Brokering Agents: Tete-@-Tete
MARI
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Question
- What is the design concept for user interface of ‘Tete-a-Tete’ system?

Brokering Agent?
- Mixture concept including
  - Comparison Shopping Agent
  - Negotiation Agent
  - Auction Agent
- Purpose
  - find solutions that meet both consumer’s and merchant’s demands

Necessity
- As a consumer
  - Shopping online is convenient, but cumbersome
  - the product that best meets individual needs
    - product comparison
    - information of all available merchant offerings
    - tradeoffs between price and performance, brand, delivery times, and extended warranties
    - better negotiation options
- As a merchant
  - lower transaction costs and increase sales
  - differentiate value-added products in an overly homogenous marketplace
  - less interested in profit per transaction and more interested in long-term profitability
**Tete-@-Tete**

- http://ecommerce.media.mit.edu/tete-a-tete/
- a project within MIT Media Lab's Agent-mediated Electronic Commerce (AmEC)
- covering three research areas
  - Multi-Agent Systems
  - Human-Computer Interaction
  - the business of Retail Electronic Commerce

**Comparison in agent mediation**

**Consumer Buying Behavior**

- product brokering
  - the retrieval of information to help determine what to buy
- merchant brokering
  - combines consideration set with merchant-specific information to help determine who to buy from
- negotiation
  - how to determine the terms of the transaction

**Negotiation**

- a form of decision making
- distributive negotiation
  - a single mutually exclusive goal
  - zero-sum game
- integrative negotiation
  - multiple interdependent, but non-mutually exclusive goals
  - non-zero-sum game

**Approach**

- How to help consumers
  - provide value comparisons
  - provide them with a level of decision support to help them determine which merchant offering best meets their needs
- How to help merchants
  - differentiate themselves along dimensions other than just price
  - automate the negotiation process

**User interface**

- a textual list of names and numbers
  - eg.: JANGO(excite), Junglee(yahoo)
  - cumbersome, confusing, not clear
User interface design

- capturing and uncovering consumers’ needs
  - ranges of acceptable values for attributes
  - relative preferences among attributes
- visualizing, ranking of product offerings
- integrative negotiations
  - a form of negotiation with multiple automated sales agents each owned and operated by a specific merchant

Application

- Frictionless Commerce Incorporated
  - http://www.frictionless.com/
- Purchase Source
  - Purchase Source MRO
  - Purchase Source RETAIL
  - iFundExpert
  - LYCOShop

Purchase Source RETAIL

http://retail.frictionless.com

Choose a profile

Select preferences

Result
Value Score

Benefits of Purchase Source

- Market-wide
- Personalized
- Real-time
- Quick to deploy
- Normalized comparisons
- Multi-attribute

MARI: Multi-Attribute Resource Intermediary

- A project being conducted at the MIT Media Laboratory
  - Implementing the core system using an HTML front end, driven by Java servlets to manage content and user interaction, and integrated with a back-end SQL database for persistent storage

Overview

- An agent-based intermediary infrastructure intended as brokering of heterogeneous goods and services
  - Makes it uniquely possible for both the buyer as well as the seller to customize bid and ask prices
    - A buying agent to customize its “bid” price according to the characteristics of a seller
    - A selling agent to discriminate in its “ask” price depending upon the specific traits of a given buyer
  - Allows users to reveal intrinsic multi-attribute utility function for a given product or service
  - Captures relative importance of attributes and permissible tradeoffs

User interface

- multi-stage heuristic
- “referential” or “preferred” configuration
  - product and transaction partner attribute values
- fixed or flexible attributes
Usage scenario

Multi-attribute utility function
- Gather information to estimate how their uni-dimensional utility might change as each flexible attribute varies over permissible range
- Valuating a potential transaction partner is taking a weighted sum of uni-dimensional utility functions

Related Work
- Market Maker, Tete-a-Tete
- Recommendation systems
  - Personalogic, Mysimon, Frictionless ValueShopper
- Price-comparison systems
  - BargainFinder, Jango
- Online negotiation systems
  - Kasbah, AuctionBot

Visualization