

OZARK CHAPTER MSPS NEWSLETTER

April 10, 2009

The next meeting is April 14, 2009 at 6 p.m. at Western Sizzlin on East Kearney.

MODOT, I love you

Jack Dill, PLS

MODOT's new network of GPS receivers is up and working. I haven't had an opportunity to try out the RTK Virtual Reference System myself but I have used some of the static data and I love it. It is a little bit of work to get signed up, you have to go to <http://gpsweb.modot.mo.gov>, download the form, fill it out, get it notarized, and mail it off. However, I sent mine in the mail on April 4 (Saturday) and was notified on April 6 (Monday) that I was ready to go. That's pretty awesome turn around time.

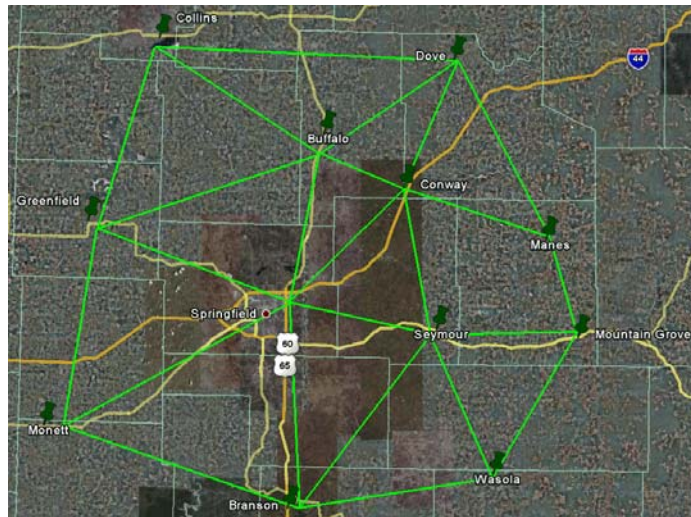
Most static software, like Ashtech Solutions or GNSS Solutions, or Trimble Geomatics Office, wants you to input something about the antenna and maybe the position of the reference receiver. Your software should correctly transform the coordinates into the coordinate system you want to use when you import the Rinex file. Or, you can open the Rinex file once you've downloaded it (use any text editor) and it will generally tell you both things. See below for the Springfield receiver MOSF:

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2.1      OBSERVATION DATA  M (MIXED)      RINEX VERSION / TYPE
GPSTime 2.62 3098 Rinex Merge 08-Apr-09 15:27:50 PGM / RUN BY / DATE
MOSF
MOSF
Unknown  TRIMBLE NETR5    Nav 3.63      REC # / TYPE / VERS
0
          TRM55971.00
-286449.6780 -5076040.9367 3839026.9633  APPROX POSITION XYZ
0.0000 0.0000 0.0000 ANTENNA: DELTA H/E/N
1 1 0 WAVELENGTH FACT L1/2
9 C1 P1 P2 L1 L2 S1 S2 D1 D2# / TYPES OF OBSERV
15.000 INTERVAL
2009 4 8 13 28 0.0000000 GPS TIME OF FIRST OBS
END OF HEADER
    
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The antenna is a TRM55971 (Trimble Zephyr Geodetic 2). The position is given in Earth Centered Earth Fixed coordinates (sometimes called Conventional Terrestrial Coordinates), which is the coordinate system GPS uses. If want to convert the coordinate to something like Lat/Long or State Plane yourself, go to <http://www.ngs.noaa.gov/> and use the online XYZ converter tool to transform the coordinate to Lat/Long. Then use Corpcon to convert to State Plane. That's one way of doing it for free. Bluemarble software has good software for that sort of thing as well. The only problem I've had is figuring out the correct time for the files I want to download. I had to add 5 hours to the local time that my session started. It reports the session will begin 5 hours later than I need but the actual data in the rinex file comes in at the correct time. Regardless, this system is a beautiful development. More in the next newsletter.

P.S. xoxoxo, MODOT, you big ole lovable State agency.



Here is a look at the receivers in our area. Once you are signed up, you can use static data from any of these receivers to get a position on your portable base or consider them an additional receiver for your static session(s) even if you are using L1, single frequency receivers, provided you are within a reasonable distance to the receiver (15 miles or less depending on occupation time).

Connection: MOSF	
Receiver:	Trimble NETR5 (SN: 4839K58724, FW: Nav 3.63 / Boot 3.55)
Station-ID:	24
Point Number:	MOSF
Configuration:	Socket Client for 10.3.80.201:55000
Reference Position:	X = -286449.678 m Y = -5076040.937 m Z = 3839026.963 m
ITRF Transformation:	NAD83 - North America
Antenna:	Zephyr Geodetic 2 (Trimble)
Antenna Height:	Bottom of antenna mount h = 0.000 m
Elevation Cutoff:	5°
Tracking Rate:	1.0 sec
Scheduler for Receiver Data Storage:	Not active
Scheduler for Connection to	Not active

INSIDE THIS ISSUE

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MSU SURVEYING PROGRAM NEWS (AND NEEDS)

Brian Viele, PLS

Do you have an old total station laying around, collecting dust and taking up space? You're probably using GPS equipment or a robot to do all your work, anyway. The old total station is obsolete; it's just in the way, right? Well here's a solution to your problem: Donate that old instrument to the MSU surveying program!

(Seriously) The MSU Geography, Geology and Planning Department needs to acquire four or five total station instruments for the GRY 275 (Introduction to Plane Surveying) course. For the past few years, digital theodolites (without EDM capabilities) have been used in the class for angle measurement and steel tapes used for distance measurement. This has worked just fine, but there comes a time when upgrades are necessary. With help from our generous community of land surveyors and engineers, maybe we can turn the rusty wheels of state-run education and move the MSU GRY 275 course at least into the 20th Century.

Here's how you can help: If you have a total station or semi-total station that you're not using and you're tired of seeing it languish on the shelf, contact me and I will come pick it up (free of charge). It doesn't have to have data collection capabilities, just as long as it has a built-in EDM device and it's in decent working order. In return, you'll have the satisfaction of knowing that you've made a contribution to the education of our young students of surveying. (I believe you can still get a tax deduction for it, as well.)

On a side note, the GRY 275 course will have a new format beginning the Fall 2009 semester. Since MSU now offers a civil engineering program through Missouri University of Science and Technology (MS&T) at Rolla, civil engineering students will be taking the introductory surveying course at MSU. The influx of engineering students will at least double the usual enrollment for the course this year and an even larger class of students is likely the following year. For consistency with the MS&T program, MSU has adopted the CE001 surveying course taught at Rolla (which requires the use of total station instruments). I believe that having a civil engineering curriculum available here in Springfield will be good for the local industry. (It will also be an excellent opportunity for me to inject some land surveyor propaganda into the minds of future engineers!)

Over the years the MSPS Ozark Chapter members and area surveyors have been gracious supporters of the MSU surveying program. There have been a number of donations of money, equipment, advice, and personal time and effort. On behalf of MSU and the other surveying instructors (Jack, Don, Gary), I want to express our appreciation for your generosity and support. I know it's tough to even consider giving up anything in this time of economic woe and if you're unable to contribute, believe me, it's understood. Still, there's no harm in asking for help, is there? (Like my wife says, "What's the worst that could happen?")

Brian Viele
MSU GGP Surveying Instructor
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THE STATE FAIR IS COMING! THE STATE FAIR IS COMING!

Below is an excerpt from an email from Chris Wickern.

It's time to form the State Fair Committee. I'd like to have representatives from all parts of the State. Darrell as President and his personal involvement is a member, Sharon Herman as Chair of the Public Relations Committee is a member, and I am a member.

Darrell represents all parts of the State, and Sharon is from the East. I'm sure Don Bormann will volunteer (with a little arm twisting), giving us 2 from central Missouri.

I'm looking for suggestions for whom to contact from other parts of the State?

Christopher M. Wickern
PLS MO, RLS AZ, CFedS
Engineering Surveys & Services
1775 W. Main St.
Sedalia, MO 65301
660 826 8618 (voice)
660 826 6158 (fax)

MINUTES FROM MARCH 10, 2009

ATTENDANCE

Jack Dill, Travis Dill, Gary Bockman, Kevin Tyler, Pete Stevens, Paul Taylor, Debra Wolfe

I. Call to order

Kevin Tyler called to order the regular meeting of the **Ozark Chapter MSPS** at 6 pm on 3/10 at Western Sizzlin.

II. Approval of minutes from last meeting

Minutes were approved from February. Guest speaker, Miles Boyer, spoke about the “Salute to Construction” by the Home Builders Association (HBA). In the past, the Ozark Chapter President has served on the Salute to Construction Council. Miles would like to have our support this year. The HBA meets on the 4th Tuesday of the month at the Springfield Contractors Building at 1313 N. Nias.

III. Old Business

It was reported that Chris Strong is looking at some options for Farmfest giveaway items.

Nobody has heard about any State Board appointments.

A suggestion was made to have a hybrid laser scanner at the July Bar-B-Que.

MODOT GPS is up and running. It is being tested and may be usable by March 13. The stations are based on Cooperative CORS monuments and perhaps will be part of that NGS system.

IV. New business

Pete Stevens mentioned the spiral curve article from the last newsletter and asked for any input or criticism in case the article is used in the state newsletter.

Missouri GIS mapping law, Senate Bill 384 was discussed. Gary Bockman said the intent of the law is to make any cadastral layers in a GIS the responsibility of a surveyor. General discussion of the law included comments that the language used in it is confusing.

Adjournment

Kevin Tyler adjourned the meeting at 7:20.

Invitation for membership

Ozark Chapter MSPS annual dues are as Follows:
Member \$20.00 Student Member \$5.00
Associate Member \$5.00
Sustaining Member \$30.00

Education Committee:

*Peter Stevens - Chairman
pstevens@mai-eng.com*

Web Page Committee:

Steve Nelson, Gaylon Smith, Dick Cox

Please remit registration and fees to:

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Kevin Tyler- President

Paul Taylor – President-elect

Mike Gray – Vice-President

Jack Dill – Secretary-Treasurer

Directors – Stephen Nelson

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