Subject: Re: what's wrong with this? --- ' vs " problem
Posted by David Fanning on Mon, 03 May 2004 22:25:23 GMT

Michael A. Miller writes:

> Ok, this I don"t get. Is it a 'feature' or a "bug"? I vote for
> bug in how IDL parses octal numbers.

Well, if it's a bug, it's been a bug for the last 20 years. :-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: what's wrong with this? --- ' vs " problem
Posted by mmiller3 on Tue, 04 May 2004 14:54:30 GMT

>>>> > "David" == David Fanning <david@dfanning.com> writes:

   > Michael A. Miller writes:
   >> Ok, this I don"t get. Is it a 'feature' or a "bug"? I
   >> vote for bug in how IDL parses octal numbers.

   > Well, if it's a bug, it's been a bug for the last 20
   > years. :-)

That's what I thought. And I can't for the life of me figure out
why it took so many years for me to notice it! Blech.

I did find some documentation in chapter 3 of "Building IDL
Applications", but there is more. In talking to my neighbors
about this, it was pointed out that the final ' or " is not
required to correctly delimit a string, so that all of the
following are the same string constant:

"Don't drink the water"
"Don't drink the water
'Don"t drink the water'
'Don"t drink the water

I could happily go along being unaware of this, except I wrote a
script that calls some IDL like this

```
  echo indypet_projections, \"$img\" >  do_this.pro
  echo exit                      >> do_this.pro
  idl do_this.pro > do_this.log 2>&1
```

sometimes this fails, depending on what the string in img is. So
I fixed it by replacing the "s with 's. But I'm not yet
convinced that I won't have cases where I need to use " to
delimit some string and ' to delimit others. So I wonder if I
need to write an IDL-like parser that can decide in advance how
to delimit strings so that IDL likes them. Of course if IDL had
a built-in mechanism for handling command line arguments, I could
let the RSI gang do that for me...

None of this fits my bias about how IDL is supposed to work,
which is exactly like I want it to that is ... I'm grudgingly
willing to count as a feature :-)

Mike

Subject: Re: what's wrong with this? --- ' vs " problem
Posted by Norbert Hahn on Tue, 04 May 2004 17:49:45 GMT
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mmiller3@iupui.edu (Michael A. Miller) wrote:

> Ok, this I don"t get. Is it a 'feature' or a "bug"? I vote for
> bug in how IDL parses octal numbers.

It's a poor feature. A string starting with " followed by a digit
starts an octal input, not necessarily a number. Thus your input

> IDL> file=" 040301_0932_2004-00005_mouse1_12x10s-4x30s-3x120s-4x300s-pro j.jpg "

make file a variable of type Int and a value of octal 040301, decimal
16577.

If you enter file="0403010932 then the variable type is long and the
value in decimal is 543213431.

The underline character is not a valid octal digit, hence "Syntax error".

HTH
Norbert

Subject: Re: what's wrong with this? --- ' vs " problem
Posted by JD Smith on Wed, 05 May 2004 22:44:09 GMT
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On Tue, 04 May 2004 19:49:45 +0200, Norbert Hahn wrote:

> mmiller3@iupui.edu (Michael A. Miller) wrote:
>
>> Ok, this I don"t get. Is it a 'feature' or a "bug"? I vote for
>> bug in how IDL parses octal numbers.
>
> It's a poor feature. A string starting with " followed by a digit
> starts an octal input, not necessarily a number. Thus your input
>
>> IDL> file=" 040301_0932_2004-00005_mouse1_12x10s-4x30s-3x120s-4x300s-pro j.jpg "
>
> make file a variable of type Int and a value of octal 040301, decimal
> 16577.
>
> If you enter file="0403010932 then the variable type is long and the
> value in decimal is 543213431.
>
> The underline character is not a valid octal digit, hence "Syntax error".

I vote for a COMPILE_OPT option turning off this "feature". Whoever
decided to use unpaired string delimeters for octal constants probably
hadn't yet written the interpreter to actually recognize those
constants. A much better syntax, should you have a need for octals,
is:

 angstrom=string('305'OB)

which has the advantage that it matches the hexadecimal notation:

 angstrom=string('C5'XB)

I guess we should be thankful they didn't offer 'HHH as a hexadecimal
shorthand.

JD

P.S. Use of "NNN octal notation in IDLWAVE tends to wreak havoc with
the fontification.