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Subject: Re: IDLitComponent - Introspection

Posted by [Robert Barnett](#) on Wed, 11 May 2005 23:48:23 GMT

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I'm soon to send a feature request to RSI about it. What do you think about the following procedures?

```
;CallGetProperty.pro
;+
; NAME:
;   CallGetProperty
;
; PURPOSE:
;   To get the property of an object, when the keyword is only known at runtime.
;
; CATEGORY:
;   Introspection
;
; CALLING SEQUENCE:
;   CallGetProperty, obj, kwd, value
;
; INPUTS:
;   obj: The object from which to obtain the property
;   kwd: The keyword name of the property
;
; OUTPUTS:
;   value: The value of the property
;
; SIDE EFFECTS:
;   Expects to be able to make a single call "obj -> GetProperty"
;
; EXAMPLE:
;
; ; Define an object
;
; pro boringobj__define
;   struct = {boringobj, boringproperty: ""}
; end
;
; pro boringobj::GetProperty, BORINGPROPERTY=boringproperty
;   if (arg_present(boringproperty)) then $
;     boringproperty = self.boringproperty
; end
;
; ; Get its property
;
; CallGetProperty, obj_new('boringobj'), 'BORINGPROPERTY', value
; print, value
```

```

;
;-
pro CallGetProperty, obj, kwd, value
; Unknown implementation
end

;CallSetProperty.pro
;+
; NAME:
; CallSetProperty
;
; PURPOSE:
; To set the property of an object, when the keyword is only known at runtime.
;
; CATEGORY:
; Introspection
;
; CALLING SEQUENCE:
; CallSetProperty, object, kwd, value
;
; INPUTS:
; object: The object from which to obtain the property
; kwd: The keyword name of the property
; value: The value of the property
;
; SIDE EFFECTS:
; Expects to be able to make a single call "obj -> SetProperty"
;
; EXAMPLE:
;
; ; Define an object
;
; pro boringobj__define
; struct = {boringobj, boringproperty: ""}
; end
;
; pro boringobj::SetProperty, BORINGPROPERTY=boringproperty
; if (n_elements(boringproperty) gt 0) then $
; self.boringproperty = boringproperty
; end
;
; ; Set its property
;
; CallSetProperty, obj_new('boringobj'), 'BORINGPROPERTY', 'boring value'
;
;-

```

```
pro CallSetProperty, obj, kwd, value
obj -> SetProperty, _EXTRA=create_struct(kwd, value)
end
```

=====

The actual application I had in mind was a configuration tool. I have objects with properties which I would like to be able to edit via a GUI at runtime. I can do this very effectively by using widget\_property sheet.

However, I have numerous objects and do not want to bother setting up a widget\_property sheet for each object individually. Instead, I wish to query objects for properties which are 'IDLContainer's and automatically generate a widget\_tree based on the links between objects.

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