Subject: Re: IDL opinions
Posted by thompson on Tue, 07 Jun 1994 14:37:36 GMT
View Forum Message <> Reply to Message

super295@pop.uky.edu (Robert G. Buice, Jr.) writes:

> I have a demo of IDL an am considering buying it. I currently use
> Speakeasy and Mathematica and am very happy with Speakeasy, but not
> with support from the Speakeasy company. I want to replace Speakasy
> with Mathematica, Matlab, or IDL and was wondering if I could get some
> opinions. I want to do number crunching and I hear that IDL is mostly
> imaging software. Actually I am very happy with Mathematica, but it
> seems to solve the same preoblems as speakasy 100X more slowly on the
> same machine. Thanks

It depends on what you mean by "number crunching". I don't think it's fair to
say that IDL is mostly for imaging, although it does it very well. It would
fairer to say that IDL is designed and optimized for working with scientific
data in all forms. It's highly flexible and easy to program in.

I've never run across Speakeasy, but my impression of Mathematica and Matlab
are that they are more optimized for expressing mathematical relationships than
IDL is, but less for working with real (i.e. grungy) data. It all depends on
the kinds of problems you want to solve.

In terms of performance, in my experience IDL puts very little overhead on a
calculation AS LONG AS ONE PROGRAMS IT PROPERLY. The secret is avoiding loops.
Under many circumstances one can avoid explicit loops completely.

Hope this helps,

Bill Thompson

Subject: Re: IDL opinions
Posted by isaacman on Tue, 07 Jun 1994 16:14:00 GMT
View Forum Message <> Reply to Message

In article <thompson.770999856@serts.gsfc.nasa.gov>, thompson@serts.gsfc.nasa.gov (William
Thompson) writes...
> super295@pop.uky.edu (Robert G. Buice, Jr.) writes:
>
>> I have a demo of IDL an am considering buying it. I currently use
>> Speakeasy and Mathematica and am very happy with Speakeasy, but not
>> with support from the Speakeasy company. I want to replace Speakasy
>> with Mathematica, Matlab, or IDL and was wondering if I could get some
>> opinions. I want to do number crunching and I hear that IDL is mostly
>> imaging software. Actually I am very happy with Mathematica, but it

>> seems to solve the same preoblems as speakasy 100X more slowly on the
>> same machine. Thanks
>
> It depends on what you mean by "number crunching". I don't think it's fair to
> say that IDL is mostly for imaging, although it does it very well. It would
> fairer to say that IDL is designed and optimized for working with scientific
> data in all forms. It's highly flexible and easy to program in.
>
> I've never run across Speakeasy, but my impression of Mathematica and Matlab
> are that they are more optimized for expressing mathematical relationships than
> IDL is, but less for working with real (i.e. grungy) data. It all depends on
> the kinds of problems you want to solve.
>
> In terms of performance, in my experience IDL puts very little overhead on a
> calculation AS LONG AS ONE PROGRAMS IT PROPERLY. The secret is avoiding loops.
> Under many circumstances one can avoid explicit loops completely.
>
> Hope this helps,
>
> Bill Thompson

I agree with Bill's post. However, I would add the caveat that one area
in which IDL has problems is memory management. You can get bitten by
memory fragmentation if you are manipulating many large arrays.

Rich Isaacman

Subject: Re: IDL opinions
Posted by dan on Tue, 07 Jun 1994 21:51:19 GMT
View Forum Message <> Reply to Message

isaacman@stars.gsfc.nasa.gov writes :

> I agree with Bill's post. However, I would add the caveat that one area
> in which IDL has problems is memory management. You can get bitten by
> memory fragmentation if you are manipulating many large arrays.

> Rich Isaacman

Memory fragmentation is an artifact of operating systems
and virtual memory.   It can occur in ANY application.

There are numerous tips on how to conserve memory in
chapter 12 of the "IDL User's Guide".

In article <7JUN199412145303@stars.gsfc.nasa.gov> isaacman@stars.gsfc.nasa.gov (Subvert the Dominant Paradigm! (301) 513-7769) writes:
>
> I agree with Bill's post. However, I would add the caveat that one area
> in which IDL has problems is memory management. You can get bitten by
> memory fragmentation if you are manipulating many large arrays.
>
> Rich Isaacman

Someone else mentioned, this, but it cannot be said enough. IDL handles
memory very well, and fragmentation is more a result from the operating
system. If you are really using huge data sets, using assoc() may help
your problem (since it uses no memory space (theoretically) and is
bloody fast. Like any other language (okay, most) you just have to do
some memory masnagement in your code. Not a big deal, and I would
venture to say that it is MUCH easier in IDL then most languages!

 -stephen Strebel

--
Stephen C Strebel   /   SKI TO DIE
strebel@sma.ch   /   and
Swiss Meteorological Institute, Zuerich / LIVE TO TELL ABOUT IT
01 256 93 85   /   (and pray for snow)