Subject: 16 bit images?
Posted by Scott Norton on Tue, 27 Oct 1998 08:00:00 GMT
View Forum Message <> Reply to Message

I"m new to these discussions, but I had a question about IDL and
PV-WAVE.
Currently, I have a demo version of PV-WAVE and I seem to be running
into
the problem that many of the functions work only for 8bit images. I
have a 16bit
gray level image I would like to analyze. Is my cursory view wrong?
Does IDL
work better with 16bit images?
Any comments would be appreciated.
Thanks!
-Scott
nortonsm@hotmail.com

Subject: Re: 16 bit images?
Posted by Erard on Mon, 02 Nov 1998 08:00:00 GMT
View Forum Message <> Reply to Message

In article <MPG.109fbf7097dfc4019896e2@news.frii.com>, davidf@dfanning.com
(David Fanning) wrote:

> Note: This is a copy of an article was posted to the IDL newsgroup.
>
> Scott Norton (Scott_Norton@surromed.com) writes:
>
>> I"m new to these discussions, but I had a question about IDL and
>> PV-WAVE.
>> Currently, I have a demo version of PV-WAVE and I seem to be running
>> into
>> the problem that many of the functions work only for 8bit images. I
>> have a 16bit
>> gray level image I would like to analyze. Is my cursory view wrong?
> ï¿½

> If these images are unsigned 16-bit values I can imagine
> you might be having some problems. There are some tips on
> my web page about how to handle that kind of data.
> Fortunately, IDL 5.2 is suppose to have a new 16-bit unsigned
> integer data type, so even these problems may be a thing
> of the past soon.
>
> Cheers,
>

> --
> David Fanning, Ph.D.

Here is a routine that converts 16-bits signed arrays to 32-bits (un)signed data. This is useful to convert output of CCDsï¿½ to something IDL can handle. It can manage structures.

S. Erard

```
function  conv_int,arg
;+
; NAME:
;  conv_int
;
; PURPOSE:
;  converts 16 bits (signed) integers to 32 bits unsigned integers.
;  (to get the Virtis or other data back with full dynamics).
;  Works on scalars, arrays, and recursively on structures.
;
; CALLING SEQUENCE:
;
;  Result = CONV_INT(arg)
;
;
; INPUTS:
;  Arg:  16 bits integer to be converted
;
;
; KEYWORD PARAMETERS:
;  NONE
;
; OUTPUTS:
;  This function returns a positive 32 bit integer version of the
;  input argument if it is a short integer. Left untouched otherwise.
;
; EXAMPLE:
;
;     F = CONV_INT(arg)
;  Returns an unsigned 16 bits value coded as long-word.
;
; MODIFICATION HISTORY:
;  Written by: Stephane Erard, 18 feb 1997
;-
```

```
t = arg        ;Make a copy
s = size(t)
case s(s(0)+1) of    ;Type code
2: BEGIN    ; if short integer, convert and keep the unsigned value
   ind=where(t lt 0, count)
   out=long(t)
   if count NE 0 then out(ind)=t(ind) + 65536L
   return, out
   END
8: for i=0, n_tags(t)-1 do t.(i) = conv_int(t.(i))    ;Structure
ELSE: BEGIN
      print, 'The parameter must be short integer (unchanged)'
      return, t
      END
ENDCASE

end
```

--
Stï¿½phane Erard

Institut d'Astrophysique Spatiale
Orsay, France
http://www.ias.fr/cdp/index.html
erard@ias.fr
