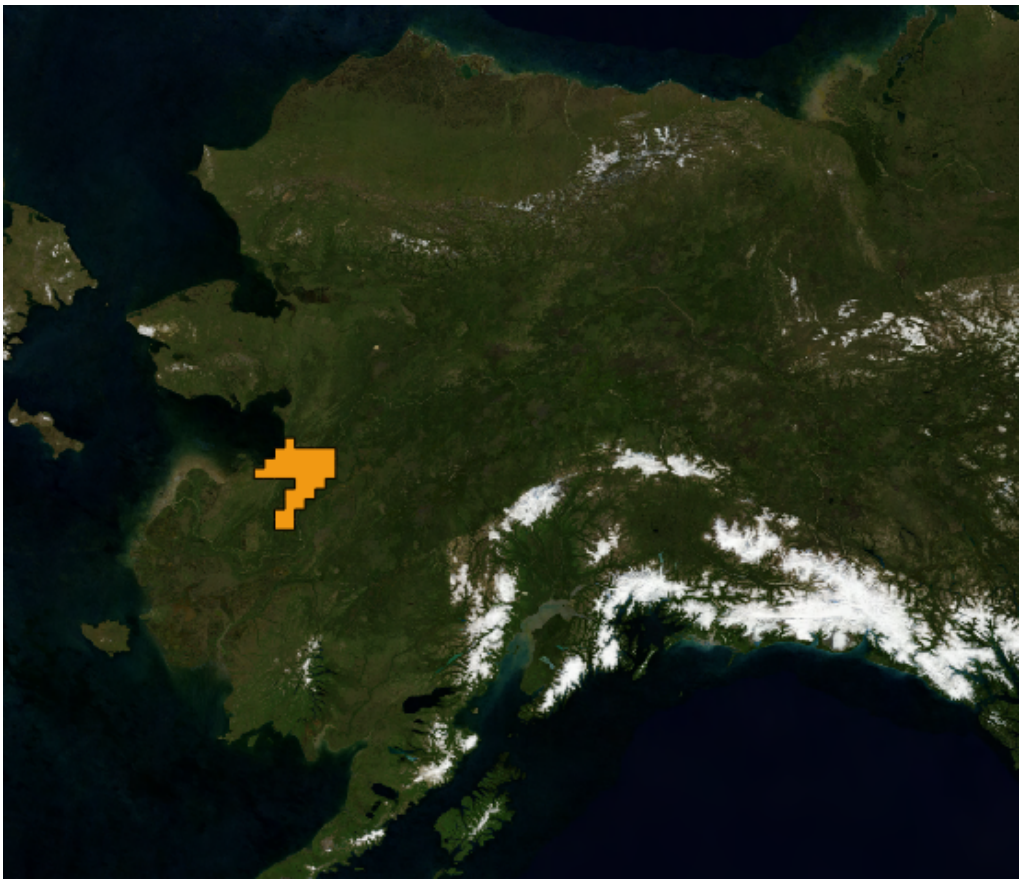
SDMI ORTHO 2012 Acceptance Report

Acceptance Overview for 20130816 delivery

CM1_13_a_20130814: 34 Tiles 13,600 km²

The 20130816 delivery of CM1_13_a_20130814 has been inspected and evaluated by UAF-GINA staff. The evaluation has determined that no corrections or modifications are necessary and this delivery complies with the Scope of Work under this contract.

Figure 1 - Coverage for 20130816 Delivery



Radiometric Accuracy Assessment

Radiometric quality for all three image types (CIR, PAN, and RGB) was visually evaluated based on these categories: cloud/shadow, haze, blend, contrast, saturation, artifact, blurry, ghosting, color, location, and nodata. All images were within allowable limits. Of interest was the capture of a second in flight jet for the ortho project.

CM1_13_a_20130814 - **Passed**

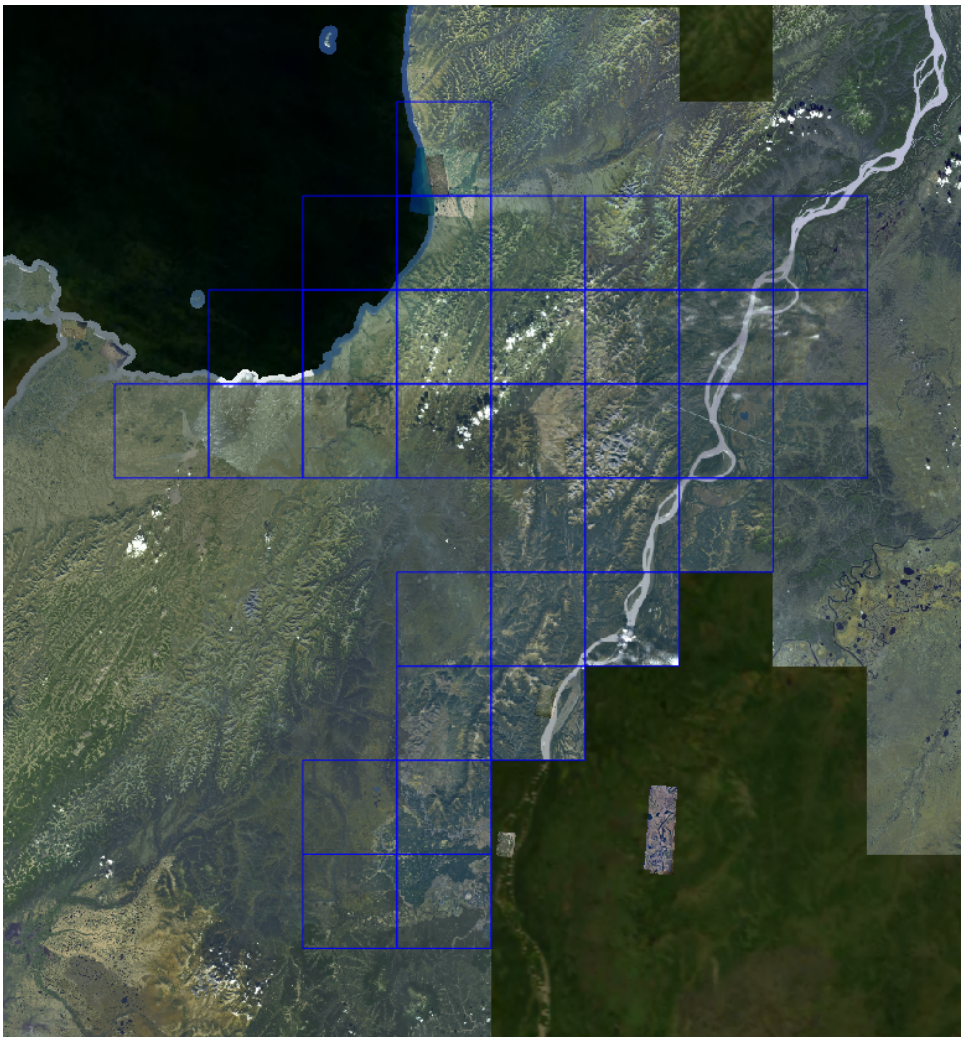
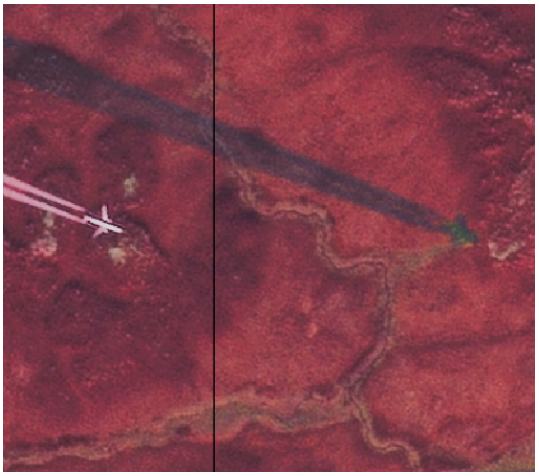


Figure 2- In flight 737 aircraft ostensibly flying from Nome.



Geometric Accuracy Assessment

The geometric accuracy assessment was based on methodology developed by i-cubed, *Alaska SDMI QC Setup & Procedures.* The RMSE was calculated based on the i3tools toolbox, RMS Reporter tool developed for use in ArcMap. Control points were chosen for each block from the base imagery, and were adjusted if necessary. The RMSE was calculated based on these differences. Control points were chosen based on them being photo identifiable in the base imagery. High resolution base imagery used for the block provided substantial coverage of the CM1_13_a_20130814 delivery.

CM1_13_a_20130814 - Passed

The block images (Figure 1) (CIR, PAN, and RGB) were compared to base images from the 2012 SDMI IFSAR ORI collection (.625 meter spatial resolution) and the GINA BDL (.6 meter spatial resolution). A total of 50 ground control points were analyzed and all points fell within the National Map Accuracy Standard (NMAS) CE90 of 12.2 meters and generated an RMSE of less than 4.82 meters (Figure 4). These errors are acceptable based on map accuracy of the National Standard for Spatial Data Accuracy (NSSDA) CE95 of 13.9 meters or a RMSE of 8 meters.

Figure 4 - Block RMS Report (RGB)

FID	POINT_X1	POINT_X2	POINT_Y1	POINT_Y2	X_Diff.	Y_Diff.	XY_Diff.	Ratio_to_RMS
0	-245761	-245764	1535382	1535385	3.175006	-2.77813	4.218847	0.88
1	-278297	-278298	1511761	1511757	1.256773	3.70418	3.911576	0.81
2	-295458	-295464	1496507	1496507	5.423969	-0.52917	5.449721	1.13
3	-269892	-269888	1502040	1502034	-3.70417	5.82084	6.899499	1.43
4	-257548	-257545	1524100	1524097	-2.85751	2.8575	4.041119	0.84
5	-266209	-266206	1537590	1537591	-2.91042	-1.85209	3.449754	0.72
6	-249419	-249422	1510197	1510195	2.063754	2.38125	3.1511	0.65
7	-289254	-289252	1515464	1515460	-1.905	4.18043	4.594022	0.95
8	-275727	-275724	1502106	1502104	-3.49251	2.38125	4.227051	0.88
9	-270378	-270381	1483216	1483214	2.381255	2.91043	3.760449	0.78
10	-322891	-322893	1575806	1575804	2.010838	2.43417	3.157317	0.65
11	-332613	-332612	1566802	1566803	-1.05834	-1.16416	1.573322	0.33
12	-327019	-327019	1575376	1575376	0	0	0	0
13	-263483	-263480	1522327	1522322	-3.70417	4.23334	5.625129	1.17
14	-307106	-307111	1451276	1451273	4.656676	3.59834	5.884954	1.22
15	-289438	-289440	1509285	1509289	2.235324	-4.41348	4.94727	1.03
16	-242617	-242618	1525732	1525731	1.111252	1.42876	1.810038	0.38
17	-332573	-332573	1562510	1562507	0.793751	2.77813	2.889299	0.6
18	-283016	-283016	1526491	1526490	-0.46302	0.79375	0.918928	0.19
19	-276984	-276982	1525511	1525515	-2.20928	-3.42636	4.076866	0.85
20	-263574	-263571	1545412	1545409	-2.81782	2.42094	3.714976	0.77
21	-308424	-308442	1452968	1452972	18.85686	-3.9976	19.27594	4
22	-264807	-264804	1494265	1494265	-2.83105	-0.23813	2.841045	0.59
23	-295421	-295415	1527236	1527235	-5.23876	1.42875	5.430096	1.13
24	-249773	-249773	1558756	1558756	0	0	0	0
25	-298092	-298094	1490238	1490240	1.746253	-1.90501	2.584272	0.54
26	-255040	-255036	1519611	1519608	-3.70417	2.43417	4.432391	0.92
27	-243824	-243821	1512472	1512475	-3.38667	-2.54001	4.233344	0.88
28	-290214	-290214	1559901	1559901	0	0	0	0
29	-267357	-267354	1532790	1532788	-2.74371	1.24593	3.013347	0.62
30	-270181	-270183	1492728	1492724	1.905004	4.23335	4.642229	0.96
31	-307698	-307700	1452377	1452372	1.322919	4.65667	4.840939	1
32	-283407	-283405	1468020	1468019	-2.09021	0.37042	2.122782	0.44
33	-331753	-331753	1565011	1565011	0	0	0	0
34	-270392	-270388	1539896	1539892	-3.96876	3.96875	5.612666	1.16
35	-262462	-262459	1528117	1528113	-3.17501	3.81	4.959512	1.03
36	-307334	-307333	1450418	1450415	-0.84667	2.96334	3.08192	0.64
37	-287969	-287969	1500841	1500841	0	0	0	0
38	-332633	-332635	1563085	1563083	1.587504	2.11667	2.645838	0.55
39	-287147	-287142	1529217	1529218	-5.55626	-0.26459	5.562557	1.15
40	-291469	-291472	1507039	1507043	3.175006	-3.91584	5.041276	1.05
41	-285296	-285296	1534372	1534372	0	0	0	0
42	-308227	-308226	1453066	1453063	-1.37584	3.17501	3.460291	0.72
43	-262017	-262010	1515458	1515461	-6.6146	-2.97657	7.253472	1.5
44	-332437	-332437	1562199	1562199	0	0	0	0
45	-308940	-308941	1453894	1453890	1.031877	3.67772	3.819737	0.79

46	-266050	-266054	1491506	1491510	3.968758	-4.29949	5.85121	1.21
47	-271342	-271339	1514444	1514443	-3.50574	0.26458	3.515706	0.73
48	-307169	-307174	1451043	1451039	4.630218	3.57188	5.847841	1.21
49	-326623	-326625	1564884	1564888	1.653649	-3.3073	3.697673	0.77
				Sum of Sq.	763.1618	399.1339	1162.296	
				n = 50				
				RMS in X,Y	3.906819	2.825363		
				RMS	4.821402			
				Average Er	3.841347			
Contro	l 1 point sh	file : CM1_	1_Control					
Contro	l 2 point sh	file : CM1_	1_RGB					
Contro	l 1 id field	: CID						
Contro	l 2 id field	: FID						
Projec	tion for RM	: NAD_198	aska_Albers					
No. of	excluded p	s : 0						