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Background & Context

- Alaska has been attempting to update statewide geospatial data for many, many years.....
- Inception of the Alaska SDMI:
 “Statewide Digital Mapping Initiative”
 (State of Alaska Initiated)
- Summer 08’ Alaska DEM Workshop
- NDEP/NDOP August meeting in Anchorage
 “Thank You!”

What we're going to discuss

- How we're coming to consensus within Alaska
- Next steps in developing the "PLAN"
- Where we're at with the "PLAN"
- What we need from you

Reaching consensus within Alaska on a digital elevation model direction

- Timing
 - There is no time to waste
- Requirements
 - 20 ‘ contour accuracy (Dewberry)
 - 15’ contour accuracy (HDR User Survey for SDMI)
- Seek a cost-effective solution
 - Airborne IFSAR is “strongest technology candidate”
- Vetted through SDMI managers
 - UAF and DNR
 - State DOT and DMVA

More on consensus

- Sept 18 – WebEX teleconference – Dewberry, UAF Manager, DNR Manager (SDMI leadership), DOT, and BLM
 - Discussed Dewberry DEM whitepaper
 - UAF and DNR agreed to release August 15 DRAFT as FINAL
- Oct 1 – DNR and BLM meeting
 - Establish oversight between Federal and State managers
 - SDMI would help fund future planning and workshop efforts
- Oct 13 – DNR, UAF, DOT, USGS, BLM
 - Establish ground rules

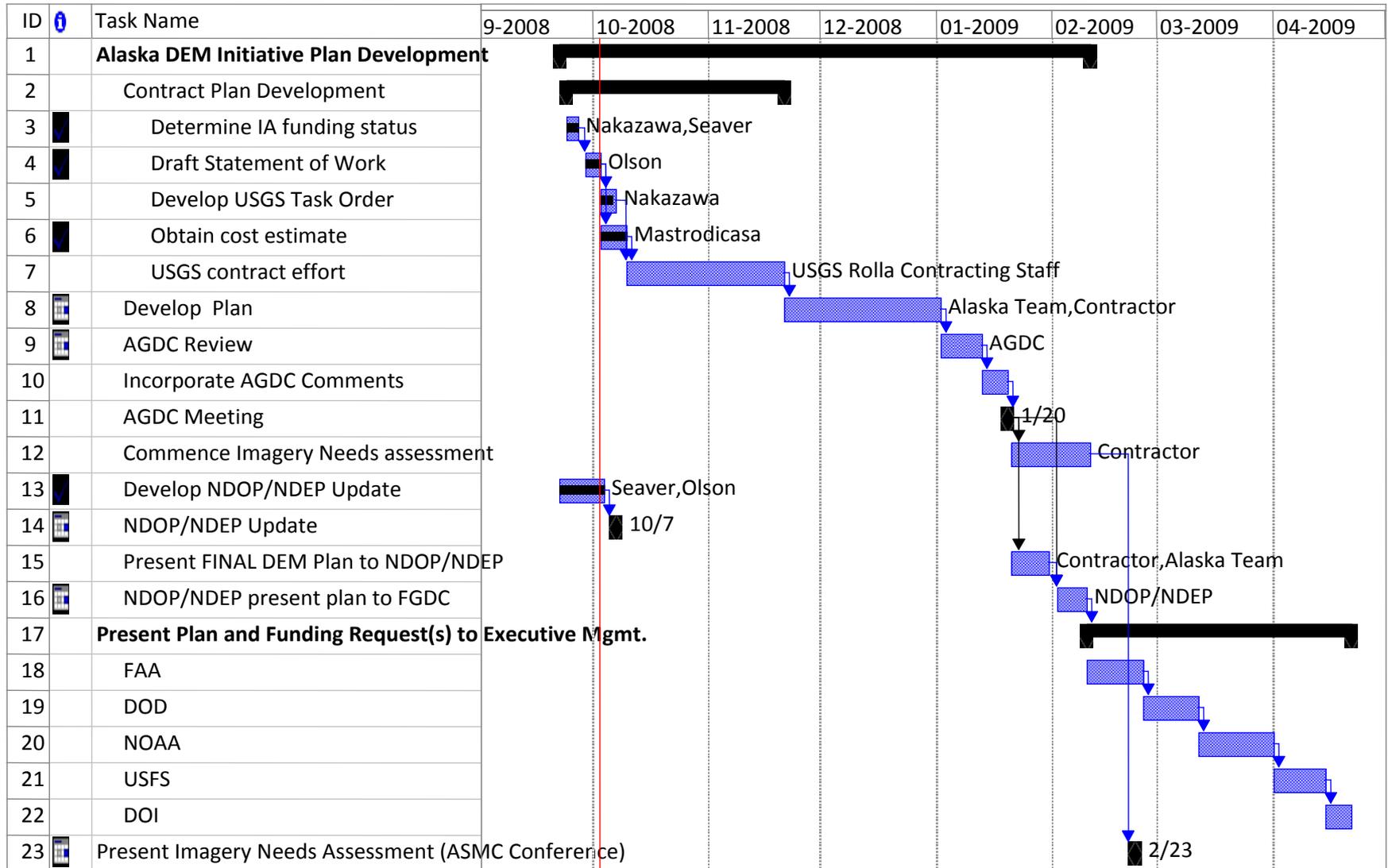
Next Steps

- Break whole project into manageable phases:
 - Phase I: DEM implementation Plan (Q1 – Q2, FY2009)
 - Phase II: Imagery requirements gathering and workshop (Q2, FY2009)
 - Similar to DEM workshop but focus on imagery
 - Phase III: Imagery implementation plan (Q3 – Q4, FY2009)

Next Steps

- Acquire contractor assistance in preparing DEM implementation plan
 - Funding from BLM, DOT, and DNR
 - Use USGS contracting vehicle
 - Focus on financial support from MULTIPLE agencies; starting in FY2010
 - Demonstrate “what’s in it for me” at the senior agency management level
 - Highest risk of failure is getting financial support at the highest Federal level

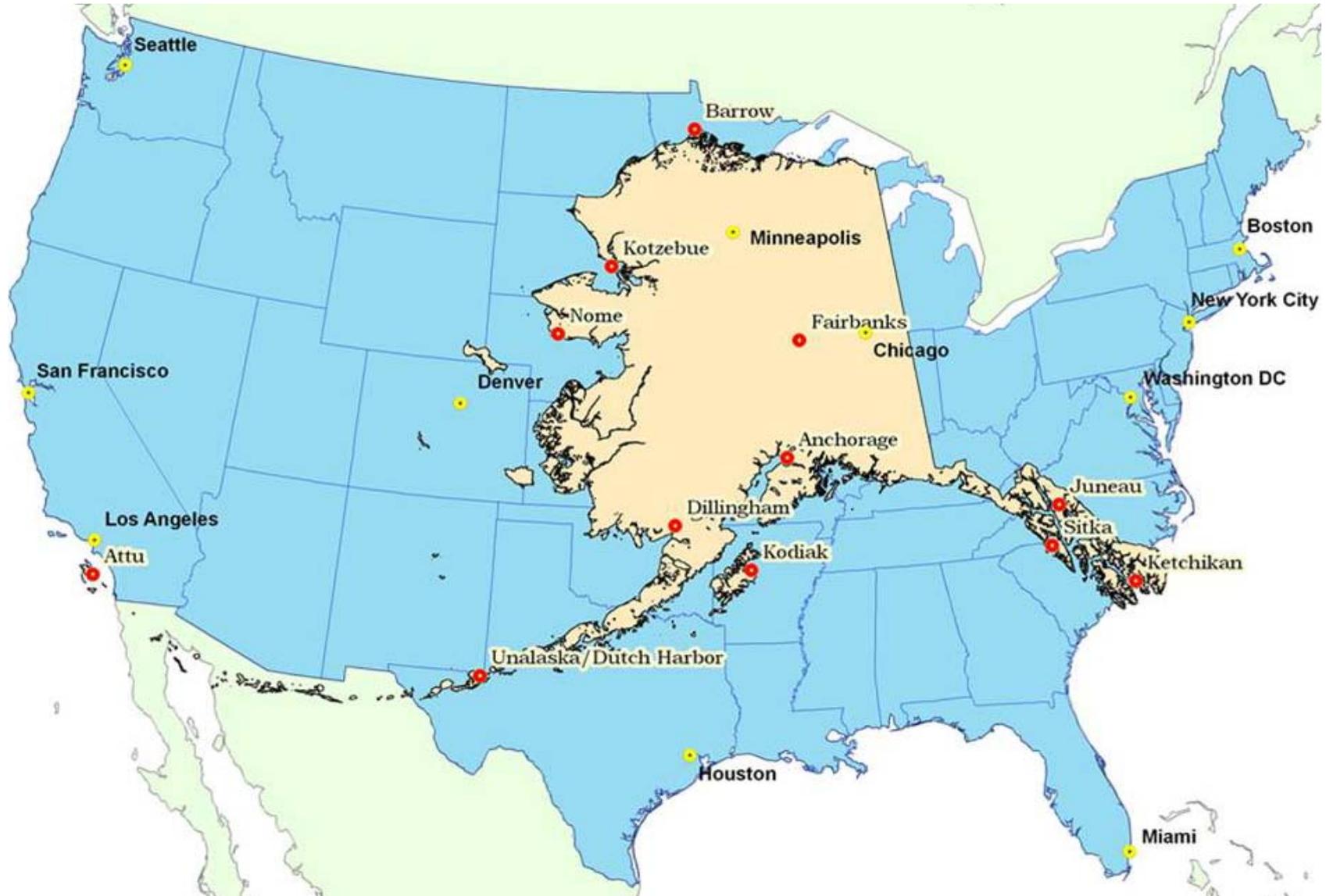
Plan for the Plan



What do we need from you

- Be candid
 - Serious, no holds barred vetting
 - Help us avoid not knowing what we don't know
- Champions
 - Help move this along
- Tell us what we need to do

- If you imaged the following states, you'd still be 15,000 square miles shy of completing the state of Alaska.
 - Washington, Idaho, Oregon, Nevada, California, and Arizona



Questions?

Matching technology with requirements (20' contour interval accuracy)

Competing Satellite Sensor Systems with contour interval (CI) accuracy	Slope: 0° to 20° Accuracy _z at 95% confidence level and equivalent CI	Slope: 20° to 40° Accuracy _z at 95% confidence level and equivalent CI	Slope: >40° Accuracy _z at 95% confidence level and equivalent CI
ASTER Global DEM	20m (110-ft CI)	Unavailable	Unavailable
GeoEye's IKONOS, 1-arc-sec w/o GCPs 0.2-arc-sec w/1 GCP per stereo model	24 m (132-ft CI) 16.7 m (92-ft CI)	Unavailable	Unavailable
Digital Globe's WorldView-1, w/o GCPs	8 m (44 ft CI)	Unavailable	Unavailable
Spot Image Corp's SPOT-5, w/o GCPs	11.9 m (66-ft CI)	21.4 m (118-ft CI)	35.7 m (197-ft CI)
ASRC's Cartosat-1 w/9 GCPs/scene	6-9 m (33-50 ft CI)	10-20 m (55-110 ft CI)	Unavailable
MDA's Radarsat-2, w/minimal GCPs (see mode explanations below)	Slope: 0° to 20°	Slope: 20° to 40°	Slope: >40°
— Multi-Look Fine (MLF) beam mode	0-10°: 8m (44-ft CI)	21-30°: 15m (83-ft CI)	20m (110-ft CI)
	11-20°: 12m (66-ft CI)	31-40°: 17m (94-ft CI)	
— Ultra Fine (UF) beam mode	0-10°: 6m (33-ft CI)	21-30°: 11m (61-ft CI)	15m (83-ft CI)
	11-20°: 8m (44-ft CI)	31-40°: 12m (66-ft CI)	

Matching technology with requirements (20' contour interval accuracy)

Competing Airborne IFSAR Systems	Slope: 0° to 10° (Accuracy, at 95% confidence level)	Slope: 10° to 20° (Accuracy, at 95% confidence level)	Slope: 20° to 30° (Accuracy, at 95% confidence level)
<u>Intermap's STAR-3/4/5/6</u>			
Type III DSM	6 m ≈33-ft contour accuracy	9 m ≈50-ft contour accuracy	12 m ≈66-ft contour accuracy
Type II DSM	1.8 m ≈10-ft contour accuracy	3 m ≈17-ft contour accuracy	4 m ≈22-ft contour accuracy
Type II DTM (untested, assumed equal to DSM)	1.8 m ≈10-ft contour accuracy	3 m ≈17-ft contour accuracy	4 m ≈22-ft contour accuracy
	Flat Terrain Yahoo County, MS	Moderate Terrain Southern California	Rolling Terrain Southeast Asia
<u>Fugro EarthData's GeoSAR</u> X-band DSM	1.8 m ≈10-ft contour accuracy	1.86 m ≈10-ft contour accuracy	8.78 m ≈49-ft contour accuracy
P-band DTM	≈10-ft contour accuracy	≈10-ft contour accuracy	≈49-ft contour accuracy
	P-band foliage penetration (10-20m typical) is slope and foliage dependent		