



Facing the Challenge of the Shrinking, Aging Surveying Profession

Professor Gary Jeffress, RPLS
Director, Conrad Blucher Institute for Surveying and Science
Texas A&M University-Corpus Christi

Assoc. Professor Grenville Barnes
School of Forest Resources and Conservation
(Geomatics)
University of Florida



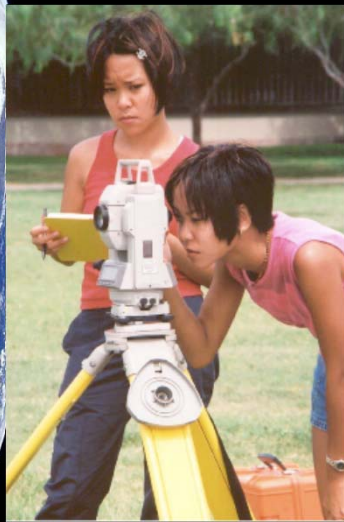


Outline: The past 20 years

1. Recent changes in surveying.
2. The aging surveying profession.
3. Challenges to surveying education.

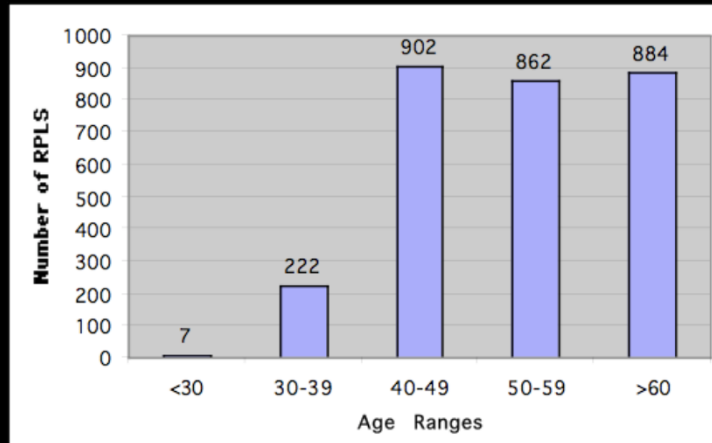


Surveying has changed since 1990



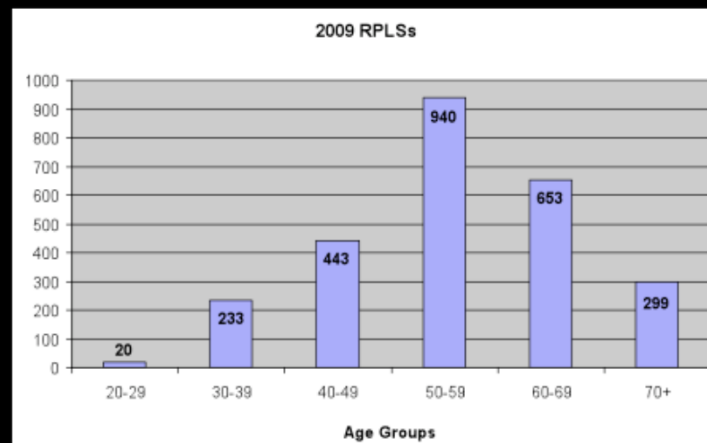
Surveying Professionals in Texas

- 1990 there were 3494 RPLS
- 2000 there were 2877 RPLS (down 617, 18%)



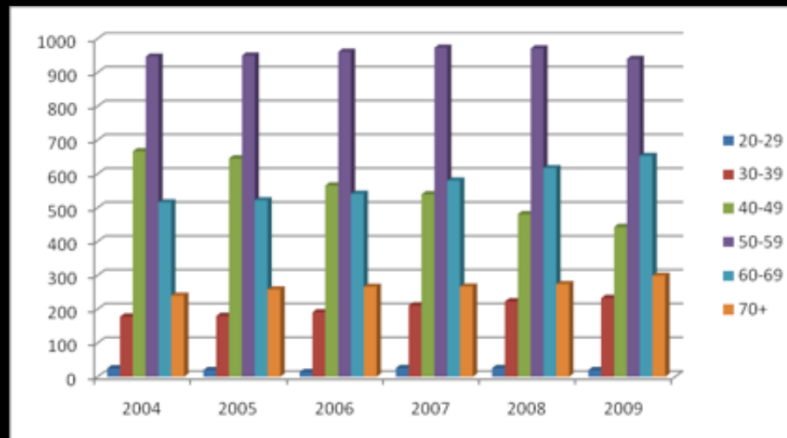
Surveying Professionals in Texas

- 2010 there are 2588 RPLS
- (down 906, 26% since 1990)



Surveying Professionals in Texas

- RPLS age profile 2004 - 2009



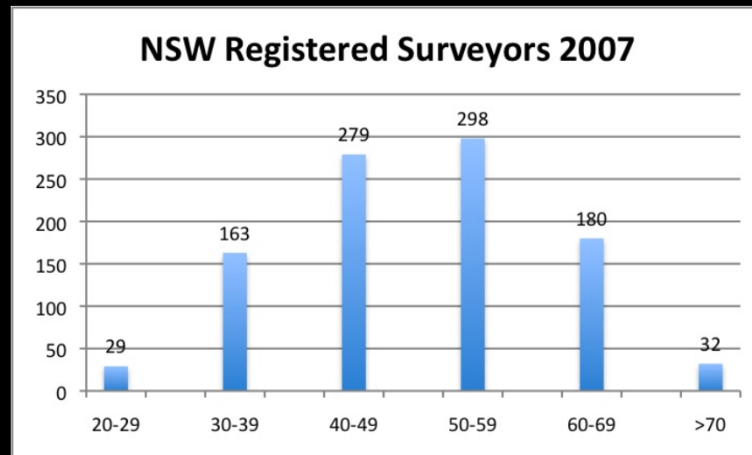
Surveying Professionals in Texas

- RPLS age profile 2004 - 2009

	2004	2005	2006	2007	2008	2009
Total	2573	2576	2539	2597	2592	2588
Average	54.23	54.69	55.16	55.14	55.42	55.79
Median	54	54	55	55	56	56
65+	478	477	478	482	519	540
% 65+	18.6	18.5	18.8	18.6	20.0	20.9

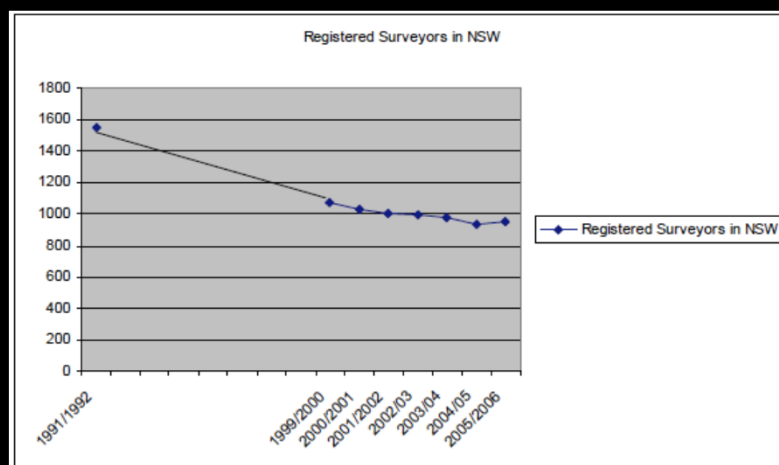
Surveying Professionals in NSW

- Registered Surveyor age profile 2007



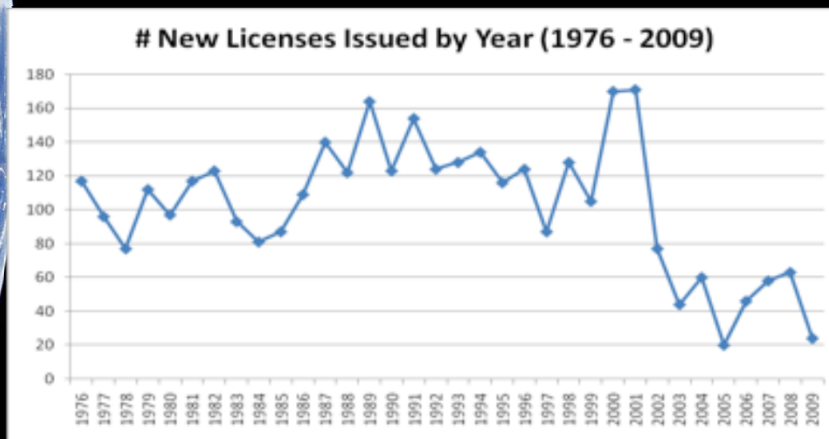
Surveying Professionals in NSW

- Registered Surveyors totals trend



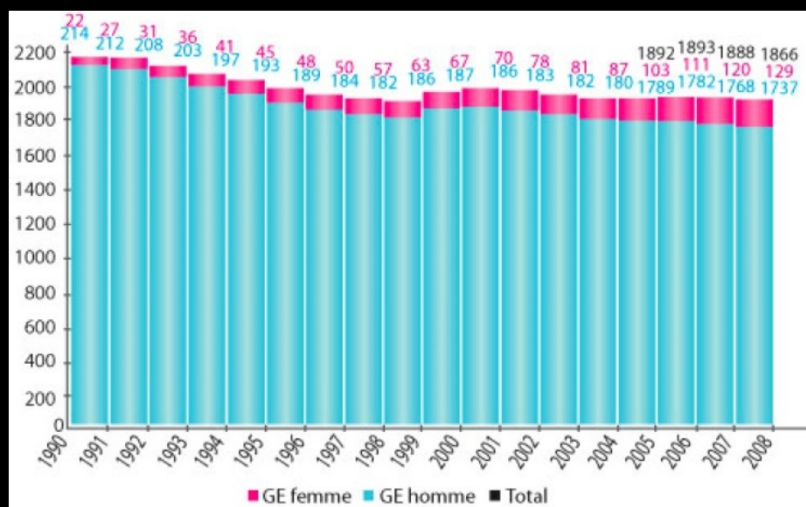
Surveying Professionals in Florida

- New Licensed Surveyors 1976 - 2009




Surveying Professionals in France


- Surveying Experts totals trend 1990 - 2008




L'augmentation en 1999 est liée à l'intégration des DOM au tableau de l'Ordre des Géomètres-Experts



PART 2




- Profile of Major Geomatics Programs in the US
- Where will new professors come from?
- Searching for a new Paradigm




Current Profile of Geomatics Programs


University of Wisconsin




- In 1990 approx. 40% of Geomatics faculty had been educated at UW
- Program within Civil Engineering – systematically dismantled the Geomatics program
- Last professors retired in 2006 – end of an era




Ohio State University




- Separate Department within College of Math and Physical Sciences
- 1995 incorporated into Dept. Civil Engineering
- 2005 geodesy faculty transferred to the Department of Geological Sciences subsequently renamed the School of Earth Sciences
- Jointly offer graduate programs in geodesy, photogrammetry and mapping




University of Maine



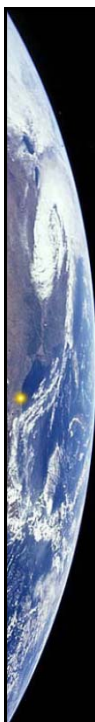
- 2003 split into undergraduate surveying and spatial engineering
- Surveying housed in School of Engineering Technology
- Department of Spatial Information Science – do not link to surveying profession
- Diversified disciplines - psychology




Purdue University




- Geomatics treated as a specialization of civil engineering
- Developing an inter-disciplinary Masters degree in Geo-Sensing
- Engineering-centric focus




Texas A&M University-Corpus Christi




- Approach – surveying education as an integral component of the geospatial sciences
- Two-track system – Geomatics & GIS
- 74% have selected the Geomatics track
- Faculty numbers have grown from 2 to 6 in the last 15 years



University of Florida




- Separately named Geomatics degree administered within civil engineering until 2004
- 2004 program transferred out of engineering college to School of Forest Resources & Conservation
- Within 3 years faculty number doubled from 4 to 8



Critical Issues facing Geomatics Education in the US

- Can Geomatics survive (and prosper) at major research universities?
- Shrinking and aging professionals...
- Who will teach tomorrow's surveyors?
- How will globalization and improving communication technology impact education?
- Is it time for a new paradigm?



Comparison of 1990 Profile of Geomatics Faculty with job application pool in 2006

1990 Profile

- 80% American-born
- PhD in Photogrammetry, Cadastral Studies, Geodesy, GIS/LIS...
- Most had at least a BS in Surveying

2006 Profile

- 5% American-born
- 50% with a PhD in remote sensing
- 80% with no surveying background

This comparison shows an increasing divide between the origin, discipline and qualifications of aspiring Geomatics professors and the demands and requirements of the surveying profession in the US.



Conclusion

- Decreasing supply of surveyors
- Changing skills of educators
- No cohesive paradigm .. Intellectual focus
- Innovation in certain programs is a positive sign
- Need to diversify and contribute to the big global issues

