Tourism Informatics / 観光地理情報学特論Ⅱ 2014 #8

Personalized Information Service in Tourism

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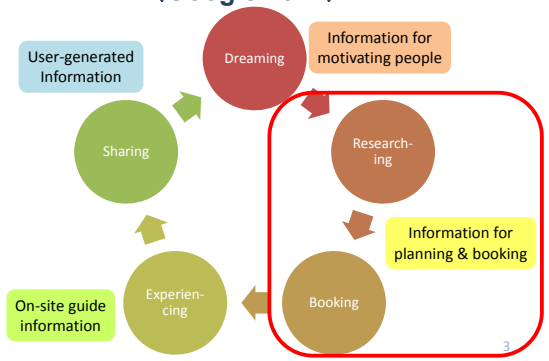
Today's Goal

We learn the concept of *personalization* and its importance in information service.

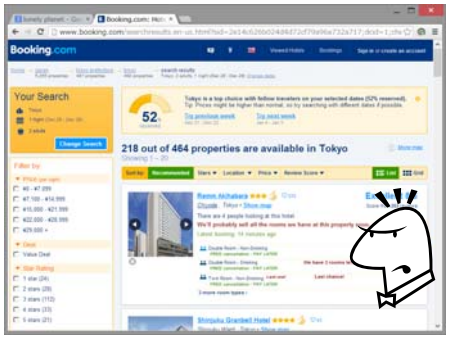
Also, as its latest example in tourism, we look at "interactive tour planner *CT-Planner*", which has been developed here in TMU

Five Stages of Travel (Google 2012)



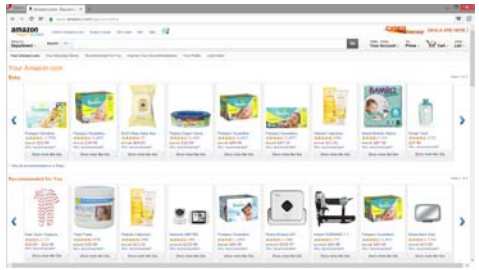
A Typical Problem when Preparing

Case Study: Hotel Reservation



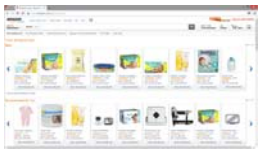
Personalization

To determine the priority of products based on the user's preference and/or context



Amazon's Secret

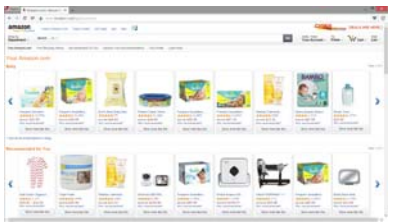
- Amazon recommends the items which a number of "users similar to you" purchase, but you haven't bought yet
- Who are similar users for you?
  - Those who have purchased similar products
  - Those who have viewed similar pages



Merit and Demerit of Collaborative Filtering

○ No need to input my profile

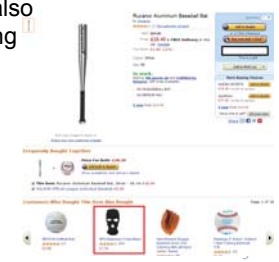
× Exceptional purchasing often leads to undesirable recommendations



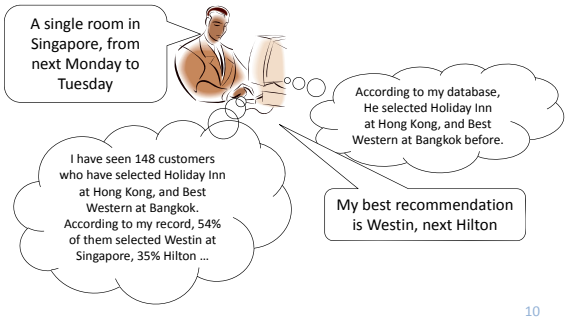
Merit and Demerit of Collaborative Filtering (cntd.)

○ Nice recommendations beyond human knowledge are sometimes discovered

× Recommendation may also be affected by purchasing of "abnormal" people



If collaborative filtering is applied to hotel search…



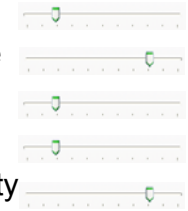
Difficulty of Collaborative Filtering in Tourism

- Low-frequent purchase → lack of data
- High context-dependency
  - The same person may reserve different grade of hotels depending on his companion

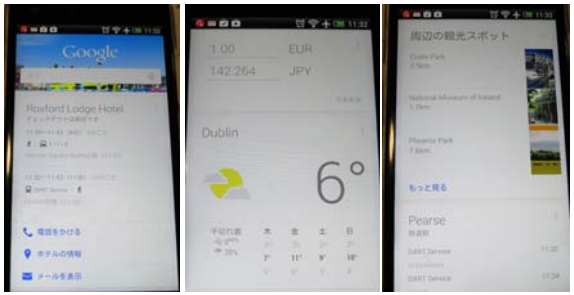
How about this?

Manual specification of preference

- Price
- Distance
- Stars
- Review
- Popularity



Another Example of Personalization in Tourism: Google Now



How does Google know my current location and my hotel?

Recommendation of Tour Plans

Introducing our cutting-edge project

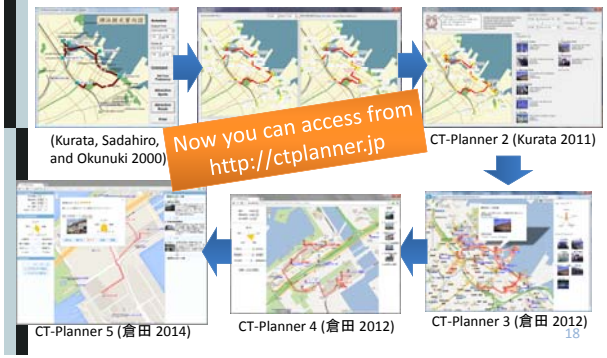
Thanks to online reservation systems, we are now able to travel all over the world more easily

However, it is still difficult for individual tourists to make an efficient tour plan!

Thus, we developed a web-based tour planner, called CT-Planner, which supports its users to make their tour agenda

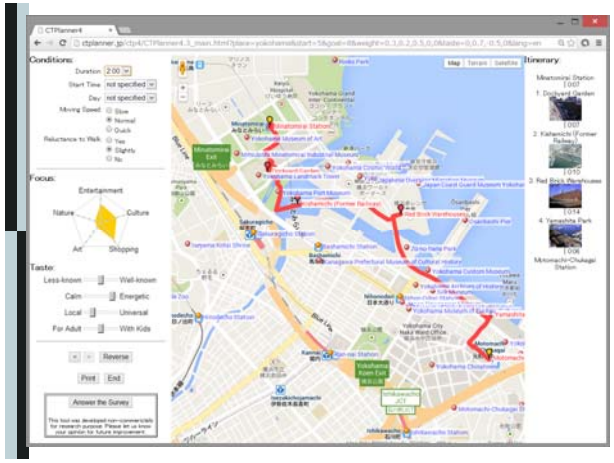
http://ctplanner.jp

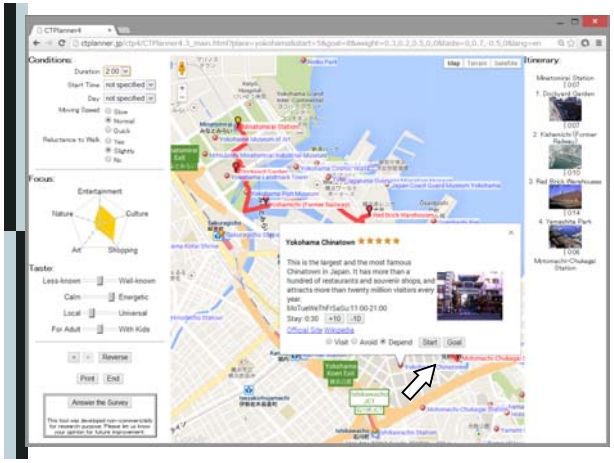
Our History



Our Target: Foreigners visiting Japan

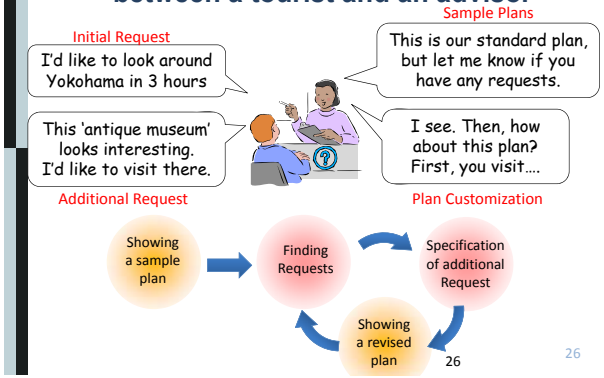
- Many of them are worried about transportation in Japan
- It will be nice if they can consult on their trip at their home/hotel, at any time, using their mother language, without troubling anybody else





Handout

Basic idea: modeling a natural interaction between a tourist and an advisor



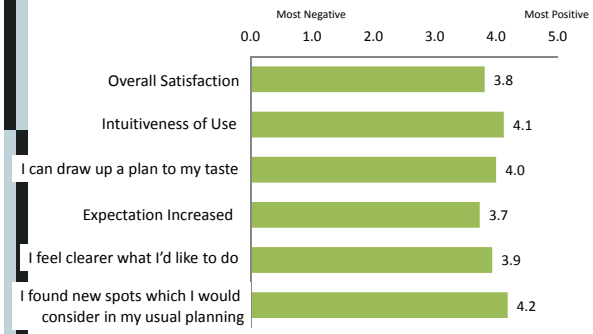
Two Sorts of User Requests

- Where to/not to visit
  - for POIs which the user knows
- Feature of the tour
  - for POIs which the user doesn't know

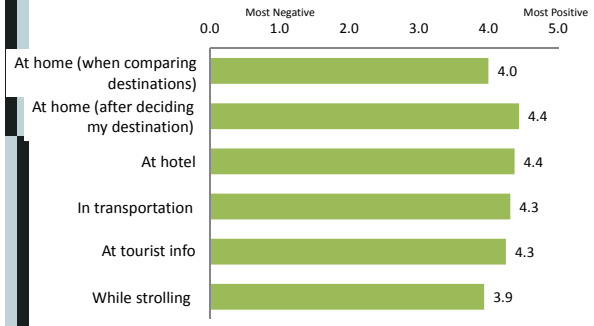
Our Evaluation

- Subject: 16 international students in Tokyo
  - Recruited through a mail magazine
  - China 6, Korea 3, Singapore 2, Vietnam, Malaysia, India, Spain, France 1
- Day: March 26/28, 2013
- Place: Yokohama

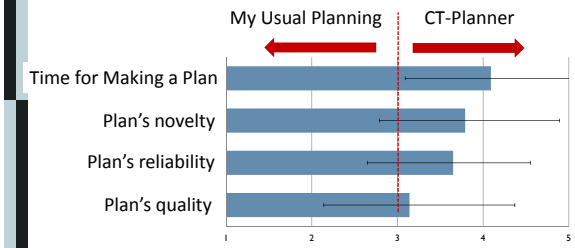
Overall Evaluation



When Do You Want to Use?



Which is better?



An Interesting Finding

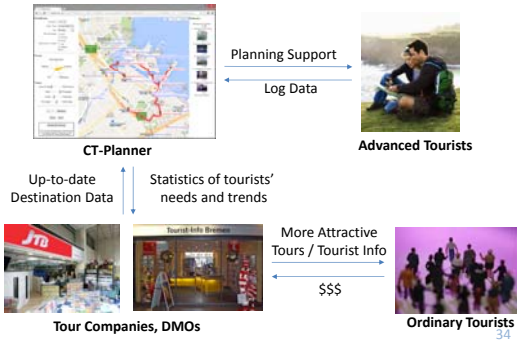
- Some people <u>didn't follow</u> the recommended plan
- Typically, such deviation occurs at the <u>last</u> of their trip
- They say, "I can deviate from my original plan as I've learnt what there are from this tool!"

Our Secret Goal

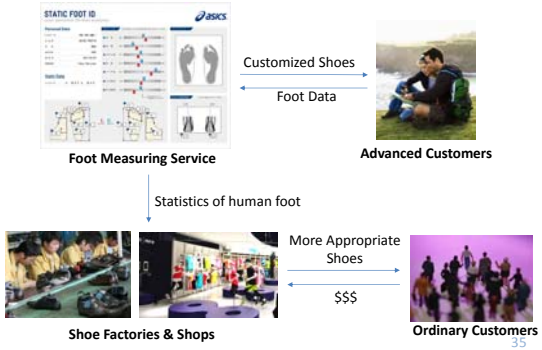
- To collect user logs in order to know the plans and attractions favored by the users of each country
- This is much cheaper than questionnaire or GPS-based survey

Rank	Name of POI	All	International Students	Foreigners living abroad
1	Yamashita Park	75%	63%	81%
2	Red Brick Warehouse	75%	63%	81%
3	Kishamichi (Former Railway Promenade)	63%	50%	69%
4	Zo-no-hana Park	58%	25%	75%
5	Dockyard Garden	54%	38%	63%
6	Yokohama Chinatown	42%	63%	31%

Our Future Vision



Similar Business Model by asics



Today's Keywords

- Personalization
- Recommendation
- Collaborative filtering
- Preference
- Context
- Planning support
- User log