
Subject: Re: 16 bit images?

Posted by [Erard](#) on Mon, 02 Nov 1998 08:00:00 GMT

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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?

> ĩ½

> 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 CCDs ĩ½ 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

--

```

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