MPEGREADY

**The DBCAPTURE.EXE program
configured for use with
CONTENT DEPOT**

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OVERVIEW

By request of stations that want a completely automatic ingestor that requires NO changes on their automation software, nor the need to create a new playlist with specific segment names for ingestion- our DBCAPTURE program can be used. DBCAPTURE is a multi-purpose program used by stations to move and copy files from one or more paths, to FTP download and upload files, to decode and encode and transcode files (decompress and compress) and to do xml/rss web publishing and podcasting.

For use for Content Depot, this software is provided free of charge to WireReady users for use LIMITED to:

Scanning one or more Content Depot receivers (I.E. IN paths) to move and decode (from mpeg2 to wav) files for playback in customer's existing WireReady systems. INI lines support processing of metadata in the CART CHUNKS so relevant description data shows up in commonly used fields in the WireReady system. The INI file supports preferences, such as whether or not to name files with the CUTID or LONG file name as provided for by NPR's metadata. Files are removed automatically from the Content Depot as they are pulled down so user management or purging is not required. Customers who want to preserve the original mpeg files for later examination/comparison can have the first IN path copy the file to two destinations, one that is converted and the other that is not. Customers who operate more than one server or air studio system can have as many OUT destinations as they like to distribute copies of the programs to as many drives as they prefer for redundancy in their operation.

Customers who wish to use the Dbcapture.exe program for other uses (web publishing, podcasting, FTP send/receive, or general automated mpeg to wav or wav to mpeg conversions) should check with WireReady to see if you have licensed those uses (generally sold under the names PodcastReady, FTPReady, WANReady and WebReady).

We are distributing a ready to use DBCAPTURE.EXE and DBCAPTURE.INI file, which resides in a folder called DBCAPTURE under the folder that the EXE is run from. The only values you need to change are the folder paths which represent the \\SHARE path to your Content Depot box (usually \\###.###.###.###\XDCACHE\CDLONGNAME - where the ### is the IP address assigned to your Content Depot box. The OUT paths should correspond to your server or on air workstation and/or production computer share names, drives and/or folder paths. The other default values we have distributed are ready for use. A SETUP program can also be placed in the directory you have chosen to install the program to, which provides GUI access to the most commonly used settings should you wish to change the operational behavior of the system. You can run multiple instances of dbcapture if you set it up in different directories or machines. This is advisable if you are already using dbcapture for other purposes like podcasting. Due to the mission critical nature of your NPR programs, we think it is best to have one instance concentrate JUST on moving files from CD to WireReady.

Customers can choose to run dbcapture from the system tray of their Production computer, as many stations have their AIR systems picking up files form their production computer. If you currently have a dedicated computer for SOSS recording, you can install it there as it can process files without getting in the way of current SOSS recording. You can install this program on ANY computer on your LAN. If you want to dedicate an XP computer just for this - anything will do. Any computer that can boot XP or Win2000 will run this app fine.

After the system is setup, consider adding WRCHECK, a free utility available from our tech support section. This program can be installed on the same or a different computer on your LAN and be "trained" to look at Dbcapture so that if dbcapture ever stops running or the computer running it has a problem, you can get a warning (or an email if you have Internet connectivity on the computer running WRCHECK).

Important Files

Windows Media Player must be installed and it must be **version 9 or later**. Most newer machines come with Windows Media Player already installed, and most likely it will be version 9 or higher. If the computer does not have this installed, pick up Media Player from the Downloads page at www.microsoft.com.

CONSIDERATIONS TO BE AWARE OF:

Content Depot receivers, when programmed by the station to catch segments of programs they time shift, will take those files into the ARCHIVE folder under XDCACHE. These are where the true files exist, and remain until the Content Depot software "XD system" deletes them based on purge dates (end date in metadata CART chunk). To provide automation systems the ability to move copies of these files off the depot box without altering the original, two folders containing symbolic links to these files is provided. A symbolic link file in Linux or Unix that behaves just like a REAL copy of that file; it just doesn't use up space on the hard-drive on the CD receiver. WireReady software is designed to process the CDLONGNAME directory as it's basis for catching new files (and resends) of the files as they arrive. It is possible to maintain your own archive of original files before they are purged from Content Depot, by setting up a duplicate file transfer step in our software.

The CDLongName directory you see on your CD receivers shows the 19 character file names, as they will be for all programs. The episode number changes each episode and goes up to 999 and then back to 0. The rest of the file name for each provided program and the segment suffixes stay the same year round - only the episode numbers change.

As mentioned, the files in the CDlongname directory, as well as CUTID, are symbolic links (a Linux or Unix term) to the actual files, which will arrive in the archive folder when the system goes on line (currently the archive folder is not being used during the initial test phase but this will soon change and you will be able to see this occur).

However, to WireReady or any other client looking at the Content Depot box, these symbolic links are real files (I.E. we can grab them, copy them, delete them, etc.). These are not like shortcuts in Windows. They are the real thing. It's just that when we, for example, pull them off the box and delete them, the original files in the ARCHIVE folder remain until the XD system (on the receiver) purges them based on their kill date.

The CUTID is the same way; they look like and behave like real audio files - with their numeric names.

With this said:

1) We do not need to do a double IN /OUT process where we backup the original mpeg files. The backup is done for us with the ARCHIVE folder, which we will leave

alone (granted during this test phase NPR isn't yet sending files there but they will be there soon). We show you in our docs how to do double transfers to maintain originals on your own drive.

2) We will be processing the CDLongName directory and moving (I.E. deleting) files out of this folder as we process them. We will get the CUTID from the metadata in the WAV file and it's assumed, by default, that stations will have us write out the files with their CUTID numbers since those don't change from week to week. This is important for stations that don't want to change their playlists with new names all the time.

The CDLongName files are unique. The episode number at the end of the file increments each episode until it reaches 999 and then resets back to 0.

3) Currently Content Depot will not automatically delete the symbolic file names from CDLongName, and therefore this is why we want to parse this folder as opposed to CUTID. The WireReady system will remove these files automatically for you. Otherwise, this folder would gradually accumulate up to 999 symbolic file links for each and every file and episode and you'd eventually have way too many files (symbolic links) in that folder which would get in the way and slow things down.

4) While we will not be processing the CUTID folder (there is no need to), the CUTID's use the same 5 digit numbers year round so in a very short time that folder stabilizes with perhaps a few hundred symbolic links that won't present a problem for the Content Depot's drive, especially since there really isn't file space associated with the symbolic links. This is a VERY handy feature if you ever want to browse the content currently on the Depot. The CUTID folder will list all possible files by their cut numbers.

5) As mentioned, the user can control via our INI file whether we write the file with the CUTID or LONG FILE NAME, but we recommend CUTID.

6) There has been discussion about carouseling of files and whether stations should store all the versions separately. The XD system internally validates audio files, as they are being file transferred over the satellite system. They are given the extension *.XD in the archive folder and do not get renamed *.WAV until the XD system verifies them as a good file. Therefore, if WireReady simply pulls every newly submitted WAV file that comes down for any given segment/episode, we have with the highest assurance knowing we will get a complete good file. This also means that if a provider ever purposely resends a file because of a provider-detected mistake at the send site, WireReady will always update the latest CUTID with the latest valid send for that file. This provides the simplest to manage solution for customers, especially those who automate the segment playback. Rest assured that the XD system would not generally hand a "bad" segment file to the automation system. It only renames the XD extension to WAV when it is confident the file is finished AND acceptable.

Therefore, we are not giving operators the ability to save multiple versions of the exact same episode/segment file as different names because there is no need and it opens the chance for operator error (such as scheduling an older version of a file). WireReady will always display the very latest CUTID for a given segment and will always overwrite it if the XD system gives us a newer file that it has validated as being good. If a provider sends a segment 3 times (for whatever reason) and we saved each one to a different name like 10001_1, 10001_2, 10003_3 the operator would be left to choose which is the best file to use - or we'd have to add complicated checking to the code to figure out which of the lot to play. And you'd have triple the storage being used. Instead there will only be 1

"10001.wav" as well as any other cut number managed in the WireReady at any given time by this system. By definition, any file passed to us is a good one, and if a provider makes a mistake and deliberately resends the modified program, you want the last one they sent you to play anyway.

TECHNICAL NOTES
There is a 200 page or so book on this system but here are summarized technical notes you want to know about this...

1) Version 6.013 of dbcapture.exe is running from C:\WIRE

2) It's INI file is c:\wire\dbcapture\dbcapture.ini

3) There are IN and OUT paths.
IN0 has an OUT0
IN1 has an OUT1
Etc, etc.

4) You can have multiple OUT paths associated with an IN path
You can have as many process paths as you want when you want multiple copies of the files being moved or decoded.

5) Here are relevant INI lines to be aware of in the main program group:

[dbcapture]
delay= (default is 60 seconds) The number of seconds between checks of Content Depot. You can make this as often as you like.

Display lines= (default is 100) Controls how many lines we show in the progress dialog window.

Log=yes (default is yes) This logs EVERYTHING we are putting in the progress dialog to a file.
We maintain one file per day - named by date and located in the INLOG folder under where the dbcapture.EXE is run from.

In your case, c:\wire\dbcapture\inlog (a snippet of the log is found at the end of this email), the log shows you the name of the file we are processing, and metadata we find. It shows you when we found it and when we deleted it.

6) IN PATH PROCESSING

IN#= (the source path where we are looking for files)

I.E.
In0= by default this is **In0=\\192.168.0.99\xdcache\cdlongname**
All the remaining lines end in 0, which means they go with the IN0 settings.

Here is where we are processing your Content Depot files:
Out0=w:\programs\,c:\cd-backup

In the above example, we are using two OUT paths separated by a comma (you can have multiple out paths).

The first out path is the path where we will be decoding the file from mpeg format to wave format.
The second path is the path where we are backing up the original files, if they were to be backed up.
Every time we check the IN0 path, we will copy the file to the two out paths above and we will DELETE the file from the IN path automatically. Files will be purged from the Content Depot box as soon as we move them off of it.

SCANTWICE=yes
This is a very important line.
Scantwice means we will check each file TWICE on the IN PATH. If your delay is 60 seconds, we check it first, then we check it again 60 seconds later. If the file size is the same, we assume the file is ready to be grabbed. If the file size has changed, we assume Content Depot is still writing the file. It is a safety feature to prevent us from retrieving a file while Content Depot is still writing it. Ordinarily with Windows computers, you can open files exclusively but because Content Depot is Linux based and uses SAMBA, we are treating it more cautiously and not trying to do Windows based file open/share type calls.

7) DECODING IN PATH

AudioFormat0=1001
AudioBitrate0=0
AudioRatio0=0

The newest version contains support for external LAME decompression instead of calling Windows' ACM/QDesign. Version 6.029 and later versions allow the use of ANY external decoding product a station could find now or anytime in the future. It's an expansion of a system we've had in place that allows stations to encode real audio products using Real's real producer command line codec. We enhanced this to allow command line calls of any 3rd party codec engine. We built it out to be compatible with the LAME program (a shareware public domain all-purpose mpeg1, 2 and 3 decoder) and it should work with others as well.

You'll define an audio format (user defined) which calls a *.BAT file, which includes passable parameters to ask the LAME.EXE to process the supplied WAV file. We have decided to assign "1001" as the format. You have to copy the LAME files to some folder, and that folder is referenced inside the batch file. The default path we recommend is wire\dbcapture\batfiles\. We decided to use a batch file since some stations have asked for the ability to add their own process steps, and a batch file is the simplest way to do it.

8) [CART CHUNK]

This group controls how we handle metadata in CART CHUNK WAV files, which is what NPR is using.

Convert-Cart-to-chunk=yes (default is yes) You want this value set to yes if you want us to grab metadata out of the original source files and make them show up as fields in WireReady (for example - visible in our MediaLog, play decks, or used with our RDS feature (for automation customers)).

TargetName-from-Cart=CUTID By default we will name the files with the CUTID 5 digit number name .WAV that NPR supplies in the meta data. If you change this to **LONG** then we will use the long name instead.

SaveEntireCartDataToTag-vers6-and-higher=No (default is no)
This should be left to NO UNLESS you are using version 6.0 or higher of WireReady. We recommend stations stay on their current version so they are not changing too many things at once (there is no reason to upgrade WireReady to be compatible with Content Depot). Versions 5 and 6 of WireReady support a 1024 character TAG field, which is a free form tag field. When set to yes, we will throw ALL metadata into this field for monitoring/logging and general diagnostic use as NPR may choose to add more metadata in the future. However, WireReady versions prior to 6 will abend (crash) if the total number of characters of all METADATA exceeds 1024 characters PER audio file. Because the amount of metadata can exceed 1024 characters if you enable this feature, it should remain **DISABLED** (set to NO) unless you are using WireReady version 6 or later.

9) [HEARTBEAT]

This grouping allows you to enable the writing of a heartbeat file every time we successfully are able to check the IN paths. If we crash, we won't update the heartbeat file. If we can't reach the Content Depot box, we won't write the heartbeat file. The destination path and name and max size for the heartbeat file are the other INI lines.

[HeartBeat]
Enable=No
Filename=C:\Temp\DBCaptureHeartBeat.txt
MaxFileSizeInBytes=5000

We have a free program WRCHECK, which you can download from our web site with instructions. This program lets you monitor the heartbeat file from the same or a different computer on your LAN and the WRCHECK program can email you if the system ever has a problem. If you don't have Internet connectivity, you should consider our KICK OFF solution.

10) [KICKOFF]

We sell a USB connected watchdog device called a KICKOFF for $249. It can reboot the computer if Windows should ever crash or if our program should crash. If enabled, our program updates a count down timer on the device every X seconds. If the count down timer reaches 0 seconds before we've reset it back up to your specified count down value, the machine is rebooted. Assuming you have us setup to resume from reboot/startup (with the program shortcut in your STARTUP group), then the system can be monitored and reset if something should ever fail.

Kick-Off Setting Changes
    If you are not using a Kick-Off device on the computer running MPEGReady for Content Depot, you can skip this section.
    If a Kick-Off device is being used to restart the computer in case of a lock-up, the settings should be changed. Due to the potential for the LAME.exe to have a longer processing time for the files, the Kick-off Timeout settings should be increased. In the DBCapture.ini file, the "Timeout in Seconds=" line under the "[Kickoff]" group should be set to "600". This will give a 10-minute window between when we reset the timer and when the computer will restart if we don't reset the timer again. Since 10 minutes should be longer than the maximum time to process a file, this will not cause the Kick-Off to reboot the computer. If the settings are left at the default of 30 seconds, the Kick-off may reboot the computer before the LAME codec is done processing a file.

11) POSTIEX support (email)

Most stations do not have their computer connected to the Internet. For those that do, we distribute some email client DLL files that enable this program to send email warnings and startup messages via email to an assigned list of email addresses. It also has the ability to send someone debug information if something goes wrong. If you are interested in these features, contact Wireready for more documentation. You do not need to enable this section for regular operation.

12) LOG SAMPLE

Here is a sample snippet from a log

```
10:46:44 AM  05/24/2006  Searching directory c:\cd\mp2-temp\ for any
files to transfer.
10:47:44 AM  05/24/2006  Searching directory c:\wire\dbcapture\in\
for DAT files to transfer.
10:47:44 AM  05/24/2006  Searching directory c:\cd\mp2\ for any files
to transfer.
10:47:44 AM  05/24/2006  Searching directory c:\cd\mp2-temp\ for any
files to transfer.
10:47:44 AM  05/24/2006  Copying c:\cd\mp2-temp\pipedrea_002_SGMT04.wav.
10:48:50 AM  05/24/2006  Setting INFO based on CART chunk:
10:48:50 AM  05/24/2006     Category from "" TO ""
10:48:50 AM  05/24/2006     Description from "" TO "Pipedreams 002 |SGMT1 "
10:48:50 AM  05/24/2006     Artist from "" TO "Michael Barone "
10:48:50 AM  05/24/2006     OutCue from "" TO "standard"
10:48:50 AM  05/24/2006     SavedBy from "" TO "ContentDepot"
10:48:50 AM  05/24/2006  Changing Output filename from
c:\cd\wav\pipedrea_002_SGMT04.wav to c:\cd\wav\60183.wav.
10:48:50 AM  05/24/2006  to c:\cd\wav\60183.wav.
10:49:12 AM  05/24/2006  Deleting c:\cd\mp2-temp\pipedrea_002_SGMT04.wav.
10:49:12 AM  05/24/2006  Copying c:\cd\mp2-temp\pipedrea_002_SGMT05.wav.
10:49:14 AM  05/24/2006  Setting INFO based on CART chunk:
10:49:14 AM  05/24/2006     Category from "" TO ""
10:49:14 AM  05/24/2006     Description from "" TO "Pipedreams 002 |SGMT1 "
10:49:14 AM  05/24/2006     Artist from "" TO "Michael Barone "
10:49:14 AM  05/24/2006     OutCue from "" TO "standard"
10:49:14 AM  05/24/2006     SavedBy from "" TO "ContentDepot"
10:49:14 AM  05/24/2006  Changing Output filename from
c:\cd\wav\pipedrea_002_SGMT05.wav to c:\cd\wav\60184.wav.
10:49:14 AM  05/24/2006  to c:\cd\wav\60184.wav.
10:49:14 AM  05/24/2006  Deleting c:\cd\mp2-temp\pipedrea_002_SGMT05.wav.
10:49:15 AM  05/24/2006  Copying c:\cd\mp2-temp\swinging_002_SGMT01.wav.
10:49:56 AM  05/24/2006  Setting INFO based on CART chunk:
10:49:56 AM  05/24/2006     Category from "" TO ""
10:49:56 AM  05/24/2006     Description from "" TO "Swinging Down 002 SMGT1"
10:49:56 AM  05/24/2006     Artist from "" TO "David Miller"
10:49:56 AM  05/24/2006     OutCue from "" TO "standard"
10:49:56 AM  05/24/2006     SavedBy from "" TO "ContentDepot"
```