

GIS Holds the Keys to the Future of Land Surveying.



RIGIS

Thirty Chapters of Amen-em-Ope son of Kanakht

Chapter 6 : Steal No Land And Eat From Your Own Field

- *Do not move the markers on the borders of fields.
Nor shift the position of the measuring-cord.
Do not be greedy for a cubit of land.
Nor encroach on the boundaries of a widow.
The trodden furrow worn down by time,
he who disguises it in the fields,
when he has snared (it) by false oaths,
he will be caught by the might of the Moon.*
- *And also from the same chapter:*
- *Beware of destroying the borders of fields,
lest a terror carry You away.
One pleases god with the might of the Lord,
when one discerns the borders of fields.*

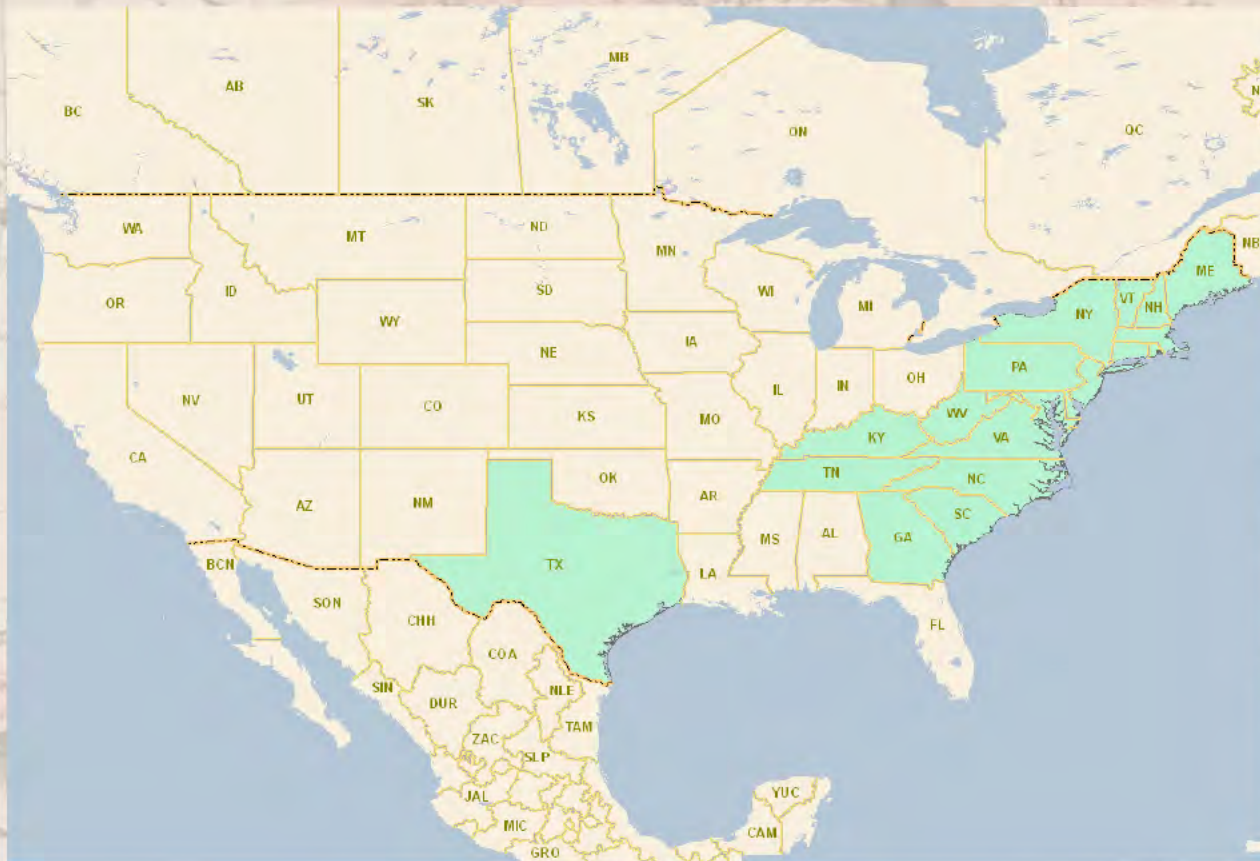




Three Surveyors and some other guy

Twenty states do not use the Public Land System

Connecticut, Delaware, Georgia, Hawaii, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, and West Virginia-



Proprietors, Land Companies, & Indians

Four Colonies (Massachusetts Bay, Plymouth, Rhode Island, & Connecticut) united to defeat the Narragansett Encampment here December 19, 1675



Recording of Surveys Not Required Surveyors Proprietary Information

- Surveyors are the ones responsible by law for the *Vector Component* of Boundaries and at the moment there is not a coherent system in place to utilize the electronic data surveyors produce.
- The “authoritative” delineation of boundaries is currently a hodgepodge of recorded documents to include survey maps.



BOUNDARIES

NOT RESPONSIBLE FOR BREAKAGE THROUGH TRANSPORTATION OR FOR GOODS S



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SURVEYORS ARE EXPERTS AT GATHERING AND EVALUATING MEASUREMENT AND FIELD EVIDENCE

Accuracy
-vs-
Precision



The Last P.I.

FOLLOW THE FOOT STEPS OF THE ORIGINAL SURVEYOR

THE TOOLS HAVE CHANGED



- Technology and the available tools have changed the way we gather and use survey data.
- Surveying as defined by state statutes similar from state to state.
- The legal definition of what surveying is in Rhode Island has not changed.
- NCEES Model Laws and Rules address Technology changes with a redefinition of surveying.



Construction

Hydrographic

Boundary



Geodesy

Photogrammetry

Forensic

GIS

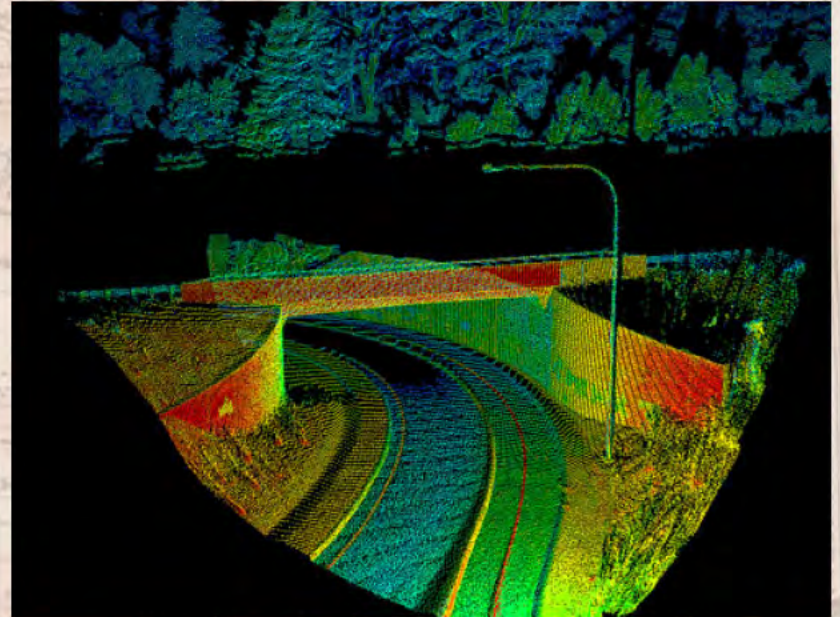
EXISTING PARADIGM

- Note Books
- Transit – Tape
- Total Station – EDM
- Paper – Mylar – Plans & Reports
- Line of Sight Surveying



PARADIGM SHIFT

- DATA COLLECTORS
- ELECTRONIC MEDIA
- GPS
- GIS
- LIDAR
- DRONES



A historical map of Rhode Island and its surrounding areas, including parts of Massachusetts, Connecticut, and New York. The map is titled 'The STATE of RHODE-ISLAND: compiled from the most authentic Observations of J. Harris. BY S. S. HARDING, 1810.' The map shows various towns, rivers, and geographical features. The text 'Authoritative Locations Require a Survey' is overlaid in large blue letters.

Authoritative Locations Require a Survey

Zoning map is authoritative statement about what can be done on either side of a boundary
...not about the location of the boundary itself

There is a subtle difference between compiled survey information from record documents and an accurate boundary retracement survey.

The electronic compilation of existing survey plans of record is not “Authoritative” to the boundary lines.

SURVEYORS CREATE AUTHORITATIVE DATA



***“Authoritative
Cadastral
Geodatabase”***

GIS IS BETTER AT DATA MANAGMENT

COORDINATES

•UNDISTURBED MONUMENTS CONTROL



1846	42°-01'-08.60"	71°-23'13.26"
1883	42°-01'-07.26"	71°-22'54.26"
1898	42°-01'-08.35"	71°-22'54.51"
1905	42°-01'-08.35"	71°-22'54.51"
1927	42°-01'-08.15"	71°-22'54.64"
1983	42°-01'-08.17"	71°-22'52.78"
2004	42°-01'-08.18"	71°-22'52.78"

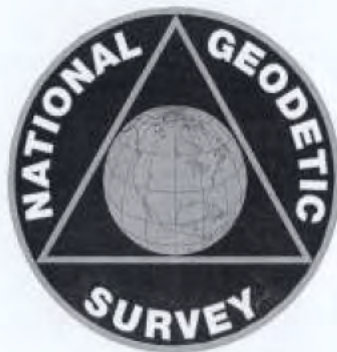


BURNTSWAMP CORNER

•BURNT SWAMP CORNER SET IN 1883
5'3"x9"x9" SET IN RUBBLE MASONARY
FOUNDATION 6'x6'x2' THE BOTTOM
BEING 5'-0" BELOW MEADOW AND ON
BLUE CLAY.

A MESSAGE FROM NOAA

**GOOD COORDINATION BEGINS WITH
GOOD COORDINATES**



GEOGRAPHY WITHOUT GEODESY IS A FELONY



SURVEYORS / GIS
TWO SIDES OF THE SAME COIN



A “Domesday” approach to creating an *“Authoritative Cadastral Geodatabase”* would create an economic stimulus equivalent to the infrastructure construction projects of FDR’s Works Projects Administration (WPA) in the 1930’s.

This century’s infrastructure is Geospatial ~ the Spatial Data Infrastructure (SDI). The building and restructuring of the SDI has the potential to lift us out of the current economic depression. The relevant multipurpose uses and economic benefits that would be derived from modeling our world in such a manner are enormous.

The building of an “Authoritative Cadastral Geodatabase” is this centuries WPA sidewalks. Can we afford not to do it?

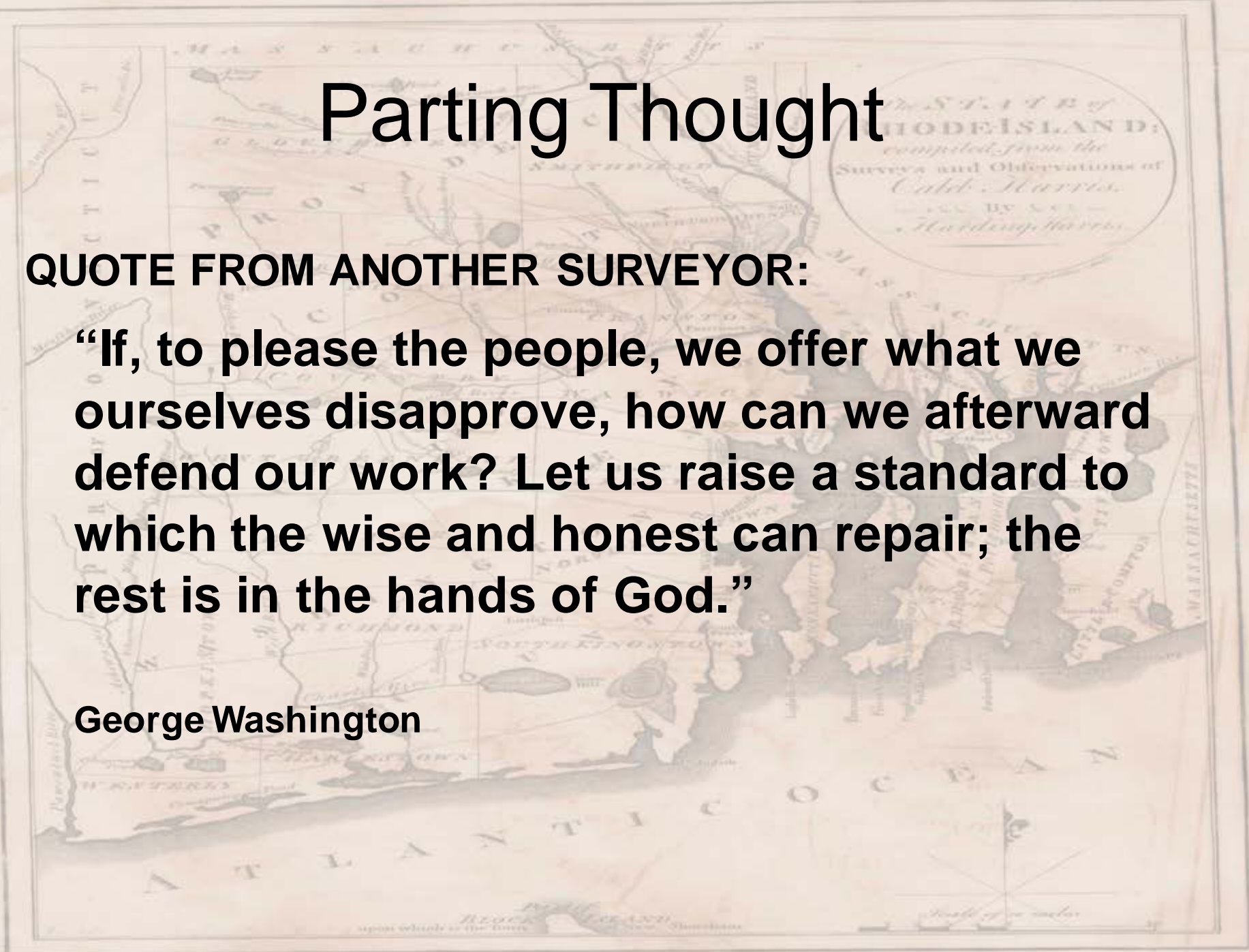


Parting Thought

QUOTE FROM ANOTHER SURVEYOR:

“If, to please the people, we offer what we ourselves disapprove, how can we afterward defend our work? Let us raise a standard to which the wise and honest can repair; the rest is in the hands of God.”

George Washington



- TRI-STATE - STATE LINE BOUND -
N42° 00' 28.98816" / W071° 47' 57.04736"



THANK YOU !

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