
Subject: At Last! A Subsititute for CW_Field.
Posted by [davidf](#) on Thu, 18 Nov 1999 08:00:00 GMT
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Hi Folks,

I've been working on the new XWindow thing, as I've mentioned. And as it sometimes goes in programming, one thing has led to another, and then to another, and the project has become bigger than I ever imagined. But I'm trying to do this with objects and learn a bit about some of the advantages of inheritance, etc. In other words, I'm trying to do it right.

So I came to the point the other day where I needed a CW_FIELD widget in one of my modal dialogs and I just couldn't bring myself to use CW_FIELD one more time. I don't know what it looks like on UNIX machines, but on Windows machines the text widget part of the compound widget doesn't look editable.

This leads to enormous confusion on the part of users. Since they get no visual clue that they can edit the numbers there, they don't. As a result, programs that use CW_Field are always returning wrong X sizes or Y sizes and reading past the end of the file, or not reading enough data, or whatever.

And a couple of other things annoy me about it. First of all, you can't attach an event handler to the darn thing. So you have to futz around and put them in a base that has an event handler attached to *it*, but the five compound widgets I have in the base do different things, and I don't want to have to sort it out, and... Well, I won't go on.

Suffice it to say that it is my opinion that compound widgets that don't allow you to attach event handlers to them are not written properly.

And then there are aesthetic concerns, which always seem to fall somewhere pretty far down on RSI's priority list, it seems to me. But when you are as anally retentive as I am it's real important--**REAL** important--that the damn things line up properly in the damn base!

So...

I wrote my own program that works the way I do. I should think there may be one or two of you who might be interested in it. I named it Coyote_Field and you can find it here:

http://www.dfanning.com/programs/coyote_field.pro

For the most part it is a drop-in replacement for CW_Field, at least if you have been using CW_Field as I have. One big difference is that Coyote_Field returns a named event structure. CW_Field couldn't do that (another bother) because the Value field in the event structure is always defined at run-time. It can be a string, long, float, etc. I've solved the problem by having the Value field be a pointer to the data. So if you rely on this part of the event structure, you will have to modify your code.

I tend to always get the data out of a CW_Field with the Get_Value keyword to Widget_Control. If you do this, then you won't even notice a difference. Except the darn thing will look more attractive. :-)

I've put a little example program at the end of the code that exercises the compound widget a little bit. I've tested things, but I'm not ready to declare it bug free. The number validation code is quite a bit trickier than I thought it was going to be when I set out on this mission. :-)

To run the example program, download the Coyote_Field program, then do this:

```
IDL> .compile coyote_field
IDL> example
```

There will be three compound widgets. The first is an INTEGER field and returns events every time you touch it. The second is a FLOAT field and only returns events when a CR is hit (not very useful, it seems to me, but a feature of CW_FIELD that I decided to retain). The third is a STRING value that you can get and set the value of with buttons.

As always, I'm interested in testers and suggesters. :-)

Regards,

David

--

David Fanning, Ph.D.

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Subject: Re: At Last! A Subsitute for CW_Field.

Posted by [Struan Gray](#) on Thu, 18 Nov 1999 08:00:00 GMT

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David Fanning, davidf@dfanning.com writes:

- > What, no Cheerios!? My family and I are currently in
- > the processes of planning a summer trip to Germany.
- > We may have to re-think it with this news. :-)

If cheerios are what I think they are (biscuits with a cream filling), they are a yucky commercial ripoff of a traditional Italian treat. Most German supermarkets have them, but the truly melt-in-the-mounth ones are to be had at Italian Delis (I know a good one in Berlin if that helps). In any case, I recommend swinging by Aachen and stocking up on Domino Steine - accept no imitations.

Please do turn your CW_FIELD into an object, and add a method to specify that real numbers should be displayed with a given number of significant figures. That'll reduce my to-do list by one item.

Struan

Subject: Re: At Last! A Subsitute for CW_Field.

Posted by [Peter Clinch](#) on Thu, 18 Nov 1999 08:00:00 GMT

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David Fanning wrote:

- > What, no Cheerios!? My family and I are currently in
- > the processes of planning a summer trip to Germany.

> We may have to re-think it with this news. :-)

Cheerios have only recently(ish) appeared in the UK, so they may have pushed into the Rhineland by the time you get there.

But even if they haven't, the yoghurt and chocolate are well ahead of the game.

Pete.

--

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Subject: Re: At Last! A Subsitute for CW_Field.

Posted by [davidf](#) on Thu, 18 Nov 1999 08:00:00 GMT

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Martin Schultz (m218003@modell3.dkrz.de) provides a few suggestions for improvement, then asks this:

> Third: why is this not an object? ;-) Indeed it would make sense to provide
> the functionality of this thing as object, so you could for example extend
> the "heart" of it (the validation routine) to allow for hex numbers or
> number ranges, etc.

Yes, indeed, it definitely *should* be written as an object. But my original goal was to create a drop-in replacement for CW_FIELD. I thought that was an hour job, and it turned into something approaching three days and two VERY late nights. Have you ever tried to decipher RSI-supplied code. :-(

But you are correct, that validation routine is the heart of the matter and it would be a whole lot easier to extend it if it was an object method.

> Then again: with an object you would require two files:
> coyote_field.pro
> and coyote_ofield__define.pro
> so people wouldn't be able to get it running ;-)

I woke up this morning thinking about this. (Do you have any idea how depressing it is to be this much in love with a *programming* language, for God's sake!) Anyway, I think the thing to do is to leave the user

interface alone, so it *can* be a drop-in replacement, but turn the heart of the program into an object. The outside world could get access (should they want or need it) to the object nature via a GetGuts keyword. (I'd probably spend an hour thinking of a better name, but that's what comes to mind at the moment.)

It just all required more effort than I was ready to give at 2:30 AM. :-)

- > And this brings up the point how to best link objects and ignorant users.
- > Should one provide a default object in the widget function and allow for
- > a predefined object to be passed as a substitute? Hence,
- > `wID = coyote_field(...)`
- > would use the `coyote_ofield` object with the functionality as present,
- > whereas
- > `wID = coyote_field(...,object=obj_new("hex_field"))`
- > would pass responsibilities on to this other thing.

No, I think the point of objects is that they will behave in a particular way unless you override that behavior by writing replacement methods, for example. You must just supply the user with opportunity and clear instructions for how to do so.

> Cheerios, (I love them and haven't found them over here)

What, no Cheerios!? My family and I are currently in the processes of planning a summer trip to Germany. We may have to re-think it with this news. :-)

Cheers,

David

--

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Posted by [davidf](#) on Thu, 18 Nov 1999 08:00:00 GMT
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Carsten Dominik (dominik@astro.uva.nl) writes:

> I really do not know what I would do without your fantastic web site,
> the excellent code you write and publish and your expert advice you
> offer on this group every day. Thanks.

I really don't know what I would do without the fantastic
IDL newsgroup community to write this stuff for. :-)
I appreciate your comments very much.

Best Regards,

David

--

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Subject: Re: At Last! A Subsitute for CW_Field.
Posted by [davidf](#) on Fri, 19 Nov 1999 08:00:00 GMT
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Martin Schultz (m218003@modell3.dkrz.de) writes:

> David: if you're coming next summer - will you stop by in Hamburg?

Very tentative itinerary yet, and we are still negotiating
a second mortgage on the house so we can afford to take
everyone but the dogs, but we plan to start in Berlin.
On to Munich for a couple of days. Over to Lake
Constance and then up to Heidelberg to sample the
Rhineland. I have to be in the UK about 5 days later,
so we have a bit of free time and are looking for
suggestions. I've been in Hamburg once--beautiful
city--and my oldest son, the German student, is
very keen on visiting.

My wife has told me NO WORK, but perhaps I can
engage you as a tour guide of the local brewery s. :-)

Cheers,

David

--

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Subject: Re: At Last! A Subsitute for CW_Field.
Posted by [m218003](#) on Fri, 19 Nov 1999 08:00:00 GMT
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In article <38350CE8.E398D39@mpi-hd.removethis.mpg.de>,
Amara Graps <Amara.Graps@mpi-hd.removethis.mpg.de> writes:

> Struan Gray wrote:

>>

>> David Fanning, davidf@dfanning.com writes:

>>

>>> What, no Cheerios!? My family and I are currently in
>>> the processes of planning a summer trip to Germany.

>>> We may have to re-think it with this news. :-)

>>

>> If cheerios are what I think they are (biscuits with a cream
>> filling),

>

> No no, cheerios are the cereal, right David? I've not seen
> them here, but will Kelloggs Corn Flakes do? :-)

>

> (don't forget the beer ;-)

>

> Amara

>

Oh yes: Cheerios are the cereal! Corn Flakes are nice, too, but nothing
compared to these little donut shaped unsweetened crispy things (lucky
I've had breakfast already ;-). True: the chocolate is really worth going
(back) to Germany -- although you can get Lindt in the States as well
now (at least on the East Coast).

David: if you're coming next summer - will you stop by in Hamburg?

Best regards,
Martin

--

XX

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[
[

Subject: Re: At Last! A Subsitute for CW_Field.
Posted by [Amara Graps](#) on Fri, 19 Nov 1999 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Struan Gray wrote:

>
> David Fanning, davidf@dfanning.com writes:
>
>> What, no Cheerios!? My family and I are currently in
>> the processes of planning a summer trip to Germany.
>> We may have to re-think it with this news. :-)
>
> If cheerios are what I think they are (biscuits with a cream
> filling),

No no, cheerios are the cereal, right David? I've not seen
them here, but will Kelloggs Corn Flakes do? :-)

(don't forget the beer ;-)

Amara

--

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"Never fight an inanimate object." - P. J. O'Rourke

Subject: Re: At Last! A Subsitute for CW_Field.
Posted by [davidf](#) on Mon, 22 Nov 1999 08:00:00 GMT
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Ben Tupper (Ben_member@newsguy.com) writes:

> I've often wondered why the Type declaration keyword for CW_FIELD is not defined
> as an alternative to declaring the data type with a keyword similar to
> COYOTE_FIELD DataType keyword. I guess I was thinking that it would nice to be
> able to declare the field type on the fly by passing along the TYPE index
> (returned by the SIZE function) to CW_FIELD (or COYOTE_FIELD) rather than
> specifying "/Float",... Is it possible to have each type of keyword (a string
> "DataType" and and integer "Type") competing to define the field type?

Well, this is exactly the kind of thing (declaring field type on the fly) that is trivial to do if the program was written as an object. It is much harder to do written the way it is currently. I'll leave it up to you to turn it into an object and send me the result. :-)

Cheers,

David

P.S. Don't forget to include Struan's request for floating value formatting. :-)

--

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Subject: Re: At Last! A Substitutute for CW_Field.
Posted by [Ben Tupper](#) on Mon, 22 Nov 1999 08:00:00 GMT
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>
> As always, I'm interested in testers and suggesters. :-)
>
David,

This looks great!

I have a specific suggestion regarding the DataType declaration keyword.

I've often wondered why the Type declaration keyword for CW_FIELD is not defined as an alternative to declaring the data type with a keyword similar to COYOTE_FIELD DataType keyword. I guess I was thinking that it would nice to be able to declare the field type on the fly by passing along the TYPE index (returned by the SIZE function) to CW_FIELD (or COYOTE_FIELD) rather than

specifying "/Float",... Is it possible to have each type of keyword (a string "DataType" and and integer "Type")competing to define the field type?

Thanks for all the great tools!

Ben Tupper
PemaquidRiver@tidewater.net
