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Subject: OO IDL

Posted by [Robert Barnett](#) on Thu, 16 Sep 2004 00:23:55 GMT

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I'm curious about common ways to call differing versions of code. I have implemented OO (Object Oriented) IDL to achieve this common task and wanted to know what peoples thoughts might be.

I have several routines, each which have many different versions. In many cases, no version is any more recent than any other. It's more that each version is applicable for different problems.

The programs are in their own .pro files, with the filename and function name being the same so that autoloading works. They are also in lowercase so that autoloading works correctly. The version is just appended onto the end like so:

```
cost_function_mem.pro
cost_function_lb.pro
cost_function_sr.pro
...
```

```
simplex_fast.pro
simplex_slow.pro
...
```

... and on it goes

This means that I have to do lots of calls to CALL\_FUNCTION becuase I only know what version I am to use at runtime.

I'm having a play around with OO IDL and seeing if there is a way to do this without using CALL\_FUNCTION, and seeing if there are any advantages in doing so.

The only way I can see to avoid the use of CALL\_FUNCTION is to create a class for each function.

```
mem::cost_function
lb::cost_function
sr::cost_function
...
```

```
fast::simplex
slow::simplex
...
```

It is now possible to call a cost function like so:

```
cf -> cost_function()
Where cf could be
cf = obj_new('mem')
cf = obj_new('lb')
cf = obj_new('sr')
```

Unfortunatley, this causes a maintainence issue with structures. I now also need to define

```
mem__define
lb__define
sr__define
fast__define
slow__define
```

However, is it easy to write a trivial shell or perl script for generating these.

It seems that both OO and CALL\_FUNCTION require the same number of lines of code aside from the maintainence of the OO structures.

Some advantages of OO may be

- \* The ability for objects to inherit each other, thus being able to use each others methods.
- \* Each class has its own namespace, ensuring that all methods which are not in conflict with other versions
- \* Each class could have instance data, thus saving effort in passing information down the call stack and back again.

Disadvantages

- \* It may not be entirely obvious where instance data comes from
- \* It may not be entirely obvious which objects inherit each other
- \* A change in class struct definitions requires IDL to restart.

The advantages of OO, although desirable don't seem to have a huge impact. Makes me wonder if anyone has an IDL OO success story.

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