





Alternative Routing: K Shortest Paths with Limited Overlap

Theodoros Chondrogiannis¹, Panagiotis Bouros^{2,3} Johan Gamper¹, Ulf Leser³

> ¹Free University of Bozen-Bolzano, Italy ²Aarhus University, Denmark ³Hunboldt-Universität zu Berlin, Germany

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k Shortest Paths

k Shortest Paths: k=3



Result Set				
p	l	V_{Sim}		
Shortest	4.0 km	Ø		
Alter. 1	4.1 km	{75%}		
Alter. 2	4.1 km	{70%, 42%}		

Short paths on average
Very similar paths



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kSPwLO

<u>k Shortest Paths with Limited Overlap: k=3, θ=50%</u>

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Result Set				
p	l	V_{Sim}		
Shortest	4.0 km	Ø		
Alter. 1	4.3 km	{48%}		
Alter. 2	4.5 km	{25%, 9%}		

Longer paths on average
Less similar paths

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Contributions

- We formalize the k-Shortest Paths with Limited Overlap (kSPwLO) problem
- We present 2 algorithms (BSL, OnePass)
- We evaluate our algorithms for different values of k (number of results) and e (overlap threshold)