP With Co-Relative Subdirectories -
-- -------------------------------
-- All DOT files sent to ${TargetDir}
-- -------------------------------
*.exe = .;
*.xml = .;
*.ver = .;
*.Targets  = .;
*.cache = .;
*.manifest = .;
-- -------------------------------
-- sent to \clean
-- -------------------------------
*.shp = .\clean;
*.log = .\clean;
*.version = .\clean;
*.vvr = .\clean;
*.bld = .\clean;
*.bat = .\clean;
*.IMAGES = .\clean;
*.txt = .\clean;
*.txa = .\clean;
*.exp = .\clean;
*.log = .\clean;
-- -------------------------------
-- sent to \clean\clw
-- -------------------------------
*.clw = .\clean\clw;
*.inc = .\clean\clw;
-- -------------------------------
-- sent to \clean\obj\release
-- -------------------------------
*.obj = .\clean\obj\release;
*.res = .\clean\obj\release;
*.rsc = .\clean\obj\release;
*.lib = .\clean\obj\release;
*.map = .\clean\obj\release;
```

HOW THE IDE DETERMINES THE VALUE OF ${TARGETDIR}

The secret to successful CLARION100.RED configuration is knowing how the default output directory is determined. This is the value that's inserted into the IDE MACRO ${TARGETDIR}.

In fact TARGETDIR is the directory in which the .APP file being worked on is located. If you wish to refer to this HOME or TARGETDIR in the .RED configuration, you do so with a DOT. Our sample .RED configuration set up for **[Release]**, allows six file extensions to be generated into the ${TargetDir} location, indicated simply by a DOT.

That's why we use an IDE MACRO ${TargetDir} as the first half of our first (P1) HNDCLEAN.EXE input parameter. The second half of our first parameter is ${ItemFileName}. This is the name of the application currently loaded for Generate-Compile activity. Note that in *Image 1* above, we've separated ${TargetDir}\${ItemFileName} with a backslash to provide a full legal path to the application.

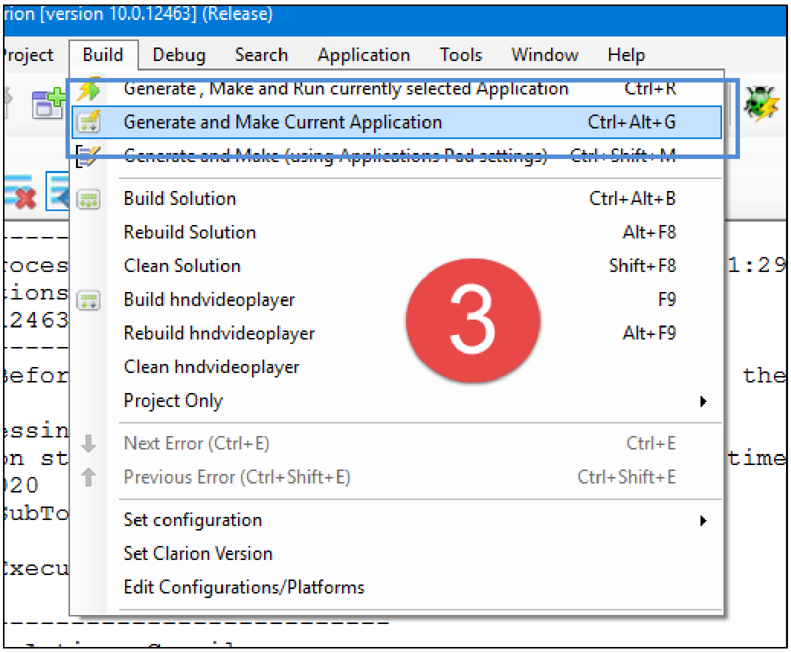
Where your app is located, then, comes up from the IDE and the value provided to ${TargetDir} depends on where the application that you're working on is located. The remaining output sub-directories are RELATIVE to that one ${TargetDir} location.

LOCATING TEST APPLICATION HNDVIDEOPLAYER.APP INTO C:\TEST

To test the viability of our setup we placed three files into a directory called **"c:\test"**. Since this application requires no dictionary, the files used are:

```
C:\TEST\HNDVIDEOPLAYER.APP
C:\TEST\HNDVIDEOPLAYER.CWPROJ
C:\TEST\HNDVIDEOPLAYER.SLN
```

We loaded the application into the Clarion 10 IDE and forced a full *Regenerate/Compile* on the freshly loaded application as using the **Generate and Make Current Application** menu as in the next image.

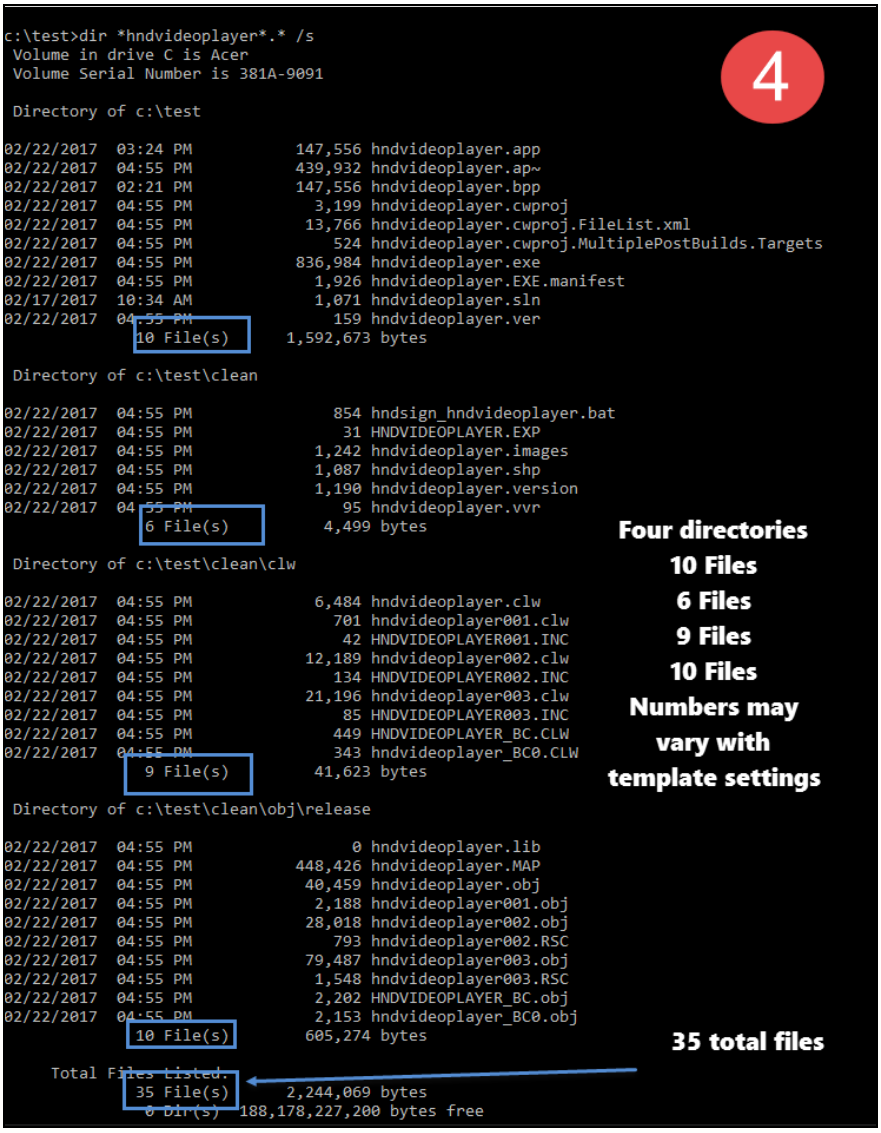

rion [version 10.0.12463] (Release)
roject
Build
Debug
Search
Application
Tools
Window
Help
Generate , Make and Run currently selected Application Ctrl+R
Generate and Make Current Application Ctrl+Alt+G
~~Generate and Make (using Applications Pad settings) Ctrl+Shift+M~~
Build Solution Ctrl+Alt+B
Rebuild Solution Alt+F8
Clean Solution Shift+F8
Build hndvideoplayer F9
Rebuild hndvideoplayer Alt+F9
Clean hndvideoplayer
Project Only
Next Error (Ctrl+E) Ctrl+E
Previous Error (Ctrl+Shift+E) Ctrl+Shift+E
Set configuration
Set Clarion Version
Edit Configurations/Platforms
3

GENERATING HNDVIDEOPLAYER.APP INTO C:\TEST

The next image provides the files created by the execution of the "*Generate and Make Current Application*" menu against our test application HNDVIDEOPLAYER.APP.

Remember we're starting with only 3 files, enumerated above. Some of these files (eg: .CLW, .INC, .VERSION etc.) are the result of the action of code-generation. Some of these files (eg: .OBJ. .MAP, .RSC etc.) are the result of the action of code-compilation.

"Generate" and "Make" (i.e. Compile) are two entirely separate IDE actions invoked when the "*Generate and Make Current Application*" menu is used.



```
c:\test>dir *hndvideoplayer*.* /s
 Volume in drive C is Acer
 Volume Serial Number is 381A-9091

 Directory of c:\test

02/22/2017  03:24 PM           147,556 hndvideoplayer.app
02/22/2017  04:55 PM           439,932 hndvideoplayer.ap~
02/22/2017  02:21 PM           147,556 hndvideoplayer.bpp
02/22/2017  04:55 PM             3,199 hndvideoplayer.cwproj
02/22/2017  04:55 PM            13,766 hndvideoplayer.cwproj.FileList.xml
02/22/2017  04:55 PM               524 hndvideoplayer.cwproj.MultiplePostBuilds.Targets
02/22/2017  04:55 PM           836,984 hndvideoplayer.exe
02/22/2017  04:55 PM             1,926 hndvideoplayer.EXE.manifest
02/17/2017  10:34 AM             1,071 hndvideoplayer.sln
02/22/2017  04:55 PM               159 hndvideoplayer.ver
              10 File(s)      1,592,673 bytes

 Directory of c:\test\clean

02/22/2017  04:55 PM               854 hndsign_hndvideoplayer.bat
02/22/2017  04:55 PM                31 HNDVIDEOPLAYER.EXP
02/22/2017  04:55 PM             1,242 hndvideoplayer.images
02/22/2017  04:55 PM             1,087 hndvideoplayer.shp
02/22/2017  04:55 PM             1,190 hndvideoplayer.version
02/22/2017  04:55 PM                95 hndvideoplayer.vvr
               6 File(s)          4,499 bytes

 Directory of c:\test\clean\clw

02/22/2017  04:55 PM             6,484 hndvideoplayer.clw
02/22/2017  04:55 PM               701 hndvideoplayer001.clw
02/22/2017  04:55 PM                42 HNDVIDEOPLAYER001.INC
02/22/2017  04:55 PM            12,189 hndvideoplayer002.clw
02/22/2017  04:55 PM               134 HNDVIDEOPLAYER002.INC
02/22/2017  04:55 PM            21,196 hndvideoplayer003.clw
02/22/2017  04:55 PM                85 HNDVIDEOPLAYER003.INC
02/22/2017  04:55 PM               449 HNDVIDEOPLAYER_BC.CLW
02/22/2017  04:55 PM               343 hndvideoplayer_BC0.CLW
               9 File(s)         41,623 bytes

 Directory of c:\test\clean\obj\release

02/22/2017  04:55 PM                 0 hndvideoplayer.lib
02/22/2017  04:55 PM           448,426 hndvideoplayer.MAP
02/22/2017  04:55 PM            40,459 hndvideoplayer.obj
02/22/2017  04:55 PM             2,188 hndvideoplayer001.obj
02/22/2017  04:55 PM            28,018 hndvideoplayer002.obj
02/22/2017  04:55 PM               793 hndvideoplayer002.RSC
02/22/2017  04:55 PM            79,487 hndvideoplayer003.obj
02/22/2017  04:55 PM             1,548 hndvideoplayer003.RSC
02/22/2017  04:55 PM             2,202 HNDVIDEOPLAYER_BC.obj
02/22/2017  04:55 PM             2,153 hndvideoplayer_BC0.obj
              10 File(s)        605,274 bytes

     Total Files Listed:
              35 File(s)      2,244,069 bytes
               0 Dir(s)  188,178,227,200 bytes free
```

4

Four directories
10 Files
6 Files
9 Files
10 Files
Numbers may
vary with
template settings

35 total files

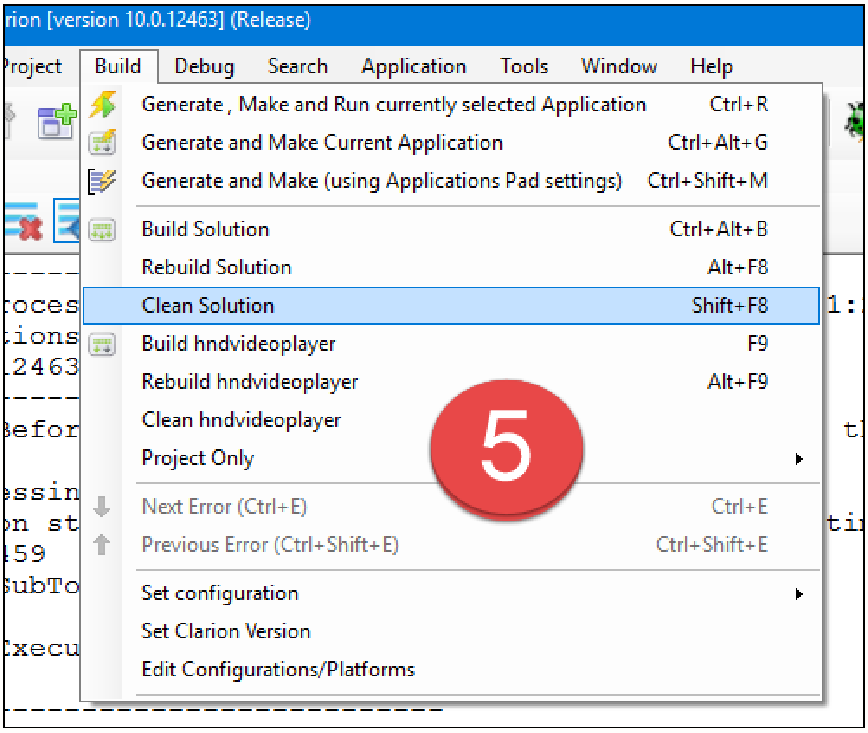
After "Generate" and "Make" the resulting file count jumps to thirty-five (35), located in the four directories configured ealier in our CLARION100.RED.

- **C:\TEST** -- 10 Files created. (i.e. ${TargetDir} Parameter 1)
- **C:\TEST\CLEAN** -- 7 Files created. (i.e. Parameter 2)
- **C:\TEST\CLEAN\CLW** -- 9 Files created. (i.e. Parameter 3)
- **C:\TEST\CLEAN\OBJ\RELEASE** -- 10 Files created. (i.e. Parameter 4)

A quick review of our CLARION100.RED setup -- *see Image 2, above* -- will confirm that these file extensions are located where they were configured to be located.

TESTING THE IDE "CLEAN SOLUTION" MENU

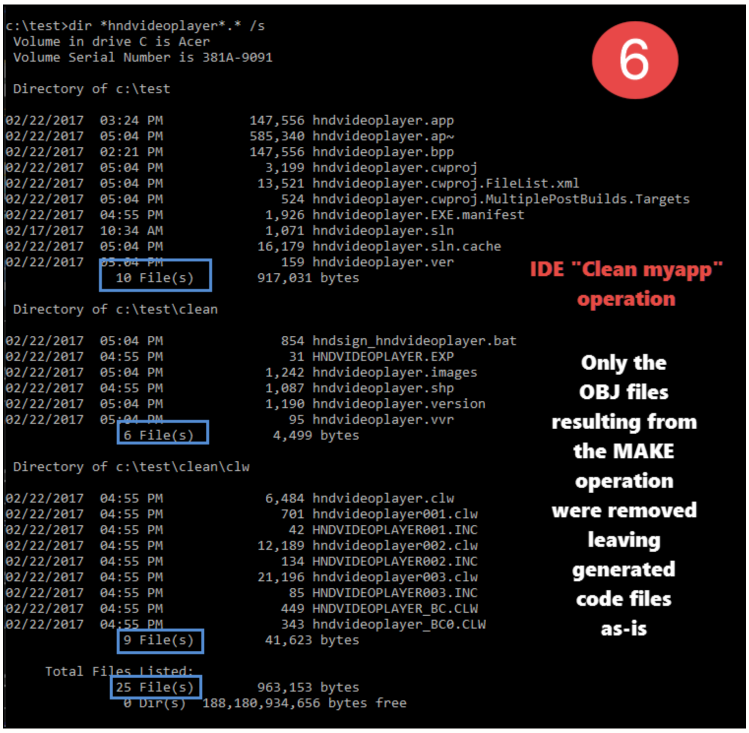
The major reason we're spending so much time testing and perfecting HNDCLEAN.EXE is because we've found that Clarion 10 does not provide a full enough cleaning service that will trigger both a full *Re-Generate* and a *Full-Recompile*.


rion [version 10.0.12463] (Release)
Project
Build
Debug
Search
Application
Tools
Window
Help
Generate , Make and Run currently selected Application Ctrl+R
Generate and Make Current Application Ctrl+Alt+G
Generate and Make (using Applications Pad settings) Ctrl+Shift+M
Build Solution Ctrl+Alt+B
Rebuild Solution Alt+F8
Clean Solution Shift+F8
Build hndvideoplayer F9
Rebuild hndvideoplayer Alt+F9
Clean hndvideoplayer
Project Only
Next Error (Ctrl+E) Ctrl+E
Previous Error (Ctrl+Shift+E) Ctrl+Shift+E
Set configuration
Set Clarion Version
Edit Configurations/Platforms
5

The Clarion 10 "Clean Solution" or "Clean hndvideoplayer" menu do trigger removal of the .OBJ files resulting from the compilation of HNDVIDEOPLAYER.APP generated source files.

Unfortunately, neither of these menus, as our test image below proves, triggers removal of *any* generated code files. Consequently applications requiring a full-regenerate in order to trigger code from newly added templates or from changed template settings requires sometimes a maneuver as drastic as exiting and re-loading the application before full code regeneration is achieved.

Before discussing that further, take a look at the files-count resulting from a the IDE's "Clean Solution" menu. **[Image 6 Below]**



```
c:\test>dir *hndvideoplayer*.* /s
 Volume in drive C is Acer
 Volume Serial Number is 381A-9091

 Directory of c:\test

02/22/2017  03:24 PM           147,556 hndvideoplayer.app
02/22/2017  05:04 PM           585,340 hndvideoplayer.ap~
02/22/2017  02:21 PM           147,556 hndvideoplayer.bpp
02/22/2017  05:04 PM             3,199 hndvideoplayer.cwproj
02/22/2017  05:04 PM            13,521 hndvideoplayer.cwproj.FileList.xml
02/22/2017  05:04 PM               524 hndvideoplayer.cwproj.MultiplePostBuilds.Targets
02/22/2017  04:55 PM             1,926 hndvideoplayer.EXE.manifest
02/17/2017  10:34 AM             1,071 hndvideoplayer.sln
02/22/2017  05:04 PM            16,179 hndvideoplayer.sln.cache
02/22/2017  05:04 PM               159 hndvideoplayer.ver
              10 File(s)        917,031 bytes

 Directory of c:\test\clean

02/22/2017  05:04 PM               854 hndsign_hndvideoplayer.bat
02/22/2017  04:55 PM                31 HNDVIDEOPLAYER.EXP
02/22/2017  05:04 PM             1,242 hndvideoplayer.images
02/22/2017  04:55 PM             1,087 hndvideoplayer.shp
02/22/2017  05:04 PM             1,190 hndvideoplayer.version
02/22/2017  05:04 PM                95 hndvideoplayer.vvr
               6 File(s)          4,499 bytes

 Directory of c:\test\clean\clw

02/22/2017  04:55 PM             6,484 hndvideoplayer.clw
02/22/2017  04:55 PM               701 hndvideoplayer001.clw
02/22/2017  04:55 PM                42 HNDVIDEOPLAYER001.INC
02/22/2017  04:55 PM            12,189 hndvideoplayer002.clw
02/22/2017  04:55 PM               134 HNDVIDEOPLAYER002.INC
02/22/2017  04:55 PM            21,196 hndvideoplayer003.clw
02/22/2017  04:55 PM                85 HNDVIDEOPLAYER003.INC
02/22/2017  04:55 PM               449 HNDVIDEOPLAYER_BC.CLW
02/22/2017  04:55 PM               343 hndvideoplayer_BC0.CLW
               9 File(s)         41,623 bytes

     Total Files Listed:
              25 File(s)        963,153 bytes
               0 Dir(s)  188,180,934,656 bytes free
```

6
IDE "Clean myapp" operation
Only the OBJ files resulting from the MAKE operation were removed leaving generated code files as-is

Of a total of 35 original files, only 10 files were deleted. Leaving 25 files as can be seen in *Image 6*.

All directories save the **C:\TEST\CLEAN\OBJ\RELEASE** still contain the same file count as before the "Clean" operation was performed.

As explained above, this is fine for triggering a "re-compile" of the application source code but it *does not trigger the IDE to "re-generate" the application*.

The "Clean" operation derives from functionality built into **MSBUILD**, an environment that does not incorporate the concept of code-generation, at least not to the extent that *Clarion* generates code.

MSBUILD considers code files to be static unless touched and edited by human hands or at least, modified by some action on the VS (Visual Studio) interface.

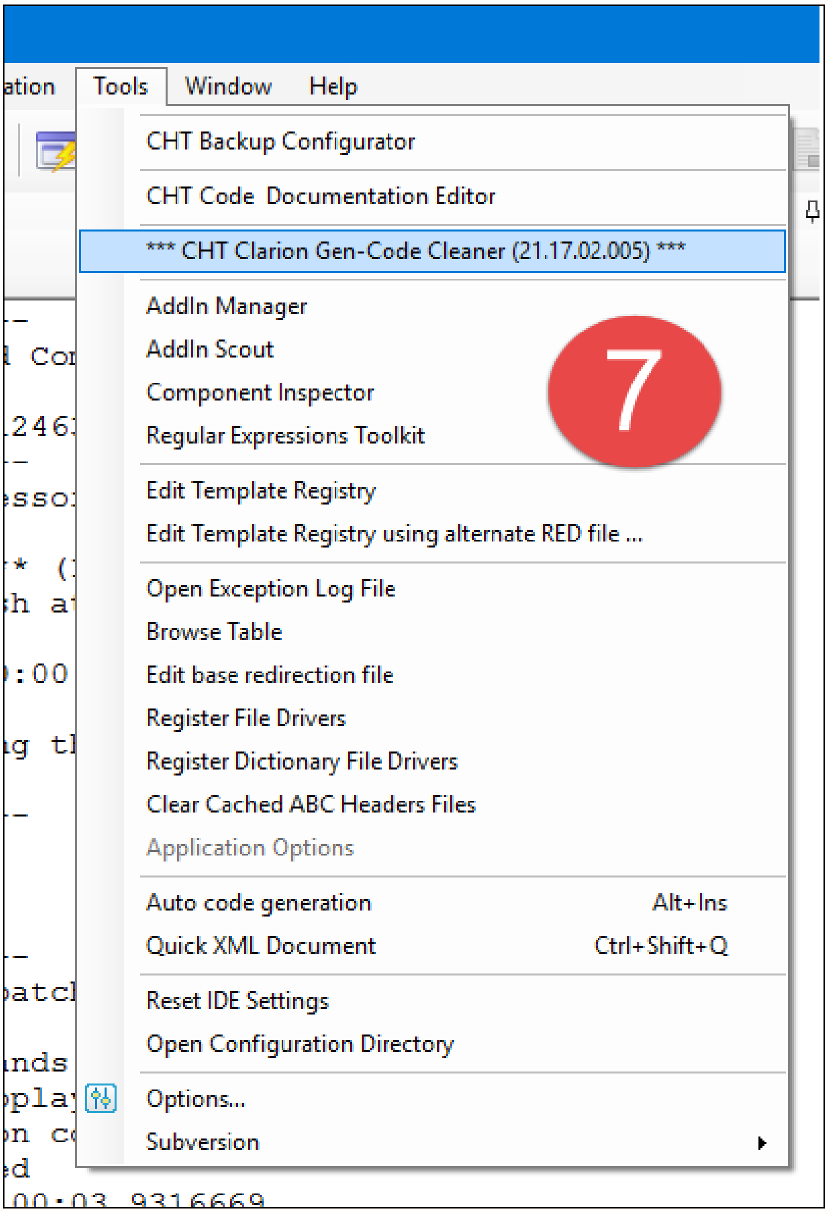
That may explain why Clarion "Clean Solution" or "Clean myapp" do not also erase generated-code files.

Unfortunately, again, it's less than satisfying to understand this when a developer knows they've made changes to their application template settings in various places and they want to trigger a **full-regenerate** to ensure that all template setting changes are being generated into the code files.

CHT HNDCLEAN.EXE TO THE RESCUE!

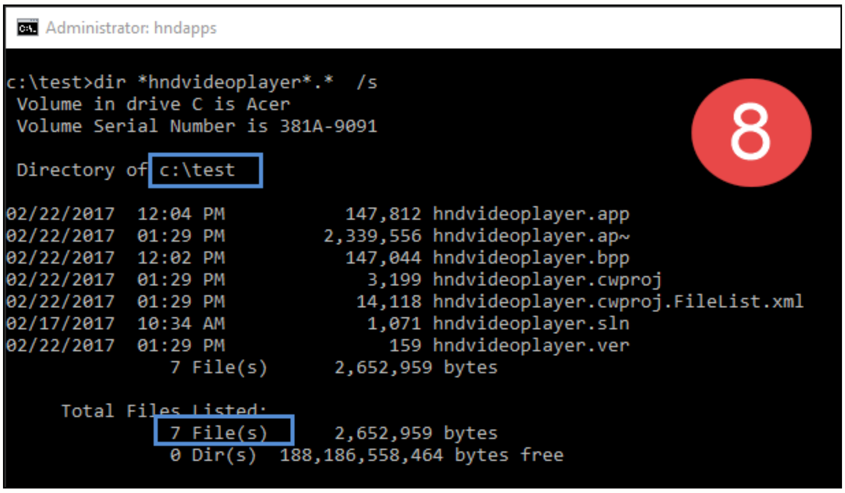
Image 1 above, explains how we set up HNDCLEAN.EXE on the Clarion Tools menu with input parameters that match the co-relative subdirectories configured in our CLARION100.RED file. If you need to recheck that before reading on, please do so now.

To execute an item on the Clarion IDE's "Tools" menu, where HNDCLEAN.EXE has been added, pull down "Tools" and click the "CHT Clarion Gen-Code Cleaner" menu item now located there. That's all there's to it. **[See Image 7]**


ation
Tools
Window
Help
CHT Backup Configurator
CHT Code Documentation Editor
*** CHT Clarion Gen-Code Cleaner (21.17.02.005) ***
AddIn Manager
AddIn Scout
Component Inspector
Regular Expressions Toolkit
Edit Template Registry
Edit Template Registry using alternate RED file ...
Open Exception Log File
Browse Table
Edit base redirection file
Register File Drivers
Register Dictionary File Drivers
Clear Cached ABC Headers Files
Application Options
Auto code generation Alt+Ins
Quick XML Document Ctrl+Shift+Q
Reset IDE Settings
Open Configuration Directory
Options...
Subversion
7

EXAMINING THE RESULT OF CLICKING THE *CHT CLARION GEN-CODE CLEANER* MENU

Back in the **"c:\test"** directory, we show you now the remaining files list resulting from executing the *CHT Clarion Gen-Code Cleaner* menu.



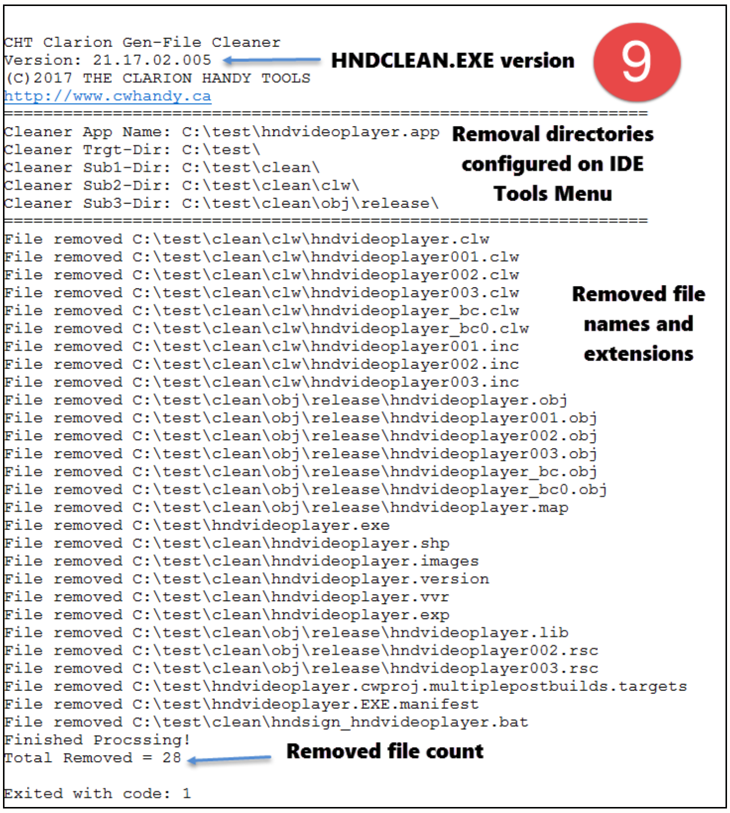
```
c:\test>dir *hndvideoplayer*.*  /s
 Volume in drive C is Acer
 Volume Serial Number is 381A-9091

 Directory of c:\test

02/22/2017  12:04 PM           147,812 hndvideoplayer.app
02/22/2017  01:29 PM         2,339,556 hndvideoplayer.ap~
02/22/2017  12:02 PM           147,044 hndvideoplayer.bpp
02/22/2017  01:29 PM             3,199 hndvideoplayer.cwproj
02/22/2017  01:29 PM            14,118 hndvideoplayer.cwproj.FileList.xml
02/17/2017  10:34 AM             1,071 hndvideoplayer.sln
02/22/2017  01:29 PM               159 hndvideoplayer.ver
               7 File(s)      2,652,959 bytes

     Total Files Listed:
               7 File(s)      2,652,959 bytes
               0 Dir(s)  188,186,558,464 bytes free
```

Only 7 files remain from the original 35 files. HNDCLEAN.EXE removed the rest. Let's examine which files are left and why they are being left untouched.

The following files names remain in the **C:\TEST** directory. Note that there are no files remaining in any of the configured co-relative sub-directories. This may not always be the case depending on whether your application is *pure-CHT* or whether it contains other 3rd party templates, some of which, we know, also generate file extensions unique to them. Even CHT template settings can affect the total number of files generated, obviously.

The important point here is that HNDCLEAN.EXE is deleting the bulk of our application's generated files, ensuring that the code-content of these files is refreshed completely from the application templates.

C:\TEST\HNDVIDEOPLAYER.APP (The original application)
C:\TEST\HNDVIDEOPLAYER.AP~ (The original application's temp file created when app is open)
C:\TEST\HNDVIDEOPLAYER.BPP (The original application's backup file created by the IDE)
C:\TEST\HNDVIDEOPLAYER.CWPROJ (The original application's project file)
C:\TEST\HNDVIDEOPLAYER.SLN (The original application's solution file)
C:\TEST\HNDVIDEOPLAYER.CWPROJ.FILELIST.XML (Required by the IDE "Clean myapp" menu)
C:\TEST\HNDVIDEOPLAYER.VER (CHT-Genearated App version file used by other CHT templates)


HNDCLEAN.EXE version
9
Removal directories configured on IDE Tools Menu
Removed file names and extensions
Removed file count

```
CHT Clarion Gen-File Cleaner
Version: 21.17.02.005
(C)2017 THE CLARION HANDY TOOLS
http://www.cwhandy.ca
=================================================================
Cleaner App Name: C:\test\hndvideoplayer.app
Cleaner Trgt-Dir: C:\test\
Cleaner Sub1-Dir: C:\test\clean\
Cleaner Sub2-Dir: C:\test\clean\clw\
Cleaner Sub3-Dir: C:\test\clean\obj\release\
=================================================================
File removed C:\test\clean\clw\hndvideoplayer.clw
File removed C:\test\clean\clw\hndvideoplayer001.clw
File removed C:\test\clean\clw\hndvideoplayer002.clw
File removed C:\test\clean\clw\hndvideoplayer003.clw
File removed C:\test\clean\clw\hndvideoplayer_bc.clw
File removed C:\test\clean\clw\hndvideoplayer_bc0.clw
File removed C:\test\clean\clw\hndvideoplayer001.inc
File removed C:\test\clean\clw\hndvideoplayer002.inc
File removed C:\test\clean\clw\hndvideoplayer003.inc
File removed C:\test\clean\obj\release\hndvideoplayer.obj
File removed C:\test\clean\obj\release\hndvideoplayer001.obj
File removed C:\test\clean\obj\release\hndvideoplayer002.obj
File removed C:\test\clean\obj\release\hndvideoplayer003.obj
File removed C:\test\clean\obj\release\hndvideoplayer_bc.obj
File removed C:\test\clean\obj\release\hndvideoplayer_bc0.obj
File removed C:\test\clean\obj\release\hndvideoplayer.map
File removed C:\test\hndvideoplayer.exe
File removed C:\test\clean\hndvideoplayer.shp
File removed C:\test\clean\hndvideoplayer.images
File removed C:\test\clean\hndvideoplayer.version
File removed C:\test\clean\hndvideoplayer.vvr
File removed C:\test\clean\hndvideoplayer.exp
File removed C:\test\clean\obj\release\hndvideoplayer.lib
File removed C:\test\clean\obj\release\hndvideoplayer002.rsc
File removed C:\test\clean\obj\release\hndvideoplayer003.rsc
File removed C:\test\hndvideoplayer.cwproj.multiplepostbuilds.targets
File removed C:\test\hndvideoplayer.EXE.manifest
File removed C:\test\clean\hndsign_hndvideoplayer.bat
Finished Procssing!
Total Removed = 28

Exited with code: 1
```

While an extensive set of 35 generated or compile-created files emanated from only three original files, you can see that HNDCLEAN.EXE performed a far more extensive "Clean" operation than the IDE's native "Clean Solution" or "Clean myapp" menus.

The operation of HNDCLEAN.EXE *WILL RESULT* in the IDE's "Generate and Make" menu causing a *full regenerate* and a *full recompile* of your application.

This is going to be a real time-saver for us. We hope the same for you dedicated Clarion users.

Contact Us

Click the link below to contact us by email.
It will start your email client with our email address inserted:

Click To Contact Us