

PUBLIC SECTOR POINT CLOUDS

FDOT - DISTRICT ONE

SURVEY AND MAPPING

RYAN KUHN, SIT – RYAN.KUHN@DOT.STATE.FL.US

2 POINT CLOUD TYPES & PROCESSING

LEARNING CURVE

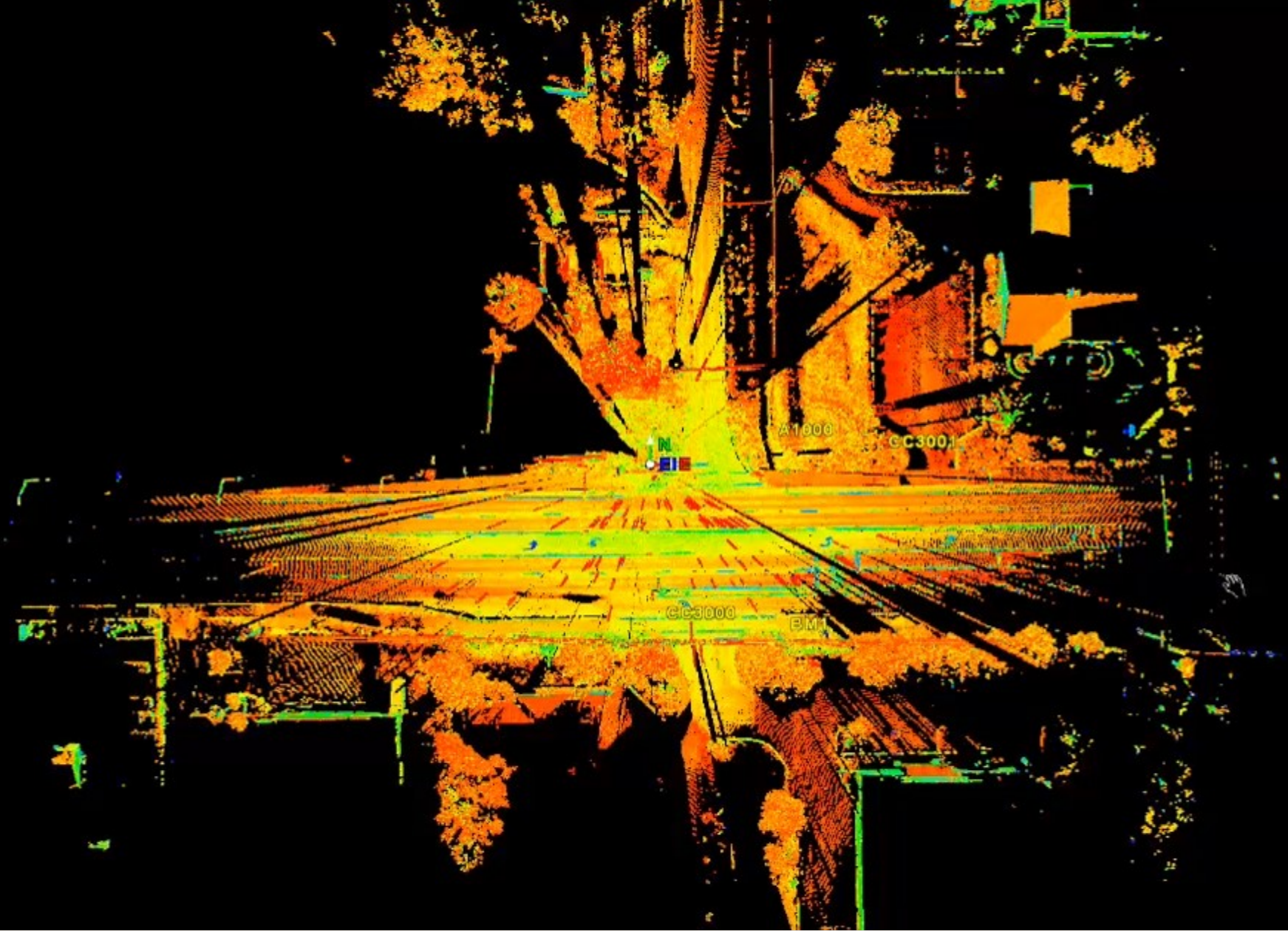
SR80 LARGEST SCANNER BASED PROJECT AT FDOT

3 PHASES– 3.2 MILES – 160 CONTROL POINTS

PHOTOGRAMMETRY LECTURE – BREAKTHROUGH



**TERRESTRIAL SCANNING:
S.R. 776 - ENGLEWOOD**

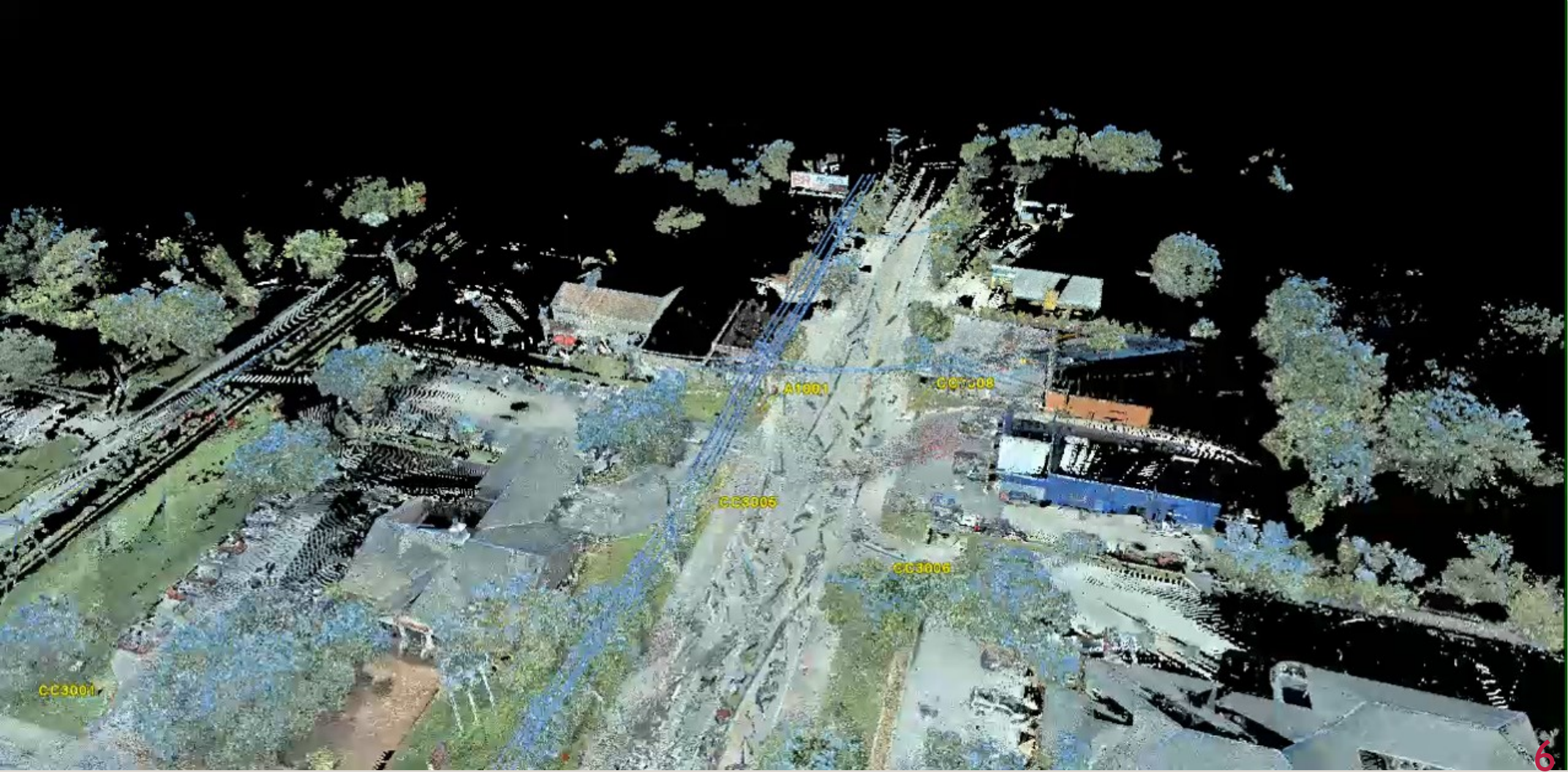


5 SOME ASSEMBLY REQUIRED 😊

- INDIVIDUAL SCAN WORLDS
- PROCESSED TOGETHER TO MAKE A COMPLETED CLOUD
- GROWN UP LEGO'S

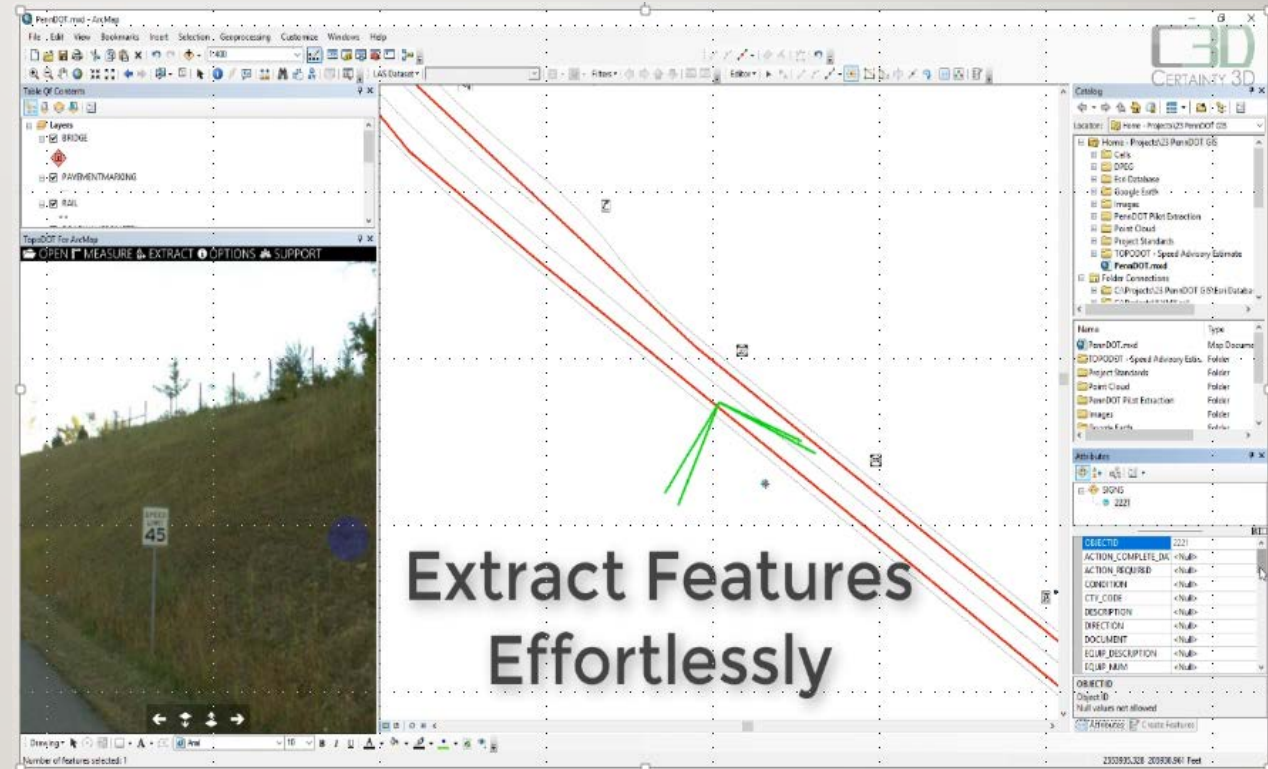
Error	Error Vector
0.036 ft	(0.031, 0.017, 0.008) ft
0.036 ft	(0.003, -0.035, -0.004) ft
0.034 ft	(0.008, -0.032, -0.005) ft
0.029 ft	(-0.019, 0.013, 0.018) ft
0.028 ft	(-0.012, 0.026, -0.002) ft
0.025 ft	(0.025, -0.004, 0.001) ft
0.025 ft	(-0.023, -0.002, -0.010) ft
0.023 ft	(-0.009, 0.013, 0.017) ft
0.023 ft	(0.006, 0.000, -0.022) ft
0.022 ft	(-0.021, 0.007, 0.003) ft
0.021 ft	(0.015, -0.009, 0.012) ft
0.021 ft	(0.004, -0.008, 0.019) ft
0.018 ft	(-0.008, 0.015, -0.004) ft
0.018 ft	(-0.012, -0.012, -0.006) ft
0.018 ft	(0.008, -0.005, -0.015) ft
0.017 ft	(-0.005, 0.016, 0.001) ft
0.016 ft	(-0.004, 0.014, 0.005) ft
0.015 ft	(-0.001, -0.009, -0.013) ft
0.015 ft	(-0.007, -0.009, -0.010) ft
0.015 ft	(0.009, 0.005, -0.011) ft
0.015 ft	(-0.001, -0.002, 0.015) ft
0.015 ft	(-0.012, 0.004, 0.008) ft
0.015 ft	(0.010, 0.005, 0.009) ft
0.014 ft	(0.012, -0.008, -0.002) ft
0.006 ft	(-0.002, 0.005, -0.003) ft

Constraint ID	ScanWorld	ScanWorld	Type	Status	Weight	Error
CP29t	Station-001: S...	Station-002: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC667b	Station-001: S...	Station-002: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC667t	Station-001: S...	Station-002: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CP25b	Station-001: S...	Station-002: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM401t	Station-002: S...	Station-003: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC668t	Station-002: S...	Station-003: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM401b	Station-002: S...	Station-003: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC668b	Station-002: S...	Station-003: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC669b	Station-003: S...	Station-004: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM402t	Station-003: S...	Station-004: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM402t	Station-003: S...	Station-005: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC669t	Station-003: S...	Station-004: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM402b	Station-003: S...	Station-004: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM402b	Station-003: S...	Station-005: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM402t	Station-004: S...	Station-005: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM402b	Station-004: S...	Station-005: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC670t	Station-004: S...	Station-005: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC670b	Station-004: S...	Station-005: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC671b	Station-005: S...	Station-006: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM408b	Station-005: S...	Station-006: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
ATBM408t	Station-005: S...	Station-006: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC671t	Station-005: S...	Station-006: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CC672t	Station-006: S...	Station-007: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CP27t	Station-006: S...	Station-007: S...	Coincident: Vertex - Vertex	On	1.0000	n/a
CP27b	Station-006: S...	Station-007: S...	Coincident: Vertex - Vertex	On	1.0000	n/a



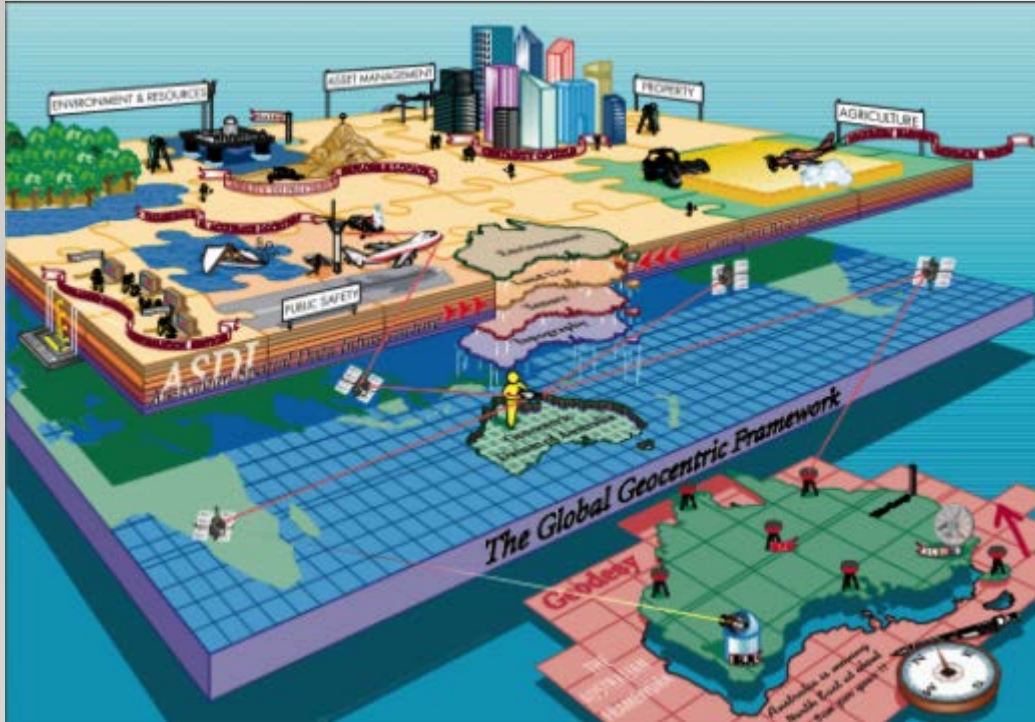
FUTURE OF DATA

- MULTI-USE DATA
 - DATA THAT CAN BE EASILY RECALLED, DEPICTED AND DISSEMINATED
- TopoDOT – DPEG



FUTURE OF DATA

8



- PERSONNEL

- GIS IS BECOMING MORE POPULAR AND INTEGRATED EVERYDAY. HOW CAN YOU DIFFERENTIATE YOURSELF?
- MULTI DISCIPLINE MINDED
- FDOT-DI DEDICATED S&M GIS STAFF WITH DEGREE IN GEOMATICS

QUESTIONS?

