

Concept of behavioral-targeted recommendation system for location-based services

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SUAI

Problem

1. The problem of monetization of Location-based services (LBS);
2. Improvement of “targeting’s” efficiency.

Mobile advertising

2008 – EUR1 billion

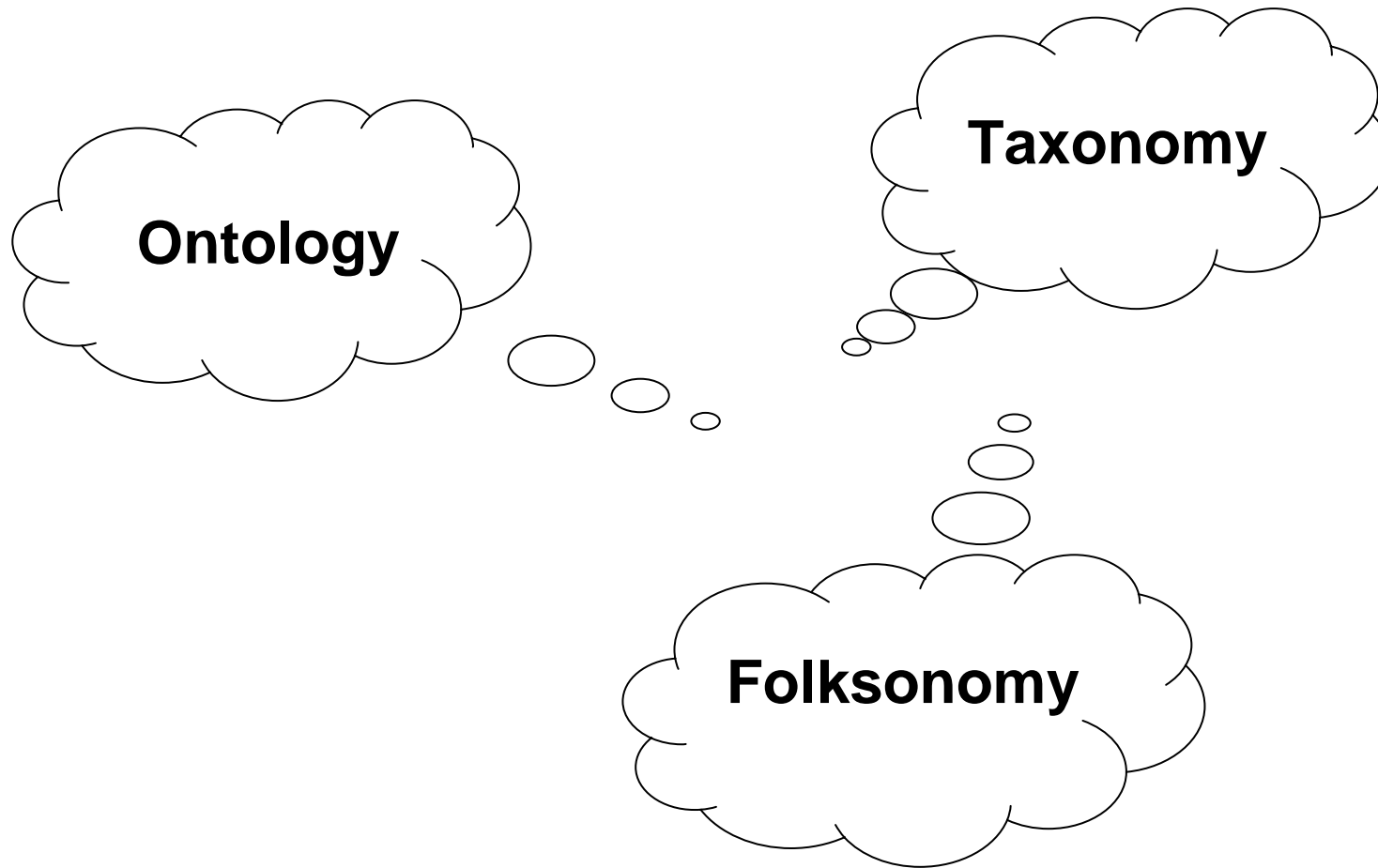
2014 – EUR8,7 billion

- 1. Apple – iAd;**
- 2. Microsoft - Microsoft Advertising;**
- 3. Google – AdMob.**

General description of the approach

- Explicit feedback:
 - the user marks his preferences himself;
 - **veracity**;
 - **lazy users**.
 - Implicit feedback:
 - we form the model of preferences, observing for user's actions;
 - 1) **user hasn't to make any actions**;
 - 2) **model is always up-to-date**;
 - **it is necessary some time for construction exact model of preferences**.
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Data model and categorization of objects - 1



Data model and categorization of objects - 2

Event can be shown in form of vector:

$$E = ((t_1, w_1), \dots, (t_n, w_n), W_E), \text{ where}$$

t_1, \dots, t_n - tags of event (area keywords, words in search query etc.)

w_1, \dots, w_n - tags' weights that represent its value comparing to other tags. If it isn't set then default weight is used.

W_E - summarized weight of the event. If it is set then tags' weights means not absolute value for ranking algorithm but only used to determine absolute weight as percentage of all tags' weights sum.

Mining association rules

1) hierarchical;

2) association rules:

- generalized [7];
 - simple: A priori [8], FPG [9];
 - quantitative [10].
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CONCLUSION AND FUTURE WORK

- 1) Experimental data during this summer
- 2) Choose best algorithm for association mining
- 3) Explore possibility of clustering
- 4) Choosing best learning technique

Thank you for attention!

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