
Subject: IDLWAVE 4.5

Posted by [dominik](#) on Mon, 16 Oct 2000 07:00:00 GMT

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IDLWAVE 4.5 fixes a few minor bugs in the object support.
(reported by JD Smith, as usually - is anybody else using this?).

<http://www.strw.leidenuniv.nl/~dominik/Tools/idlwave>

- Carsten

Subject: Re: IDLWAVE 4.5

Posted by [John-David T. Smith](#) on Wed, 18 Oct 2000 07:00:00 GMT

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Kenneth Mankoff wrote:

>

> On Wed, 18 Oct 2000, Martin Schultz wrote:

>> Karsten Rodenacker wrote:

>>> Carsten Dominik schrieb:

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>>> Carsten is doing with that (X)emacs mode idlwave! I think most users are

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>> Ohhhh. I for one just looove the idlwave emacs mode, and I am not

>> using anything else for editing of my IDL programs. However, I am

>> almost ashamed to reply to this thread, because I still haven't found

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> Hi,

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> I've spent some time useing the shell. The main problem that i run across

> is that now i have my emacs keys and my idl keys messed up. up-arrow

> doesn't recall my last IDL command anymore, it just moves up in the

> emacs text-buffer. Other than a few problems like that, it works quite

> nicely. Does anyone out there have a good workaround for this?

>

> -ken.

Like you, I was loathe to give up my basic xterm running IDL for the

built-in emacs shell. Here's what finally convinced me to switch (among many, many others):

1. Compiling: No more typing ".run myfile" a million times. C-c C-d C-c. Instant compilation. Nothing more natural when you've just edited a file. Compile error? The line is highlighted. Fix my dumb syntax mistake, run C-c C-d C-c again. Repeat until it compiles successfully. This one is an *enormous* time savings.
2. Abbreviations: All of the abbreviations you love (like \line -- see <http://www.strw.LeidenUniv.nl/~dominik/Tools/idlwave/idlwave.html#TOC14> if you don't know what I mean) are available in the shell. You can easily add your own too.
3. Routine info, and instant online help: The same help features you love from IDLWAVE buffers are available in the shell, as is the routine info. No more fishing through manuals to recall the ordering of those arguments. Instant, and I mean instant, access is available whether you're writing a program or running one. example:

IDL> a=histogram([C-c ?] and you get:

Usage: Result = HISTOGRAM(Array)

Keywords: BINSIZE INPUT MAX MIN NAN OMAX OMIN REVERSE_INDICES

Source: Builtin

The Keywords are all blue, so I can right click on them (the color lets me know they have a corresponding topic in the help file). Suppose I right-click on "REVERSE_INDICES"... up pops the help buffer with:

REVERSE_INDICES

Set this keyword to a named variable in which the list of reverse indices is returned.

This list is returned as a longword vector

all queued up. You can just as easily see routine information and view the source of any IDL procedure, builtin, shipped with IDL, written by you or others... anything.

4. Completion: Hit tab in the shell and a routine name, system variable, field, filename, etc. is completed. It's even smart enough to complete class names after

IDL> a=obj_new(['Tab]

and keywords to that classes' Init function after

IDL> a=obj_new('myClass',[Tab]

Those of you who use a shell like bash or tcsh that does completion usually find that you hit Tab instinctively about every 10 keystrokes, and the same is true in IDLWAVE's shell. This is a *major* time saver. Examples.

```
IDL> a=readf[Tab]
```

and instantly I get

```
IDL> a=readfits(
```

A quick check to [C-c ?] tells me the file name is expected first, so I begin typing it:

```
IDL> a=readfits('~~/myfiles/[Tab]
```

now all my files are popped into a completion buffer (exactly the same as if you were loading the file into emacs). I can choose one, or get better completion by typing a few more characters, etc.

5. Compiling regions: Ever wanted to test out a bit of code but didn't because it couldn't fit on one IDL command line (like an entire if then begin endif else ... block)? You can simply compile and run **regions** if you use the shell. Just highlight it and [C-c C-d C-e].

6. Debugging. I admit it. I too used to be a "when in doubt sprinkle print and help statements liberally" debugger. No longer (ok, usually no longer). Setting, deleting, viewing, and modifying breaks is so easy with IDLWAVE and the shell that I just don't have an excuse anymore. And being able to Shift-middle click on any variable name to have it's value printed saves time by the bushel. Not to mention quickly navigating the calling stack upon break or error (I suppose I already mentioned that in a prior post).

7. History. The comint mode IDLWAVE uses for its shell saves the entire history (doesn't use IDL's history). This means the history survives restarting IDL (an unfortunately common occurrence). And powerful history searching (among many other features) is built right into comint. I too missed my arrow keys for history recall, which is why I added:

```
(setq comint-scroll-to-bottom-on-input t)
(setq comint-scroll-show-maximum-output t)
(define-key idlwave-shell-mode-map [up] 'comint-previous-input)
(define-key idlwave-shell-mode-map [down] 'comint-next-input)
```

into my idlwave-shell-mode-hook (see <http://www.strw.LeidenUniv.nl/~dominik/Tools/idlwave/idlwave.html#TOC40>)

for info on how this works). For help on any of these variables do [C-h v] and type its name -- don't forget to use tab completion to make your life easy. Now I get the best of both worlds. I can use Emacs' powerful editing features on my old input and output, collecting things together to construct a new command, for instance. I can keep commands in registers and pop them out whenever needed, etc., etc. And when on the command line, I can use up arrow just like I used to. There are many more options to get comint to behave just as you like. See the info (C-h i) for emacs->Shell Mode.

8. Shadow listing with likeliness ranking: a fancy way of saying IDLWAVE detects those eminently bothersome times when more than one routine of the same name is on your path or compiled in (or builtin). You see this immediately with routine_info, and can even generate a full shadow listing for everything idlwave knows about (which is a fair bit more than IDL knows about). This works even without the shell running, but if it is, it checks *compiled* routines also! Especially nice when someone dumps a big package on you to test out and you just can't seem to get it running, or can't run your old stuff alongside it.

I could go on and on but I won't. Emacs and all this lisp business is intimidating at first, but you really don't need to know any of that to get all the benefits. Customization usually just involves cut and paste to your .emacs file. Don't let the parentheses scare you. Give it a try, and you'll see why I spend so much time raving about it.

Thanks Carsten!

Good luck,

JD

P.S. And for those of you afraid you won't be able to install idlwave... it is simple. All you do is download:

```
ftp://ftp.strw.leidenuniv.nl/pub/dominik/idlwave/idlwave.tar.gz
ftp://ftp.strw.leidenuniv.nl/pub/dominik/idlwave/idlwave-help.tar.gz
```

to /tmp (or anywhere), then do (as root):

```
% tar xzvf idlwave.tar.gz
% cd idlwave-version
% tar xzvf ../idlwave-help.tar.gz
% make
% make install-all
```

where "version" is something like 4.5. This by default puts idlwave in /usr/local/share/emacs/site-lisp/, which is a fine place. It also puts

the help files in /usr/local/etc, which is also fine. (Carsten had to separate these for copyright issues, not to punish us).

Now simply add the following to the top of your .emacs file. (Note possible changes):

```
;;; IDLWAVE setup
; Comment the following out if emacs already knows about
; where idlwave is installed. Try M-x idlwave-mode to see.
; You can also change the path if you've put it somewhere strange.
(setq load-path (cons "/usr/local/share/emacs/site-lisp/" load-path))

; Change the following to point to the idlwave help files,
; if installed somewhere other than the default.
(setq idlwave-help-directory "/usr/local/etc")

; Font lock, not just for IDLWAVE... mmmm colors
; comment out if you're boring.
(global-font-lock-mode 1)
; Uncomment the following if you commented the above,
; but would like font-lock to operate in IDLWAVE mode.
;(add-hook 'idlwave-mode-hook 'turn-on-font-lock)

; Here we ensure sure IDLWAVE is loaded for .pro files...
(autoload 'idlwave-mode "idlwave" "IDLWAVE Mode" t)
(autoload 'idlwave-shell "idlw-shell" "IDLWAVE Shell" t)
(setq auto-mode-alist
  (cons '("\\.pro\\|" . idlwave-mode) auto-mode-alist))
.....
,,,,,,,,,,,,,,,,,,,,,
```

That's it to get going. See
<http://www.strw.LeidenUniv.nl/~dominik/Tools/idlwave/idlwave.html#SEC40>
for more customization fun. (I for one insist on (setq
idlwave-main-block-indent 3) -- with due deference to David Fanning's
coding style). And don't forget to build your personal catalog of
routines (menu IDLWAVE->Routine Info->Select Catalog Directories) for
maximum enjoyment!

Hope you made it this far.

--

J.D. Smith | WORK: (607) 255-6263
Cornell Dept. of Astronomy | (607) 255-5842
304 Space Sciences Bldg. | FAX: (607) 255-5875
Ithaca, NY 14853 |

Subject: Re: IDLWAVE 4.5

Posted by [mole6e23](#) on Wed, 18 Oct 2000 07:00:00 GMT

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Martin Schultz <martin.schultz@dkrz.de> wrote:

> Ohhhh. I for one just looove the idlwave emacs mode, and I am not
> using anything else for editing of my IDL programs. However, I am
> almost ashamed to reply to this thread, because I still haven't found
> the time to play around with the shell within idlwave, and so I miss

That's basically the same situation I'm in. I adore the syntax coloring and the automatic indentation, and the functions lists (not to mention just the emacs search functionality, etc.), but I really haven't explored 90% of the rest of the stuff that the idlwave mode does, so I didn't want to respond, either. But now that I'm not alone, it's much easier. =) The only things I use to do IDL are xemacs and the idl command line. I used the IDLDE for about a week before I decided it was the silliest thing on earth. (perhaps a little exaggeration, but I didn't like it much.)

I've accidentally gotten into the shell mode before, but I'm so used to the normal command line that I got out of it quickly. So I don't use all those fancy features that allow me to look at variables, etc. I still use a lot of "print" and "help" statements in my code to figure things out. As with Martin, it will be someday that I'll get around to learning the rest of it.

Todd

Subject: Re: IDLWAVE 4.5

Posted by [Kenneth Mankoff](#) on Wed, 18 Oct 2000 07:00:00 GMT

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On Wed, 18 Oct 2000, Martin Schultz wrote:

> Karsten Rodenacker wrote:

>> Carsten Dominik schrieb:

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>>> (reported by JD Smith, as usually - is anybody else using this?).

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>>> - Carsten

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>> Carsten is doing with that (X)emacs mode idlwave! I think most users are

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-ken.

Subject: Re: IDLWAVE 4.5

Posted by [promashkin](#) on Wed, 18 Oct 2000 07:00:00 GMT

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I would love to have the functionality that IDLwave provides. However, I tried installing Emacs on my Mac, and after I wasted one full working day doing that with no success, I decided I could have had a lot more accomplished that day in the IDL DE instead. I believe that the Mac built of Emacs is transparent to those who made it, but I could not make it do anything but come up with a fully non-intuitive tiny window that would freeze every time I tried to type something. Sorry.

Cheers,
Pavel

Subject: Re: IDLWAVE 4.5

Posted by [Martin Schultz](#) on Wed, 18 Oct 2000 07:00:00 GMT

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Karsten Rodenacker wrote:

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>
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- > Unluckily there is seemingly not such comfortable system under Windows
- > possible caused by the lacking process communication. What about using
- > cygwin? Maybe that is a possibility to overcome the Windows limitations.
- >
- > --
- > Karsten Rodenacker ()

Ohhhh. I for one just looove the idlwave emacs mode, and I am not using anything else for editing of my IDL programs. However, I am almost ashamed to reply to this thread, because I still haven't found the time to play around with the shell within idlwave, and so I miss out probably at least 80% of what idlwave can offer. And for a non-native emacs user, I find it still relatively hard to configure the editor or install a new version of idlwave or ... -- In my new way of doing things (writing objects) I often wish I had a class browser handy; and as I hear, this is available in the idlwave mode. So, there will be the day

Cheers,
Martin

--

```

[[ Dr. Martin Schultz  Max-Planck-Institut fuer Meteorologie  [[
[[      Bundesstr. 55, 20146 Hamburg      [[
[[      phone: +49 40 41173-308      [[
[[      fax: +49 40 41173-298      [[
[[ martin.schultz@dkrz.de      [[
[[

```

Subject: Re: IDLWAVE 4.5

Posted by [Karsten Rodenacker](#) on Wed, 18 Oct 2000 07:00:00 GMT

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--

Karsten Rodenacker ()

-----:~)

GSF - Forschungszentrum Institute of Biomathematics and Biometry
D-85758 Oberschleissheim Postfach 11 29
Tel: +49 89 31873401 | FAX: ...3369 | rodена@gsf.de |
Karsten@Rodenacker.de
<http://www.gsf.de/ibb/homepages/rodenacker>

Subject: Re: IDLWAVE 4.5

Posted by [dominik](#) on Mon, 23 Oct 2000 07:00:00 GMT

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>>>> > "KM" == Kenneth Mankoff <mankoff@lasp.colorado.edu> writes:

KM> I've spent some time using the shell. The main problem that i run
KM> across is that now i have my emacs keys and my idl keys messed up.
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KM> up in the emacs text-buffer. Other than a few problems like that,
KM> it works quite nicely. Does anyone out there have a good
KM> workaround for this?

Hi Ken,

this is the kind of feedback I mean. Let me know what does not work well.

IDLWAVE 4.6 will contain a better default for the bindings of the arrow keys. They will behave like in an xterminal if you are in the last line of the shell buffer - i.e. in the current command line.

- Carsten

--

Carsten Dominik <dominik@astro.uva.nl> _ /

Sterrenkundig Instituut "Anton Pannekoek" |X|
Kruislaan 403; NL-1098 SJ Amsterdam /| \ _ _ _ / \
phone +31 (20) 525-7477; FAX +31 (20) 525-7484 _|o|_ / ~ ~ \ _ / ~ ~ ~

Subject: Re: IDLWAVE 4.5

Posted by [Vapuser](#) on Tue, 31 Oct 2000 22:26:09 GMT

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Carsten Dominik <dominik@astro.uva.nl> writes:

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>
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> - Carsten

Carsten;

I realize I'm a little late on this thread, but... I just want to say I use IDLWAVE mode **all the time**. It's the **only** way I do any editing. I almost never run IDL outside of idlwave-shell and I especially love the ability to write a little .run script in a buffer, then do 'C-h; C-cC-dC-e' to run it. I use this functionality to build up little parts of a longer program, I just keep gluing these little snippets of code into larger peices of code until I have some large program.

In fact, this announcement in the newsgroup made me go off, get the emacs 20.4 code an actually build it on my SGI, no mean feat, when you consider how strangely SGIs are set up some times. That's how devoted I am!

It is, without a doubt, the absolute best way to write IDL I've found. Thanks for maintaining it!

whd

--

William Daffer: 818-354-0161: William.Daffer@jpl.nasa.gov

Subject: Re: IDLWAVE 4.5

Posted by [promashkin](#) on Tue, 31 Oct 2000 23:14:35 GMT

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Vapuser wrote:

> It is, without a doubt, the absolute best way to write IDL I've
> found

I believe you. I was so tempted by this thread that I tried to set up
Xemacs again on my PPC. Another couple hours wasted, but not the whole
day - I got smarter. I can't figure it out. Sorry. I believe IDLWAVE is
great, but with the dumb brains inside my head I am sticking to the IDL
DE :-(
Cheers,
Pavel

Subject: Re: IDLWAVE 4.5

Posted by [Paul van Delst](#) on Wed, 01 Nov 2000 14:07:40 GMT

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Vapuser wrote:

>
> Carsten Dominik <dominik@astro.uva.nl> writes:
>
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> buffer, then do 'C-h; C-cC-dC-e' to run it.

'C-h; C-cC-dC-e'?

Good ctrl-alt-del lord! Now I remember why I don't use emacs. :o)

(Sorry Carsten :o()

cheers,

paulv

--

Paul van Delst Ph: (301) 763-8000 x7274
CIMSS @ NOAA/NCEP Fax: (301) 763-8545
Rm.207, 5200 Auth Rd. Email: pvandelst@ncep.noaa.gov
Camp Springs MD 20746

Subject: Re: IDLWAVE 4.5

Posted by [Matt Haffner](#) on Wed, 01 Nov 2000 22:38:19 GMT

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Paul van Delst wrote:

>

> Vapuser wrote:

>>

>> Carsten Dominik <dominik@astro.uva.nl> writes:

>>

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Not to start a editor holy-war or anything but for quite a while most of the cryptic keyboard commands are available via menus in emacs and xemacs for you mouse-types. This is especially true for custom modes like IDLWAVE--just about everything is there in the menu for you to explore...

mh

--

Matt Haffner /|-----|\ University of Wisconsin

Dept. of Astronomy /|-----|\ Madison

haffner@astro.wisc.edu /|-----|\

WHAM project -- <http://www.astro.wisc.edu/wham>

Subject: Re: IDLWAVE 4.5

Posted by [Vapuser](#) on Thu, 02 Nov 2000 19:03:48 GMT

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Matt Haffner <haffner@astro.wisc.edu> writes:

> Paul van Delst <pvandelst@ncep.noaa.gov> writes:

<snip>
>> 'C-h; C-cC-dC-e'?

Actually it should have been 'C-xh; C-cC-dC-e' What I typed would only have confused 'help'

>>
>> Good ctrl-alt-del lord! Now I remember why I don't use emacs. :o)
>
> Not to start a editor holy-war or anything but for quite a while most of
> the cryptic keyboard commands are available via menus in emacs and
> xemacs for you mouse-types. This is especially true for custom modes
> like IDLWAVE--just about everything is there in the menu for you to
> explore...
>

This is true. I'm not sure about the 'C-xh' (sorry for the mistyping) to mark the buffer, but the 'run region' is there. Hmmm, yep, the 'save and .run' will save the entire buffer and .run it, so you could do exactly what I typed but from the menu.

I just use the keyboard equivalents because I find it faster and easier. I do it so much my fingers remember it easily, although I can't type the right keystrokes when composing a followup.

whd

--

William Daffer: 818-354-0161: William.Daffer@jpl.nasa.gov
