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Subject: Re: Removing some but not all spaces in a string  
Posted by [Craig Markwardt](#) on Tue, 29 Jul 2008 02:41:55 GMT  
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wlandsman <wlandsman@gmail.com> writes:

```
> I'm looking for suggestions for the best way remove the spaces around
> "operators" (e.g. < . > , =) in a string but not around other
> characters. For example, I want the string
>
> 'name = ngc 5548, v <15'
>
> to become
>
> 'name=ngc 5548, v<15'
```

I usually do specialized string twizzling at the byte level, which is done in TEST2 below. I'm not sure if TEST2 faster or more elegant than your TEST, but it avoids all the gluing and ungluing inherent in the STREGEX() method. It's a pity there isn't a STREPLACE() which handles regular expressions.

I also attached a version based on REPSTR() but since that sub-routine itself does glue/unglue, it's just hiding the mess behind a facade.

Craig

```
pro test2, st
  space = 32b
  ops = '<>=' ;; Operations to delete spaces
  bops = byte(ops)

  st = strtrim(strcompress(st),2)
  if st EQ "" then return

  bb = byte(st)
  mask = 0b
  for i = 0, n_elements(bops)-1 do begin
    mask = mask OR [(bb EQ space AND bb(1:*) EQ bops(i)),0b]
    mask = mask OR [0b,(bb EQ bops(i) AND bb(1:*) EQ space)]
  endfor

  wh = where(mask EQ 0)
  st = string(byte(bb(wh)))
  return
end
```

```

pro test3, st
  space = ' '
  ops = ['<','>','=']    ;; Operations to delete spaces

  st = strtrim(strcompress(st),2)
  if st EQ " then return
  for i = 0, n_elements(ops)-1 do begin
    op = ops(i)
    st = repstr(st, '+'op, op)
    st = repstr(st, op+' ', op)
  endfor
  return
end

```

--

-----  
 Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@REMOVEcow.physics.wisc.edu  
 Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response  
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Subject: Re: Removing some but not all spaces in a string  
 Posted by [Jeremy Bailin](#) on Tue, 29 Jul 2008 11:26:32 GMT  
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On Jul 28, 10:41 pm, Craig Markwardt  
 <craigm...@REMOVEcow.physics.wisc.edu> wrote:  
 > wlandsman <wlands...@gmail.com> writes:  
 >> I'm looking for suggestions for the best way remove the spaces around  
 >> "operators" (e.g. < . > , =) in a string but not around other  
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 > I also attached a version based on REPSTR() but since that sub-routine  
 > itself does glue/unglue, it's just hiding the mess behind a facade.  
 >

```

> Craig
>
> pro test2, st
>   space = 32b
>   ops = '<>='      ;; Operations to delete spaces
>   bops = byte(ops)
>
>   st = strtrim(strcompress(st),2)
>   if st EQ "" then return
>
>   bb = byte(st)
>   mask = 0b
>   for i = 0, n_elements(bops)-1 do begin
>     mask = mask OR [(bb EQ space AND bb(1:*) EQ bops(i)),0b]
>     mask = mask OR [0b,(bb EQ bops(i) AND bb(1:*) EQ space)]
>   endfor
>
>   wh = where(mask EQ 0)
>   st = string(byte(bb(wh)))
>   return
> end
>
> pro test3, st
>   space = ''
>   ops = ['<','>','=']      ;; Operations to delete spaces
>
>   st = strtrim(strcompress(st),2)
>   if st EQ "" then return
>   for i = 0, n_elements(ops)-1 do begin
>     op = ops(i)
>     st = repstr(st, ' '+op, op)
>     st = repstr(st, op+' ', op)
>   endfor
>   return
> end
>
> --
> -----
> Craig B. Markwardt, Ph.D.   EMAIL: craigm...@REMOVEcow.physics.wisc.edu
> Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
> -----

```

I know this is a cheat, but I'm a firm believer in using the right tool for the job... and string manipulation is not IDL's.

```
spawn, "echo "+string1+" | sed -e 's/ *\[<>=\] *^1/g'", string2
```

-Jeremy.

---

Subject: Re: Removing some but not all spaces in a string  
Posted by [humanumbrella](#) on Tue, 29 Jul 2008 12:45:05 GMT  
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On Jul 29, 7:26 am, Jeremy Bailin <astroco...@gmail.com> wrote:  
> On Jul 28, 10:41 pm, Craig Markwardt  
>  
>  
>  
> <craigm...@REMOVEcow.physics.wisc.edu> wrote:  
>> wlandsman <wlands...@gmail.com> writes:  
>>> I'm looking for suggestions for the best way remove the spaces around  
>>> "operators" (e.g. < . > , =) in a string but not around other  
>>> characters. For example, I want the string  
>  
>>> 'name = ngc 5548, v <15'  
>  
>>> to become  
>  
>>> 'name=ngc 5548, v<15'  
>  
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>> handles regular expressions.  
>  
>> I also attached a version based on REPSTR() but since that sub-routine  
>> itself does glue/unglue, it's just hiding the mess behind a facade.  
>  
>> Craig  
>  
>> pro test2, st  
>> space = 32b  
>> ops = '<>=' ;; Operations to delete spaces  
>> bops = byte(ops)  
>  
>> st = strtrim(strcompress(st),2)  
>> if st EQ '' then return  
>  
>> bb = byte(st)  
>> mask = 0b  
>> for i = 0, n\_elements(bops)-1 do begin  
>> mask = mask OR [(bb EQ space AND bb(1:\*) EQ bops(i)),0b]  
>> mask = mask OR [0b,(bb EQ bops(i) AND bb(1:\*) EQ space)]  
>> endfor  
>  
>> wh = where(mask EQ 0)  
>> st = string(byte(bb(wh)))

```

>> return
>> end
>
>> pro test3, st
>> space = ' '
>> ops = ['<','>','=']    ;; Operations to delete spaces
>
>> st = strtrim(strcompress(st),2)
>> if st EQ "" then return
>> for i = 0, n_elements(ops)-1 do begin
>>     op = ops(i)
>>     st = repstr(st, ' '+op, op)
>>     st = repstr(st, op+' ', op)
>> endfor
>> return
>> end
>
>> --
>> -----
>> Craig B. Markwardt, Ph.D.    EMAIL: craigm...@REMOVEcow.physics.wisc.edu
>> Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
>> -----
>
> I know this is a cheat, but I'm a firm believer in using the right
> tool for the job... and string manipulation is not IDL's.
>
> spawn, "echo '"+string1+"' | sed -e 's/ *\[<=>]\) *^1/g", string2
>
> -Jeremy.

```

What if you take all spaces out and just put one back in after c and , ??

Cheers,  
--Justin

---

Subject: Re: Removing some but not all spaces in a string  
 Posted by [Bob\[3\]](#) on Tue, 29 Jul 2008 15:16:45 GMT  
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On Jul 28, 10:41 pm, Craig Markwardt  
 <craigm...@REMOVEcow.physics.wisc.edu> wrote:  
 > ... . It's a pity there isn't a STREPLACE() which  
 > handles regular expressions.

Is there a version that handles static replacements?  
 If so, why not just replace " > " with ">"; " < " with "<" and " = "

with "=" etc.?

- > I also attached a version based on REPSTR() but since that sub-routine
- > itself does glue/unglue, it's just hiding the mess behind a facade.

I must be missing something because I'm unfamiliar with REPSTR() as well (and my IDL Help has no mention).  
Are these from an external library?

---

Subject: Re: Removing some but not all spaces in a string  
Posted by [David Fanning](#) on Tue, 29 Jul 2008 15:27:33 GMT  
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Craig Markwardt writes:

- > It's a pity there isn't a STREPLACE() which
- > handles regular expressions.

If I am not mistaken, Mike Galloy has a version called STR\_REPLACE that handles regular expressions. I found it with his white paper on regular expressions (a must read, by the way). Don't have a link, but certainly it can be found on Mike's web page:

<http://www.michaelgalloy.com/>

Cheers,

David

--

David Fanning, Ph.D.  
Fanning Software Consulting, Inc.  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

---

Subject: Re: Removing some but not all spaces in a string  
Posted by [humanumbrella](#) on Tue, 29 Jul 2008 15:33:40 GMT  
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On Jul 29, 11:27 am, David Fanning <n...@dfanning.com> wrote:

- > Craig Markwardt writes:
- >> It's a pity there isn't a STREPLACE() which
- >> handles regular expressions.
- >
- > If I am not mistaken, Mike Galloy has a version

> called STR\_REPLACE that handles regular expressions.  
> I found it with his white paper on regular expressions  
> (a must read, by the way). Don't have a link, but  
> certainly it can be found on Mike's web page:  
>  
> <http://www.michaelgalloy.com/>  
>  
> Cheers,  
>  
> David  
> --  
> David Fanning, Ph.D.  
> Fanning Software Consulting, Inc.  
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>  
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

White pages --> <http://www.itvis.com/codebank/search.asp?FID=311>

STR\_REPLACE from Mike --> <http://michaelgalloy.com/2006/06/11/regular-expressions.html>

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Subject: Re: Removing some but not all spaces in a string  
Posted by [Craig Markwardt](#) on Tue, 29 Jul 2008 15:37:51 GMT  
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Bob Crawford <[Snowman42@gmail.com](mailto:Snowman42@gmail.com)> writes:

> On Jul 28, 10:41i½pm, Craig Markwardt  
> <[craigm...@REMOVEcow.physics.wisc.edu](mailto:craigm...@REMOVEcow.physics.wisc.edu)> wrote:  
>> ... . i½It's a pity there isn't a STREPLACE() which  
>> handles regular expressions.  
>  
> Is there a version that handles static replacements?  
> If so, why not just replace " > " with ">"; " < " with "<" and " = "  
> with "=" etc.?  
>  
>> I also attached a version based on REPSTR() but since that sub-routine  
>> itself does glue/unglue, it's just hiding the mess behind a facade.  
>  
> I must be missing something because I'm unfamiliar with REPSTR() as  
> well (and my IDL Help has no mention).  
> Are these from an external library?

Yep it's in the IDL Astronomy Library.... which Wayne should be  
intimately familiar with, but maybe not everybody else :-)  
<http://idlastro.gsfc.nasa.gov/>

Craig

--

-----  
Craig B. Markwardt, Ph.D. EMAIL: craigmnet@REMOVEcow.physics.wisc.edu  
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response  
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Subject: Re: Removing some but not all spaces in a string  
Posted by [wlandsman](#) on Tue, 29 Jul 2008 15:40:52 GMT  
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On Jul 29, 11:27 am, David Fanning <n...@dfanning.com> wrote:

> If I am not mistaken, Mike Galloy has a version  
> called STR\_REPLACE that handles regular expressions.  
> I found it with his white paper on regular expressions  
> (a must read, by the way). Don't have a link, but  
> certainly it can be found on Mike's web page:

>  
STR\_REPLACE is available in the ITTVIS contrib library  
<http://www.ittvis.com/codebank/search.asp?FID=311>  
Since it accepts regular expressions, I suspect I can use it instead  
of Jeremy's sed command. But first I have to parse how that sed  
command works.

repstr.pro is from the Astron library  
<http://idlastro.gsfc.nasa.gov/ftp/pro/misc/repstr.pro>  
and only accepts static expressions, which is how Craig was using it.

\*\* What if you take all spaces out and just put one back in after c \*\*  
\*\* and , ?? \*\*

That's OK for that specific string, but I'd like to make it work for  
an arbitrary string.

Thanks everyone for their suggestions. --Wayne

---

Subject: Re: Removing some but not all spaces in a string  
Posted by [Craig Markwardt](#) on Tue, 29 Jul 2008 15:43:09 GMT  
[View Forum Message](#) <> [Reply to Message](#)

David Fanning <news@dfanning.com> writes:

> Craig Markwardt writes:  
>  
>> It's a pity there isn't a STREPLACE() which  
>> handles regular expressions.  
>  
> If I am not mistaken, Mike Galloy has a version

- > called STR\_REPLACE that handles regular expressions.
- > I found it with his white paper on regular expressions
- > (a must read, by the way). Don't have a link, but
- > certainly it can be found on Mike's web page:
- >
- > <http://www.michaelgalloy.com/>

It looks nice. But what I should have said was, it's a pity there isn't a \*NATIVE\* version of STREPLACE() which handles regular expressions. All of the string replacement functions do lots of slicing and dicing of the string, which Wayne is already quite capable of :-)

Craig

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Craig B. Markwardt, Ph.D.   EMAIL: [craigmnet@REMOVEcow.physics.wisc.edu](mailto:craigmnet@REMOVEcow.physics.wisc.edu)  
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Subject: Re: Removing some but not all spaces in a string  
Posted by [humanumbrella](#) on Tue, 29 Jul 2008 16:09:05 GMT  
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On Jul 29, 11:40 am, wlandsman <[wlands...@gmail.com](mailto:wlands...@gmail.com)> wrote:  
> That's OK for that specific string, but I'd like to make it work for  
> an arbitrary string.

I realize (: -- I figured all of your data was formatted in the same way... (:  
ie: str = NGC #, v<#

have fun~~  
Cheers,  
--Justin