

Drawings:

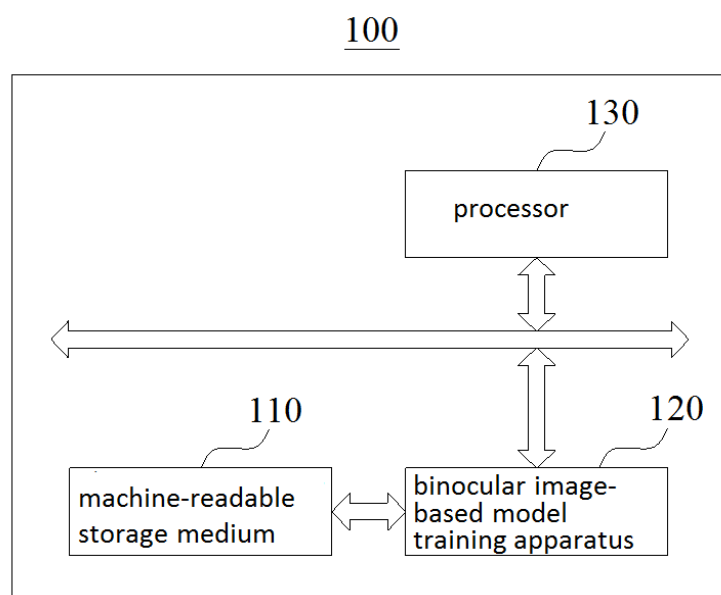


FIG. 1

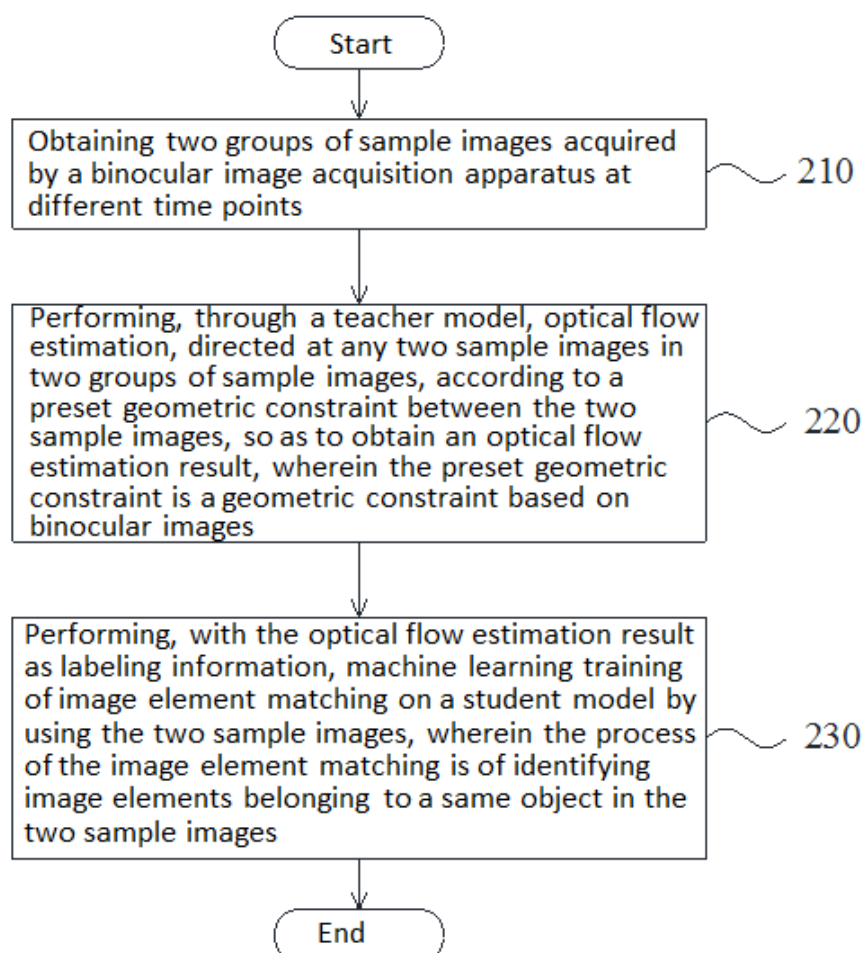


FIG. 2

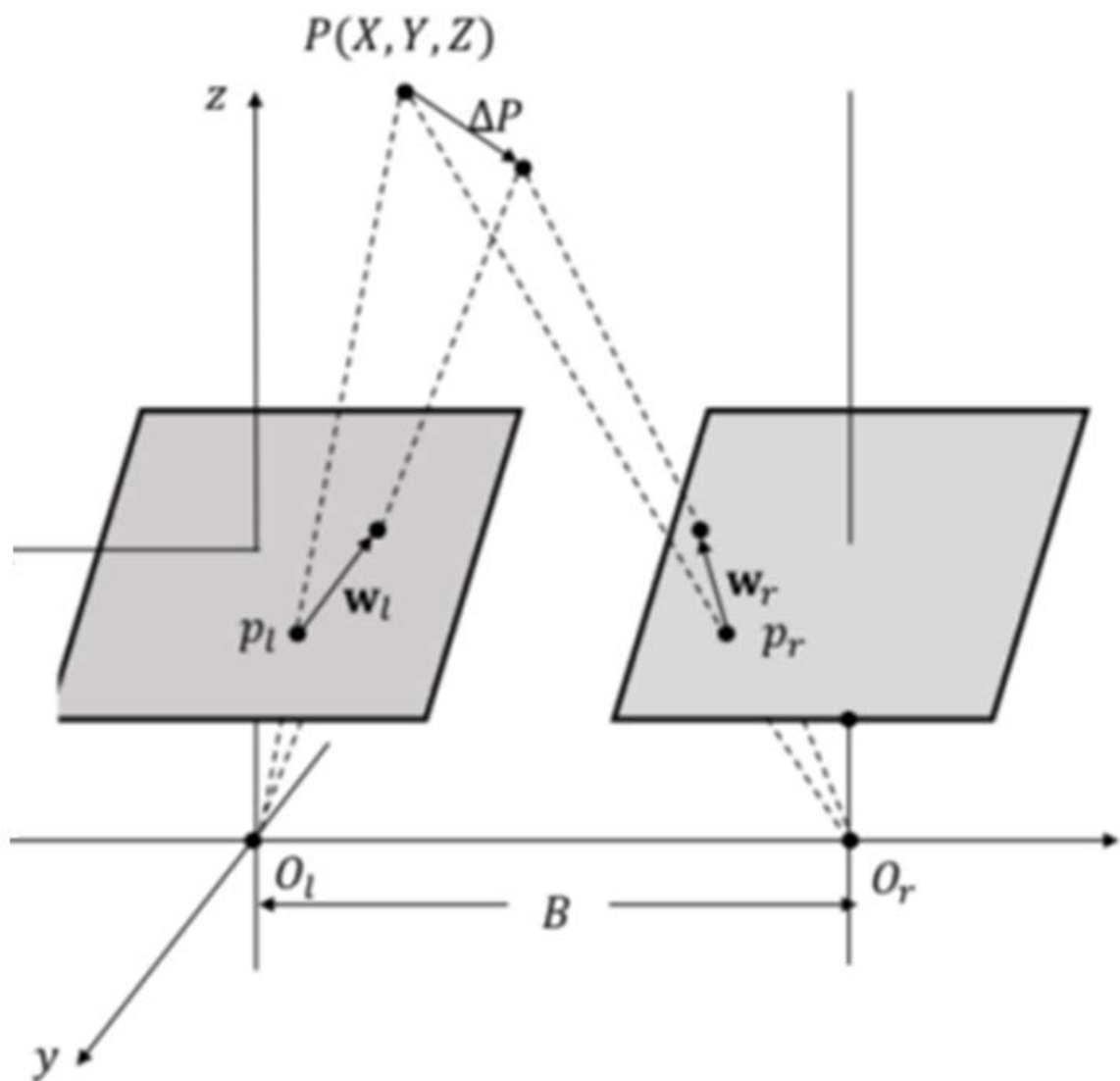


FIG. 3

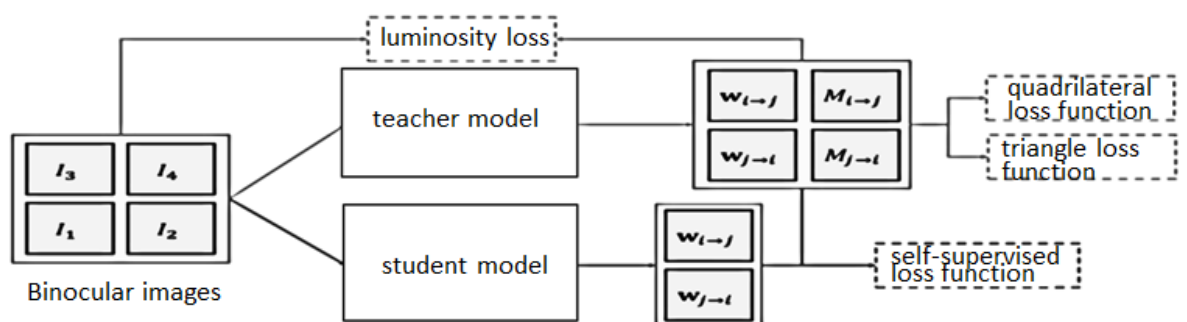


FIG. 4

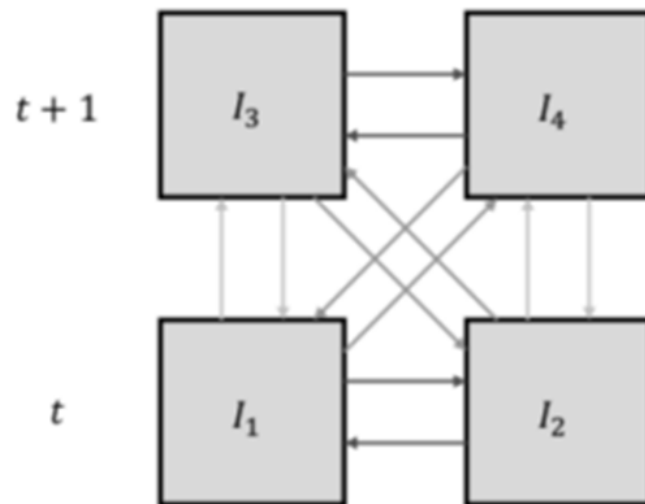


FIG. 5

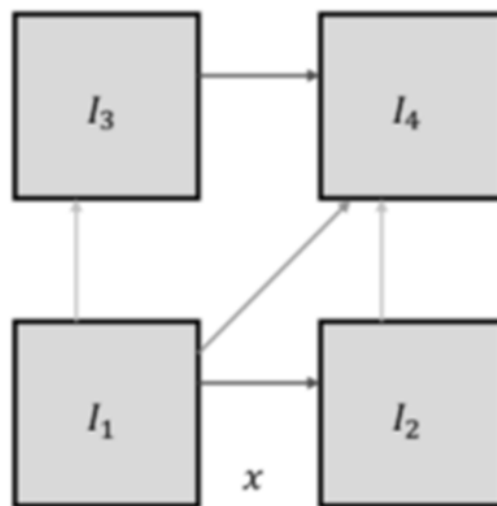


FIG. 6

Method		KITTI 2012						KITTI 2015				
		train		test				train		test		
		EPE-all	EPE-noc	EPE-all	EPE-noc	Fl-all	Fl-noc	EPE-all	EPE-noc	Fl-all	Fl-fg	Fl-bg
Supervised	FlowNetS+ft	7.52	–	9.1	–	44.49%	–	–	–	–	–	–
	SpyNet+ft	3.36	–	4.1	2.0	20.97%	12.31%	–	–	35.07%	43.62%	33.36%
	FlowFieldsCNN+ft	–	–	3.0	1.2	13.01%	4.89%	–	–	18.68%	20.42%	18.33%
	DCFlow	–	–	–	–	–	–	–	–	14.86%	23.70%	13.10%
	FlowNet2+ft	(1.28)	–	1.8	1.0	8.80%	4.82%	(2.3)	–	10.41%	8.75%	10.75%
	UnFlow-CSS+ft	(1.14)	(0.66)	1.7	0.9	8.42%	4.28%	(1.86)	–	11.11%	15.93%	10.15%
	ProfFlow+ft	(1.89)	–	2.1	1.1	7.88%	4.49%	(5.22)	–	15.04%	20.91%	13.86%
	LiteFlowNet+ft	(1.05)	–	1.6	0.8	7.27%	3.27%	(1.62)	–	9.38%	7.99%	9.66%
	PWC-Net+ft	(1.45)	–	1.7	0.9	8.10%	4.22%	(2.16)	–	9.60%	9.31%	9.66%
	MFF+ft	–	–	1.7	0.9	7.87%	4.19%	–	–	7.17%	7.25%	7.15%
SelfFlow+ft	(0.76)	–	1.5	0.9	6.19%	3.32%	(1.18)	–	8.42%	7.61%	12.48%	
Unsupervised	BackToBasic+ft	11.3	4.3	9.9	4.6	43.15%	34.85%	–	–	–	–	–
	DSTFlow+ft	10.43	3.29	12.4	4.0	–	–	16.79	6.96	39%	–	–
	UnFlow-CSS+ft	3.29	1.26	–	–	–	–	8.10	–	23.30%	–	–
	OccAwareFlow-ft	3.55	–	4.2	–	–	–	8.88	–	31.2%	–	–
	MultiFrameOccFlow-None+ft	–	–	–	–	–	–	6.65	3.24	–	–	–
	MultiFrameOccFlow-Soft+ft	–	–	–	–	–	–	6.59	3.22	22.94%	–	–
	DDFlow+ft	2.35	1.02	3.0	1.1	8.86%	4.57%	5.72	2.73	14.29%	20.40%	13.08%
	SelfFlow+ft	1.69	0.91	2.2	1.0	7.68%	4.31%	4.84	2.40	14.19%	21.74%	12.68%
	Ours+ $L_p+L_q+L_t$	4.91	0.84	–	–	–	–	7.88	2.24	–	–	–
	Ours+ $L_p+L_q+L_t$ +Self-Supervision	1.45	0.82	1.7	0.9	7.63%	4.02%	3.54	2.12	11.10%	16.67%	9.99%

FIG. 7

Method	KITTI 2012						KITTI 2015					
	EPE-all	EPE-noc	EPE-occ	D1-all	D1-noc	D1-occ	EPE-all	EPE-noc	EPE-occ	D1-all	D1-noc	D1-occ
Godard <i>et al.</i>	2.12	1.44	30.91	10.41%	8.33%	98.98%	1.96	1.53	24.66	10.86%	9.22%	97.99%
Zhou <i>et al.</i>	–	–	–	–	–	–	–	–	–	9.91%	8.61%	–
SeqStereo <i>et al.</i>	2.37	1.63	33.62	9.64%	7.89%	84.13%	1.84	1.46	26.07	8.79%	7.7%	72.2%
Guo <i>et al.</i>	1.16	1.09	4.14	6.45%	5.82%	33.28%	1.71	1.67	4.06	7.06%	6.75%	23.49%
Ours+ L_p	1.73	1.13	27.03	7.88%	5.87%	92.27%	1.79	1.40	25.24	9.83%	7.74%	97.68%
Ours+ $L_p+L_q+L_t$	1.62	0.94	29.26	6.69%	4.69%	90.94%	1.67	1.31	19.55	8.62%	7.15%	88.57%
Ours+ $L_p+L_q+L_t$ +Self-Supervision	1.01	0.93	4.52	5.14%	4.59%	26.11%	1.34	1.31	2.56	6.13%	5.93%	14.85%

FIG. 8

110

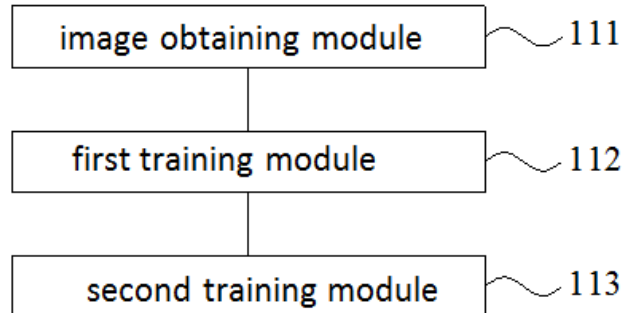


FIG. 9