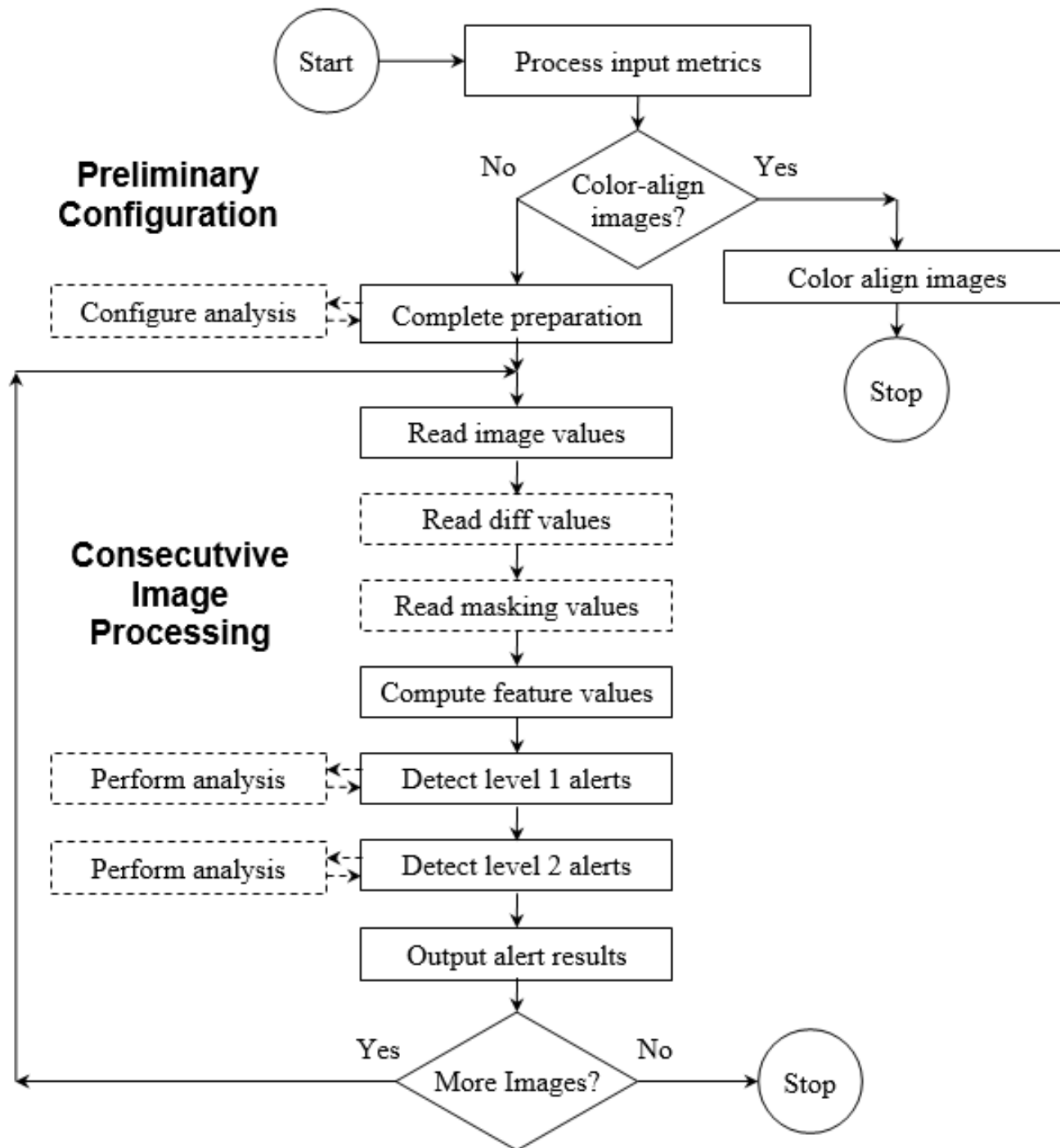


Operational processing sequence



Config folder contents

	A	B	C	D
1	0.2126	0.7152	0.0722	
2				
3				

	A	B	C	D
1	Image	Chip Row	Chip Column	
2	visual_23	669	754	
3	visual_24	635	750	
4	visual_24	637	750	
5	visual_25	585	746	
6	visual_25	635	746	
7	visual_25	637	744	
8	visual_26	542	734	

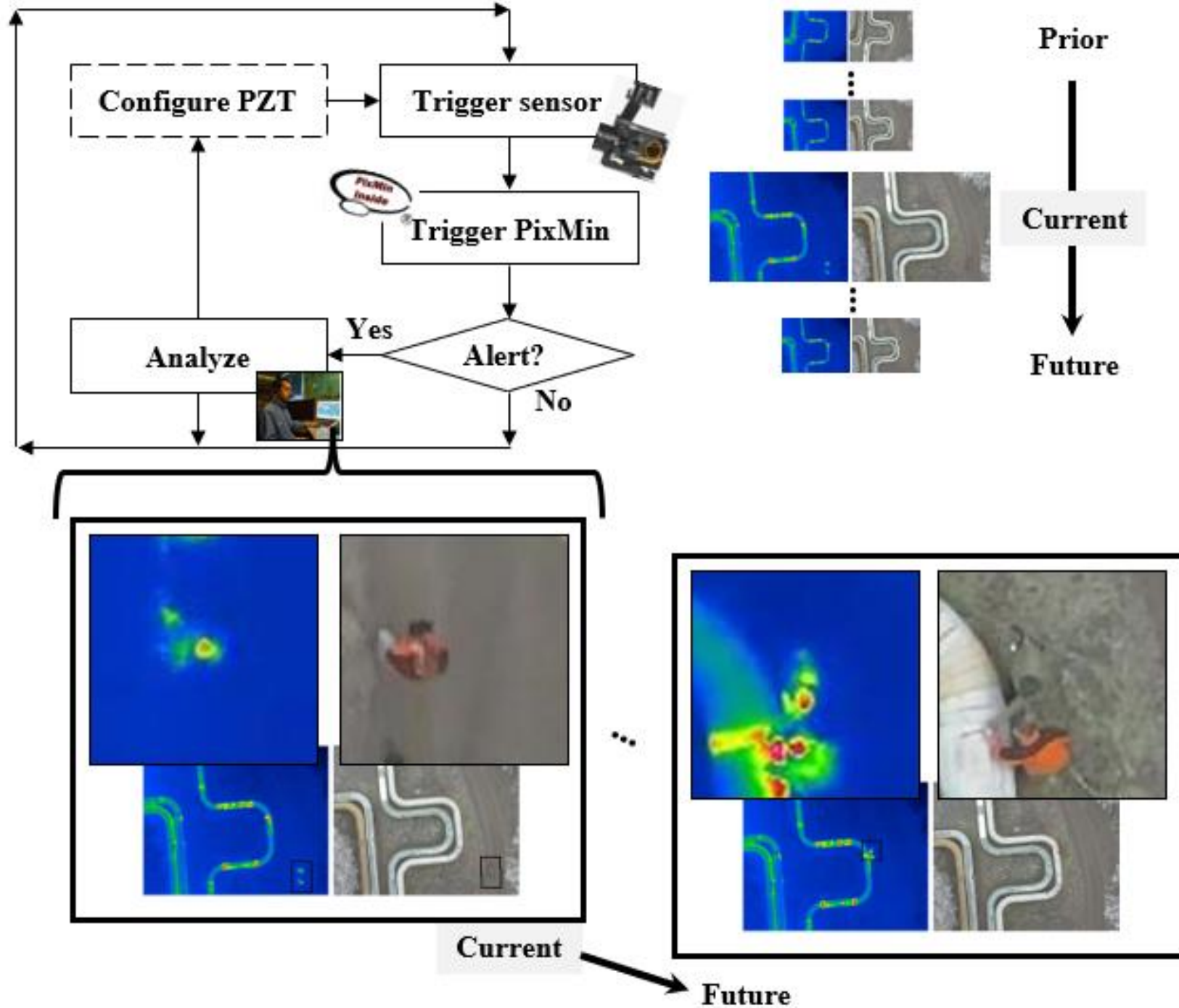
- diff
- mask
- chip_locations.csv
- color_weights.csv
- config_errors.txt
- input_metrics.pxm.csv
- template_values_level_1.csv
- template_values_level_2.csv
- template_versions_level_1.csv
- template_versions_level_2.csv

	A	B	C	D
1	This is a PixMin(TM) Analysis Development Kit configuration file. See the README file for more information.			
2				
3	Name	Value	Description	
4	input image folder	{input_image}	This path points to a folder containing the input images.	
5	input pixel rows	696	This positive integer should be less than or equal to the number of rows in the input images.	
6	input pixel columns	870	This positive integer should be less than or equal to the number of columns in the input images.	
7	configuration metrics folder	{input_metrics}	This path points to a folder containing the configuration metrics.	
8	color alignment	0	If set to one, PixMin performs color alignment on the input images.	
9	feature standardizing option	1	If set to one, PixMin standardizes the features.	
10	feature masking option	0	If set to one, PixMin masks the features.	
11	feature diff option	12	If set to one, PixMin finds the difference between the features.	
12	level 1 alert block and output cutoff value	48	This is the number of pixels in the alert block.	
13	level 1 template matching basis	1	Each pixel's level 1 match.	
14	level 1 pixel match cutoff value	25	PixMin produces level 1 pixel match alerts when the match is greater than or equal to this value.	
15	level 1 alert block cutoff value	20	Each level 1 alert block's pixel match must be greater than or equal to this value.	
16	level 1 maximum alerts	200	This is the maximum number of level 1 alerts.	
17	level 2 skip option	0	If set to one, no level 2 detection is performed.	
18	criteria pass-through option	0	If set to one, the criteria are passed through to the next level.	
19	level 2 alert block size	2	This is the number of pixels in the alert block.	
20	level 2 template matching basis	1	Each pixel's level 2 match.	
21	level 2 pixel match cutoff value	5	PixMin produces level 2 pixel match alerts when the match is greater than or equal to this value.	
22	level 2 alert block cutoff value	4	Each level 2 alert block's pixel match must be greater than or equal to this value.	
23	level 2 maximum alerts	200	This is the maximum number of level 2 alerts.	
24	analysis	c	This metric determines the analysis type.	
25	output detection folder	{input_image}	This path points to a folder containing the output detection results.	
26	no normal output option	0	Normal image output mapping is disabled.	
27	output alert map border width	3	PixMin distinguishes alert maps by border width.	
28	internal border removal option	1	If set to one, PixMin removes the internal border.	

	A	B	C	D	E	F	G	H	I
1	types		1						
2	type	rows	columns						
3	0	7	7						
4	row\col	0	1	2	3	4	5	6	
5	0	-0.88409	-0.88409	-0.88409	-0.88409	-0.88409	-0.88409	-0.88409	
6	1	-0.88409	0.361135	0.361135	0.361135	0.361135	0.361135	-0.88409	
7	2	-0.88409	0.361135	1.61931	1.61931	1.61931	0.361135	-0.88409	
8	3	-0.88409	0.361135	1.61931	2.485435	1.61931	0.361135	-0.88409	
9	4	-0.88409	0.361135	1.61931	1.61931	1.61931	0.361135	-0.88409	
10	5	-0.88409	0.361135	0.361135	0.361135	0.361135	0.361135	-0.88409	
11	6	-0.88409	-0.88409	-0.88409	-0.88409	-0.88409	-0.88409	-0.88409	

	A	B	C	D
1	type	versions		
2	0	3		
3		version	scale	rotation deg
4		0	9	0
5		1	9	45
6		2	9	90
7				

Continuous operation deployment example



ADK use-case organization

Use-case Reports

- 1_PixMin_image_processing_overview.pdf
- 2_1_PixMin_caribou_detection.pdf
- 2_2_PixMin_Wildlife_trail_camera_photo_triage.pdf
- 2_3_PixMin_threat_detection_from_fixed_cameras.pdf
- 2_4_PixMin_obstacle_detection.pdf
- 2_5_PixMin_timely_asset_management.pdf
- 2_6_PixMin_warm_body_event_detection.pdf
- 2_7_PixMin_underwater_threat_detection.pdf
- 2_8_PixMin_marine_mammal_detection.pdf
- 2_9_PixMin_wildlife_drone_camera_triage.pdf
- 2_10_PixMin_ripple_detection.pdf
- 2_11_PixMin_anomaly_detection_from_displays.pdf
- 2_12_PixMin_rocket_classification.pdf
- 2_13_PixMin_image_color_variability_correction.pdf
- 3_1_PixMin_added_value_potential_determination.pdf
- 3_1_use-case_evaluation_imagery_desirables.pdf

Use-case folders

- 1_caribou_detection
- 2_tortoise_fixed_camera_detection
- 3_threat_fixed_camera_detection
- 4_obstacle_detection
- 5_asset_management
- 6_warm_body_detection
- 7_underwater_object_detection
- 8_whale_detection
- 9_tortoise_drone_detection
- 10_ripple_detection
- 11_display_change_detection
- 12_rocket_classification
- 13_imagery_color_alignment

Use-case sub-folders

- analysis
- config
- input_images
- output
- output_archive

Input image color value organization

row\col	0	1	2	3	...	7,353	7,354	7,355	7,356	7,357	7,358	7,359		
0	0	3	6	9	12	15	18	22,059	22,062	22,065	22,068	22,071	22,074	22,077
	1	4	7	10	13	16	19	22,060	22,063	22,066	22,069	22,072	22,075	22,078
	2	5	8	11	14	17	20	22,061	22,064	22,067	22,070	22,073	22,076	22,079
1	22,080	22,083	22,086	22,089	22,092	22,095	22,098	44,139	44,142	44,145	44,148	44,151	44,154	44,157
	22,081	22,084	22,087	22,090	22,093	22,096	22,099	44,140	44,143	44,146	44,149	44,152	44,155	44,158
	22,082	22,085	22,088	22,091	22,094	22,097	22,100	44,141	44,144	44,147	44,150	44,153	44,156	44,159
2	44,160	44,163	44,166	44,169	44,172	44,175	44,178	66,219	66,222	66,225	66,228	66,231	66,234	66,237
	44,161	44,164	44,167	44,170	44,173	44,176	44,179	66,220	66,223	66,226	66,229	66,232	66,235	66,238
	44,162	44,165	44,168	44,171	44,174	44,177	44,180	66,221	66,224	66,227	66,230	66,233	66,236	66,239
3	66,240	66,243	66,246	66,249	66,252	66,255	66,258	88,299	88,302	88,305	88,308	88,311	88,314	88,317
	66,241	66,244	66,247	66,250	66,253	66,256	66,259	88,300	88,303	88,306	88,309	88,312	88,315	88,318
	66,242	66,245	66,248	66,251	66,254	66,257	66,260	88,301	88,304	88,307	88,310	88,313	88,316	88,319
4	88,320	88,323	88,326	88,329	88,332	88,335	88,338	110,379	110,382	110,385	110,388	110,391	110,394	110,397
	88,321	88,324	88,327	88,330	88,333	88,336	88,339	110,380	110,383	110,386	110,389	110,392	110,395	110,398
	88,322	88,325	88,328	88,331	88,334	88,337	88,340	110,381	110,384	110,387	110,390	110,393	110,396	110,399
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	
4,907	108,346,560	108,346,563	108,346,566	108,346,569	108,346,572	108,346,575	108,346,578	108,368,619	108,368,622	108,368,625	108,368,628	108,368,631	108,368,634	108,368,637
	108,346,561	108,346,564	108,346,567	108,346,570	108,346,573	108,346,576	108,346,579	108,368,620	108,368,623	108,368,626	108,368,629	108,368,632	108,368,635	108,368,638
	108,346,562	108,346,565	108,346,568	108,346,571	108,346,574	108,346,577	108,346,580	108,368,621	108,368,624	108,368,627	108,368,630	108,368,633	108,368,636	108,368,639
4,908	108,368,640	108,368,643	108,368,646	108,368,649	108,368,652	108,368,655	108,368,658	108,390,699	108,390,702	108,390,705	108,390,708	108,390,711	108,390,714	108,390,717
	108,368,641	108,368,644	108,368,647	108,368,650	108,368,653	108,368,656	108,368,659	108,390,700	108,390,703	108,390,706	108,390,709	108,390,712	108,390,715	108,390,718
	108,368,642	108,368,645	108,368,648	108,368,651	108,368,654	108,368,657	108,368,660	108,390,701	108,390,704	108,390,707	108,390,710	108,390,713	108,390,716	108,390,719
4,909	108,390,720	108,390,723	108,390,726	108,390,729	108,390,732	108,390,735	108,390,738	108,412,779	108,412,782	108,412,785	108,412,788	108,412,791	108,412,794	108,412,797
	108,390,721	108,390,724	108,390,727	108,390,730	108,390,733	108,390,736	108,390,739	108,412,780	108,412,783	108,412,786	108,412,789	108,412,792	108,412,795	108,412,798
	108,390,722	108,390,725	108,390,728	108,390,731	108,390,734	108,390,737	108,390,740	108,412,781	108,412,784	108,412,787	108,412,790	108,412,793	108,412,796	108,412,799
4,910	108,412,800	108,412,803	108,412,806	108,412,809	108,412,812	108,412,815	108,412,818	108,434,859	108,434,862	108,434,865	108,434,868	108,434,871	108,434,874	108,434,877
	108,412,801	108,412,804	108,412,807	108,412,810	108,412,813	108,412,816	108,412,819	108,434,860	108,434,863	108,434,866	108,434,869	108,434,872	108,434,875	108,434,878
	108,412,802	108,412,805	108,412,808	108,412,811	108,412,814	108,412,817	108,412,820	108,434,861	108,434,864	108,434,867	108,434,870	108,434,873	108,434,876	108,434,879
4,911	108,434,880	108,434,883	108,434,886	108,434,889	108,434,892	108,434,895	108,434,898	108,456,939	108,456,942	108,456,945	108,456,948	108,456,951	108,456,954	108,456,957
	108,434,881	108,434,884	108,434,887	108,434,890	108,434,893	108,434,896	108,434,899	108,456,940	108,456,943	108,456,946	108,456,949	108,456,952	108,456,955	108,456,958
	108,434,882	108,434,885	108,434,888	108,434,891	108,434,894	108,434,897	108,434,900	108,456,941	108,456,944	108,456,947	108,456,950	108,456,953	108,456,956	108,456,959

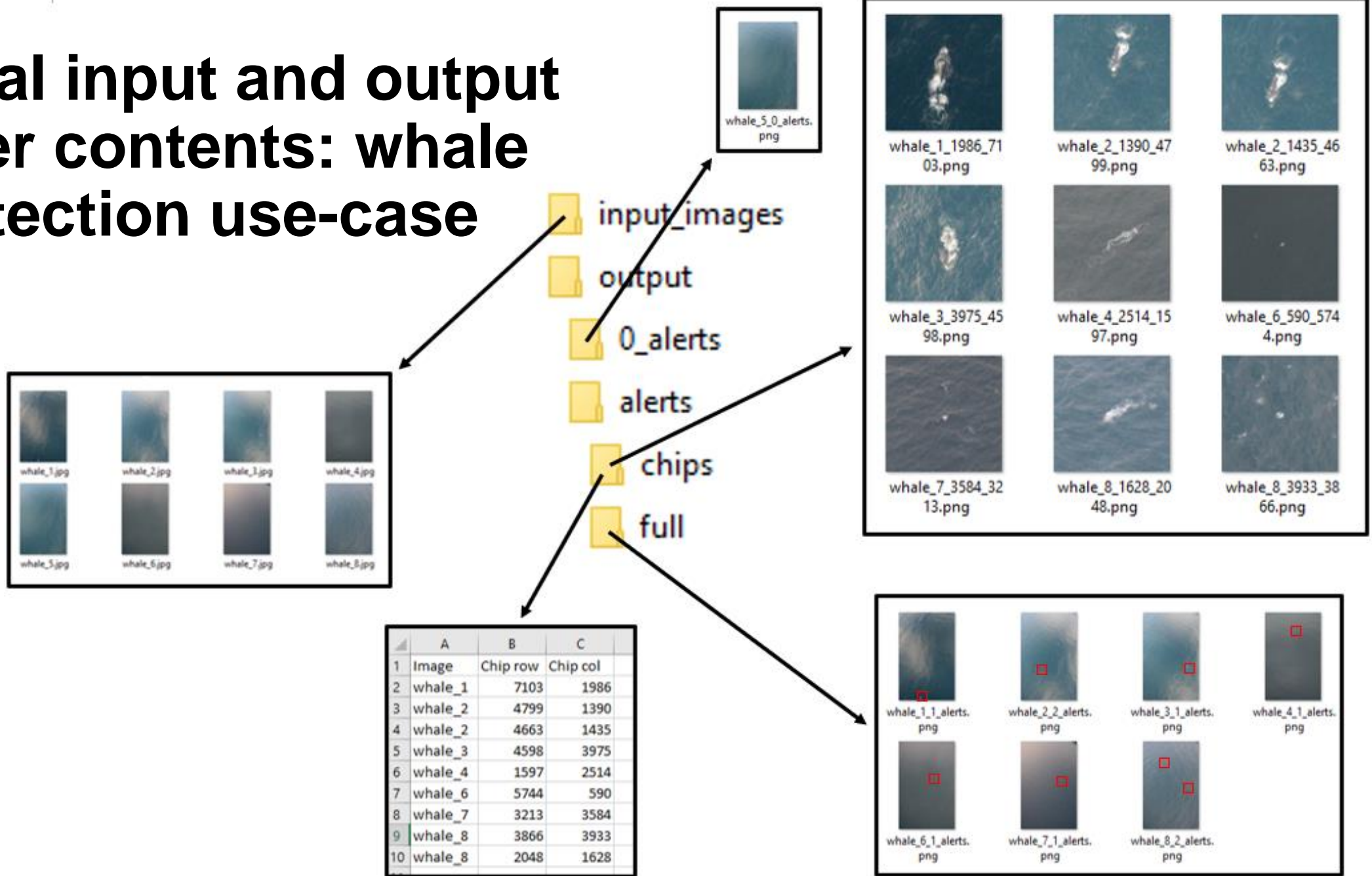
Image color feature value organization

row\col	0	1	2	3	4	5	6	...	7,353	7,354	7,355	7,356	7,357	7,358	7,359
0	0	1	2	3	4	5	6	...	7,353	7,354	7,355	7,356	7,357	7,358	7,359
1	7,360	7,361	7,362	7,363	7,364	7,365	7,366	...	14,713	14,714	14,715	14,716	14,717	14,718	14,719
2	14,720	14,721	14,722	14,723	14,724	14,725	14,726	...	22,073	22,074	22,075	22,076	22,077	22,078	22,079
3	22,080	22,081	22,082	22,083	22,084	22,085	22,086	...	29,433	29,434	29,435	29,436	29,437	29,438	29,439
4	29,440	29,441	29,442	29,443	29,444	29,445	29,446	...	36,793	36,794	36,795	36,796	36,797	36,798	36,799
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
4906	36,108,160	36,108,161	36,108,162	36,108,163	36,108,164	36,108,165	36,108,166	...	36,115,513	36,115,514	36,115,515	36,115,516	36,115,517	36,115,518	36,115,519
4907	36,115,520	36,115,521	36,115,522	36,115,523	36,115,524	36,115,525	36,115,526	...	36,122,873	36,122,874	36,122,875	36,122,876	36,122,877	36,122,878	36,122,879
4909	36,130,240	36,130,241	36,130,242	36,130,243	36,130,244	36,130,245	36,130,246	...	36,137,593	36,137,594	36,137,595	36,137,596	36,137,597	36,137,598	36,137,599
4910	36,137,600	36,137,601	36,137,602	36,137,603	36,137,604	36,137,605	36,137,606	...	36,144,953	36,144,954	36,144,955	36,144,956	36,144,957	36,144,958	36,144,959
4911	36,144,960	36,144,961	36,144,962	36,144,963	36,144,964	36,144,965	36,144,966	...	36,152,313	36,152,314	36,152,315	36,152,316	36,152,317	36,152,318	36,152,319

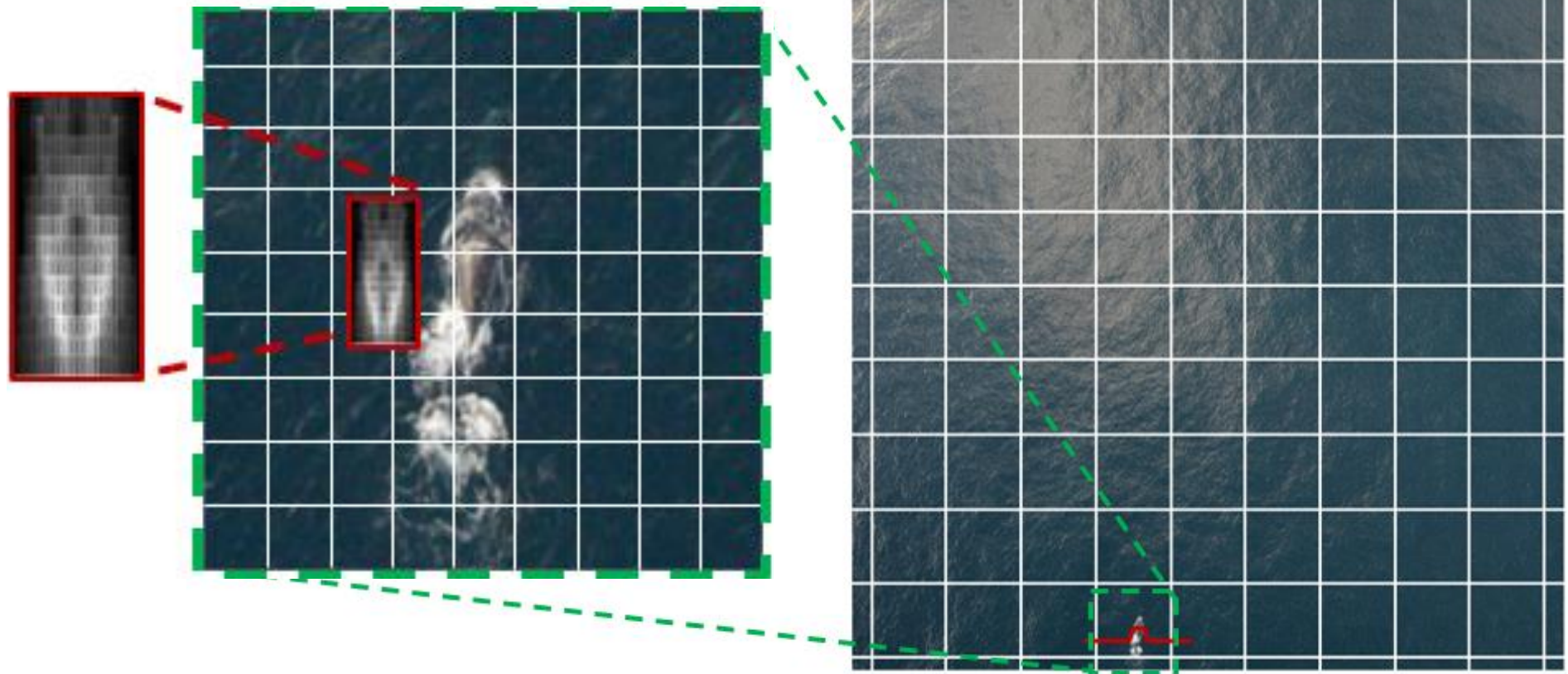
Level 1 and output chip alert blocks

row\col	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	#
1	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
2	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
3	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
4	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
5	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
6	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
7	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
8	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
9	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
10	#	111	112	113	114	115	116	117	118	119	120	121	122	123	124	#

Normal input and output folder contents: whale detection use-case



Level 1 and 2 *triage*: whale detection example

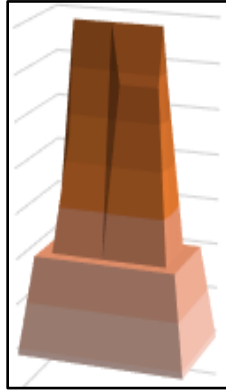


Template values library (Appendix C)

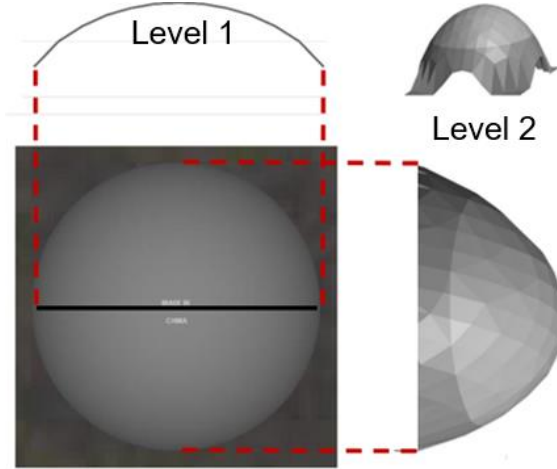
Spike contrast



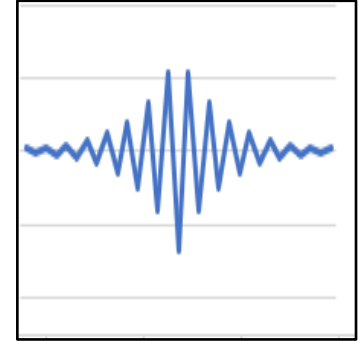
Cone contrast



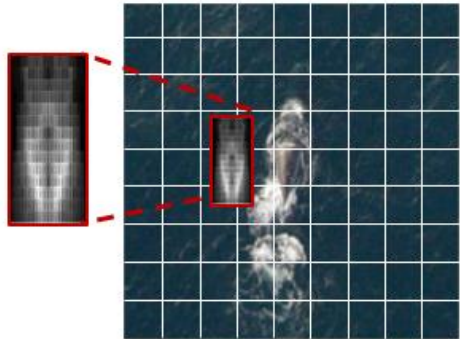
Submerged sphere contrast



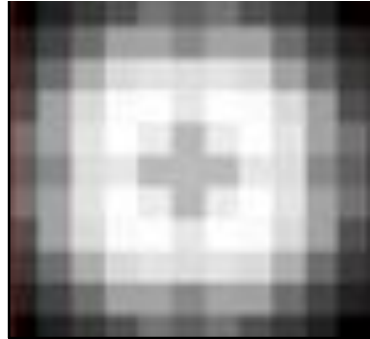
One-dimensional ripple contrast



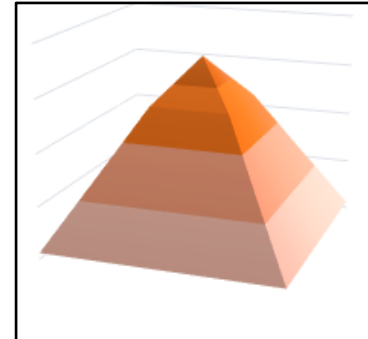
Whale body contrast



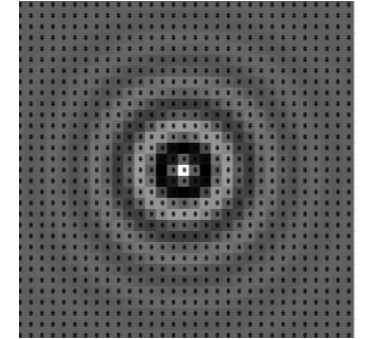
Annulus contrast



Pyramid contrast

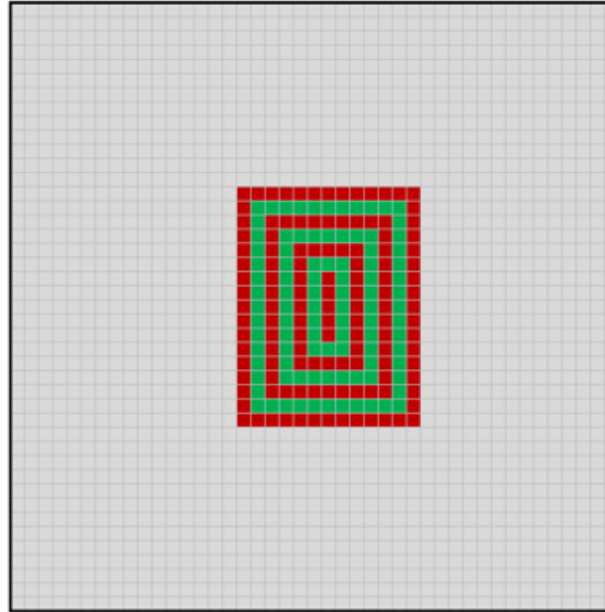


Two-dimensional ripple contrast

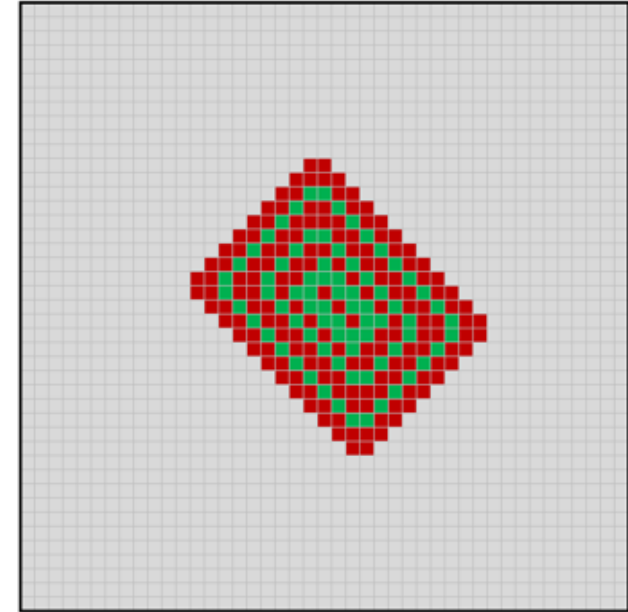


Template versions: ROI rotating and scaling

Rotation angle
= 0 degrees

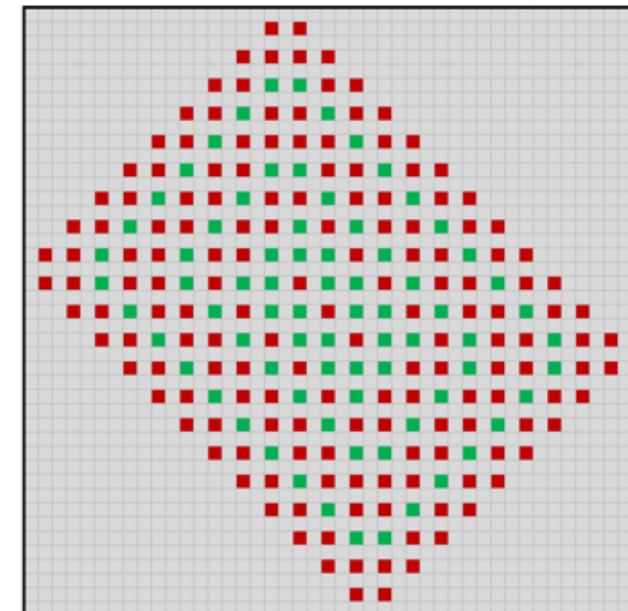
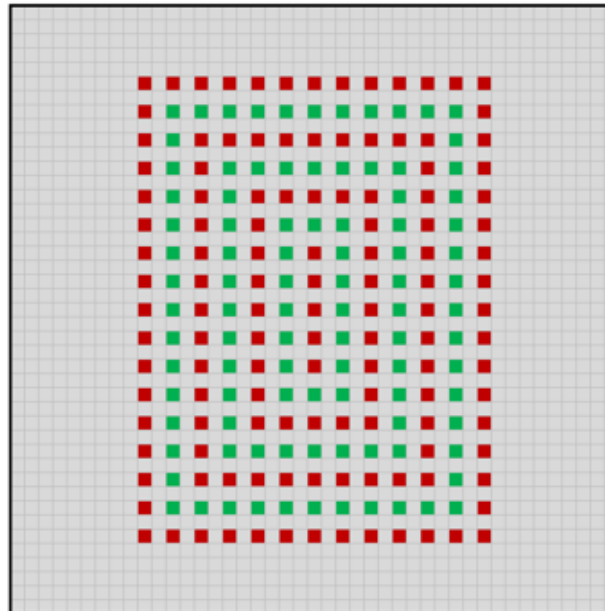


Rotation angle
= 45 degrees

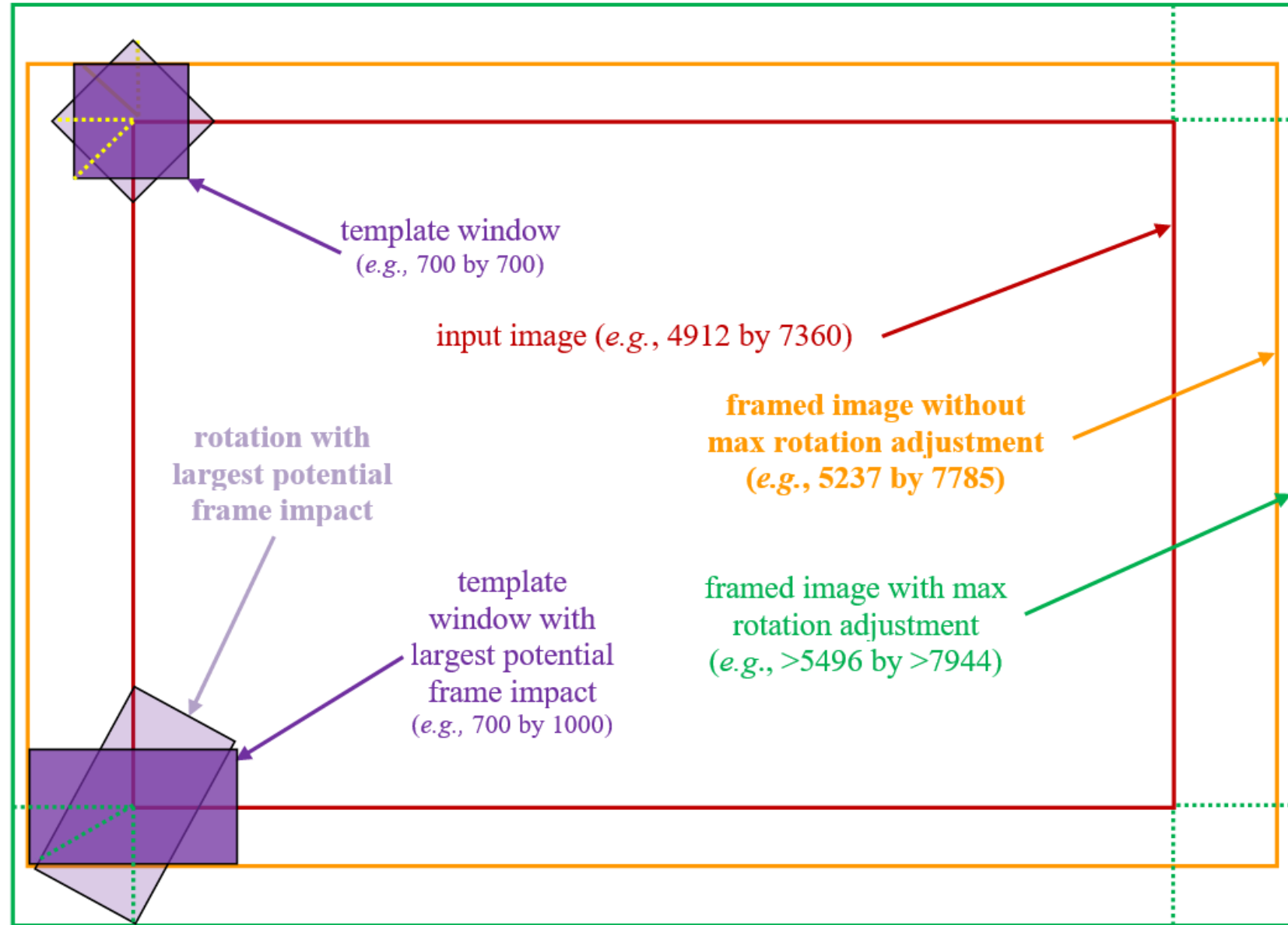


Scale factor
= 1

Scale factor
= 2



Template coverage at image boundaries



Mirrored frames

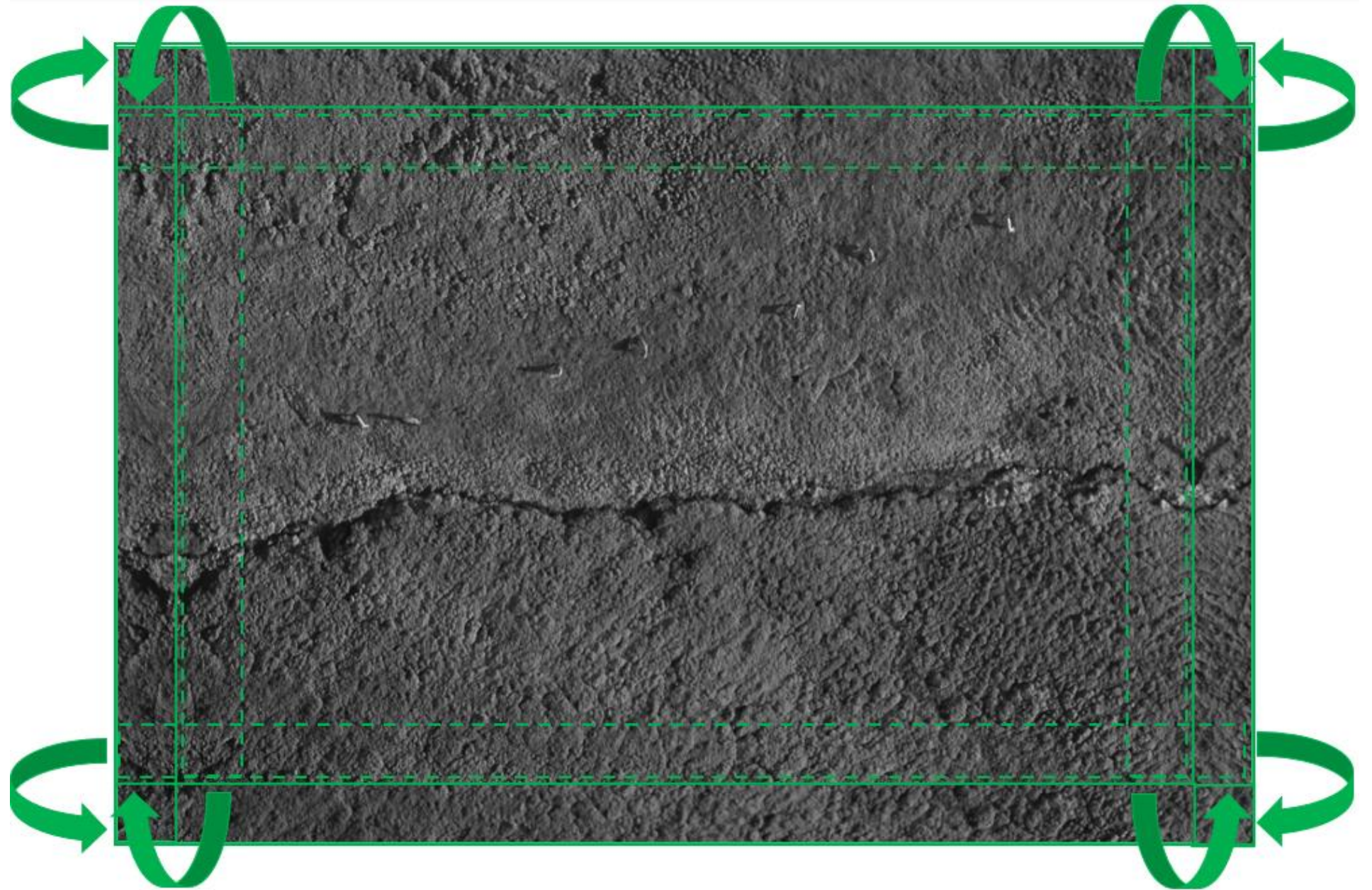
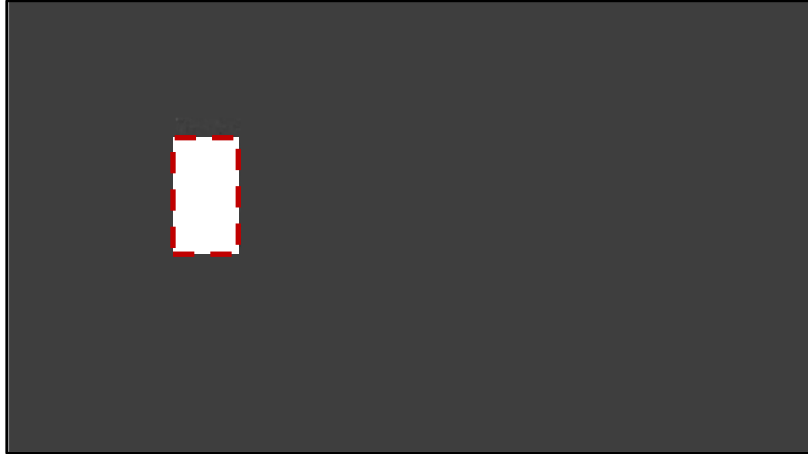


Image masking and differencing

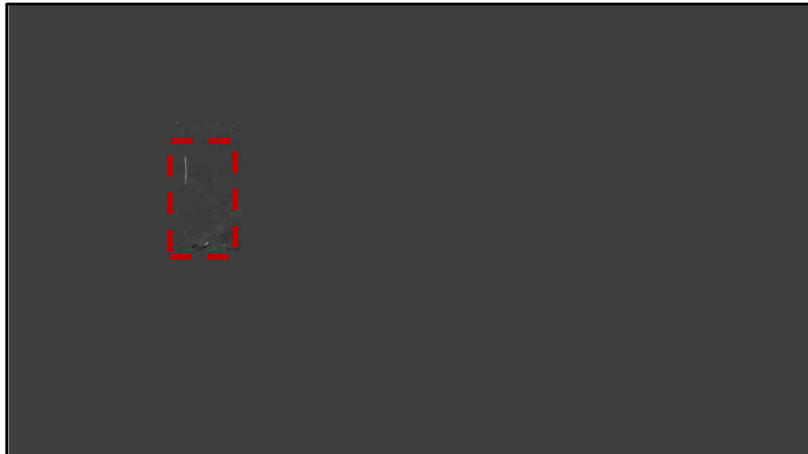
Mask File Values



Input Image File



Image Difference Values

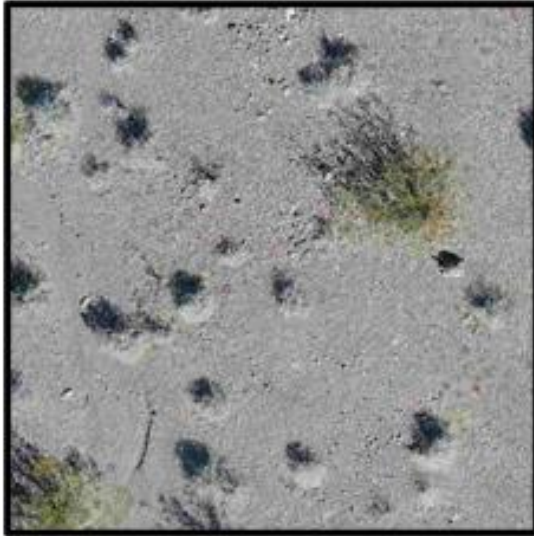


Output Alert Map File



Pixel alignment example: input images and differenced features

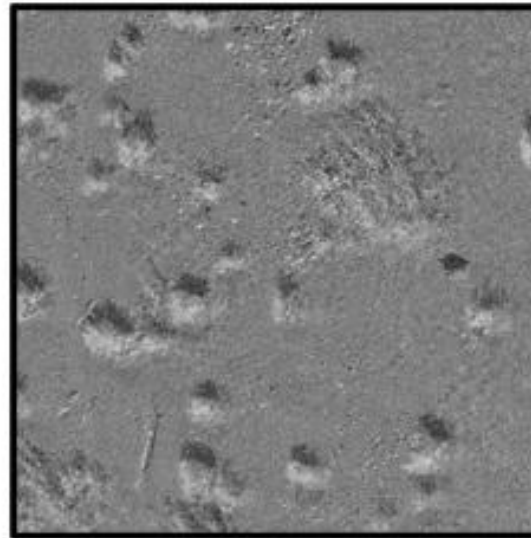
Input image with target



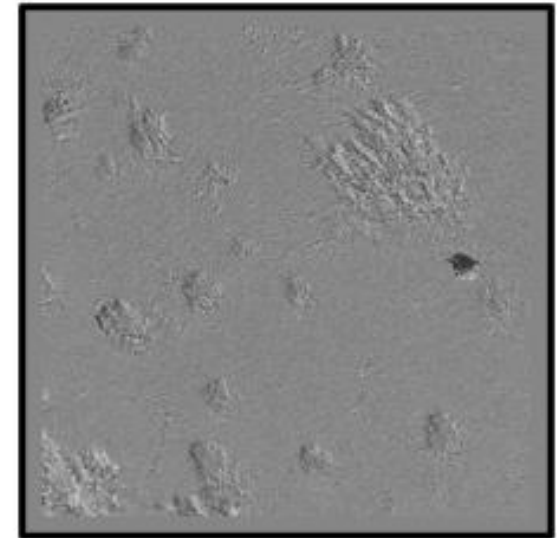
Input image with no target



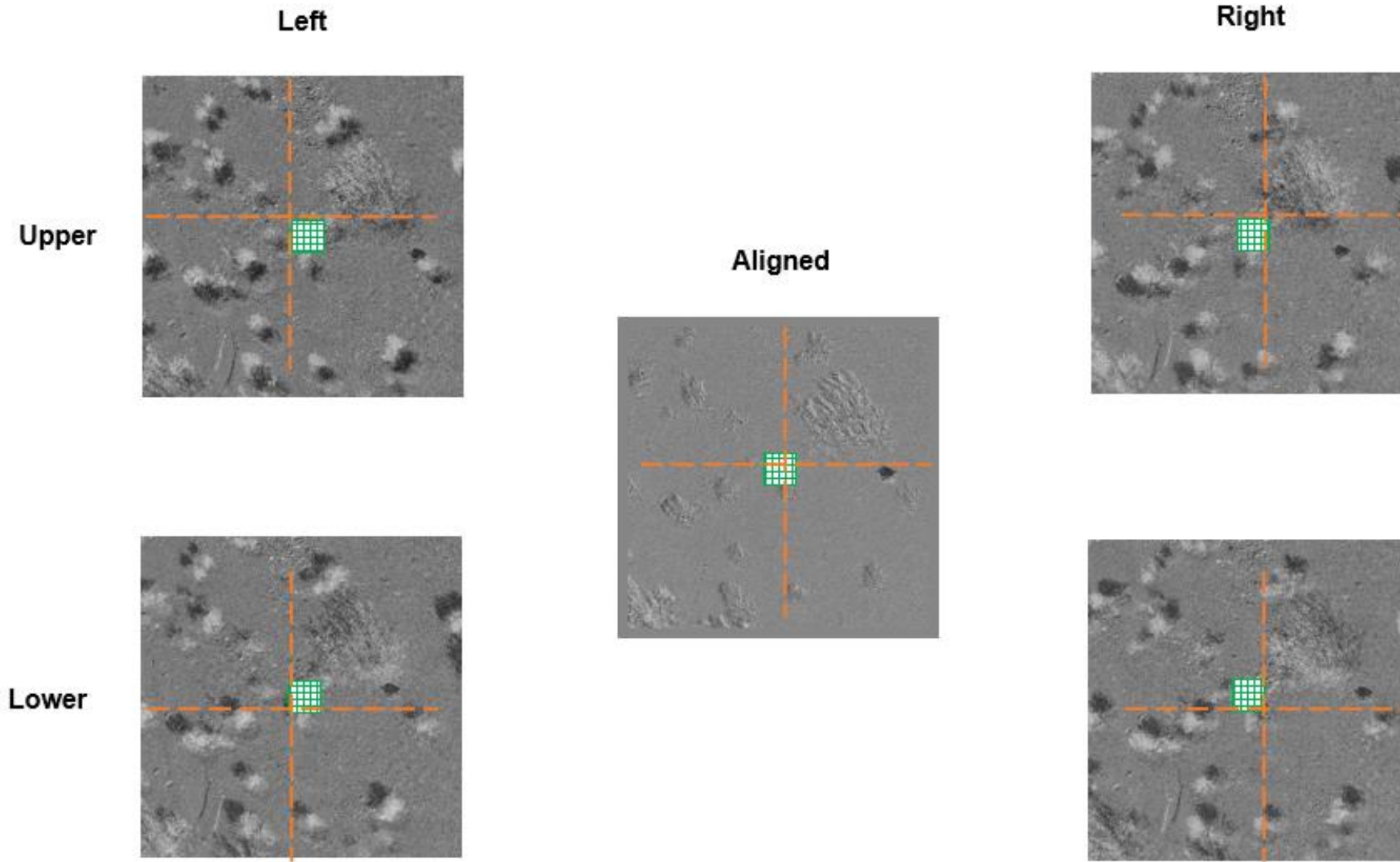
Differenced features without pixel alignment



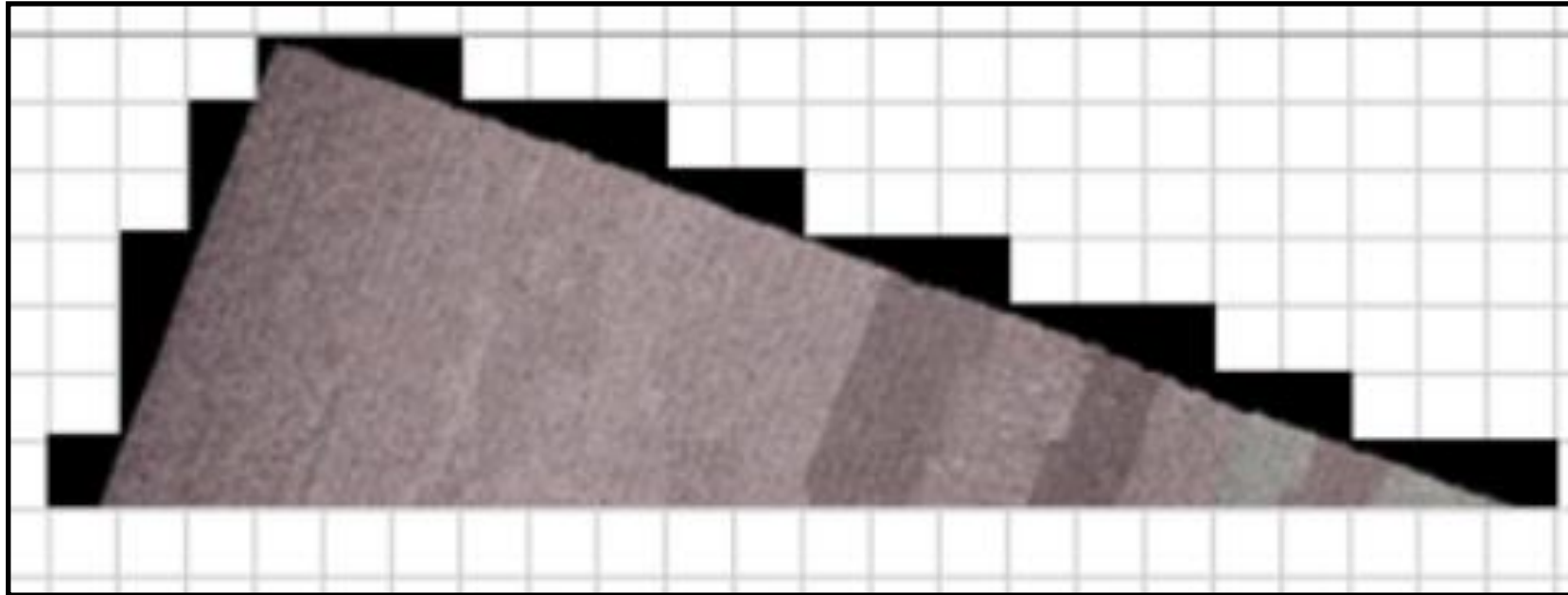
Differenced features with pixel alignment



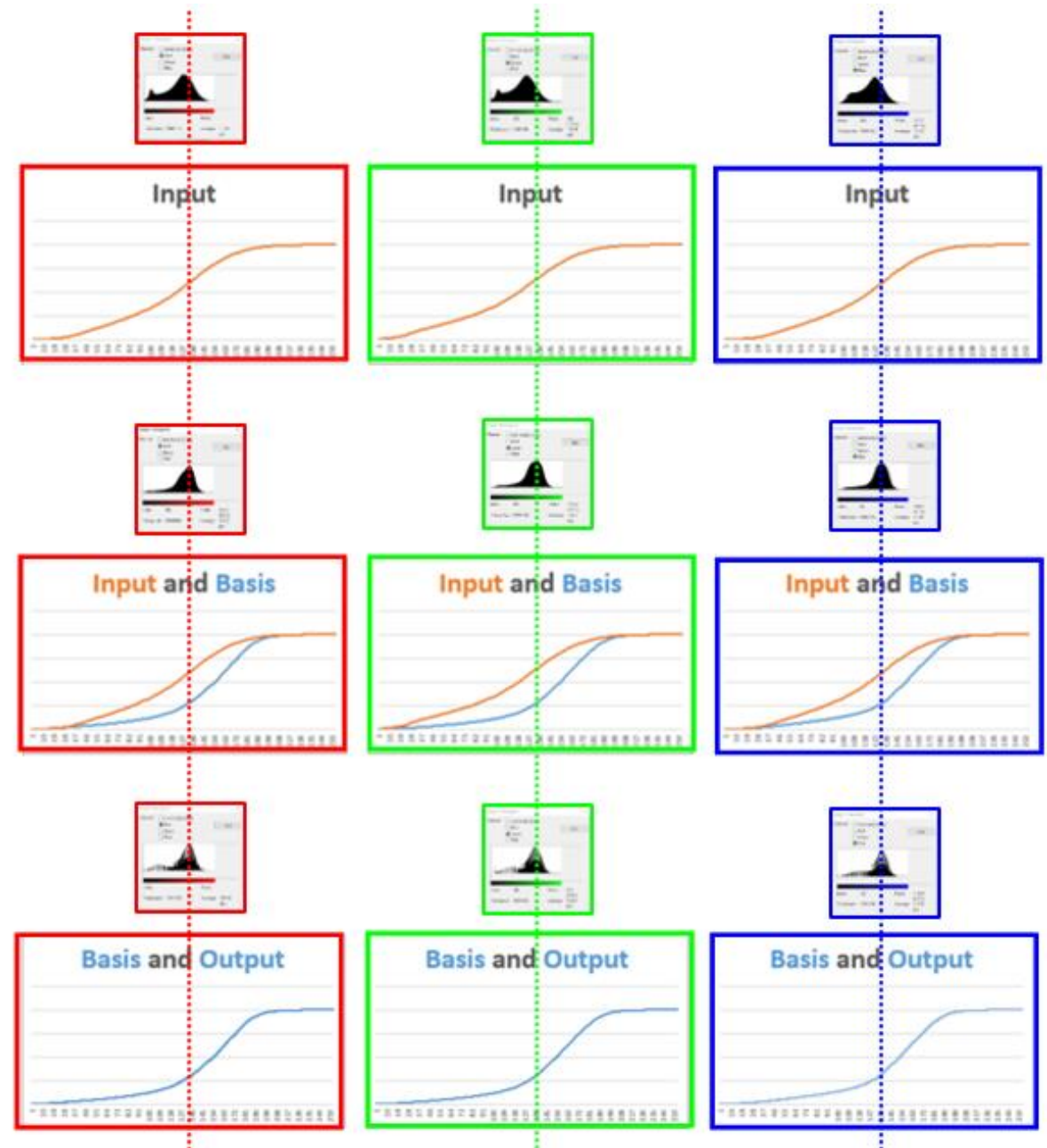
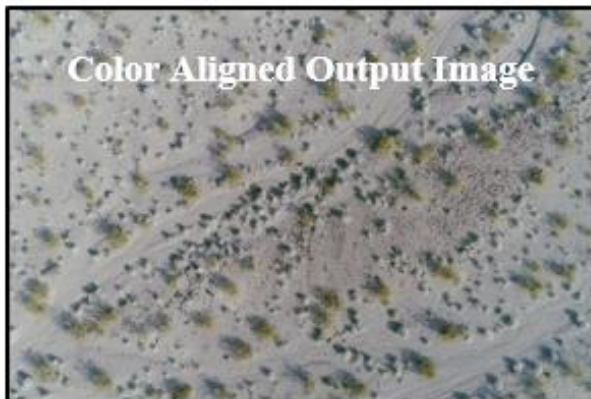
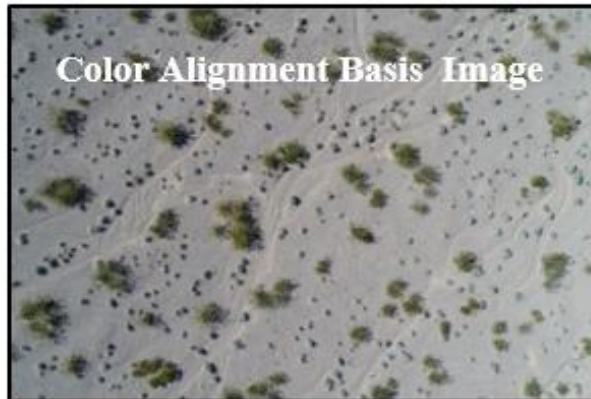
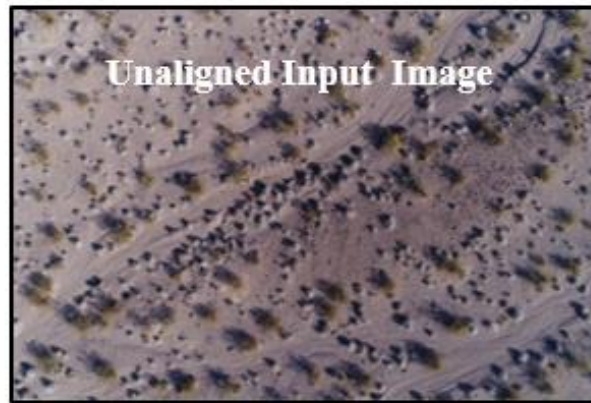
Pixel alignment example: shifted crosshairs and their alignment effects



Color variability problem



Color alignment example



Configuration Imperative: *processing speed matters!*

Preliminary configuration

Consecutive image processing. For each image:

Read input image color pixel values

Read and/or process differencing values if necessary

Read and/or process image masking values if necessary

Convert image pixel RGB values to pixel feature values

Process level 1 alerts

For each Level 1 template type:

For each Level 1 template version within type:

For each pixel row:

For each pixel column:

For each template row:

For each template column:

Evaluate pixel cutoff values
using one of eight criteria

Produce level 1 analysis output if necessary

Process level 2 alerts (as above)

Output normal alert media

Termination

An example calculation (level 1 only):
4912 image rows * 7360 image columns *
64 template rows * 64 template columns *
4 template types * 8 template versions
= 592 billion calculations per image!

Evaluate cutoff values using one of these criteria:

- Sums of absolute differences without masking
- Sums of absolute differences with masking
- Projections without masking
- Projections with masking
- Standard deviations without masking
- Standard deviations with masking
- Correlations without masking
- Correlations with masking

Whale detection use-case configuration

input_metrics.pxm.csv

2			
3	Name	Value	Description
4	input image folder	{input_m	This path points to a folder containing PixMin i
5	input pixel rows	7360	This positive integer should be the same as the
6	input pixel columns	4912	This positive integer should be the same as the
7	configuration metrics folder	{input_m	This path points to a folder containing configur
8	color alignment	0	If set to one, PixMin performs image color align
9	feature standardizing option	1	If set to one, PixMin standardizes feature value
10	feature masking option	0	If set to one, PixMin evaluates selected pixels
11	feature diff option	0	If set to one, PixMin finds a diff folder inside th
12	level 1 alert block and output chip size	513	This is the number of pixel rows and columns in
13	level 1 template matching basis	1	Each pixel's level 1 match value measures how
14	level 1 pixel match cutoff value	14	PixMin produces level 1 pixel alerts when pixel
15	level 1 alert block cutoff value	50	Each level 1 alert block's pixel level alert count
16	level 1 maximum alerts	2	This is the maximum number of level 1 alerts p
17	level 2 skip option	0	If set to one, no level 2 detection will occur so
18	criteria pass-through option	0	If set to one, the criterion values calculated per
19	level 2 alert block size	57	This is the number of pixel rows and columns in
20	level 2 template matching basis	2	Each pixel's level 2 match value measures how
21	level 2 pixel match cutoff value	3.5	PixMin produces level 2 pixel alerts when pixel
22	level 2 alert block cutoff value	750	Each level 2 alert block's pixel level alert count
23	level 2 maximum alerts	2	This is the maximum number of level 2 alerts p
24	analysis	d	This metric determines output analysis data. If
25	output detection folder	{input_m	This path points to a folder containing PixMin o
26	no normal output option	0	Normal image output may not be necessary wh
27	output alert map border width	7	PixMin distinguishes alerted regions within ale
28	internal border removal option	1	If set to one, PixMin removes borders within o



template_values_level_1.csv

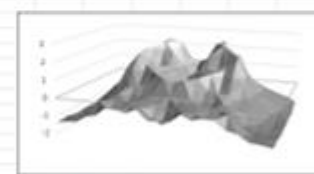
	A	B	C	D	E	F	G
1	types		1				
2	type	rows	columns				
3		1	1	145			
4	row/col	0	1	2	3	4	5
5		0	-0.395	-0.395	-0.395	-0.395	-0.395
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

template_versions_level_1.csv

	A	B	C	D	E
1	type	versions			
2		0	3		
3		version	scale	rotation deg	
4			0	9	0
5			1	9	45
6			2	9	90

template_values_level_2.csv

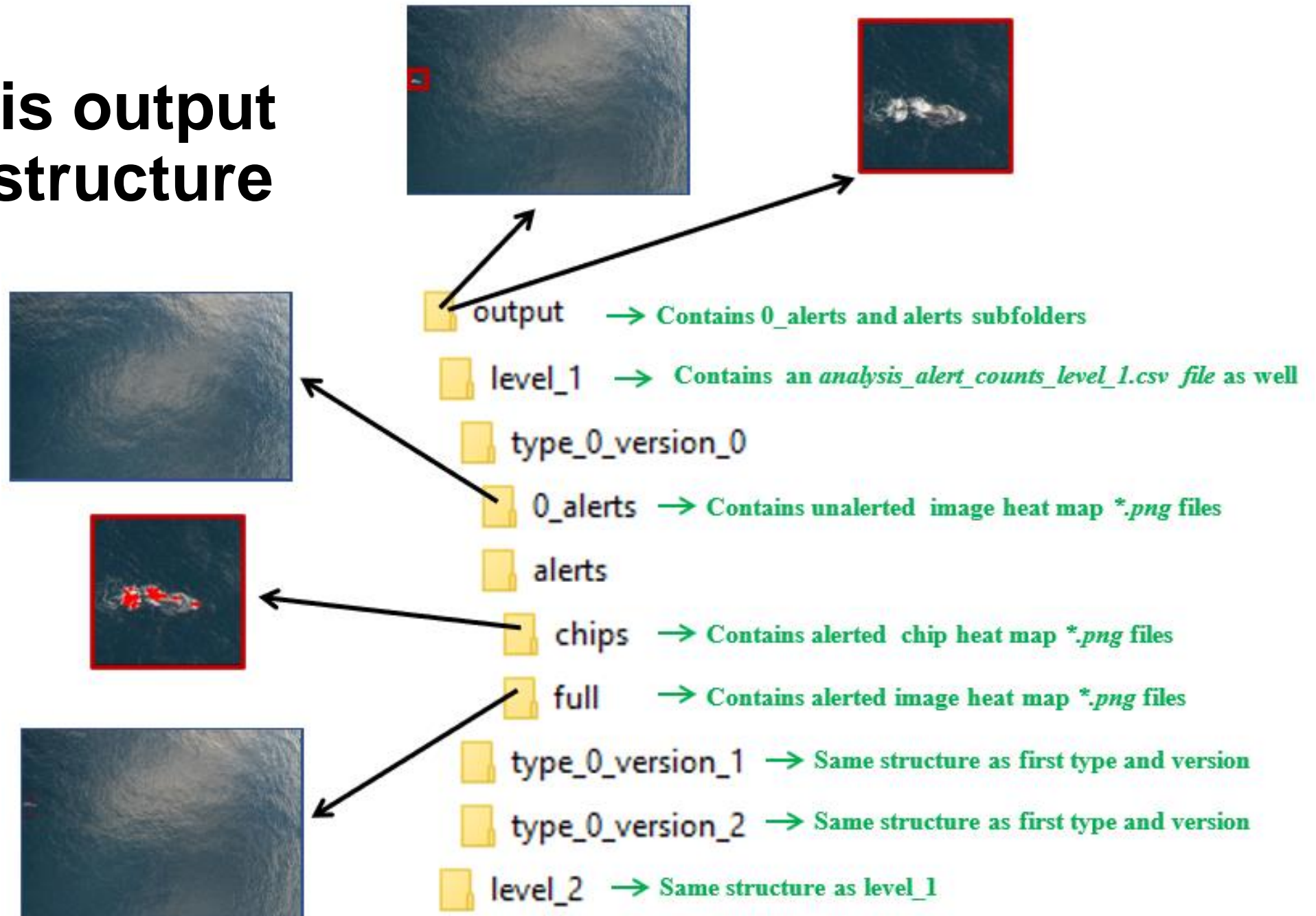
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
1	types																						
2	type	rows	columns																				
3		21	34																				
4	row/col	0	1	2	3	4	5	6	7	8	9	10	11	12	13								
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							
15																							
16																							
17																							
18																							
19																							
20																							



template_versions_level_2.csv

	A	B	C	D
1	type	versions		
2		0	12	
3		version	scale	rotation deg
4			0	3
5			1	3
6			2	3
7			3	3
8			4	3
9			5	3
10			6	0
11			7	0
12			8	0
13			9	0
14			10	0
15			11	0
16				

Analysis output folder structure



Analysis input and output example

ANALYSIS INPUT CONFIGURATION EXAMPLE

INPUT <i>chip_locations.csv</i> FILE CONTENTS					INPUT IMAGE FILES	
row/col	A	B	C	D		
	1	Image	Chip row	Chip column	0	config_snippet_01a
0	2	config_snippet_01b	7015	7103	1	config_snippet_01b
1	3	config_snippet_02b	4450	4799	2	config_snippet_01c
2	4	config_snippet_02b	4963	4663	3	config_snippet_02a
3	5	config_snippet_03a	6502	2048	4	config_snippet_02b
4	6	config_snippet_03a	1885	202	5	config_snippet_02c
5	7	config_snippet_03b	3424	109	6	config_snippet_03a
6	8	config_snippet_03b	2911	403	7	config_snippet_03b
7	9	config_snippet_03c	2910	403	8	config_snippet_03c
8	10	config_snippet_03c	3937	403		

TEMPLATE COMBINATIONS	
Types	Versions
0	0
0	1
1	0

NOTES

- Files are shown for analysis **a** only. Normal output is not shown. Folder name fonts are **bold**. Filename fonts are *red italics*.
- Type **b** filename extensions are *.h5* instead of *.png*. Otherwise, type **a** and type **b** output names are the same.
- same folder names and filenames as **type_0_version_0**
- same folder names and filenames as **type_0_version_0**
- same folder names and filenames as **level_1**
- Besides the output media shown, if *b_no_normal_image_output* = 0, the ADK will output the usual normal detection media.

RESULTING ANALYSIS OUTPUT MEDIA

output (note 1)	
level_1	
type_0_version_0	
0_alerts	<i>config_snippet_01a.png</i> <i>config_snippet_01c.png</i> <i>config_snippet_02a.png</i> <i>config_snippet_02c.png</i>
alerts	full <i>config_snippet_01b.png</i> <i>config_snippet_02b.png</i> <i>config_snippet_03a.png</i> <i>config_snippet_03b.png</i> <i>config_snippet_03c.png</i>
chips	<i>config_snippet_01b_7015_7103.png</i> <i>config_snippet_02b_4450_4799.png</i> <i>config_snippet_02b_4963_4663.png</i> <i>config_snippet_03a_6502_2048.png</i> <i>config_snippet_03a_1885_202.png</i> <i>config_snippet_03b_2911_403.png</i> <i>config_snippet_03c_2910_403.png</i> <i>config_snippet_03c_3937_403.png</i>
type_0_version_1 (note 3)	
type_1_version_0 (note 4)	
<i>analysis_statistics_level_1.csv</i>	
level_2 (note 5)	

Analysis output: level 1 statistics “from_ADK” tab

	A	B	C	D	E	F	G	H	I	J	K	L
1	Image	Chip Row	Chip Col.	Type	Version	# Alerts	Hit Ratio	Max. Val.	Max Row	Max Col.	Type	
2	config_snippet_01a	Image	Total	0	0	0	NA	8.48492	3198	0	Level 1 All	
3	config_snippet_01a	Image	Total	0	1	0	NA	9.25206	5085	16	Level 1 All	
4	config_snippet_01a	Image	Total	0	2	0	NA	8.92843	4848	696	Level 1 All	
5	config_snippet_01b	Image	Total	0	0	1085	NA	18.1598	7140	1950	Level 1 All	
6	config_snippet_01b	7015	1944	0	0	1085	INF	18.1598	7140	1950	Level 1 Block	
7	config_snippet_01b	Image	Total	0	1	553	NA	17.1132	7131	1954	Level 1 All	
8	config_snippet_01b	7015	1944	0	1	553	INF	17.1132	7131	1954	Level 1 Block	
9	config_snippet_01b	Image	Total	0	2	1	NA	14.0238	7134	1961	Level 1 All	
10	config_snippet_01b	7015	1944	0	2	1	INF	14.0238	7134	1961	Level 1 Block	
11	config_snippet_01c	Image	Total	0	0	0	NA	9.1081	645	469	Level 1 All	
12	config_snippet_01c	Image	Total	0	1	0	NA	8.68499	4494	43	Level 1 All	
13	config_snippet_01c	Image	Total	0	2	0	NA	8.15123	4176	63	Level 1 All	
14	config_snippet_02a	Image	Total	0	0	0	NA	9.59671	6824	4520	Level 1 All	
15	config_snippet_02a	Image	Total	0	1	0	NA	9.17267	6860	4527	Level 1 All	
16	config_snippet_02a	Image	Total	0	2	0	NA	11.4106	7295	3825	Level 1 All	
17	config_snippet_02b	Image	Total	0	0	603	NA	17.9756	4634	1435	Level 1 All	
18	config_snippet_02b	4450	1431	0	0	554	INF	17.9756	4634	1435	Level 1 Block	
19	config_snippet_02b	4963	1431	0	0	49	INF	15.3774	4706	1435	Level 1 Block	
20	config_snippet_02b	Image	Total	0	1	68	NA	15.3498	4702	1432	Level 1 All	
21	config_snippet_02b	4450	1431	0	1	554	INF	15.3498	4702	1432	Level 1 Block	
22	config_snippet_02b	4963	1431	0	1	11	INF	15.02	4777	1402	Level 1 Block	
23	config_snippet_02b	Image	Total	0	2	0	NA	13.2803	4694	1441	Level 1 All	
24	config_snippet_02b	4450	1431	0	2	0	0 / 0	13.2803	4694	1441	Level 1 Block	
25	config_snippet_02b	4963	1431	0	2	0	0 / 0	12.7515	4713	1429	Level 1 Block	
26	config_snippet_02c	Image	Total	0	0	0	NA	7.12442	4679	4907	Level 1 All	
27	config_snippet_02c	Image	Total	0	1	0	NA	8.47096	7297	3527	Level 1 All	
28	config snippet 02c	Image	Total	0	2	0	NA	10.8306	7357	3501	Level 1 All	

Analysis output: level 1 statistics “sorted...” tab Totals

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Image	Chip Row	Chip Col.	Type	Version	# Alerts	Hit Ratio	Max. Val.	Max Row	Max Col.	Type		
2	config_snippet_01a	Image	Total	0	0	0	NA	8.48492	3198	0	Level 1 All		
3	config_snippet_01a	Image	Total	0	1	0	NA	9.25206	5085	16	Level 1 All		
4	config_snippet_01a	Image	Total	0	2	0	NA	8.92843	4848	696	Level 1 All		
5	config_snippet_01b	Image	Total	0	0	1085	NA	18.1598	7140	1950	Level 1 All		
6	config_snippet_01b	Image	Total	0	1	553	NA	17.1132	7131	1954	Level 1 All		
7	config_snippet_01b	Image	Total	0	2	1	NA	14.0238	7134	1961	Level 1 All		
8	config_snippet_01c	Image	Total	0	0	0	NA	9.1081	645	469	Level 1 All		
9	config_snippet_01c	Image	Total	0	1	0	NA	8.68499	4494	43	Level 1 All		
10	config_snippet_01c	Image	Total	0	2	0	NA	8.15123	4176	63	Level 1 All		
11	config_snippet_02a	Image	Total	0	0	0	NA	9.59671	6824	4520	Level 1 All		
12	config_snippet_02a	Image	Total	0	1	0	NA	9.17267	6860	4527	Level 1 All		
13	config_snippet_02a	Image	Total	0	2	0	NA	11.4106	7295	3825	Level 1 All		
14	config_snippet_02b	Image	Total	0	0	603	NA	17.9756	4634	1435	Level 1 All		
15	config_snippet_02b	Image	Total	0	1	68	NA	15.3498	4702	1432	Level 1 All		
16	config_snippet_02b	Image	Total	0	2	0	NA	13.2803	4694	1441	Level 1 All		
17	config_snippet_02c	Image	Total	0	0	0	NA	7.12442	4679	4907	Level 1 All		
18	config_snippet_02c	Image	Total	0	1	0	NA	8.47096	7297	3527	Level 1 All		
19	config_snippet_02c	Image	Total	0	2	0	NA	10.8306	7357	3501	Level 1 All		
20	config_snippet_03a	Image	Total	0	0	70	NA	15.5613	4944	4911	Level 1 All		
21	config_snippet_03a	Image	Total	0	1	499	NA	20.5964	6482	169	Level 1 All		
22	config_snippet_03a	Image	Total	0	2	168	NA	16.4591	6494	167	Level 1 All		
23	config_snippet_03b	Image	Total	0	0	891	NA	20.6517	3210	1469	Level 1 All		
24	config_snippet_03b	Image	Total	0	1	623	NA	19.6374	3213	1463	Level 1 All		
25	config_snippet_03b	Image	Total	0	2	977	NA	18.5611	3091	1450	Level 1 All		
26	config_snippet_03c	Image	Total	0	0	145	NA	16.9251	4154	4911	Level 1 All		
27	config_snippet_03c	Image	Total	0	1	204	NA	16.6993	3353	4219	Level 1 All		
28	config_snippet_03c	Image	Total	0	2	417	NA	17.7928	4033	4225	Level 1 All		

from ADK sorted Chip Row Then Image cutoff highlights

Analysis output: level 1 statistics “sorted...” tab chips

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Image	Chip Row	Chip Col.	Type	Version	# Alerts	Hit Ratio	Max. Val.	Max Row	Max Col.	Type		
29	config_snippet_01b	7015	1944	0	0	1085	INF	18.1598	7140	1950	Level 1 Block		
30	config_snippet_01b	7015	1944	0	1	553	INF	17.1132	7131	1954	Level 1 Block		
31	config_snippet_01b	7015	1944	0	2	1	INF	14.0238	7134	1961	Level 1 Block		
32	config_snippet_03a	6502	405	0	0	13	0.565217	14.6235	6501	166	Level 1 Block		
33	config_snippet_03a	6502	405	0	1	284	2.86869	20.5964	6482	169	Level 1 Block		
34	config_snippet_03a	6502	405	0	2	38	0.292308	16.4591	6494	167	Level 1 Block		
35	config_snippet_02b	4963	1431	0	0	49	INF	15.3774	4706	1435	Level 1 Block		
36	config_snippet_02b	4963	1431	0	1	11	INF	15.02	4777	1402	Level 1 Block		
37	config_snippet_02b	4963	1431	0	2	0	0 / 0	12.7515	4713	1429	Level 1 Block		
38	config_snippet_02b	4450	1431	0	0	554	INF	17.9756	4634	1435	Level 1 Block		
39	config_snippet_02b	4450	1431	0	1	554	INF	15.3498	4702	1432	Level 1 Block		
40	config_snippet_02b	4450	1431	0	2	0	0 / 0	13.2803	4694	1441	Level 1 Block		
41	config_snippet_03c	3937	3996	0	0	0	0	11.9366	4175	4213	Level 1 Block		
42	config_snippet_03c	3937	3996	0	1	23	0.139394	14.872	3689	4012	Level 1 Block		
43	config_snippet_03c	3937	3996	0	2	119	0.730061	17.7928	4033	4225	Level 1 Block		
44	config_snippet_03b	3424	1431	0	0	670	167.5	20.6517	3210	1469	Level 1 Block		
45	config_snippet_03b	3424	1431	0	1	526	9.74074	19.6374	3213	1463	Level 1 Block		
46	config_snippet_03b	3424	1431	0	2	529	3.26543	18.5176	3208	1467	Level 1 Block		
47	config_snippet_03b	2911	1431	0	0	217	54.25	17.8938	2989	1536	Level 1 Block		
48	config_snippet_03b	2911	1431	0	1	43	0.796296	16.2801	3078	1479	Level 1 Block		
49	config_snippet_03b	2911	1431	0	2	286	1.76543	18.5611	3091	1450	Level 1 Block		
50	config_snippet_03c	2910	4838	0	0	62	0.746988	15.8717	2906	4907	Level 1 Block		
51	config_snippet_03c	2910	4838	0	1	16	0.09697	14.6492	2882	4903	Level 1 Block		
52	config_snippet_03c	2910	4838	0	2	135	0.828221	16.6325	2905	4887	Level 1 Block		
53	config_snippet_03a	1885	3483	0	0	34	1.47826	15.5273	1986	3716	Level 1 Block		
54	config_snippet_03a	1885	3483	0	1	116	1.17172	16.8889	1994	3711	Level 1 Block		
55	config snippet 03a	1885	3483	0	2	0	0	13.1117	1991	3722	Level 1 Block		

from_ADK sorted_Chip_Row_Then_Image cutoff_highlights

Ready Accessibility: Good to go

Analysis output: level 1 statistics “cutoff...” tab

ALERT SUMS OVER TEMPLATE COMBINATIONS																
															alert count cutoff:	50
															below cutoff color:	49
															at or above cutoff color:	50
Image	Chip Row	Chip Col.	Type	Version	# Alerts	Hit Ratio	Max. Val.	Max Row	Max Col.	Type	Image	Total	Chip Row	Chip Col.	# Alerts	
config_snippet_01c	Image	Total	0	0	0	NA	9.1081	645	469	Level 1 All	config_snippet_01c	0				
config_snippet_01c	Image	Total	0	1	0	NA	8.68499	4494	43	Level 1 All						
config_snippet_01c	Image	Total	0	2	0	NA	8.15123	4176	63	Level 1 All						
config_snippet_02a	Image	Total	0	0	0	NA	9.59671	6824	4520	Level 1 All	config_snippet_02a	0				
config_snippet_02a	Image	Total	0	1	0	NA	9.17267	6860	4527	Level 1 All						
config_snippet_02a	Image	Total	0	2	0	NA	11.4106	7295	3825	Level 1 All						
config_snippet_02b	Image	Total	0	0	603	NA	17.9756	4634	1435	Level 1 All	config_snippet_02b	671				
config_snippet_02b	4450	1431	0	0	554	INF	17.9756	4634	1435	Level 1 Block	config_snippet_02b		4450	1431	1108	
config_snippet_02b	4963	1431	0	0	49	INF	15.3774	4706	1435	Level 1 Block	config_snippet_02b		4963	1431	60	
config_snippet_02b	Image	Total	0	1	68	NA	15.3498	4702	1432	Level 1 All						
config_snippet_02b	4450	1431	0	1	554	INF	15.3498	4702	1432	Level 1 Block						
config_snippet_02b	4963	1431	0	1	11	INF	15.02	4777	1402	Level 1 Block						
config_snippet_02b	Image	Total	0	2	0	NA	13.2803	4694	1441	Level 1 All						
config_snippet_02b	4450	1431	0	2	0	0/0	13.2803	4694	1441	Level 1 Block						
config_snippet_02b	4963	1431	0	2	0	0/0	12.7515	4713	1429	Level 1 Block						
config_snippet_02c	Image	Total	0	0	0	NA	7.12442	4679	4907	Level 1 All	config_snippet_02c	0				
config_snippet_02c	Image	Total	0	1	0	NA	8.47096	7297	3527	Level 1 All						
config_snippet_02c	Image	Total	0	2	0	NA	10.8306	7357	3501	Level 1 All						
config_snippet_03a	Image	Total	0	0	70	NA	15.5613	4944	4911	Level 1 All	config_snippet_03a	737				
config_snippet_03a	6502	405	0	0	13	0.565217	14.6235	6501	166	Level 1 Block	config_snippet_03a		6502	405	335	
config_snippet_03a	1885	3483	0	0	34	1.47826	15.5273	1986	3716	Level 1 Block	config_snippet_03a		1885	3483	150	
config_snippet_03a	Image	Total	0	1	499	NA	20.5964	6482	169	Level 1 All						
config_snippet_03a	6502	405	0	1	284	2.86869	20.5964	6482	169	Level 1 Block						
config_snippet_03a	1885	3483	0	1	116	1.17172	16.8889	1994	3711	Level 1 Block						
config_snippet_03a	Image	Total	0	2	168	NA	16.4591	6494	167	Level 1 All						
config_snippet_03a	6502	405	0	2	38	0.292308	16.4591	6494	167	Level 1 Block						

Analysis output: level 2 “from_ADK” tab excerpts

	A	B	C	D	E	F	G	H	I	J	K	L
1	Image	Chip Row	Chip Col.	Type	Version	# Alerts	Hit Ratio	Max. Val.	Max Row	Max Col.	Type	
2	config_snippet_01b	7015	1944	0	0	545	NA	4.60949	7219	1979	Level 2 All	
3	config_snippet_01b	7015	1944	0	0	202	0.58892	SAME	461	292	Level 2 Block	
4	config_snippet_01b	7015	1944	0	1	443	NA	4.41357	7160	1941	Level 2 All	
5	config_snippet_01b	7015	1944	0	1	236	1.1401	SAME	402	254	Level 2 Block	
6	config_snippet_01b	7015	1944	0	2	819	NA	4.15779	7076	1966	Level 2 All	
7	config_snippet_01b	7015	1944	0	2	284	0.53084	SAME	318	279	Level 2 Block	
8	config_snippet_01b	7015	1944	0	3	274	NA	4.02477	7225	1992	Level 2 All	
9	config_snippet_01b	7015	1944	0	3	186	2.11364	SAME	467	305	Level 2 Block	
10	config_snippet_01b	7015	1944	0	4	430	NA	4.62513	7220	1990	Level 2 All	
11	config_snippet_01b	7015	1944	0	4	314	2.7069	SAME	462	303	Level 2 Block	
12	config_snippet_01b	7015	1944	0	5	1264	NA	4.80535	7003	1987	Level 2 All	
13	config_snippet_01b	7015	1944	0	5	543	0.75312	SAME	245	300	Level 2 Block	
14	config_snippet_01b	7015	1944	0	6	238	NA	3.76048	7139	1936	Level 2 All	
15	config_snippet_01b	7015	1944	0	6	238	INF	SAME	381	249	Level 2 Block	
16	config_snippet_01b	7015	1944	0	7	263	NA	4.05241	7247	1947	Level 2 All	
17	config_snippet_01b	7015	1944	0	7	263	INF	SAME	489	260	Level 2 Block	
18	config_snippet_01b	7015	1944	0	8	1003	NA	4.42564	7238	1961	Level 2 All	
19	config_snippet_01b	7015	1944	0	8	521	1.08091	SAME	480	274	Level 2 Block	
20	config_snippet_01b	7015	1944	0	9	1097	NA	4.82573	7238	1972	Level 2 All	
21	config_snippet_01b	7015	1944	0	9	556	1.02773	SAME	480	285	Level 2 Block	
22	config_snippet_01b	7015	1944	0	10	275	NA	3.77223	7137	1971	Level 2 All	
23	config_snippet_01b	7015	1944	0	10	177	1.80612	SAME	379	284	Level 2 Block	
24	config_snippet_01b	7015	1944	0	11	919	NA	4.47058	7221	1962	Level 2 All	
25	config_snippet_01b	7015	1944	0	11	402	0.77756	SAME	463	275	Level 2 Block	
26	config_snippet_02b	4450	1431	0	0	741	NA	4.96469	4625	1420	Level 2 All	
27	config_snippet_02b	4450	1431	0	0	452	1.56401	SAME	432	246	Level 2 Block	
28	config_snippet_02b	4450	1431	0	1	462	NA	4.51134	4698	1436	Level 2 All	
29	config_snippet_02b	4450	1431	0	1	204	1.75	SAME	505	262	Level 2 Block	

← →
from_ADK
sorted_Type_Then_Image
cutoff_highlights
+
⋮
◀

Analysis output: level 2 “sorted ...” tab “All” excerpts

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Image	Chip Row	Chip Col.	Type	Version	# Alerts	Hit Ratio	Max. Val.	Max Row	Max Col.	Type		
26	config_snippet_02b	4963	1431	0	0	319	NA	4.3718	4760	1503	Level 2 All		
27	config_snippet_02b	4963	1431	0	1	482	NA	4.21705	4762	1506	Level 2 All		
28	config_snippet_02b	4963	1431	0	2	488	NA	4.355	4765	1514	Level 2 All		
29	config_snippet_02b	4963	1431	0	3	345	NA	4.52244	4769	1521	Level 2 All		
30	config_snippet_02b	4963	1431	0	4	142	NA	4.06258	4765	1517	Level 2 All		
31	config_snippet_02b	4963	1431	0	5	272	NA	4.21626	4755	1511	Level 2 All		
32	config_snippet_02b	4963	1431	0	6	70	NA	3.78846	4758	1382	Level 2 All		
33	config_snippet_02b	4963	1431	0	7	132	NA	3.75776	4707	1427	Level 2 All		
34	config_snippet_02b	4963	1431	0	8	59	NA	3.7145	4707	1433	Level 2 All		
35	config_snippet_02b	4963	1431	0	9	146	NA	3.85733	4708	1451	Level 2 All		
36	config_snippet_02b	4963	1431	0	10	146	NA	3.91513	4743	1527	Level 2 All		
37	config_snippet_02b	4963	1431	0	11	0	NA	2.94018	4748	1523	Level 2 All		
38	config_snippet_03a	6502	405	0	0	0	NA	3.49909	6492	152	Level 2 All		
39	config_snippet_03a	6502	405	0	1	0	NA	3.45281	6633	344	Level 2 All		
40	config_snippet_03a	6502	405	0	2	134	NA	4.2169	6508	163	Level 2 All		
41	config_snippet_03a	6502	405	0	3	37	NA	3.66974	6491	172	Level 2 All		
42	config_snippet_03a	6502	405	0	4	92	NA	4.00725	6490	176	Level 2 All		
43	config_snippet_03a	6502	405	0	5	28	NA	3.78763	6547	202	Level 2 All		
44	config_snippet_03a	6502	405	0	6	0	NA	3.01205	6490	153	Level 2 All		
45	config_snippet_03a	6502	405	0	7	0	NA	3.17574	6650	355	Level 2 All		
46	config_snippet_03a	6502	405	0	8	0	NA	3.46803	6506	181	Level 2 All		
47	config_snippet_03a	6502	405	0	9	0	NA	3.39876	6583	217	Level 2 All		
48	config_snippet_03a	6502	405	0	10	0	NA	3.43674	6580	215	Level 2 All		
49	config_snippet_03a	6502	405	0	11	0	NA	3.0108	6423	238	Level 2 All		

from_ADK | sorted_Type_Then_Image | cutoff_highlights | + | ◀

Analysis output: level 2 “sorted ...” tab “Block” excerpts

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Image	Chip Row	Chip Col.	Type	Version	# Alerts	Hit Ratio	Max. Val.	Max Row	Max Col.	Type		
134	config_snippet_02b	4963	1431	0	0	169	1.12667	SAME	54	329	Level 2 Block		
135	config_snippet_02b	4963	1431	0	1	196	0.68532	SAME	56	332	Level 2 Block		
136	config_snippet_02b	4963	1431	0	2	179	0.57929	SAME	59	340	Level 2 Block		
137	config_snippet_02b	4963	1431	0	3	186	1.16981	SAME	63	347	Level 2 Block		
138	config_snippet_02b	4963	1431	0	4	79	1.25397	SAME	59	343	Level 2 Block		
139	config_snippet_02b	4963	1431	0	5	130	0.91549	SAME	49	337	Level 2 Block		
140	config_snippet_02b	4963	1431	0	6	52	2.88889	SAME	52	208	Level 2 Block		
141	config_snippet_02b	4963	1431	0	7	110	5	SAME	1	253	Level 2 Block		
142	config_snippet_02b	4963	1431	0	8	59	INF	SAME	1	259	Level 2 Block		
143	config_snippet_02b	4963	1431	0	9	144	72	SAME	2	277	Level 2 Block		
144	config_snippet_02b	4963	1431	0	10	113	3.42424	SAME	37	353	Level 2 Block		
145	config_snippet_02b	4963	1431	0	11	0	0 / 0	SAME	42	349	Level 2 Block		
146	config_snippet_03a	6502	405	0	0	0	0 / 0	SAME	247	4	Level 2 Block		
147	config_snippet_03a	6502	405	0	1	0	0 / 0	SAME	388	196	Level 2 Block		
148	config_snippet_03a	6502	405	0	2	134	INF	SAME	263	15	Level 2 Block		
149	config_snippet_03a	6502	405	0	3	37	INF	SAME	246	24	Level 2 Block		
150	config_snippet_03a	6502	405	0	4	92	INF	SAME	245	28	Level 2 Block		
151	config_snippet_03a	6502	405	0	5	24	6	SAME	302	54	Level 2 Block		
152	config_snippet_03a	6502	405	0	6	0	0 / 0	SAME	245	5	Level 2 Block		
153	config_snippet_03a	6502	405	0	7	0	0 / 0	SAME	405	207	Level 2 Block		
154	config_snippet_03a	6502	405	0	8	0	0 / 0	SAME	261	33	Level 2 Block		
155	config_snippet_03a	6502	405	0	9	0	0 / 0	SAME	338	69	Level 2 Block		
156	config_snippet_03a	6502	405	0	10	0	0 / 0	SAME	335	67	Level 2 Block		
157	config_snippet_03a	6502	405	0	11	0	0 / 0	SAME	178	90	Level 2 Block		

ALERT SUMS OVER TEMPLATE COMBINATIONS

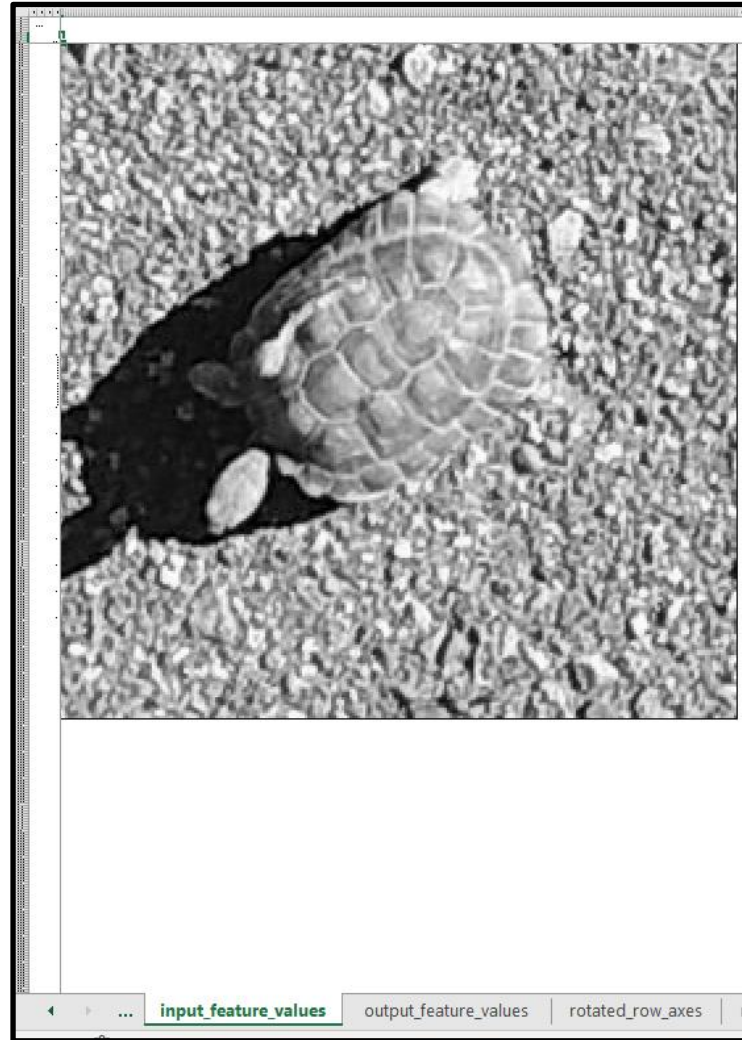
SUMS OVERTYPES:		count
alert cutoff:		750
sub-alert color:		743
alert color:		750

	Image	chip Ro	chip Co	Type	Version	Alerts	Hit Rate	Max. Va	Max Row	Max Col	Type	Image	chip Ro	chip Co	Alerts
155	config_snippet_03b	2911	1431	0	0	24	NA	3.5843	3089	1443	Level 2 All				
156	config_snippet_03b	2911	1431	0	0	24	INF	SAME	435	269	Level 2 Block	config_snippet_03b	2911	1431	1403
157	config_snippet_03b	2911	1431	0	1	44	NA	3.7503	3095	1446	Level 2 All				
158	config_snippet_03b	2911	1431	0	1	44	INF	SAME	441	272	Level 2 Block				
159	config_snippet_03b	2911	1431	0	2	38	NA	3.8823	3017	1562	Level 2 All				
160	config_snippet_03b	2911	1431	0	2	68	2.2667	SAME	363	388	Level 2 Block				
161	config_snippet_03b	2911	1431	0	3	55	NA	3.6832	3119	1362	Level 2 All				
162	config_snippet_03b	2911	1431	0	3	47	5.875	SAME	465	188	Level 2 Block				
163	config_snippet_03b	2911	1431	0	4	43	NA	3.5883	2998	1574	Level 2 All				
164	config_snippet_03b	2911	1431	0	4	17	0.6538	SAME	344	400	Level 2 Block				
165	config_snippet_03b	2911	1431	0	5	0	NA	3.4443	3103	1359	Level 2 All				
166	config_snippet_03b	2911	1431	0	5	0	0 / 0	SAME	449	185	Level 2 Block				
167	config_snippet_03b	2911	1431	0	6	164	NA	3.9189	3070	1444	Level 2 All				
168	config_snippet_03b	2911	1431	0	6	164	INF	SAME	416	270	Level 2 Block				
169	config_snippet_03b	2911	1431	0	7	11	NA	3.6403	3086	1449	Level 2 All				
170	config_snippet_03b	2911	1431	0	7	11	INF	SAME	432	275	Level 2 Block				
171	config_snippet_03b	2911	1431	0	8	504	NA	4.1766	3093	1469	Level 2 All				
172	config_snippet_03b	2911	1431	0	8	400	3.8462	SAME	439	295	Level 2 Block				
173	config_snippet_03b	2911	1431	0	9	303	NA	4.1542	3087	1475	Level 2 All				
174	config_snippet_03b	2911	1431	0	9	290	22.308	SAME	433	301	Level 2 Block				
175	config_snippet_03b	2911	1431	0	10	313	NA	3.9816	2988	1588	Level 2 All				
176	config_snippet_03b	2911	1431	0	10	213	2.13	SAME	334	414	Level 2 Block				
177	config_snippet_03b	2911	1431	0	11	125	NA	3.8556	3062	1463	Level 2 All				
178	config_snippet_03b	2911	1431	0	11	125	INF	SAME	408	289	Level 2 Block				
179	config_snippet_03c	2910	4838	0	0	0	NA	2.8427	3062	4854	Level 2 All				
180	config_snippet_03c	2910	4838	0	0	0	0 / 0	SAME	408	89	Level 2 Block	config_snippet_03c	2910	4838	63
181	config_snippet_03c	2910	4838	0	1	0	NA	2.8558	3059	4910	Level 2 All				
182	config_snippet_03c	2910	4838	0	1	0	0 / 0	SAME	405	145	Level 2 Block				
183	config_snippet_03c	2910	4838	0	2	0	NA	3.1524	3066	4911	Level 2 All				
184	config_snippet_03c	2910	4838	0	2	0	0 / 0	SAME	412	146	Level 2 Block				
185	config_snippet_03c	2910	4838	0	3	0	NA	3.2761	3054	4911	Level 2 All				
186	config_snippet_03c	2910	4838	0	3	0	0 / 0	SAME	400	146	Level 2 Block				
187	config_snippet_03c	2910	4838	0	4	0	NA	3.3153	2654	4831	Level 2 All				
188	config_snippet_03c	2910	4838	0	4	0	0 / 0	SAME	0	66	Level 2 Block				
189	config_snippet_03c	2910	4838	0	5	0	NA	3.4585	2865	4911	Level 2 All				
190	config_snippet_03c	2910	4838	0	5	0	0 / 0	SAME	211	146	Level 2 Block				
191	config_snippet_03c	2910	4838	0	6	0	NA	3.1173	2904	4906	Level 2 All				
192	config_snippet_03c	2910	4838	0	6	0	0 / 0	SAME	250	141	Level 2 Block				
193	config_snippet_03c	2910	4838	0	7	0	NA	3.1633	2910	4901	Level 2 All				
194	config_snippet_03c	2910	4838	0	7	0	0 / 0	SAME	256	136	Level 2 Block				
195	config_snippet_03c	2910	4838	0	8	0	NA	3.4572	3063	4890	Level 2 All				
196	config_snippet_03c	2910	4838	0	8	0	0 / 0	SAME	415	125	Level 2 Block				
197	config_snippet_03c	2910	4838	0	9	0	NA	3.4669	2910	4911	Level 2 All				
198	config_snippet_03c	2910	4838	0	9	0	0 / 0	SAME	256	146	Level 2 Block				
199	config_snippet_03c	2910	4838	0	10	12	NA	3.691	2904	4911	Level 2 All				
200	config_snippet_03c	2910	4838	0	10	12	INF	SAME	250	146	Level 2 Block				
201	config_snippet_03c	2910	4838	0	11	71	NA	3.8256	2885	4911	Level 2 All				
202	config_snippet_03c	2910	4838	0	11	51	2.55	SAME	231	146	Level 2 Block				
203	config_snippet_03c	3337	3336	0	0	100	NA	3.7526	4165	4187	Level 2 All				

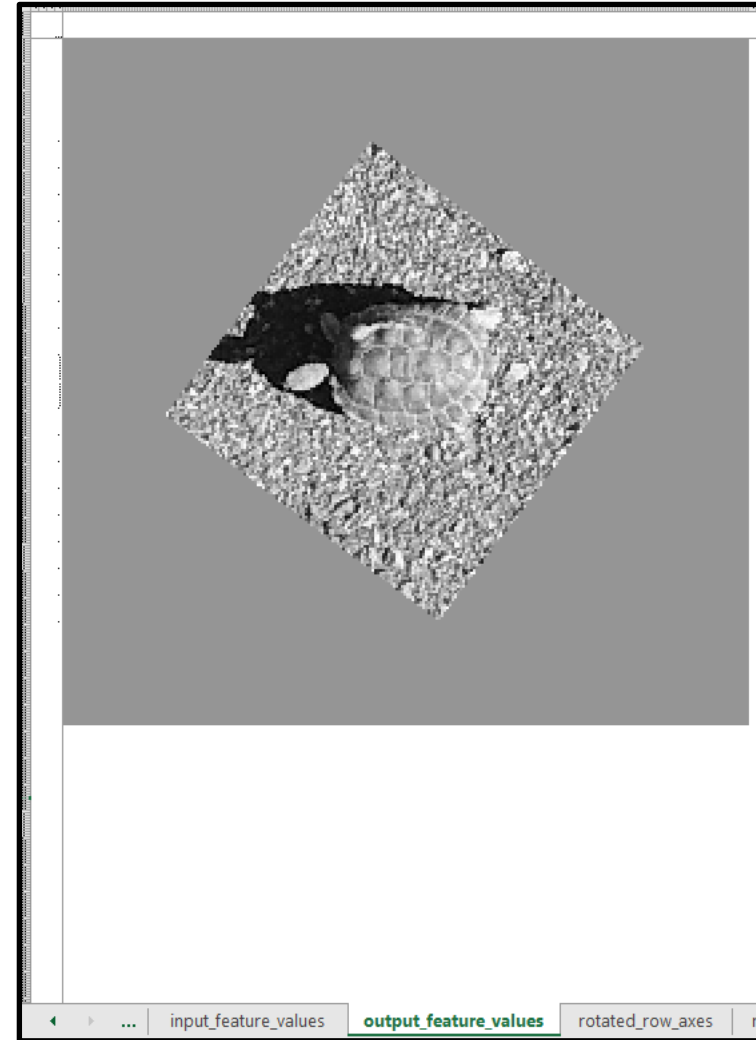
**Analysis output:
level 2
“cutoff_highlights”
tab excerpts**

Analysis tools: target chip reorientation

Input Chip



Reoriented Chip



Example:
Scale Factor = 2
Rotation = 37°

Analysis tools: mask builder

NOTES:

- 1) These are Cartesian axis values starting with (0,0) at their lower left corner. These are **NOT** image axes starting with (0,0) at their upper left corner.
- 2) Upper left corner lines and lower right corner lines **MUST** have positive slopes. Upper right corner lines and lower left corner lines **MUST** have negative slopes.
- 3) The last, "reset" tab in this spreadsheet contains settings that will not mask any pixels at all.
- 4) "Upper left" is abbreviated by UL below. Likewise for the other three corners.

INPUT METRICS: Green

DERIVED METRICS: Orange

IMAGE y AXIS POINT
0

TOP FRAME ROW POINT
999

IMAGE UL AXES		UL LINE POINTS		UR LINE POINTS		IMAGE UR AXES	
upper point	lower point	upper point	lower point	upper point	lower point	upper point	lower point
x	y	row	col	row	col	x	y
1	0	999	1	999	998	998	0
0	1	998	0	998	999	999	1

LEFT FRAME COLUMN POINT (x = col)
0

RIGHT FRAME COLUMN POINT (x = col)
999

IMAGE LL AXES		LL LINE POINTS		LR LINE POINTS		IMAGE LR AXES	
upper point	lower point	upper point	lower point	upper point	lower point	upper point	lower point
x	y	row	col	row	col	x	y
0	998	1	0	1	999	999	998
1	999	0	1	0	998	998	999

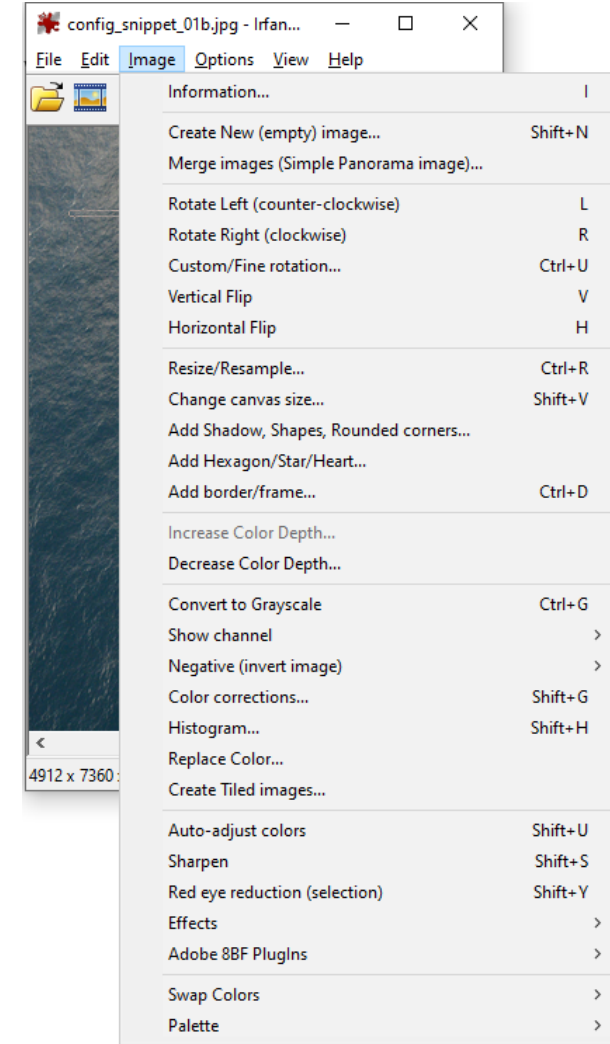
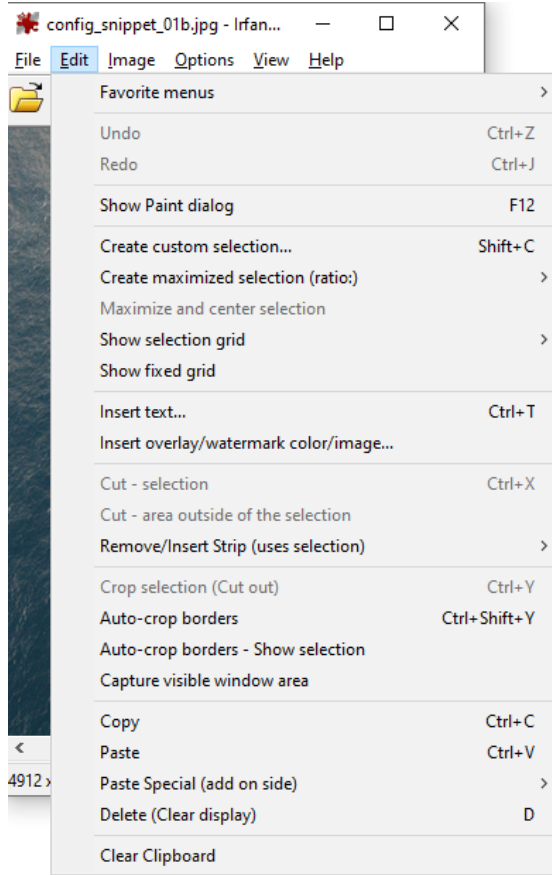
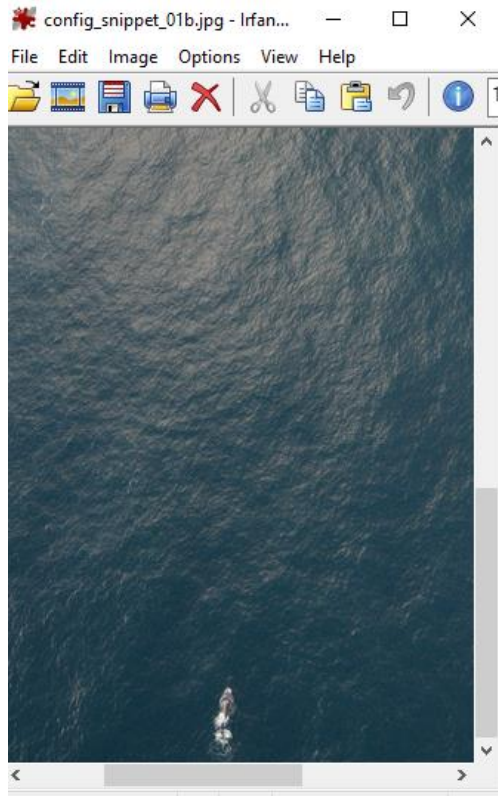
BOTTOM FRAME ROW POINT
0

IMAGE y AXIS POINT
999

UL dividing line slope:	UL dividing line constant:	UR dividing line slope:	UR dividing line constant:
1.0	998.0	-1.0	1997.0
LL dividing line slope:	LL dividing line constant:	LR dividing line slope:	LR dividing line constant:
-1.0	1.0	1.0	-998.0

instructions-settings | a_input_mask | +f_output_UR_mask | +b_rectangular_frame_mask | +c_LL_mask | +d_LR_mask | +e_UL_mask | reset ...

Analysis tools: IrfanView



Analysis tools: HDFView

The screenshot displays the HDFView interface. On the left, a tree view shows the file structure: `config_snippet_0` > `Output_Group` > `0000`. The main panel is titled "Object Attribute Info" and shows "General Object Info" with "Attribute Creation Order: Creation Order NOT Tracked" and "Number of attributes = 0".

Two windows are overlaid on the main panel:

- Image Viewer:** Titled "0000 at /Output_Group/ [config_snippet_01b_7110_1...". It displays a grayscale image of a whale's tail. A vertical color scale on the right ranges from $-1.99E0$ at the top to $2.92E0$ at the bottom.
- Data Display:** Titled "0000 at /Output_Group/ [config_snippet_01b_7110_1970.h5 in C:\Users\Developer\Document...". It shows a table of data with columns 0 through 6. The data is 0-based.

At the bottom of the window, a status bar contains the following text:

No attached palette found, default grey palette is used to display image
0000 at /Output_Group/ [config_snippet_01b_7110_1970.h5 in C:\Users\Developer\Documents\PixMin_ADK_2023\2_use-case_files\8_whale_detection\output_archive\output_1\level_1\type_0_version_0>alerts\chips
0000 at /Output_Group/ [config_snippet_01b_7110_1970.h5 in C:\Users\Developer\Documents\PixMin_ADK_2023\2_use-case_files\8_whale_detection\output_archive\output_1\level_1\type_0_version_0>alerts\chips

Analysis tools: flight plan coverage calculator

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1																				
2			Camera pixel size (mm):		0.0027		Ground sampling distance (cm/pixel):		8.18				0.082		GSD (m/pixel)					
3			Camera/lens focal length (mm):		3.3								0.13		Camera/lens focal length (inches)					
4			Camera left-right resolution (pixels):		1920		Ground left-right coverage per image (m):		157.1											
5			Camera front-back resolution (pixels):		1080		Ground front-back coverage per image (m):		88.4											
6			Raw bits / pixel:		12										328		Altitude (ft)			
7			Left-right FOV (degrees):		76.3		Left-right survey coverage (m):		903.6						5.6		Ground speed (m/sec)			
8			Front-back FOV (degrees):		47.7		Front-back survey coverage (m):		100.0						12.43		Ground speed (mph)			
9															3.22		Ground resolution (inches per pixel)			
10		Color codes	Frame rate (frames/sec):		0.50		Search time per transact (min):		0.3						11.1		Ground frame creep (m/frame)			
11		Input:	Altitude (m):		100.0		Time per turn (sec):		5.4						124.42		transact shift distance (m)			
12		Interim:	Ground speed (Km/hr):		20.00		Search flight time (min):		2.7						87.4		Front-back overlap (%)			
13		Output:	Transact search distance (m):		100		Ferry time (min):		3.0						0.584		left-right non-overlap proportion			
14			Number of transacts:		7		Total flight time (min):		30.7						0.126		Front-back non-ovelap proportion			
15			left-right (each side) overlap (%):		20.80															
16			Ferry distance (km):		0.5		Left-right non-overlap (pixels):		1121.3						18.0		Per transact search time (sec)			
17			Engagement time (minutes)*:		25.0		front-back non-overlap (pixels):		135.8						23.4		Per transact flight time, counting turn time (sec)			
18																				
19			target size (cm):		60.9		target pixels:		7.4						24.0		Target size (inches)			
20			adjusted target left-right drift rate (m/sec)**:		0.075															
21							left-right drift between transacts (pixels):		21.5											
22																				
23																				
24																				
25																				
26			Transmission/upload rate (megabits/sec):		25										0.0011		Overall processing rate (hours/image)			
27			Triage processing rate (secs/image/processor):		16										82		Images per daily flight			
28															3.11		Megabytes/image (uncompressed)			
29			Number of processors:		4										3.11E-06		Terabytes/image (uncompressed)			
30															1.00		Transmission/upload time per image (sec)			
31																				
32																				
33																				
34																				
35																				
36																				
37																				

* This is the estimated time during which the drone will descending to a hovering position over the target, once it has detected the target

** This is the estimated drift error rate after the flight transact direction has been set to move in the same direction as target drift