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TO: Spatial Data Policy Participants/Delegates

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RE: Foot Units in state statutes – for NM, see <http://www.globalcogo.com/Foot-SPCS.pdf>

As a life-long supporter of surveying and devoted to accommodating the impacts of the digital revolution, I have not been bashful about sharing insights with fellow professionals. Although I might look further ahead than some in the use of 3D digital spatial data, I am proud of my surveying experiences and aspire for surveying (and surveyors) to get the recognition we deserve as custodians/protectors of land ownership rights. Many talented professionals enjoy successful careers as land surveyors. Those insights, dedication, and service are truly remarkable.

But the landscape for surveying has changed remarkably with the digital revolution. Not only does the land surveyor need to learn/adapt to new technology and methods for “getting the job done,” surveyors must now compete with spatial data users who do great things with geographic information systems (GISs). In days gone by, the phrase “GIS means get it surveyed” was “cute.” Although GIS has matured as a discipline which now “drives the train,” the fact is that surveying is still responsible for the geometrical integrity of spatial data. Surveying services must remain relevant.

As if that were not enough, surveyors have always provided the foundational component of engineering projects built on the spatial data infrastructure. Modernization of the National Spatial Reference System (NSRS) by the National Geodetic Survey (NGS) is underway and critical to the continued integrity of spatial data applications nationally. The NSRS is the foundation that surveyors use in support of modern spatial data collection and processing activities. The NSRS products that NGS provides are essential to integrity and consistency in the use of 3D digital spatial data. If we as surveyors abdicate our responsibility, the artificial intelligence (AI) invasion will become increasingly insidious – see [Unmasking AI by Joy Buolamwini \(Audiobook\) - Read free for 30 days](#)

In short, there is much more at stake than just dictating use of the U.S. survey foot in the New Mexico state plane coordinate enabling legislation. Even though we surveyors enjoy being independent, surveying is a member of and provides an integral contribution to the accomplishments of multi-disciplinary teams – the international foot is seen as unifying while the U.S. survey foot is divisive. As a legacy unit, the U.S. survey foot joins a list of other legacy units (chains, poles, rods, varas, etc.) handled routinely by professional surveyors. The “foot” issue is also being considered in other states.

Concluding points:

1. All states should include use of the international foot in the state plane coordinate legislation designed to accommodate the SPCS2022.
2. Separately, the issue of bridging the gap between using 3D digital spatial data and “local” surveying practice is legitimate and needs to be addressed. The 3D global spatial data model (GSDM) is that bridge - see <http://www.globalcogo.com/GSDM-Alternative.pdf>.
3. Although transition will take time, disruptive innovation awaits no one and use of NSRS products will need periodic updating - see <http://www.globalcogo.com/ATandT-Story.pdf>.