Subject: Inverse hyperbolics?
Posted by tom.grydeland on Wed, 11 Sep 2013 10:48:48 GMT
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Will these be in IDL anytime soon? I'm amazed they're not.
(Yes, I have the implementation from MGLib)

If you need a reason, look no further than
http://en.wikipedia.org/wiki/Universal_Transverse_Mercator_c oordinate_system

--T

Subject: Re: Inverse hyperbolics?
Posted by Mark Piper on Wed, 11 Sep 2013 16:14:43 GMT
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On Wednesday, September 11, 2013 4:48:48 AM UTC-6, Tom Grydeland wrote:
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This is a very reasonable request. While we're at it, maybe we should add secant, cosecant and cotangent functions. And a log base 2 function. Here's the list of transcendental functions currently in IDL:

http://www.exelisvis.com/docs/routines-65.html

Any others?

mp

Subject: Re: Inverse hyperbolics?
Posted by suicidaleggroll on Wed, 11 Sep 2013 16:34:21 GMT
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On Wednesday, September 11, 2013 10:14:43 AM UTC-6, Mark Piper wrote:

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>
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> mp

For log base 2 (or any other base), just make your own function:

```
function alogn, x, n
  return, alog(x)/alog(n)
end
```

And secant, cosecant, cotangent are even easier. Just more 1-liners.

Subject: Re: Inverse hyperbolics?
Posted by Mark Piper on Wed, 11 Sep 2013 16:55:42 GMT
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On Wednesday, September 11, 2013 10:34:21 AM UTC-6, suicida...@gmail.com wrote:
>
> For log base 2 (or any other base), just make your own function:
>
> function alogn, x, n
>   return, alog(x)/alog(n)
> end
>
> And secant, cosecant, cotangent are even easier. Just more 1-liners.

True, but why should a user have to go through an extra step? These functions should just be included, as a convenience, in IDL.

mp

Subject: Re: Inverse hyperbolics?
Posted by Lajos Foldy on Wed, 11 Sep 2013 19:28:13 GMT
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On Wednesday, September 11, 2013 6:14:43 PM UTC+2, Mark Piper wrote:

> This is a very reasonable request. While we're at it, maybe we should add secant, cosecant and cotangent functions. And a log base 2 function. Here's the list of transcendental functions currently in IDL:
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>   http://www.exelisvis.com/docs/routines-65.html
>

exp? :-)

(It is there under Math Miscellaneous, but why there?)

regards,
Lajos

Subject: Re: Inverse hyperbolics?

Posted by Paul Van Delst[1] on Wed, 11 Sep 2013 21:20:21 GMT
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Huh, that is weird. If you've got ALOG in the list of transcendentals,
why not its "inverse"?

BTW, this is a side issue, I've always wondered why the logarithm
function is called ALOG instead of just LOG.

cheers,

paulv

On 09/11/13 15:28, fawltylanguage@gmail.com wrote:
> On Wednesday, September 11, 2013 6:14:43 PM UTC+2, Mark Piper wrote:
>
>> This is a very reasonable request. While we're at it, maybe we
>> should add secant, cosecant and cotangent functions. And a log base
>> 2 function. Here's the list of transcendental functions currently
>> in IDL:
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>> http://www.exelisvis.com/docs/routines-65.html
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>
> exp? :-)
>
> (It is there under Math Miscellaneous, but why there?)
>
> regards, Lajos
>

Subject: Re: Inverse hyperbolics?
Posted by Lajos Foldy on Thu, 12 Sep 2013 08:20:30 GMT
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On Wednesday, September 11, 2013 11:20:21 PM UTC+2, Paul van Delst wrote:

> BTW, this is a side issue, I've always wondered why the logarithm
> function is called ALOG instead of just LOG.

My guess is Fortran legacy.

regards,
Lajos

Subject: Re: Inverse hyperbolics?
Posted by tom.grydeland on Thu, 12 Sep 2013 09:58:50 GMT
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On Wednesday, September 11, 2013 6:14:43 PM UTC+2, Mark Piper wrote:

> This is a very reasonable request.

Glad you think so! :-)

> While we're at it, maybe we should add secant, cosecant and cotangent functions.

... and their hyperbolic counterparts?

> And a log base 2 function.

Certainly.

> http://www.exelisvis.com/docs/routines-65.html
> Any others?

We've found that an 'EXPI' function, returning 'COMPLEX(COS(X), SIN(X))', would give a significant improvement in performance over 'EXP(I*X)' for a real argument.

> mp

--T