

1 **DISCLAIMER**

I Am Not Your Attorney.

This seminar is not intended to provide you with legal advice. Seek legal advice from an attorney who is familiar with your particular situation and the facts in your particular case. The example contract clauses contained herein (if any) are intended as examples only and should be reviewed and modified by competent legal counsel to reflect variations in applicable state and local law specific to your circumstances.

2 **RELEVANCY IN THE 21ST CENTURY**

Are we Destined to become the Buggy Whip Manufacturers of the 21st Century?

3 **RELEVANCY IN THE 21ST CENTURY**

Technology Made Them Obsolete.

4 **RELEVANCY IN THE 21ST CENTURY**

They Became Fodder for Museum Displays.

5 **RELEVANCY IN THE 21ST CENTURY**

They Became Fodder for Museum Displays.

6 **RELEVANCY IN THE 21ST CENTURY**

Look familiar?

7 **WHO MOVED MY CHEESE**

CHANGES IN THE PRACTICE OF LAND SURVEYING ARE INEVITABLE:

How we deal with the change is what matters.

8 **WHO MOVED MY CHEESE**

"Finally, one day Haw began laughing at himself. 'Haw, haw, look at us. We keep doing the same things over and over again and wonder why things don't get better. If this wasn't so ridiculous, it would be even funnier.'"

Johnson, Spencer, M.D., *Who Moved my Cheese?*, G.P. Putnam's Sons, New York, 1998, at 43.

9 **WHO MOVED MY CHEESE**

THE HANDWRITING ON THE WALL:

- Change Happens – They keep moving the cheese.
- Anticipate Change – Get ready for the cheese to move.
- Monitor Change – Smell the cheese often so you know when it is getting old.
- Adapt to Change Quickly – The quicker you let go of old cheese, the sooner you can enjoy new cheese.

Johnson, Spencer, M.D., *Who Moved my Cheese?*, G.P. Putnam's Sons, New York, 1998, at 74.

10 **WHO MOVED MY CHEESE**

THE HANDWRITING ON THE WALL:

- Change – Move with the cheese.
- Enjoy Change – Savor the adventure and enjoy the taste of new cheese.
- Be Ready to Change Quickly and Enjoy it Again & Again – They keep moving the cheese.

Johnson, Spencer, M.D., *Who Moved my Cheese?*, G.P. Putnam's Sons, New York, 1998, at 74.

11 **WHO MOVED MY CHEESE**

"It is extremely likely that virtually anyone will be able to achieve positions accurate to less than half-meter (some believe even as little as 10 cm), in real-time at the 95% confidence level, and this will be possible in the not-so-distant future. Research indicates this may be achievable without the need for any form of terrestrial augmentation (CORS, RTN, the FAA's WAAS, DGPS, or observations at passive control points), and that these observations will be made with relatively inexpensive units that could be whatever will pass as a smartphone in 2020."

David Doyle, *A New Datum*, Professional Surveyor Magazine, August 2013 at 14.

12 **THE GEOSPATIAL COMMUNITY**

"In order to safeguard life, health, and property and to promote the public welfare, the practice of land surveying in this state is a learned profession to be practiced and regulated as such, and its practitioners in this state shall be held accountable to the state and members of the public by high professional standards in keeping with the ethics and practices of the other learned professions in this state...."

Code of Ala.1975, Sec.31-11-2(c).

13 **THE GEOSPATIAL COMMUNITY**

"(1) In order to safeguard the life, health, property and welfare of the public and to establish and maintain a high standard of integrity, skills, and practice in the professions of engineering and land surveying, the following Rules of Professional Conduct are promulgated in accordance with O.C.G.A. 43-15-6(1). ..."

Georgia Admin. Code, Sec. 180-6-.01.

14 **THE GEOSPATIAL COMMUNITY**

"To be a successful professional surveyor, one must have more than a narrow technical education. Technical education has to do with things. Employees at a lower professional scale deal with things; professionals deal with people, situations, and ideas."

Evidence and Procedures, 5th Edition, Page 484.

15 **THE GEOSPATIAL COMMUNITY**

“The surveyor, having made an evaluation of the evidence, forms an opinion as to where he believes the lines would be located if fully adjudicated in a court of law. The typical modern day surveyor sees himself as an expert evaluator of evidence. He strives to arrive at the same opinion of boundary location regardless of whether he was hired by his client or his client’s next door neighbor.”

Williams & Onsrud, What Every Lawyer Should Know about Title Surveys, Reprinted in “Land Surveys, A Guide for Lawyers,” Real Property and Trust Law Section American Bar Association, 1986.

16 **COBB’S VALUE CURVE**

17 **COBB’S VALUE CURVE**

DETAILED FUNCTIONS:

1. The determination of the size and shape of the earth and the measurement of all data needed to define the size, position, shape and contour of any part of the earth and monitoring any change therein.
2. The positioning of objects in space and time as well as the positioning and monitoring of physical features, structures and engineering works on, above or below the surface of the earth.
3. The development, testing and calibration of sensors, instruments and systems for the above mentioned purposes and other surveying purposes.
4. The acquisition and use of spatial information from close range, aerial and satellite imagery and the automation of these processes.
5. The determination of the position of the boundaries of public or private land, including national and international boundaries, and the registration of those lands with the appropriate authorities.
6. The design, establishment and administration of geographic information systems (GIS) and the collection, storage, analysis, management, display and dissemination of data.
7. The analysis, interpretation and integration of spatial objects and phenomena in GIS, including the visualisation and communication of such data in maps, models and mobile digital devices.
8. The study of the natural and social environment, the measurement of land and marine resources and the use of such data in the planning of development in urban, rural and regional areas.
9. The planning, development and redevelopment of property, whether urban or rural and whether land or buildings.
10. The assessment of value and the management of property, whether urban or rural and whether land or buildings or landed interests.
11. The planning, measurement and management of construction works, including

the estimation of costs.

18 **COBB'S VALUE CURVE**

COMMODITY SERVICES:

1. The determination of the size and shape of the earth and the measurement of all data needed to define the size, position, shape and contour of any part of the earth and monitoring any change therein.
2. The positioning of objects in space and time as well as the positioning and monitoring of physical features, structures and engineering works on, above or below the surface of the earth.
3. The development, testing and calibration of sensors, instruments and systems for the above mentioned purposes and other surveying purposes.
4. The acquisition and use of spatial information from close range, aerial and satellite imagery and the automation of these processes.
5. The determination of the position of the boundaries of public or private land, including national and international boundaries, and the registration of those lands with the appropriate authorities.
6. The design, establishment and administration of geographic information systems (GIS) and the collection, storage, analysis, management, display and dissemination of data.
7. The analysis, interpretation and integration of spatial objects and phenomena in GIS, including the visualisation and communication of such data in maps, models and mobile digital devices.
8. The study of the natural and social environment, the measurement of land and marine resources and the use of such data in the planning of development in urban, rural and regional areas.
9. The planning, development and redevelopment of property, whether urban or rural and whether land or buildings.
10. The assessment of value and the management of property, whether urban or rural and whether land or buildings or landed interests.
11. The planning, measurement and management of construction works, including the estimation of costs.

19 **WHERE WE GO FROM HERE**

BRAND NAME SERVICES:

2. The positioning of objects in space and time as well as the positioning and monitoring of physical features, structures and engineering works on, above or below the surface of the earth.
3. The development, testing and calibration of sensors, instruments and systems for the above mentioned purposes and other surveying purposes.
5. The determination of the position of the boundaries of public or private land, including national and international boundaries, and the registration of those lands with the appropriate authorities.
9. The planning, development and redevelopment of property, whether urban or rural

and whether land or buildings.

10. The assessment of value and the management of property, whether urban or rural and whether land or buildings or landed interests.

11. The planning, measurement and management of construction works, including the estimation of costs.

20 **WHERE WE GO FROM HERE**

EXCLUSIVE SERVICES:

5. The determination of the position of the boundaries of public or private land, including national and international boundaries, and the registration of those lands with the appropriate authorities.

21 **RELEVANCY IN THE 21ST CENTURY**

Ten Significant Problems Facing the Land Surveying Profession

22 **RELEVANCY IN THE 21ST CENTURY**

1. AN UN-EXPLOITED NICHE

We have an Exclusive Service that no one else can offer and we sell it for pennies on the dollar.

23 **STEELE v. CALLAHAN**

Indiana Court of Appeals

970 N.E.2d 799

July 17, 2012

24 **RELEVANCY IN THE 21ST CENTURY**

2. WE ARE AFRAID OF PROPERTY LINES

We are the only profession licensed and qualified to deal with the on-the-ground location of property lines, but we are not dealing with the on-the-ground location of property lines.

25 **RELEVANCY IN THE 21ST CENTURY**

Surveying Property:

"In keeping with recent legal decisions, we have somewhat modified some of the terminology. For instance, seldom is the term *property line* or *property boundary* used. It is our belief that property rights, including property boundaries, are legal questions and as such are not addressed by land surveyors. Surveyors locate boundaries, or land boundaries or deed lines. They do not and cannot locate property rights."

Robillard, Walter G., Donald Wilson, Evidence and Procedures for Boundary Location, Sixth Edition, 2011, John Wiley & Sons, Inc., Hoboken, New Jersey, at 2.

26 **RELEVANCY IN THE 21ST CENTURY**

Surveying Property:

"One of the reasons for giving surveyors the exclusive privilege of marking

boundaries is to prevent the unskilled from monumenting lines that encroach on the bona fide rights of others.”

Brown, Curtis M., *The Professional Status of Land Surveyors*, 1961, “Surveying and Mapping,” Vol. XXI, No. 1, at 63-71.

27 **RELEVANCY IN THE 21ST CENTURY**

Surveying Property:

“The surveyor does have moral obligations to the public and among them is the duty to never subtract from the rights of adjoiners. Every boundary survey for a client establishes the boundary of an adjoiner.”

Brown, Curtis M., *The Professional Status of Land Surveyors*, 1961, “Surveying and Mapping,” Vol. XXI, No. 1, at 63-71.

28 **McGHEE v. YOUNG**

Florida Court of Appeals

606 So.2d 1215

October 7, 1992

29 **HARRIS v. ROBERTSON**

Supreme Court of Arkansas

813 S.W.2d 252

July 8, 1991

30 **RELEVANCY IN THE 21ST CENTURY**

3. WE ARE A HOUSE DIVIDED

We are divided over the Fundamental Precepts of land surveying.

31 **RELEVANCY IN THE 21ST CENTURY**

A House Divided:

“Every kingdom divided against itself is brought to desolation; and every city or house divided against itself shall not stand.”

Matthew 12:25, King James

32 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

- You are either and original surveyor laying out the property lines for the very first time, or you are a following surveyor finding where the lines have already been established on the ground.

33 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

- But we can't agree on who the original surveyor was. Was it the first surveyor to draw a line on a map or the first surveyor to attempt to put the lines on the ground?

34 **KNERR v. MAULDIN**

California Court of Appeals
Second Appellate Division
Division Six
2006 Cal.App.Unpub. LEXIS 6749
August 2, 2006

35 **From the CLSA Amicus Brief**

The Superior Court sought to determine the location of the boundary in question by assessing which testimony was "more credible." Although it paid lip service to the concept of "following in the footsteps" of the original surveyor--being one Mr. Davy who, in 1926, surveyed the boundary of Chatsworth Lake View Annex and created the protracted lots within--it does not appear to have understood how that is done.

36 **From the CLSA Amicus Brief**

The Superior Court refused to recognize the importance of actually retracing the original surveyor's 1926 work, instead accepting the boundary location of respondent's surveyor, South Bay Engineering.... If this Court adopts the Superior Court's approach to determining boundaries, property rights will rest on witness credibility assessments at trial, instead of on proper survey procedure and boundary control, and the quest for evidence of the original surveyor's work.

37 **From the CLSA Amicus Brief**

The advance of technology has allowed for the increase in precision and reliability of locating evidence with ever-increasing efficiency. It must be made clear that simply locating or collecting evidence is not boundary surveying. Evaluation and interpretation of the collected evidence is what constitutes boundary surveying. It is possible to locate a boundary in the wrong location with a high degree of precision.

38 **From the CLSA Amicus Brief**

Primary Authorities Cited in the CLSA Brief:

- *De Escobar v. Isom* (1952) 112 Cal.App.2d 172, quoting *Diehl v. Zanger*, 39 Mich 601 (1878).
- *Bullard v. Kempff* (1897) 119 Cal. 9, 15 quoting *Diehl, supra*.

39 **From Diehl v. Zanger**

"The plaintiffs in error submitted evidence conducing to show, among other things, that lots thirty-nine and forty, as well as other contiguous lots in the subdivision, had for twenty years and upwards been identified and defined in their position and extent upon the ground by buildings, fences and harmonious occupancy, and that at the very time of the grant to defendants in error the physical evidences of recognized and long admitted bounds which plaintiffs in error contend for, were visible and apparent to everybody."

Diehl v. Zanger, 1878 Mich.LEXIS 375 (Mich.1878). Opinion by Cooley

40 **From Diehl v. Zanger**

“There was no conflicting evidence in regard to these facts. They were not disputed, and there is no evidence that the practical locations and proprietary and possessory recognitions ever deviated until after the remarkable results of the late survey.”

Diehl v. Zanger, 1878 Mich.LEXIS 375 (Mich.1878). Opinion by Cooley

41 **From Diehl v. Zanger**

“This litigation grows out of a new survey recently made by the city surveyor. This officer after searching for the original stakes and finding none, has proceeded to take measurements according to the original plat, and to drive stakes of his own. According to this survey the practical location of the whole plat is wrong, and all the lines should be moved between four and five feet to the east.”

Diehl v. Zanger, 1878 Mich.LEXIS 375 (Mich.1878). Opinion by Cooley

42 **From Diehl v. Zanger**

“Nothing is better understood than that few of our early plats will stand the test of a careful and accurate survey without disclosing errors. This is as true of the government surveys as of any others, and if all the lines were now subject to correction on new surveys, the confusion of lines and titles that would follow would cause consternation in many communities.”

Diehl v. Zanger, 1878 Mich.LEXIS 375 (Mich.1878). Opinion by Cooley

43 **From Diehl v. Zanger**

“Indeed the mischiefs that must follow would be simply incalculable, and the visitation of the surveyor might well be set down as a great public calamity.”

Diehl v. Zanger, 1878 Mich.LEXIS 375 (Mich.1878). Opinion by Cooley

44 **From Diehl v. Zanger**

“The surveyor has mistaken entirely the point to which his attention should have been directed. The question is not how an entirely accurate survey would locate these lots, but how the original stakes located them.”

Diehl v. Zanger, 1878 Mich.LEXIS 375 (Mich.1878). Opinion by Cooley

45 **From Diehl v. Zanger**

“No rule in real estate law is more inflexible than that monuments control course and distance—a rule that we have frequent occasion to apply in the case of public surveys, where its propriety, justice and necessity are never questioned.”

Diehl v. Zanger, 1878 Mich.LEXIS 375 (Mich.1878). Opinion by Cooley

46 **California Law**

"Where, as here, there is an established interior monument near the lots being surveyed, it is that monument that should be used. (See, e.g., *State of California v. Thompson* (1971) 22 Cal. App. 3d 368, 379, 99 Cal. Rptr. 594 ["Although respondent contends that [appellant's surveyor] ought to have commenced his survey from the east in order to literally 'follow in the footsteps' of [the original surveyor], this argument is without merit. A survey from the nearest established corner is least liable to error."

Knerr v. Mauldin, 2006 Cal.App.Unpub. LEXIS 6749 (Cal.App.2006).

47 **California Law**

"If the position of the line always remained to be ascertained by measurement alone, the result would be that it would not be a fixed boundary, but would be subject to change with every new measurement. Such uncertainty and instability in the title to land would be intolerable."

Young v. Blakeman, 95 P. 888 (Cal.1908).

48 **California Law**

"As we view the case, however, the sole and only question for determination, in so far as the rights of plaintiffs (who are respondents here) are concerned, is whether the description contained in this deed, corrected as above stated, embraces the parcel of land in dispute. The deed, in so far as it purports to describe the tract of land conveyed by the city to Bonilla is free from ambiguity or uncertainty."

Hunt v. Barker, 151 P. 165 (Cal.App.1915).

49 **California Law**

"If in running the lines as called for upon the ground it should appear that the calls of distance and course are in fact inconsistent with natural monuments called for, then such calls as to distance and course must, under the well-recognized rule, yield to the latter, provided the location of such monuments can be found."

Hunt v. Barker, 151 P. 165 (Cal.App.1915).

50 **California Law**

"And the same is true with reference to natural boundaries, since they, as well as monuments, control calls of courses and distances in conflict therewith. *Bland v. Smith* (Tex. Civ. App.) 26 S.W. 773; *Stoll v. Beecher*, 94 Cal. 1,29 P. 332; *Kimball v. McKee*, 149 Cal. 435, 86 P. 1089; 4 Am. & Eng. Encyc. Law, p. 765."

Hunt v. Barker, 151 P. 165 (Cal.App.1915).

51 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

"The surveyor who is attempting to relocate a tract of land must remember that the original survey is presumed to be absolutely correct, no matter how inaccurately the work may have been done. Thus, wherever an original corner can be found, that corner shall be considered correctly located."

Clark, Frank Emerson, *Fundamentals of Law for Surveyors*, 1939, International Textbook Company, Scranton, Penn. at 23.

52 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

"In re-establishing the lines of a survey the footsteps of the original surveyor should be followed, and it is immaterial that the lines actually run by him are not correct. Courses and distances yield to natural monuments and boundaries. This rule is so strict that even the government itself cannot question it."

Calder v. Hillsboro Land Co., 122 So.2d 445 (Fla.App.1960).

53 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

"A survey of a description does not determine title to land but seeks to find and identify the land embraced within the description. In resurveying a tract of land according to a former plat or survey, the surveyor's only function or right is to relocate, upon the best evidence obtainable, the corners and lines at the same places where originally located by the first surveyor on the ground."

Gilbert v. Geiger, 747 N.W.2d 188 (Wisc.App.2008).

54 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

"That is, Rushing did not attempt to locate the original boundary line; he simply tried to restore the shortage that arose due to the floating error by establishing a new line. The court also found this practice to be in conflict with established land survey practices, where surveyors try to retrace old boundaries by 'walking in the shoes of the original surveyor' and 'following in the tracks of the original surveyor.'"

In Re: Boundary Dispute Between Lots 97 & 98, 681 S.E.2d 553 (N.C.App.2009).

55 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

"That is, Rushing did not attempt to locate the original boundary line; he simply tried to restore the shortage that arose due to the floating error by establishing a new line. The court also found this practice to be in conflict with established land survey practices, where surveyors try to retrace old boundaries by 'walking in the shoes of the original surveyor' and 'following in the tracks of the original surveyor.'"

In Re: Boundary Dispute Between Lots 97 & 98, 681 S.E.2d 553 (N.C.App.2009).

56 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

- Despite every court in every jurisdictions saying, basically, the same thing, land surveyors had to interject a new surveyor-contrived concept—the “first surveyor” concept.

57 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

“At times, the surveyor must determine whether he or she is retracing an ‘original survey’ or a ‘first survey.’ ... Initially the surveyor must determine whether the creating surveyor actually ran the creating line and then reduced the survey to notes or the description was created on paper and then a surveyor subsequently placed that description on the ground.”

Robillard, Walter G., Donald Wilson, Curtis M. Brown, *Evidence and Procedures for Boundary Location*, Fifth Edition, 2006, John Wiley & Sons, Inc., Hoboken, New Jersey, at 310.

58 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

“When a parcel or parcels are created on paper, without a survey being conducted, and the surveyor is later requested to place one of these paper-described parcels on the ground, this survey should be considered the ‘first’ survey, in that it is the first survey to be placed on the ground after the description.”

Robillard, Walter G., Donald Wilson, Curtis M. Brown, *Evidence and Procedures for Boundary Location*, Fifth Edition, 2006, John Wiley & Sons, Inc., Hoboken, New Jersey, at 310.

59 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

“The difference is that whereas the original survey controls, the first survey is nothing more than an opinion by the surveyor of where the written description should be placed. As such, it is always open to collateral attack.”

Robillard, Walter G., Donald Wilson, Curtis M. Brown, *Evidence and Procedures for Boundary Location*, Fifth Edition, 2006, John Wiley & Sons, Inc., Hoboken, New Jersey, at 310.

60 **RELEVANCY IN THE 21ST CENTURY**

The results of this philosophy are not hard to find. The pincushion corner is the physical manifestation of our collective confusion over our duties and responsibilities towards property boundaries.

61 **RELEVANCY IN THE 21ST CENTURY**

“Always open to collateral attack.”

Robillard, Walter G., Donald Wilson, Curtis M. Brown, *Evidence and Procedures for Boundary Location*, Fifth Edition, 2006, John Wiley & Sons, Inc., Hoboken, New Jersey, at 310.

62 **RELEVANCY IN THE 21ST CENTURY**

Fundamental Precepts:

"If the position of the line always remained to be ascertained by measurement alone, the result would be that it would not be a fixed boundary, but would be subject to change with every new measurement. Such uncertainty and instability in the title to land would be intolerable."

Young v. Blakeman, 95 P. 888 (Cal.1908).

63 **DYKES v. ARNOLD**

COURT OF APPEALS OF OREGON

129 P.3d 257

February 8, 2006

64 **RELEVANCY IN THE 21ST CENTURY**

4. WE HAVE AN INFERIOR PROFESSION

Our Low Standards of Practice, have turned us into an inferior profession with too many examples of unethical behavior.

65 **RELEVANCY IN THE 21ST CENTURY**

Low Standards of Practice:

"Without superior knowledge, we have an inferior profession. ... The major deterrent to our becoming a learned profession is our low requirements for the right to practice. So long as we have low admission requirements, we will have low standards of practice and low public opinion."

Brown, Curtis M., *The Professional Status of Land Surveyors*, 1961, "Surveying and Mapping," Vol. XXI, No. 1, at 63-71.

66 **BUTLER V. COYLE**

Washington Court of Appeals

Case No. 29198-7-111, 29517-6-111

February 2, 2013

67 **RELEVANCY IN THE 21ST CENTURY**

Ethical Issues as a Result of Our Low Standards:

- Because of our low standards of practice and low admission requirements, we have too many examples of unethical behavior.

68 **RELEVANCY IN THE 21ST CENTURY**

"When a surveyor is employed to establish the position of a point or line in which two or more persons are interested he should act as an honorable, unprejudiced party and seek to find the true position, regardless of consequences. ... It is therefore of the utmost importance that the surveyor should act in the same manner as does a judge

on the bench rather than as a partisan employee of one of the persons concerned. By performing his duties in this way, the surveyor makes friends and also gains the reputation of being just.”

Clark, Frank Emerson, *Fundamentals of Law for Surveyors*, 1939, International Textbook Company, Scranton, Penn. at 1.

69 **RELEVANCY IN THE 21ST CENTURY**

“Ethics are often unenforceable. True professional stature arises from obedience to the unenforceable.”

Brown, Curtis M., *The Professional Status of Land Surveyors*, 1961, “*Surveying and Mapping*,” Vol. XXI, No. 1, at 63-71.

70 **ROLLY MARINE**

v.

McLAUGHLIN ENGINEERING

Florida Court of Appeals, Fourth District

49 So.3d 823

December 1, 2010

71 **ROLLY MARINE v. McLAUGHLIN ENG.**

“Surveyors again moved to dismiss. First they argued the new pleading was an improper attempt to circumvent the order dismissing the second amended complaint ‘with prejudice.’ All claims, they further contended, are barred by the economic loss rule (ELR). Next they contended that surveyors are not ‘professionals’ within the meaning of the Florida Supreme Court’s exemption from the ELR.”

Rolly Marine v. McLaughlin Engineering, 49 So.3d 823 (Fla.App.2010).

72 **ROLLY MARINE v. McLAUGHLIN ENG.**

“In *Moransais* ... the court held that the ELR may not be applied to ‘professionals.’

Surveyors argue that, when the surveys were performed and certified, they were not deemed professionals for purposes of application of the ELR.”

Rolly Marine v. McLaughlin Engineering, 49 So.3d 823 (Fla.App.2010).

73 **RELEVANCY IN THE 21ST CENTURY**

5. WE LICENSE THE MINIMALLY COMPETENT

Once licensed, the minimally competent are then allowed to perform the equivalent of open-heart surgery.

74 **RELEVANCY IN THE 21ST CENTURY**

Minimally Competent:

- Why aren’t we treated like the doctors and the lawyers?
- Because we don’t act like the doctors and the lawyers.

75 **JONES v. GRESHAM**

Mississippi Court of Appeal

965 So.2d 581

August 21, 2007

76 **RELEVANCY IN THE 21ST CENTURY**

6. WE ARE TRAINING TECHNICIANS NOT PROFESSIONALS

We are teaching our student surveyors How to be Technicians, not professionals.

77 **RELEVANCY IN THE 21ST CENTURY**

Professionals or Technicians:

- As a general proposition, our geomatics programs are not teaching students how to be professional surveyors; they are teaching about things, GIS, CAD programs, computations, remote sensing, etc.

78 **RELEVANCY IN THE 21ST CENTURY**

Professionals or Technicians:

- What is the difference between being a professional and being a mere technician?
- The BIG THREE are (1) Clergy, (2) Doctors, and (3) Lawyers. What separates the big three from the rest?

79 **RELEVANCY IN THE 21ST CENTURY**

Professionals or Technicians:

"To be a successful professional surveyor, one must have more than a narrow technical education. Technical education has to do with things. Employees at a lower professional scale deal with things; *professionals deal with people, situations, and ideas.*"

Robillard, Walter G., Donald Wilson and Curtis Brown, *Evidence and Procedures for Boundary Location*, Fifth Edition at 484.

80 **RELEVANCY IN THE 21ST CENTURY**

Technicians Deal with Things:

- Introduction to Geomatics
- Introduction to Surveying Instruments
- Introduction to Maps and GIS
- Measurement Science
- Surveying Computations
- Plane Surveying (Math)
- Automated Surveying and Mapping
- Engineering and Construction Surveying
- Geodetic Positioning Systems (GPS)
- GIS Applications
- GPS for Mappers
- Geodesy and Geodetic Coordinates
- Mapping by Photogrammetry and Remote Sensing
-
-

81 **RELEVANCY IN THE 21ST CENTURY**

Professionals Deal with:

- Things such as Facts
- People
- Situations
- Ideas

Add:

- A special relationship with client. A Trust.

82 **RELEVANCY IN THE 21ST CENTURY**

Professionals or Technicians:

- Since the land surveyor's exclusive jurisdiction is the performance of professional services relative to the on-the-ground location of real property boundaries, not only must the professional land surveyor deal with the people and the situation, but with the ideas that are in play.

83 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

"The Surveyor in the field has no opportunity to consult authorities, to counsel with others, or hold under advisement for subsequent adjudication. He must think and act for himself, and that quickly and firmly. In the discharge of his duties he combines the three-fold character of attorney, jury and judge. Of attorney, in bringing out and collecting the evidence; of jury, in determining the facts from the evidence; and of judge, in applying the law to the facts so ascertained."

Enos, A.Z., *The Early Surveyors and Surveying in Illinois*, 1891, Springfield Printing Company, Springfield, Illinois at 7.

84 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

"I have generally found that this line of reasoning appeals pretty strongly to all parties interested and that there is general willingness to abide by a decision so reached. The fact that you have been willing to collect all data possible and hear all side of the case begets confidence, and the rest is largely a matter of common sense."

Mulford, A.C., "Boundaries and Landmarks," 1912, D.Van Nostrand Co., New York, at 42-43.

85 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

"If, however, the evidence for and against re-locating an old line in a certain place is pretty evenly divided, it is my belief that a conference of all parties interested should be arranged with a view to establish a line by agreement, as a sure and safe way of preserving the peace and fixing the boundary for years to come."

Mulford, A.C., "Boundaries and Landmarks," 1912, D.Van Nostrand Co., New York, at 42-43.

86 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

"In an old settled country, the principal work of the surveyor is to retrace old boundary lines, find old corners, and relocate them when lost. In performing this duty, he exercises, to a certain extent, judicial functions. He usually takes the place of both judge and jury, and acting as arbiter between adjoining proprietors, decides both the law and the facts in regard to their boundary lines."

Hodgman, F., M.S., C.E., *A Manual of Land Surveying*, The F. Hodgman Co., Climax, Mich. 1913, at Page 289.

87 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

"He does this not because of any right or authority he may possess, but because the interested parties voluntarily submit their differences to him as an expert in such matters, preferring to abide by his decisions rather than go to law about it."

Hodgman, F., M.S., C.E., *A Manual of Land Surveying*, The F. Hodgman Co., Climax, Mich. 1913, at Page 289.

88 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

"Surveyors and engineers should be acquainted with those laws and practices that are closely associated with their profession. They should be familiar with their legal rights, responsibilities, liabilities, and duties under various circumstances."

Clark, Frank Emerson, *Fundamentals of Law for Surveyors*, 1939, International Textbook Company, Scranton, Penn. at 1.

89 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

"The surveyor is a professional man, and the laws pertaining to the rights and liabilities of professional men apply, in a general way, to him. When a surveyor is employed professionally by a private party, he is expected to exercise the degree of care that would be exercised under the same or similar circumstances by a skilled surveyor of ordinary prudence. For failure to exercise such care, he can be held liable in damages, to the extent of the injury to the employer."

Clark, Frank Emerson, *Fundamentals of Law for Surveyors*, 1939, International Textbook Company, Scranton, Penn. at 1.

90 **RELEVANCY IN THE 21ST CENTURY**

The Ideas that are in Play:

- Real Property Law
 - Estates in Land
 - Easements and Rights-of-Way
 - Deeds and Conveyances
 - Real Property Title and Recording Statutes

- Property Rights and Remedies

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91 **RELEVANCY IN THE 21ST CENTURY**

The Ideas that are in Play:

- Boundary Law
 - The Boundary Establishment Doctrines
 - Monuments and Corners
 - The Public Land Surveying System
 - Lot and Block Surveying
 - Metes and Bounds Surveying
 - Water Boundaries

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92 **RELEVANCY IN THE 21ST CENTURY**

The Ideas that are in Play:

- Liabilities and Limitations on Liability
 - Standard of Care
 - Professional Negligence
 - Trespass
 - Fraud
 - Slander of Title
 - Statutes of Limitations
 - Discovery Rule
 - Repose

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93 **RELEVANCY IN THE 21ST CENTURY**

The Ideas that are in Play:

- Evidence and Procedures
 - Applicable Rules of Evidence
 - The Ultimate Issue Rule
 - Evidence Gathering
 - Evidence Evaluation
 - Evidence Standards
 - Weighing the Evidence
 - Rendering a Well-Reasoned Opinion on the Ultimate Issue

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94 **RELEVANCY IN THE 21ST CENTURY**

The Ideas that are in Play:

- Alternative Dispute Resolution
 - Conflict Resolution
 - Mediation
 - Boundary Line Agreements
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95 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

“When a surveyor is employed to establish the position of a point or line in which two or more persons are interested he should act as an honorable, unprejudiced party and seek to find the true position, regardless of consequences.”

Clark, Frank Emerson, Fundamentals of Law for Surveyors, 1939, International Textbook Company, Scranton, Penn. at 1.

96 **RELEVANCY IN THE 21ST CENTURY**

What Did the Patriarchs of Surveying Think:

“It is therefore of the utmost importance that the surveyor should act in the same manner as does a judge on the bench rather than as a partisan employee of one of the persons concerned. By performing his duties in this way, the surveyor makes friends and also gains the reputation of being just.”

Clark, Frank Emerson, Fundamentals of Law for Surveyors, 1939, International Textbook Company, Scranton, Penn. at 1.

97 **RELEVANCY IN THE 21ST CENTURY**

The Trust:

- Land surveyors are, or should be, the stewards of the nation’s property boundaries, giving equal consideration to the interests of his client and well as the adjoining property owner. The land surveyor advocates for the true property line and honors *bona fide* rights acquires in good faith. Borrowing from the Marine Corps, his motto should be semper fidelis ad proprietatem limes—always faithful to the property boundary.
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98 **RELEVANCY IN THE 21ST CENTURY**

7. REACHING CRITICAL MASS

When our falling numbers reach a certain Critical Mass, Traditional land surveying will become irrelevant.

99 **RELEVANCY IN THE 21ST CENTURY**

Critical Mass:

“The minimum amount or number required for something to happen, begin , etc.”

Webster’s New World College Dictionary, Fourth Edition.

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100 **RELEVANCY IN THE 21ST CENTURY**

Critical Mass:

- When the reduced number of traditional land surveyors, those licensed by the state to locate property boundaries, reaches a certain critical mass—that is to say, when a willing purchaser of land surveying services can no longer readily find a willing provider of those services at reasonable rates—land surveying, as we currently know it, will become irrelevant.

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101 **RELEVANCY IN THE 21ST CENTURY**

Why Our Numbers are Falling:

- Aging profession.
- Not attracting young people.
- Perceived as a second-class profession.
- Four-year degree requirement?
- Double-edged sword?

102 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

“Deciding who owns what in dirt-space has been slow and expensive for as long as people have relied on paper rather than force to decide it. The process still often begins with a search for a musty sheaf of papers buried in some distant archive. Then, from another source, come the paper maps needed to locate the dirt in question.”

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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103 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

“Digital technologies are now easily powerful enough to draw precise boundaries around anything, anywhere, and instantly link the delineated space to any written record that affects ownership and use. The boundary lines come from companies like Garmin and Trimble, which make the GPS hardware that can report exactly where anything is located in dirt-space.”

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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104 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

“They also come from Navteq and Tele Atlas, which compile Google-scale databases that map where everything in dirt-space is located relative to everything else.”

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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105 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

"Google, Microsoft and Oracle have what it takes to provide instant, intelligent access to every registry, court record, contract and government pronouncement that affects who claims what interest in this particular acre or building, or the oil under this dirt, or the fish or shipwreck under these waters."

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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106 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

"The private sector (with a big boost from government surveyors and military satellites) now has the dirt-space mapping and locating well in hand."

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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107 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

"Mayors and governors should now be scrambling to digitize every scrap of information already stored in their dirt-space registries, along with every administrative and judicial record that addresses related rights."

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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108 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

"The objective should be a system so wired that courts won't enforce any claim that isn't digitally recorded and linked to every sliver of dirt-space it targets."

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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109 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

"The cost of getting official clearance to build, develop, fence off, subdivide, mine, buy, mortgage, sell or inherit will drop sharply. The poor will benefit the most."

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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110 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

"Quick, cheap, reliable answers provide liquidity—they let markets move wealth easily and often between dirt-space, cash-space and virtual forms of wealth (like stocks and bonds). Private wealth, free markets and global prosperity all hinge on our property-defining skills."

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

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111 **RELEVANCY IN THE 21ST CENTURY**

The Calls for a New System are Already out There:

"The precision, speed and accuracy of the property-defining technologies now at hand are poised to unlock wealth and stimulate growth worldwide."

Huber, Peter, *Good Data Makes Good Fences*, May 19, 2008, Forbes Magazine.

112 **RELEVANCY IN THE 21ST CENTURY**

A Slow, Cumbersome and Expensive Process:

- Why is locating property in dirt-space so slow, cumbersome and expensive?
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113 **FIRST BEAT ENTERTAINMENT**

v.

ECC, LLC

Court of Civil Appeals Of Alabama

962 So.2d 266

January 12, 2007

114 **First Beat v. ECC, Ala.Civ.App. 2007**

"43 U.S.C. § 752 provides that the corners of a section and any other landmarks within the section established by the original government survey shall be adhered to in the future. However, it does not purport to state that every time a survey is made of a line dividing a quarter of a section into quarters, the original government survey of that section must be retraced. Moreover, First Beat has cited no caselaw holding that 43 U.S.C. § 752 requires such a retracing."

115 **First Beat v. ECC, Ala.Civ.App. 2007**

"The reasonable inference to be drawn from the earlier surveys locating the south line and the iron pipes marking the termini of the south line was that earlier surveyors had located the termini of the south line and its location based on the location of the four corners of Section 26 as established by the original government survey of Section 26."

116 **RELEVANCY IN THE 21ST CENTURY**

Four-Year Degree—Double-Edged Sword?

- Reducing our numbers—sending us towards irrelevancy.
- Eliminates a traditional path to licensure that was a big supplier of numbers.
- Doesn't guarantee more professional competence.
- Not teaching the exclusive niche of traditional land surveying.
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117 **RELEVANCY IN THE 21ST CENTURY**

fixes have been made to the practice of land surveying that could potentially provide the reward/incentive to obtain the degree, as opposed to becoming an engineer, architect or any other profession with a four-year degree requirement.

122 **RELEVANCY IN THE 21ST CENTURY**

As a result, the incompetent are allowed to practice right along side the competent, and consequentially, exclusive services that can only be provided by the licensed land surveyor have become some of the cheapest services in all of the geospatial community.

123 **RELEVANCY IN THE 21ST CENTURY**

1 Good Practice and Bad

2 • In the medical profession it's not OK to amputate the wrong leg. In the land surveying profession it's perfectly OK as long as you do it with precision.

124 **RELEVANCY IN THE 21ST CENTURY**

Good Practice and Bad

- Our minimum technical standards, to a certain extent, are to blame.
- They are technical standards written by technician for technicians.
- Over time they became the "maximum" technical standards.
- They measure accuracy by how precisely one measures.
- They do not differentiate between good practice and bad.
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125 **RELEVANCY IN THE 21ST CENTURY**

"A 'standard' is a 'type, model or combination of elements acceptable as correct or perfect,' according to Black's Law Dictionary. In the context of land surveying, a standard of professional practice would describe the acceptable elements of 'correct practice.'"

Lucas, Jeffery N., "What is a Standard of Practice?" P.O.B. Magazine, April, 2012.

126 **RELEVANCY IN THE 21ST CENTURY**

"The idea of what is acceptably correct can't be divorced from the professional standard of care. The standard of care for all professional service providers in all jurisdictions is the same. It is what the reasonably prudent professional would do under like or similar circumstances."

Lucas, Jeffery N., "What is a Standard of Practice?" P.O.B. Magazine, April, 2012.

127 **RELEVANCY IN THE 21ST CENTURY**

Good Practice and Bad

- Our technical standards do not define the standard for correct practice, therefore, the incompetent are allowed to practice side-by-side with the competent.
- The most important work the land surveyor does is the rendering of a well-reasoned opinion on the location of property lines.
- This is the only reason land surveyors are licensed.

128 **RELEVANCY IN THE 21ST CENTURY**

Good Practice and Bad

- But we license the minimally competent and then allow them to perform open-heart surgery.
- No other profession allows the incompetent to continue to practice.
- In the land surveying profession, the incompetent not only are allowed to practice, they become the presidents of our surveying societies and sit on our regulatory boards.

129 **RELEVANCY IN THE 21ST CENTURY**

Half of the 57,000 licensed land surveyors do not see that there is A
problem.

130 **RELEVANCY IN THE 21ST CENTURY**

No Problems—No Worries:

- My anecdotal evidence from teaching seminars and traveling the country talking to surveyors, literally, from Key West Florida to Fairbanks Alaska—Holton Maine to San Diego California, indicates to me that half of the surveyors in the United States do not see a problem with the way land surveying is being practiced.

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131 **RELEVANCY IN THE 21ST CENTURY**

No Problems—No Worries:

- This means that half of the surveyors who sit on our regulatory boards don't see a problem either.
- If your regulatory board is filled with engineers, then all of the engineers on that board don't see a problem.
- This means that the land surveying profession may not have the willpower to make the changes necessary to change our course towards inevitable irrelevancy.

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132 **ELTON v. DAVIS**

Missouri Court of Appeals
Western District
123 S.W.3d 205
October 14, 2003

133 **RELEVANCY IN THE 21ST CENTURY**

10. DO NOTHING BOARDS

When the perception becomes that our regulatory boards are "surveyors taking care of surveyors," then deregulation will follow.

134 **RELEVANCY IN THE 21ST CENTURY**

Surveyors Taking Care of Surveyors:

"A North Carolina Board of Dentistry case is being reviewed by the US Supreme Court. The specific issue involved the Board's declaration that a 'teeth whitener' was practicing dentistry without a license. The courts held that the disciplinary action amounted to unfair restraint of free trade, because the dental profession elected (i.e., appointed) the members of the Dentistry Board. In other words, outsiders saw it as 'dentists taking care of dentists.'

Dr. Dan Turner, Reporting to ASPLS Board Members on the May, 2014, NCEES Board of Director's Meeting.

135 **RELEVANCY IN THE 21ST CENTURY**

Surveyors Taking Care of Surveyors:

NCEES has requested to file a brief in support of the dental board because of the profound impact to engineering and surveying boards if the Supreme Court upholds the judgment of lower courts."

Dr. Dan Turner, Reporting to ASPLS Board Members on the May, 2014, NCEES Board of Director's Meeting.

136 **RELEVANCY IN THE 21ST CENTURY**

Ten Solutions to Save Traditional Land Surveying and Remain Relevant