

The
AGM AUDIO FILE PACKER

An introduction explaining the dot agm file format and why this is used to submit data for encoding or other processes.

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Why pack multi-channel audio?

You have no doubt experienced with encoding projects for DVD and CD many differing naming conventions for channels in a project. Either tapes arrive with a specific order of channels or data media with names on specific files. At this point a small amount of concentration needed to ensure that the correct files/tracks end up in the correct encoder path.

Normally there is also a reliance on the basic integrity of the files and tracks. If you want to check the length of each track on a PC this is done as a byte count and not referenced generally to audio length. The bit depth of each file and sample rate can also be checked but only through laborious right clicking and comparison of file properties. This is not such a risk when you are the person who has created the exported or transferred tracks, but, if you inherit these files from say a client, it is pertinent to check the data is OK for encoding and also to concentrate whilst interpreting sometimes illogical file naming conventions.

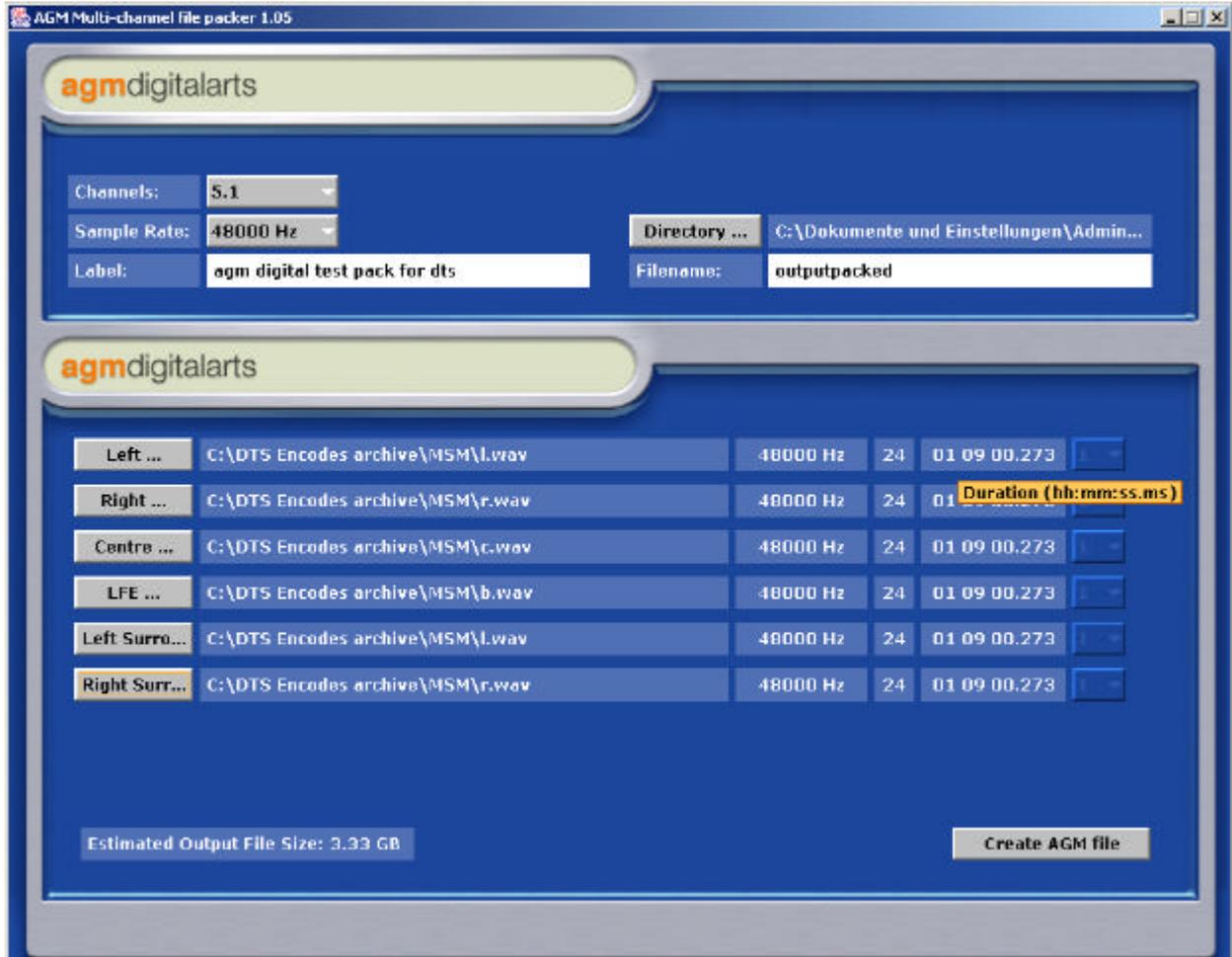
Thus we have the packer. A multi-channel format can be chosen from a dropdown menu and files in either wav or aiff format added to create the content of the output file.

It is important to note that the packer is designed to offer an overview of data for encoding, it lists the length of the program material in timecode format and also compares the lengths and other attributes of the all channels to give a check on whether everything is suitable for an encoding or transcoding to another format. It is also important to note that the packer is process independent. It does nothing but prepare multichannel audio for a future processing, it doesn't change the content, it also is not designed to pass on encoding criteria to other processing programs.

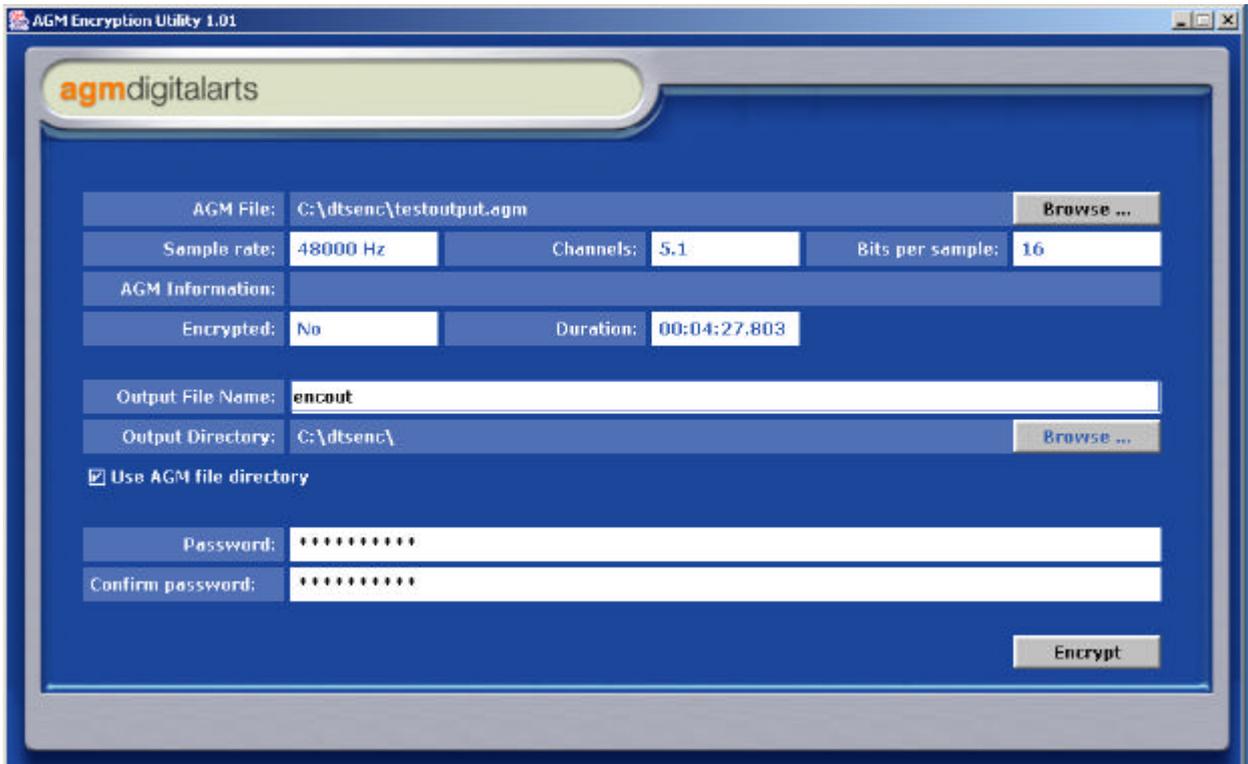
We have been asked to include the criteria for encoding to DTS format for example within the packer. Although this can be done, what if the content is also destined for multiple encodes of excerpts in that format as well as a pitch conversion prior to encoding and an additional processing say to AC3?

It seemed best to use the packer as a data wrapper that represents data as it stands, (albeit with a text field where wishes can be added and seen later at the processing stage) the fulfilling of processing commands is this way correctly banished to the encoding program. This also means that the packer remains neutral and protected from version upgrades of encoding software.

The packer can therefore be freely distributed to anyone who is making exported files for encoding or transferring data for encoding from source tapes. We have already seen a good response to this from clients and they can see for themselves whether all the files are correct for encoding prior to the packed file being submitted.



ENCRYPTION – SECURITY



AGM has also an additional basic encryption wrapper to encrypt the packed file making acceptance by the encoder only possible through a supply of a correct password. This allows a direct delivery of packed audio data to an encoding system. If a small studio has a single workstation encoder they can accept packed data from many clients and handle these packages with safe ease and improved organisation.

The packer provides an encodable single data file. There is no longer any risk associated with allocating correct files and names to channels or selecting the correct amount of tracks to encode. 6.1 data is 6.1 to the encoder and guaranteed all to be at the correct bit depth and track order for the encoding process.

If a client prepares data for you to encode in this way, gone is the need for any verification calls about track names and locations, no need to ask at what bit resolution the files are supplied, also the additional text information can be read in the encoder itself.

This small Java application (to enable Java on your machine please access <http://www.java.com>) allows a clear definition of what type of project the files refer to.

Choose 5.1 for a set of data for 5.1 encoding, add each track name in the fields provided by simply selecting them from a listed directory. When this is done each file's characteristics are displayed and available for comparison. Any differences in Sample Rate, Length, Bit Depth for example will show up as orange coloured fields in the display. You can either correct these by changing to alternative files or the packer will refuse to pack files that cannot be subsequently successfully encoded.

When all files are complete, a file size is displayed and the files can be interleaved to a single data file to the location defined. This happens very quickly and is about the same duration as copying the files from one disk to another. The resultant dot agm file is the complete project ready for encoding including other information you may have entered.

On the server based encoder the packer actually copies and packs the dot agm file to your account reserved area on the hard disk of the encoding server.

There is no loss of time therefore as copying the files to an encoder would take this amount of time also.

The packed dot agm file is also a good format for archiving source files with encoded files for future reference.

Some people have seen the packer as an additional time overhead in the encoding process. This observation is logical but does ignore the advantages of the small amount of time spent organising the files for an encode into a packed file in this way. If you are working on your own machine with wav files and want to encode immediately, the packing process seems illogical. However, we want to achieve two things

1. separate the packing process from the encoding system. Use many packers on many workstations and use a separate system for encoding. This frees up workstations for editing and other earning related work. Looked at in this way, the packer is a useful tool for many to prepare for encoding, our network product is the best example of this.
2. encourage workstation manufacturers to offer the packed file format as a standard output for exporting data for encoding. This will allow workstation manufacturers to eliminate this wav or aiff to packed format stage in the operation and also allow them to bolt on encoders that accept this format. We have spoken to a few leading WS manufacturers who are reluctant to incorporate their own licensed encoding technology but would welcome an easy transfer of data to an external encoder. Some WS manufacturers may even license our encoders to enhance their products.

The packer allows many workstation clients to access encoding technology easily. It speeds up the flow of data to the encoding process and removes several hurdles in a currently over complicated and sometimes risky encoding environment. It is all no big deal but this technology is developed to remove hurdles and make the flow of encoding easier and potentially more profitable.

It is designed also to make the prospect of encoding for DVD more attractive and to generate an ease of workflow for formats needing encouragement.