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Subject: Re: reading wav files

Posted by [hahn](#) on Tue, 16 Jan 2001 10:29:24 GMT

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jnettle1@utk.edu (jnettle1) wrote:

> Does anyone have a routine/set of routines to read \*.wav files in IDL? And if  
> so, do you feel like sharing it?? :)

I process wav files randomly, so I have some read/write routines written on my own. However, these routines work on stereo encoded 16 bits per sample files only and ignore anything but the data chunk. I can send you the routines by mail if needed.

The following structe defines the header. It is 44 bytes long. It assumes that the data chunk follows the format descriptor block.

```
WAV_HDR = { WAVE_HEADER, $
            ID1:'****',  LoF:0L,  ID2:'*****',  LoH:0L, $
            FMT:0,      NChan:0,  SpSc:0L,      DpSc:0L, $
            BypSa:0,    BipSa:0,  ID3:'****',    LoD:0L  }

; ID1    the letters "RIFF"
; LOF    bytes from here (i.e. from byte 8) to end of file
; ID2    the letters "WAVE" followed by "fmt "
;        "fmt " is the beginning of the format descriptor block
; LoH    Length of Header (here 16 Bytes format descriptor) that follows
;        ---- start of format header ----
; FMT    format tag, 1 = PCM, 257 = IBM mu Law, 258 = IBM a Law,
;        259 = IBM Adaptive PCM (adpcm)
; NChan  channels (1 = Mono, 2 = Stereo ...)
; SpSc   samples per second
; DpSc   data bytes per second = samples per second * bytes per sample
; BypSa  bytes per sample = channels * (bits per sample / 8)
; BipSa  bits per sample
;        ---- end of format header ----
;        Now watch for "data": Other blocks will be skipped.
; ID3    the letters "data". This is the beginning of the data block
; LoD    data length, i.e. the number of bytes of the actual data.
;        ---- start of sampled data ----
;        for multi-channel samples 1st byte is channel 1, 2nd byte is
;        channel 2, 3rd byte channel 3 (or if 2 channels, channel 1 again)
;        Amplitude (y-values) from -127 to 127 or -32767 to 32767.
;        ---- end of sampled data ----
;        Comments may follow. Don't play 'em
;
```

