Date: October 29, 2014

TO: Patrick.Curry@noaa.gov

Denise.e.Harper@noaa.gov

FROM: Earl F. Burkholder, PS, PE, F.ASCE email: eburk@globalcogo.com

President – Global COGO, Inc. url: <a href="www.globalcogo.com">www.globalcogo.com</a>
P.O. Box 3162 tel: (575) 532-6185

Las Cruces, NM 88003

RE: "BIG DATA at NOAA" – Solicitation ST-1330-14-RP-0039

These comments are in response to material posted October 28, 2014 under NOAA solicitation ST-1330-14-RP-0039. I have downloaded and read:

1. Attendee list – about 10% were NOAA personnel.

- 2. Power point presentation impressive.
- 3. Big Industry Day remarks.
- 4. Industry Notes.
- 5. Questions & Answers

In reading all that, I'm overwhelmed . . . even so, I invite your consideration of the following:

- 1. To the extent that Big Data share a spatial (or geospatial) component, enormous benefit can be realized if those location data (from disparate sources) share a common definition for both:
  - a. Geometry
  - b. Spatial data accuracy
  - c. The global spatial data model (GSDM) includes both. See previous correspondence.
- 2. Philosophical (and strategic) considerations include:
  - a. Details are important see emails of:
    - i). March 31, 2014 to Zhang and Harper
    - ii). May 29, 2014 to Curry and Harper
  - b. I am not as brave as the <u>sailor</u> who "challenged" the judgment of Admiral Sir Clowdisley Shovell in 1707 and paid with his life for insubordination. But, the digital revolution carries with it the opportunity to do things better than previous.
  - c. My area of expertise includes understanding and knowing how to compute 3-D digital spatial data accuracy. For example, see <a href="http://www.globalcogo.com/NetworkLocal.html">http://www.globalcogo.com/NetworkLocal.html</a>. Defective knowledge of same can be costly both in terms of life and property see <a href="http://www.globalcogo.com/sub.pdf">http://www.globalcogo.com/sub.pdf</a>
- 3. The posted Question & Answer material notes that "data processing" is one cause of data latency. That is legitimate and my point exactly. NOAA collects data from many sources, including satellite imagery, GPS data, LiDAR, and others. I find it hard to believe that you (NOAA) archive the "raw" data for subsequent use (and re-use). Many data are "pre-processed" in some manner. In reading the posted material, I see that NOAA is asking the user community for help in some of the challenges of getting everyone on the same page. In this case, my suggestion is that NOAA can do everyone a huge service by identifying the GSDM as the underlying standard that supports many valuable uses of BIG DATA. See my original email of March 31, 2014. How else can I help?