

# **A Videography Analysis Framework for Video Retrieval and Summarization**

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**Supplemental materials  
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# Videography Features

- Please see Section on ‘Videography Features’.
- A video sample result for videography feature extraction is included in supplemental material. It shows camera motion detection (static/pan/tilt/zoom) and grouping of KLT tracks into foreground (green tracks) and background (red tracks):  
[videography-example-GettingVehicleUnstuck.avi](#)
- Above three video samples are from TRECVID MED ‘11 dataset, used for both retrieval and summarization experiments in the draft.
- Note that, due to size limit for supplemental materials, all enclosed samples are downsampled versions of original videos. Additionally, each sample contains only ~20 seconds from original clips. The content in sample clips may not show the associated events.
- All videos are encoded using ‘ffmpeg’ with mpeg4 + simple profile

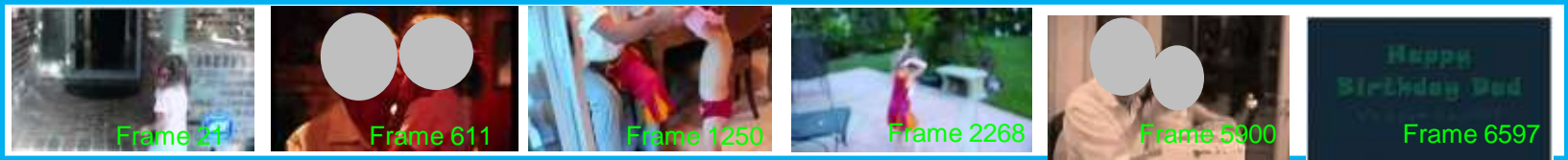
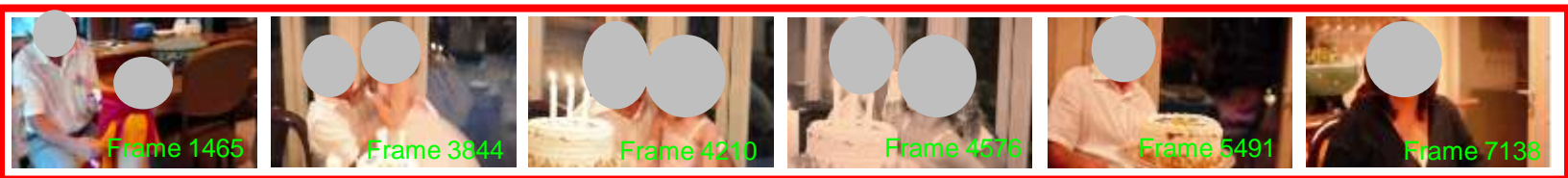
# Video Retrieval

- Please see Section on ‘Retrieval’ in the paper.
- The table below enlists all the detailed quantitative results included in the paper. For detailed description and experiment acronyms, please refer to the manuscript.

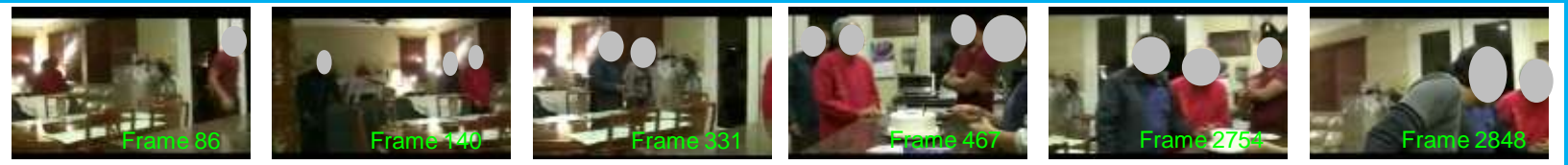
	E01	E02	E03	E04	E05	mAP (E01- E05)	mAP (D) (E01, E04)		E06	E07	E08	E09	E10	E11	E12	E13	E14	E15	mAP (E06- E15)	mAP(D) (E06, E08, E12, E13)
Chance	2.66	2.66	2.00	2.07	2.33	2.34	2.37		0.54	0.35	0.42	0.26	0.25	0.43	0.58	0.32	0.27	0.26	0.37	0.47
S/P/T/Z	8.92	2.90	5.35	8.26	2.74	5.63	8.59		0.86	0.37	1.10	0.37	0.31	0.83	1.19	0.49	0.40	0.25	0.62	0.91
J_BGC	12.77	4.96	5.64	18.02	3.65	9.01	15.40		0.91	0.37	1.68	0.39	0.77	1.00	1.41	0.91	0.42	0.38	0.82	1.23
J_BGS	15.08	5.21	5.53	22.99	3.68	10.50	19.03		1.78	0.48	2.64	0.49	0.71	0.75	1.48	1.46	0.57	0.43	1.08	1.84
J_BGCS	17.08	6.99	5.95	31.93	6.09	13.61	24.50		1.84	0.50	3.37	0.48	0.63	0.85	1.41	1.71	0.70	0.40	1.19	2.08
J_BFCS-	17.39	6.92	5.96	32.12	6.08	13.69	24.75		1.91	0.50	3.34	0.48	0.65	0.87	1.43	1.80	0.70	0.41	1.21	2.12
			11.5																	
C-BFCS	16.74	6.67	6	25.36	5.96	13.26	21.05		2.03	0.61	1.88	0.61	0.59	1.27	1.47	0.85	0.86	0.62	1.08	1.56
			10.3																	
GIST	12.41	5.50	5	8.28	6.32	8.57	10.34		1.40	1.08	3.07	2.20	1.23	1.23	3.48	0.94	0.58	0.86	1.61	2.22
			11.6																	
Fusion	24.55	7.59	2	36.14	8.80	17.74	30.35		2.46	1.13	11.91	2.15	1.56	1.41	3.78	1.82	0.88	1.00	2.81	4.99

# Video Summarization

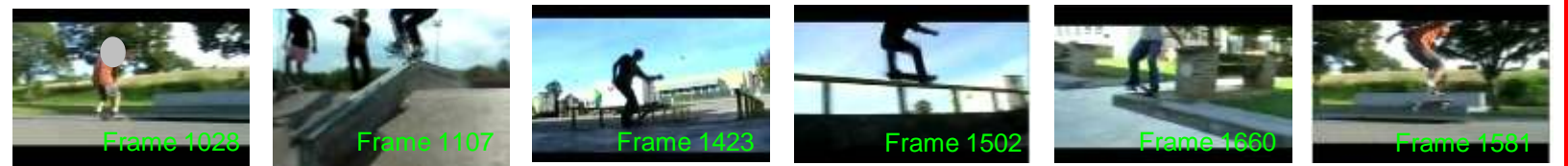
- Please see Section on ‘Summarization’ in the paper.
- Three additional video summarization sample results by the proposed ‘videography-aware’ method (**red**) and a conventional baseline method (**blue**, using change of color histograms) are shown in the next slide.
  - Two results on birthday party and one result on board trick is shown.



Birthday Party: **proposed method** (captures candle blowing) vs **baseline**



Birthday Party: **proposed method** (captures candle blowing) vs **baseline**



Board Trick: **proposed method** vs **baseline**

NOTE: faces in images are intentionally occluded for privacy.