

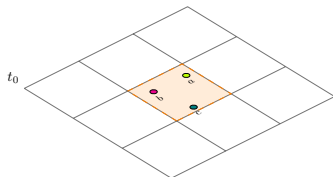
# PFLOCK Report

Andres Calderon

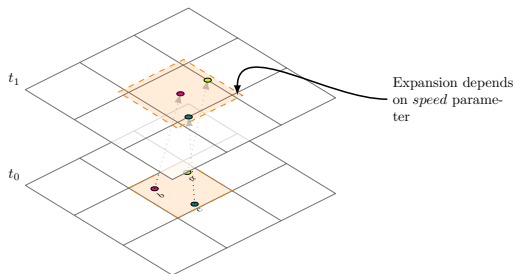
University of California, Riverside

October 25, 2019

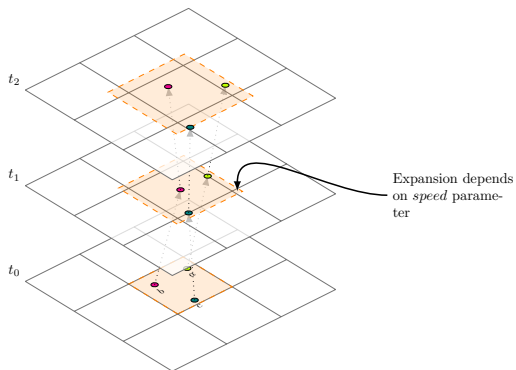
# Alternative 1



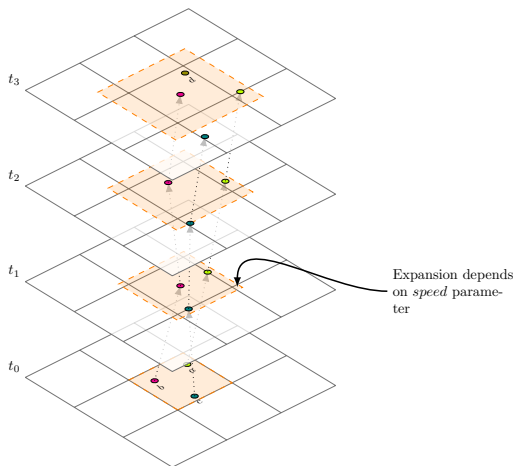
# Alternative 1



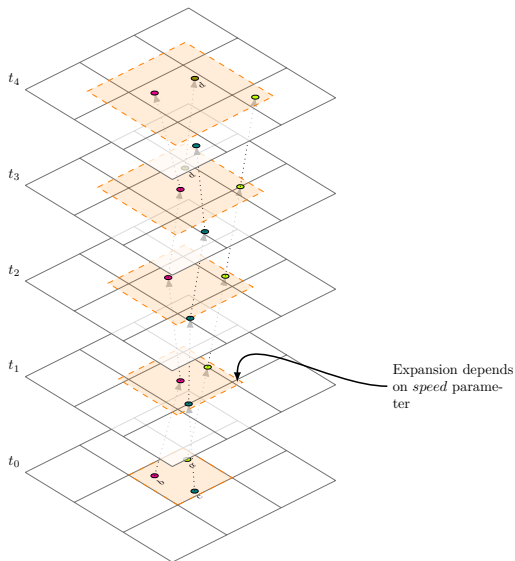
# Alternative 1



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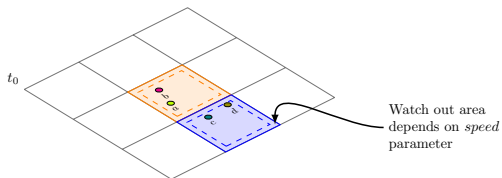
# Alternative 1



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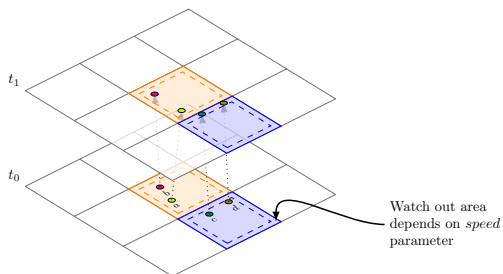
- ▶ Each partition expands according to the **speed** parameter, so it will have the information of all the trajectories which start on it.
- ▶ Flocks  $a$  and  $b$  start in the partition  $(1, 1)$ . Flock  $a$  starts and ends inside of the partition. Flock  $b$  leaves the partition but remains inside the expansion area. Both will be reported.
- ▶ Flock  $c$  starts in the partition  $(1, 1)$  but leaves the expansion area at time 3. It will not be reported.
- ▶ Even flock  $d$  starts and end in partition  $(1, 1)$ , it will not be reported because it did not begin at the start of the window (it does not meet the  $\delta$  parameter).

## Alternative 2

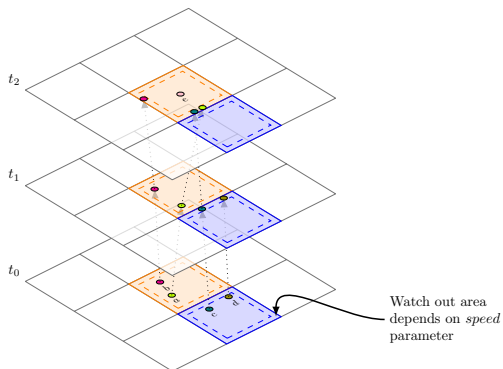




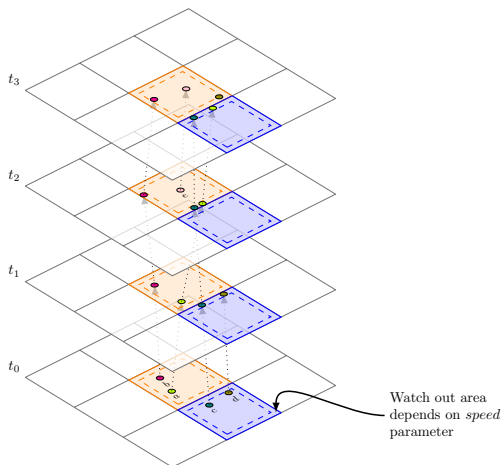
## Alternative 2



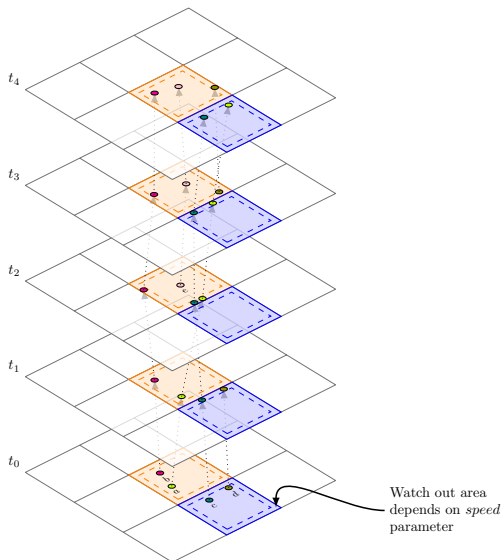
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## Alternative 2

- ▶ Each partition is divided into “watch out” and “safe” area according to the **speed** parameter.
- ▶ Each partition remains fixed and it will report flocks which start and end inside of it if they meet the  $\delta$  parameter (i.e. partition (1, 1) will report flock  $b$  but not flock  $e$ ).
- ▶ Each partition has to report flocks if they start or end on its “watch out” area. They must be post-processed to check if they can be concatenated.

## Alternative 2

- For example, for flocks  $a$ ,  $c$  and  $d$  we have:

Partition (1,1)	Partition (1,0)	Concat
$a_{t_0-t_2}$	$a_{t_3-t_4}$	$a_{t_0-t_4} \checkmark$
$c_{t_2-t_2}$	$c_{t_0-t_1}$	$c_{t_0-t_4} \checkmark$
	$c_{t_3-t_4}$	
$d_{t_3-t_4}$	$d_{t_0-t_1}$	$\times$