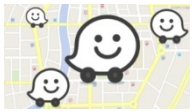
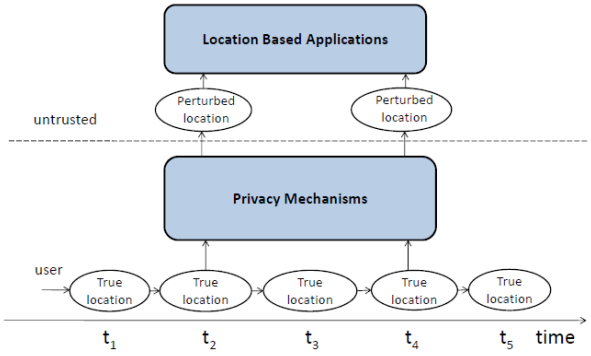
TWC: Small: Rigorous and Customizable Spatiotemporal Privacy for Location Based Applications

Challenge:

- Temporal correlations (road networks, moving patterns)
- Personalized privacy requirements and spatiotemporal semantics
- Varying application requirements





Solution:

- Extended differential privacy accounting for temporal correlations
- Customizable privacy via policy graphs
- Optimal and heuristic perturbation algorithms

Scientific Impact:

- Rigorous and customizable privacy notions and mechanisms in the new setting of location sharing
- Understanding of privacy and utility trade-off in the context of location based applications

Broader Impact:

- Spatiotemporal privacy protection for users
- Enabling and promoting adoption of location based applications
- integrated educational activities

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