

Long-term tracking by diving videos into successive short episodes(LT_DSE)

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Difficulties in VOT2019 long-term challenge

More categories

VOT2018LT: Person, ball, bird, car, cat, dragon, uav

VOT2019LT new added: **boat, bull, deer, dog, face, horse, parachute**



Difficulties in VOT2019 long-term challenge

More similar targets
interference



Difficulties in VOT2019 long-term challenge



Difficulties in VOT2019 long-term challenge



Need stronger discriminating ability

Difficulties in VOT2019 long-term challenge

Longer disappearing frames



Difficulties in VOT2019 long-term challenge

Before disappearing



Reappear



Difficulties in VOT2019 long-term challenge

More dramatic appearance
changes

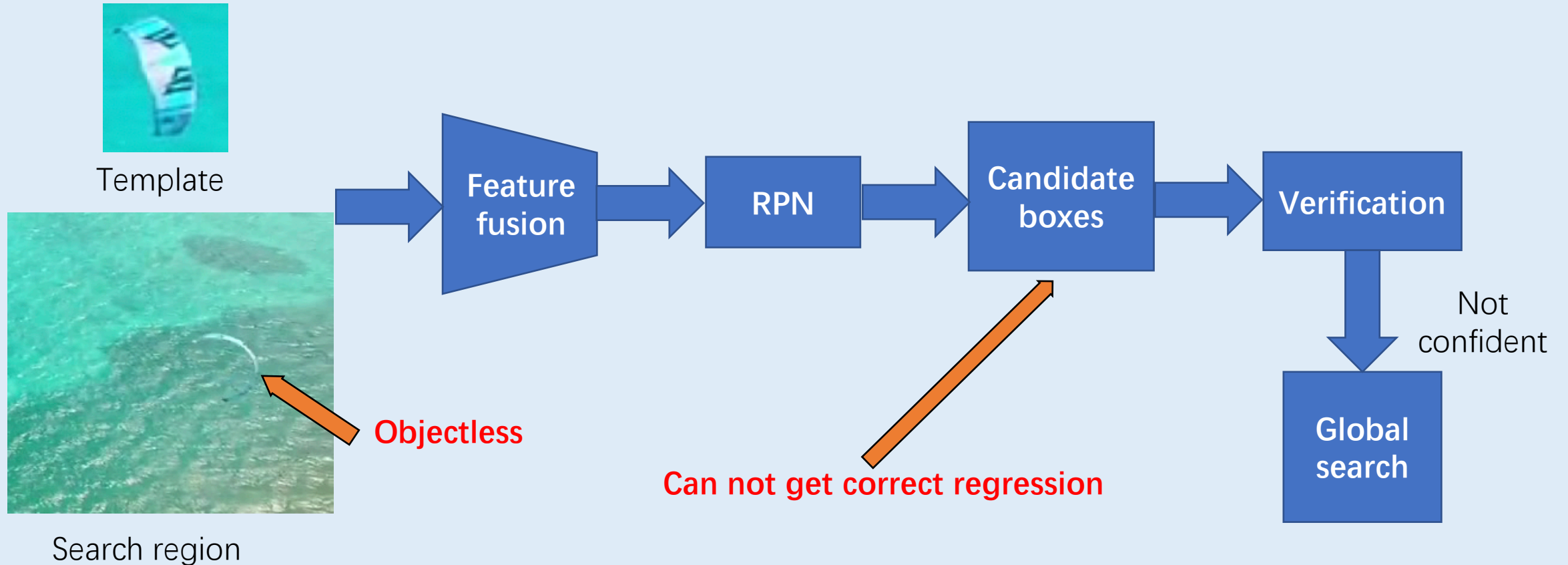


Difficulties in VOT2019 long-term challenge



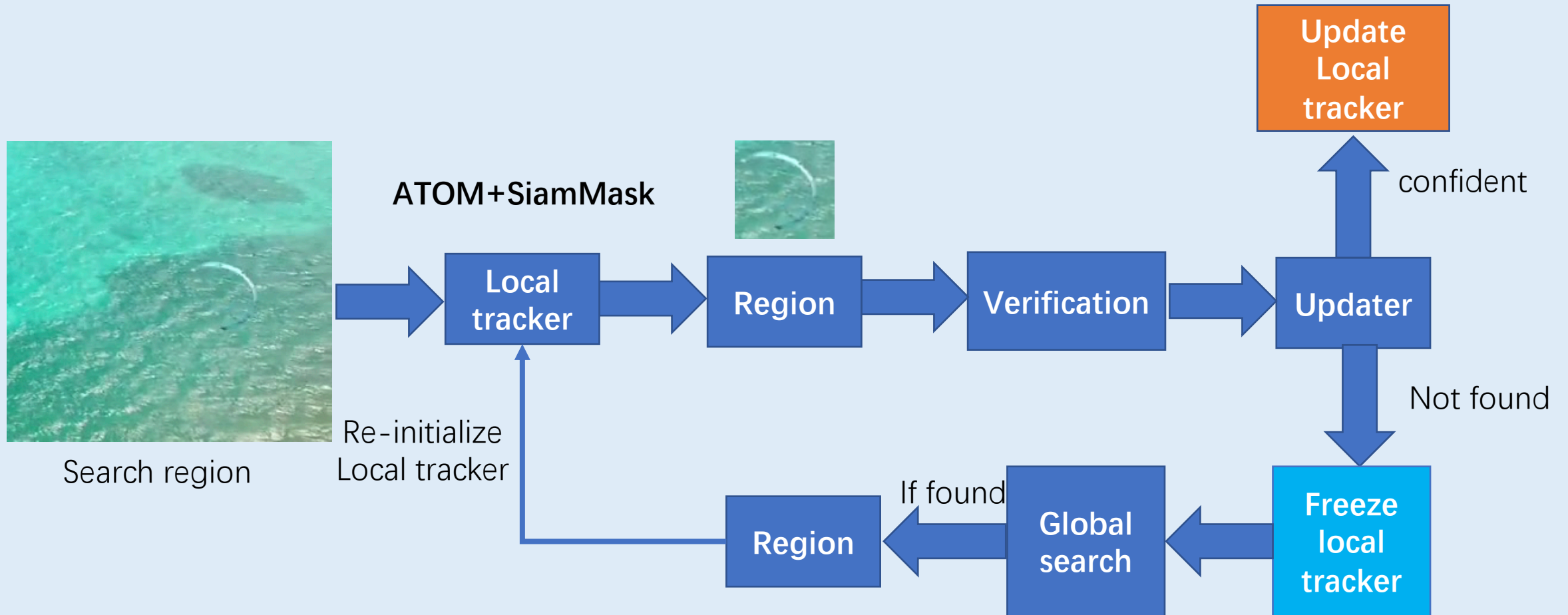
RPN do not work

Problems in VOT18 winner tracker

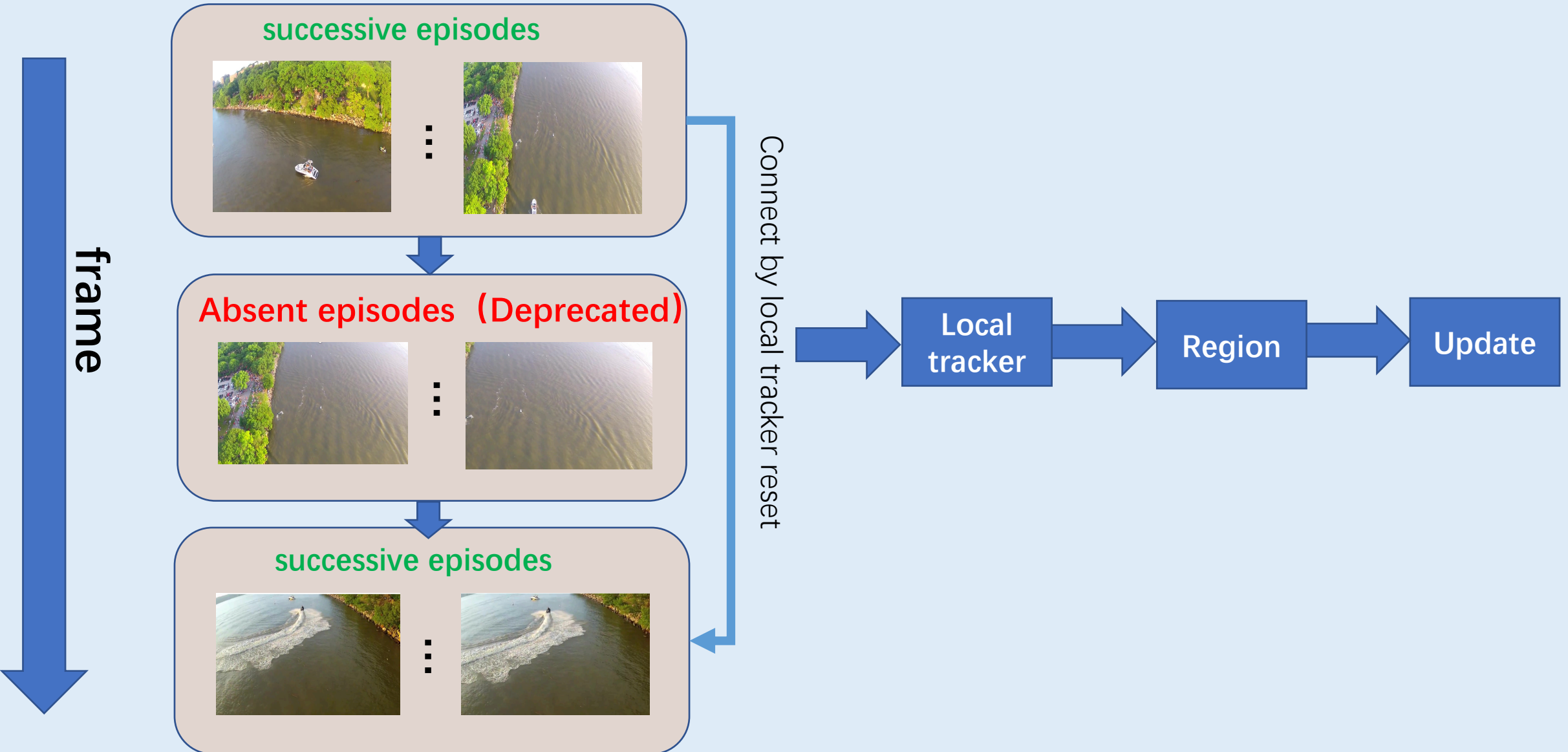


Local Tracking no-update

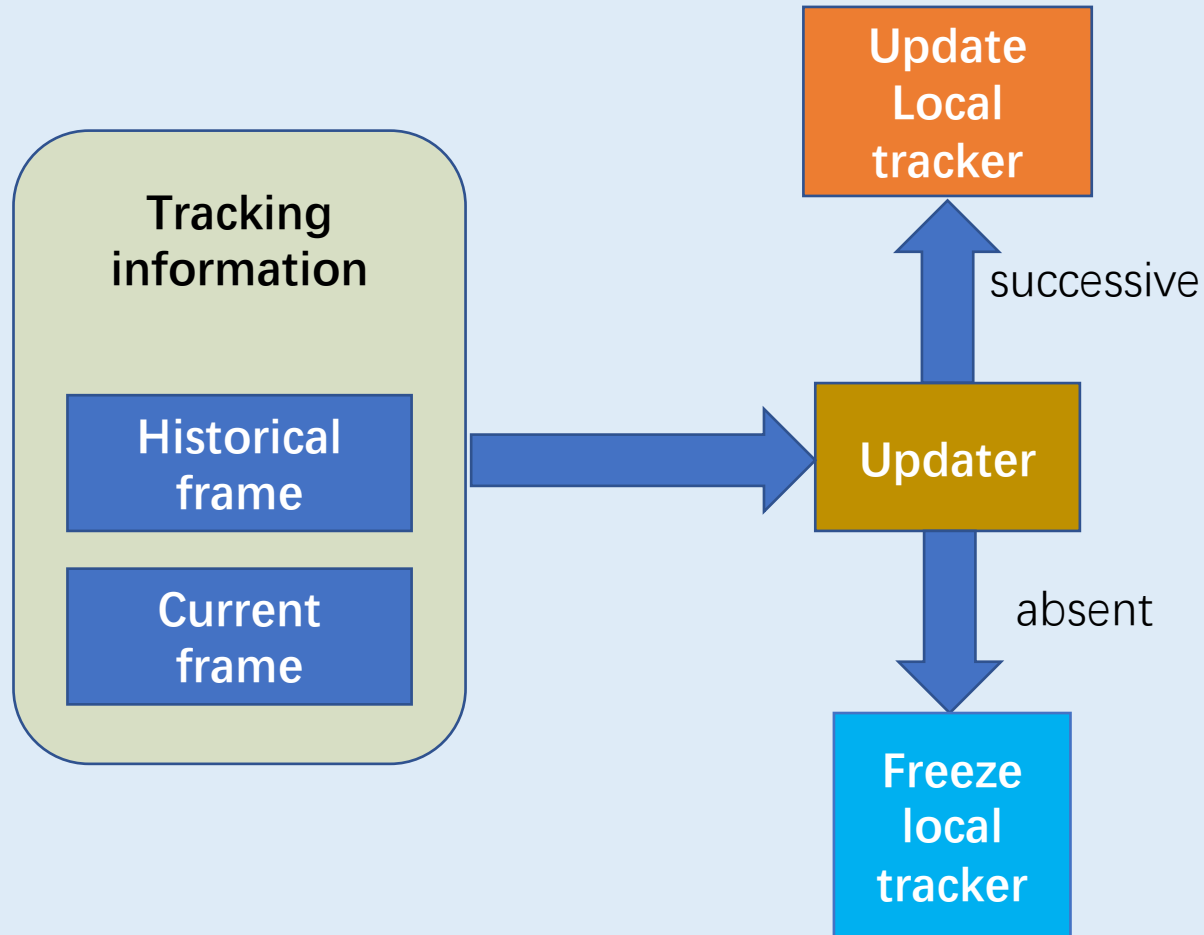
Embed the short tracker into long-term tracking



Embed the short tracker into long-term tracking



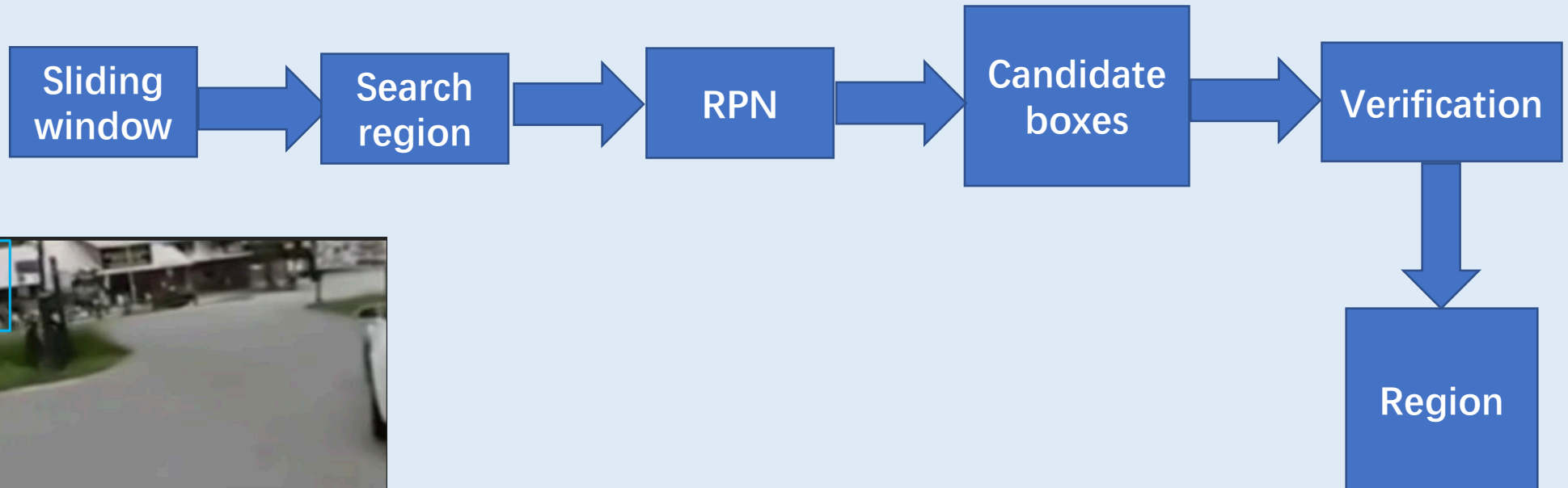
Embed the short tracker into long-term tracking



Thresholds :
Tracker score,
Confidence,
Trajectory ...

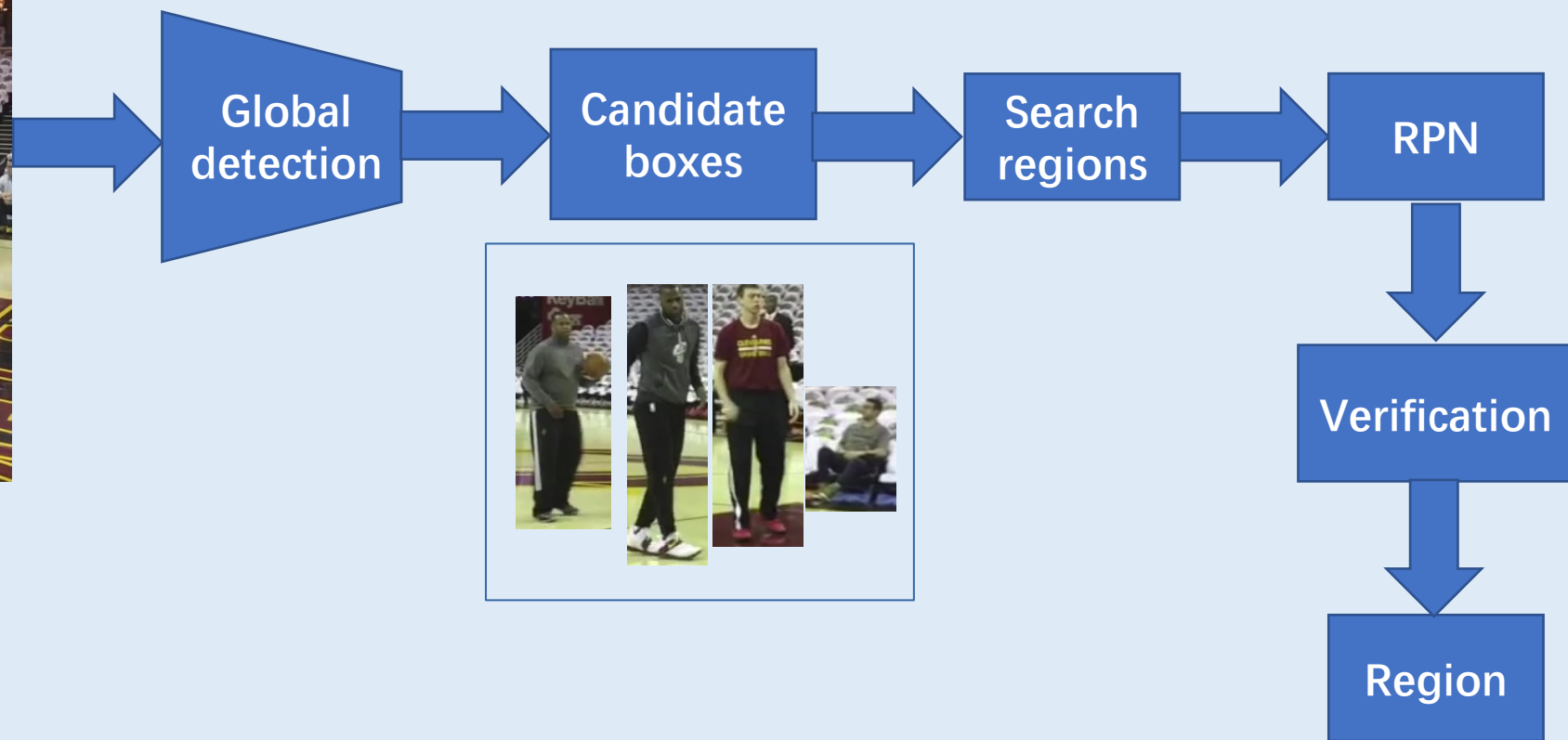
Problems in VOT18 winner tracker

Global search



VOT19 winner tracker (LT_DSE)

Global search



Performance

VOT2019 LT

	F	TP	TR	FPS
LT_DSE	0.6955	0.7150	0.6771	13.4
MBMD	0.5733	0.5944	0.5533	2.71



Performance

LaSOT testing set

	ATOM	RT-MDNet	LT_DSE
Overlap	0.504	0.324	0.551



For more details...

Code(train code, testing code..):

LT_DSE(VOT original version):

https://github.com/Daikenan/LT_DSE

Future improved version will be released on my github:

https://github.com/Daikenan/LT_DSE

Contact: dkn2014@mail.dlut.edu.cn



github

