Subject: Re: Conversion Between UTM and Lat/Lon Coordinates
Posted by APound on Tue, 15 Jan 2008 19:25:31 GMT
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On Jan 15, 11:35 am, David Fanning <n...@dfanning.com> wrote:
> Folks,
>
> I have a geoTiff image in a UTM projection. And I have
> the corners and center of the image in UTM coordinates.
> To put political boundaries on this image, I need to
> create the proper UTM map projection space. In order
> to do that, it seems to me, I need to know the center
> of the map projection (or image) in latitude and longitude
> space. (Since MAP_PROJ_INIT seems to require this.)
>
> Therefore, it seems to me I need to convert my UTM
> coordinates to lat/lon coordinates. I have found
> JAVA applets on the Internet to do that, but it would
> be nice to have a little IDL program to do it. Does
> anyone have such a thing? Would you like me to publish
> it on my web page so you can become famous? :-)
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

David,

I found a fairly straight forward website on the formulas, but it is a
bit over my head... Maybe you'll be able to glean something from
that...

http://www.uwgb.edu/dutchs/UsefulData/UTMFormulas.HTM

Good luck,

APound

Subject: Re: Conversion Between UTM and Lat/Lon Coordinates
Posted by David Fanning on Tue, 15 Jan 2008 19:37:02 GMT
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APound writes:

> I found a fairly straight forward website on the formulas, but it is a
> bit over my head... Maybe you'll be able to glean something from
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>
> http://www.uwgb.edu/dutchs/UsefulData/UTMFormulas.HTM

Thanks for this. Someone just reminded me of those lovely
routines Ben Tupper made available at one time or another.
I'm just trying UTM_to_LL now.

I looked at that web site earlier today and had much the
same reaction you did. Good thing Ben wasn't deterred.
His code looks so similar that I think he must have
cribbed it from here. :-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Conversion Between UTM and Lat/Lon Coordinates
Posted by Brian Larsen on Tue, 15 Jan 2008 21:23:42 GMT
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David,

one thing that I know here (and mentioned on the website that APound
gave) is that there are a bunch of different geodes that this
conversion can be done in. As you map your data from UTM to Lat Lon
and then use the maps be sure to use the right one. The frustrating
thing is that in one geographic region the wrong one can look fine and
look horrible in another, it can be truly annoying if it bites you.
Your UTM data should specify which one is being used.

The different one are:
NAD83/WGS84
GRS 80
WGS72
Australian 1965
Krasovsky 1940
International (1924) -Hayford (1909)

Clake 1880
Clarke 1866
Airy 1830
Bessel 1841
Everest 1830

Cheers,

Brian

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Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Conversion Between UTM and Lat/Lon Coordinates
Posted by ben.bighair on Wed, 16 Jan 2008 22:17:22 GMT
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On Jan 15, 2:37 pm, David Fanning <n...@dfanning.com> wrote:
> APound writes:
>> I found a fairly straight forward website on the formulas, but it is a
>> bit over my head... Maybe you'll be able to glean something from
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>
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>
> Thanks for this. Someone just reminded me of those lovely
> routines Ben Tupper made available at one time or another.
> I'm just trying UTM_to_LL now.
>
> I looked at that web site earlier today and had much the
> same reaction you did. Good thing Ben wasn't deterred.
> His code looks so similar that I think he must have
> cribbed it from here. :-)
>

Hi David,

Wow - I am impressed someone did it using a spreadsheet. Must be like trying to walk a dog with two legs - you just have to pull real hard. The reference cited in my code and on that website (Snyder, J. P., 1987; Map Projections - A Working Manual. U.S. Geological Survey Professional Paper 1395, 383 p.) is probably one of the better purchases I have ever made. I haven't done much map stuff in a long time, but I fondly remember that great book.

Cheers,
Ben