Subject: Re: Intersection of 2 sets--Beginner IDL question
Posted by Craig Markwardt on Wed, 17 Oct 2001 21:49:02 GMT
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JD Smith <jdsmith@astro.cornell.edu> writes:
> Craig Markwardt wrote:
...
>> Long ago (1 year?) I tried to collect all the various algorithms that
>> were being discussed, and some that weren't yet, to do set operations.
>> CMSET_OP has the dreaded "CM" prefix, but it also knows how to do
>> intersections, unions, and exclusive or's. It can do X AND NOT Y type
>> intersections as well, in one self contained function.
>>
>> The syntax is:
>>
>> x_and_y = cmset_op(X, 'AND', y)
>>
>> It can return by value or index.
>
> Ahah, a nice update since last I looked. I'm sure the exact break
> between histogram vs. sort is machine dependent, but your defaults seem
> logical.
>
> There's one more thing I should point out in support of the much
> maligned ARRAY method, as exemplified in the where_array() routine
> originally by Dan Carr at RSI: it works for *any* IDL type.
>
> In as much as comparisons like:
>
> a=ptr_new('test') & b=a
> print, b eq a
>
> and
>
> a=obj_new('myClass') & b=a
> print, b eq a
>
> work, you can do intersections on lists of pointers, lists of objects,
> etc., by using the array method. The underlying IDL operation which is
> data-type agnostic is simply array indexing, so in the context of the
> REFORM/REBIN tutorial, you can use the awkward "lindgen(n,m) mod m"-type
> method (of which where_array is a special case) to perform flexible
> operations on any type of array. Just beware of the N^2 performance.
>
> I'm also not sure how sort is defined on pointer and object arrays...
> probably by heap variable number, in which case that one should work
> too.

Hi JD--

That's a really good point, and worth exploring further. In principle it could be as easy as just loosening the restriction on the data type, but I guess I was just being conservative.

Craig

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