

PFLOCK Report

Andres Calderon

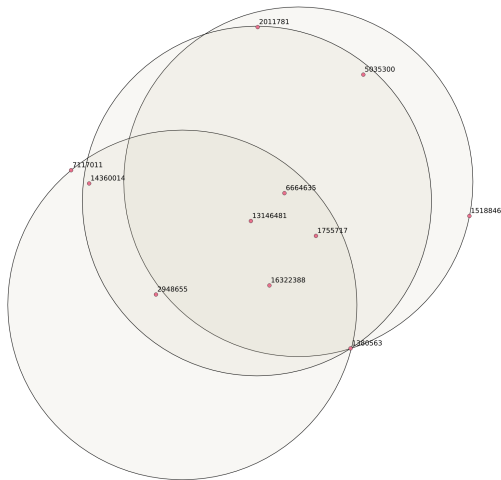
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A critical issue in the new approach...

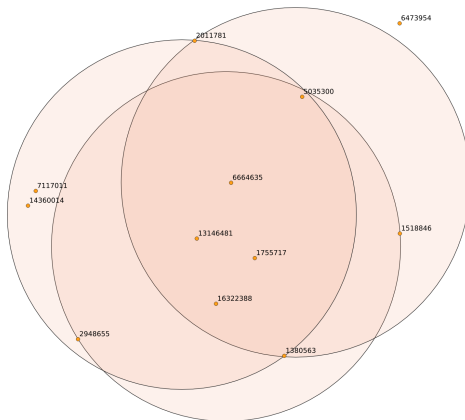
- ▶ Using an example with $\varepsilon = 50$, $\mu = 5$ and $\delta = 5$
- ▶ Tracking trajectory 13805563 to illustrate the problem...

Disks at t_0



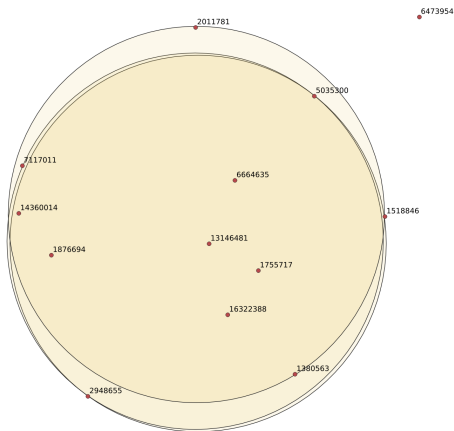
t	Trajectories in the same disk that 13805563							
0	1518846	1755717	2011781	2948655	5035300	6664635	13146481	16322388
0	1755717	2948655	6664635	7117011	13146481	14360014	16322388	
0	1755717	2011781	2948655	5035300	6664635	13146481	14360014	16322388

Disks at t_1



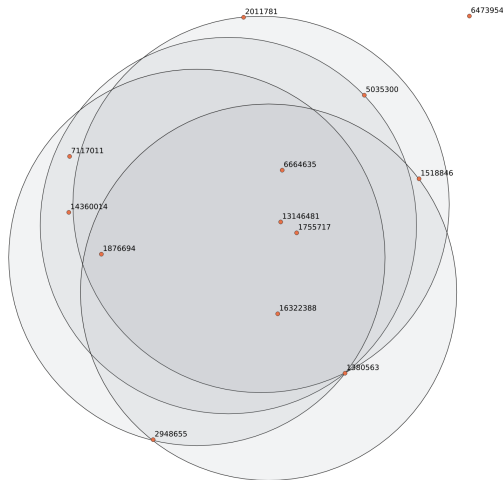
t	Trajectories in the same disk that 1380563									
1	1518846	1755717	2948655	5035300	6664635	13146481	16322388			
1	1518846	1755717	2011781	5035300	6664635	13146481	16322388			
1	1755717	2011781	2948655	5035300	6664635	7117031	13146481	14360014	16322388	

Disks at t_2



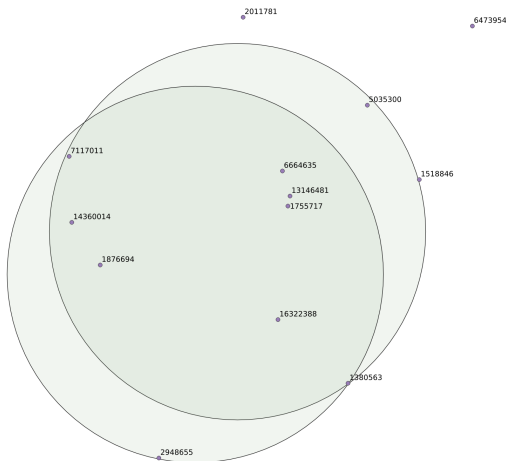
t	Trajectories in the same disk that 13805563								
2	1518846	1755717	1876694	2011781	5035300	6664635	7117011	13146481	14360014
2	1518846	1755717	1876694	2948655	5035300	6664635	13146481	14360014	16322388
2	1755717	1876694	2948655	5035300	6664635	7117011	13146481	14360014	16322388

Disks at t_3



t	Trajectories in the same disk that 13805563							
3	1518846	1755717	1876694	5035300	6664635	7117011	13146481	14360014 16322388
3	1518846	1755717	1876694	2011781	5035300	6664635	13146481	16322388
3	1518846	1755717	1876694	2948655	6664635	13146481	16322388	
3	1755717	1876694	2948655	6664635	7117011	13146481	14360014	16322388

Disks at t_4



t Trajectories in the same disk that **13805563**

4 1518846 1755717 1876694 5035300 6664635 7117011 13146481 14360014 16322388

4 1755717 1876694 2948655 6664635 7117011 13146481 14360014 16322388

Finding maximal patterns using δ as *min_sup* ...

- The assumption was that maximal patterns will retrieve the largest sets of trajectories which are together. If they happens at least δ times they should cover the whole window. However,...

t	Trajectories moving together with 1380563
0	1518846 1755717 2011781 2948655 5035300 6664635 13146481 16322388
0	1755717 2948655 6664635 7117011 13146481 14360014 16322388
0	1755717 2011781 2948655 5035300 6664635 13146481 14360014 16322388
1	1518846 1755717 2948655 5035300 6664635 13146481 16322388
1	1518846 1755717 2011781 5035300 6664635 13146481 16322388
1	1755717 2011781 2948655 5035300 6664635 7117011 13146481 14360014 16322388
2	1518846 1755717 1876694 2011781 5035300 6664635 7117011 13146481 14360014 16322388
2	1518846 1755717 1876694 2948655 5035300 6664635 13146481 14360014 16322388
2	1755717 1876694 2948655 5035300 6664635 7117011 13146481 14360014 16322388
3	1518846 1755717 1876694 5035300 6664635 7117011 13146481 14360014 16322388
3	1518846 1755717 1876694 2011781 5035300 6664635 13146481 16322388
3	1518846 1755717 1876694 2948655 6664635 13146481 16322388
3	1755717 1876694 2948655 6664635 7117011 13146481 14360014 16322388
4	1518846 1755717 1876694 5035300 6664635 7117011 13146481 14360014 16322388
4	1755717 1876694 2948655 6664635 7117011 13146481 14360014 16322388

Maximal frequent patterns
1518846 1755717 1876694 5035300 6664635 13146481 16322388
1755717 2011781 5035300 6664635 13146481 16322388
1755717 1876694 2948655 6664635 13146481 16322388
1755717 2948655 5035300 6664635 13146481 16322388
1755717 1876694 6664635 7117011 13146481 14360014 16322388
1755717 2948655 6664635 7117011 13146481 14360014 16322388
1755717 5035300 6664635 7117011 13146481 14360014 16322388
1755717 1876694 5035300 6664635 13146481 14360014 16322388

Some maximal patterns do not touch all the times...

t	Trajectories moving together with 1380563
0	1518846 1755717 2011781 2948655 5035300 6664635 13146481 16322388
0	1755717 2948655 6664635 7117011 13146481 14360014 16322388
0	1755717 2011781 2948655 5035300 6664635 13146481 14360014 16322388
1	1518846 1755717 2948655 5035300 6664635 13146481 16322388
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1	1755717 2011781 2948655 5035300 6664635 7117011 13146481 14360014 16322388
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1755717 5035300 6664635 7117011 13146481 14360014 16322388
1755717 1876694 5035300 6664635 13146481 14360014 16322388

More critical, it can hide real patterns...

Flock hidden by a maximal pattern

1518846 1755717 5035300 6664635 13146481 16322388

t Trajectories moving together with **1380563**

0 1518846 1755717 2011781 2948655 5035300 6664635 13146481 16322388

0 1755717 2948655 6664635 7117011 13146481 14360014 16322388

0 1755717 2011781 2948655 5035300 6664635 13146481 14360014 16322388

1 1518846 1755717 2948655 5035300 6664635 13146481 16322388

1 1518846 1755717 2011781 5035300 6664635 13146481 16322388

1 1755717 2011781 2948655 5035300 6664635 7117011 13146481 14360014 16322388

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1755717 1876694 6664635 7117011 13146481 14360014 16322388

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