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:

- > 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

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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>
> Any others?
>
>
> 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:
- > 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:

>>

>> 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 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 View Forum Message <> Reply to Message

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