The Virtual Customer Initiative

Marketing Group
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The Voice of the Customer

- Thirty years of impact on practice
  - Silk & Urban: pretest markets started industries
  - Little: central to the data explosion
  - many other high-impact papers

- The VOC has been successful and has evolved over the last 15 years.
  - best praise is that it is now generic
  - key papers with hundreds of citations
 - both Bass dissertation and Little best paper prizes (INFORMS)

Virtual Customer Initiative

- to improve the speed, accuracy, and usability of customer input to the product development process

- take advantage of multimedia, computation, and new algorithms
  - rich media
  - rapid, dispersed communications
 - highly adaptive interactions with respondents

Product Development Process
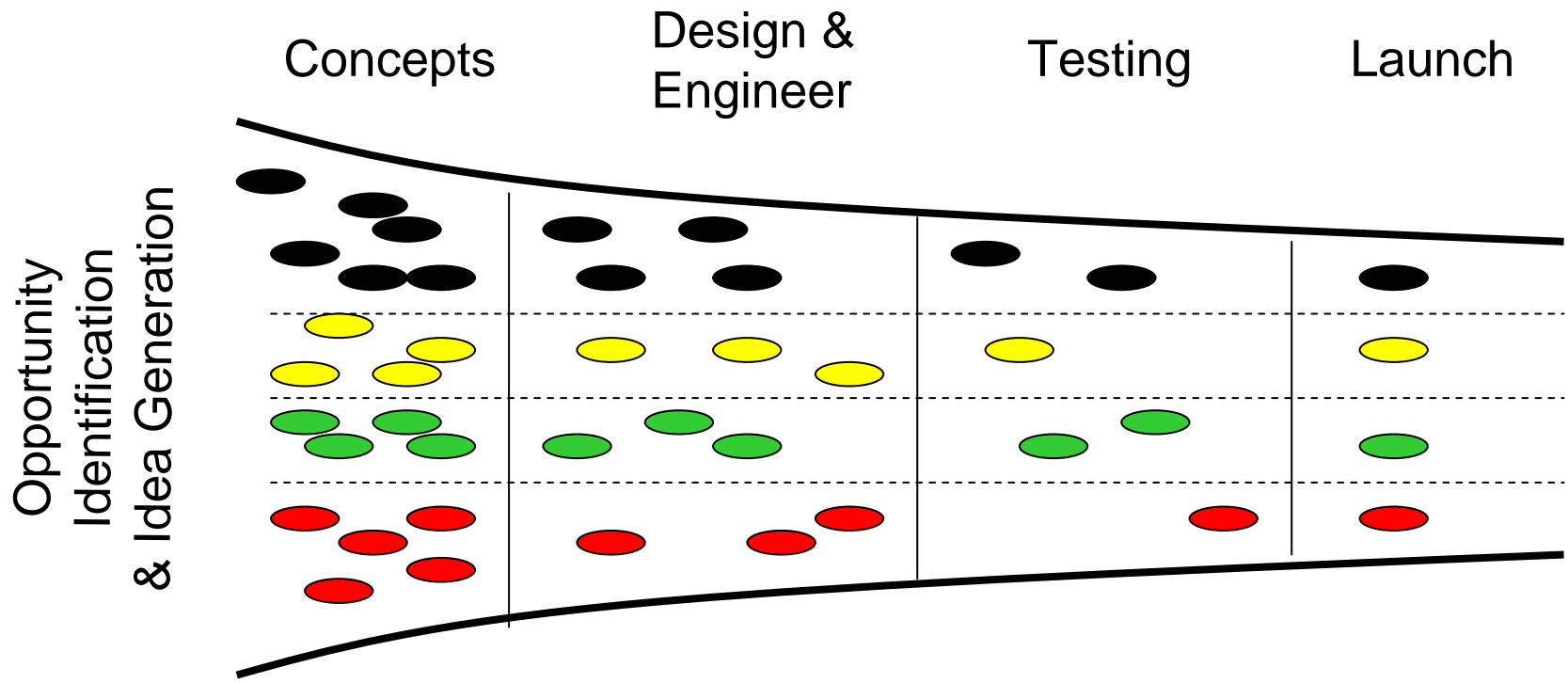
Opportunity identification

- Prelec's information pump
  - incentive compatible "parlor" game
  - think hard, be non-redundant

- Toubia's idea generation game***
  - asynchronous, no need for co-location
  - incentives balance "search" and "exploitation"
  - e.g., rewarded for others building on your idea
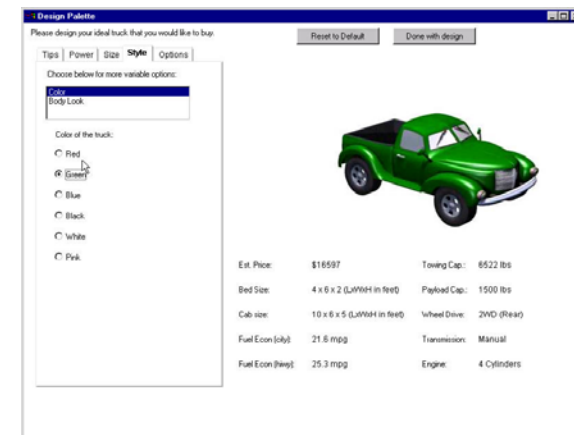 - self-monitoring mechanisms
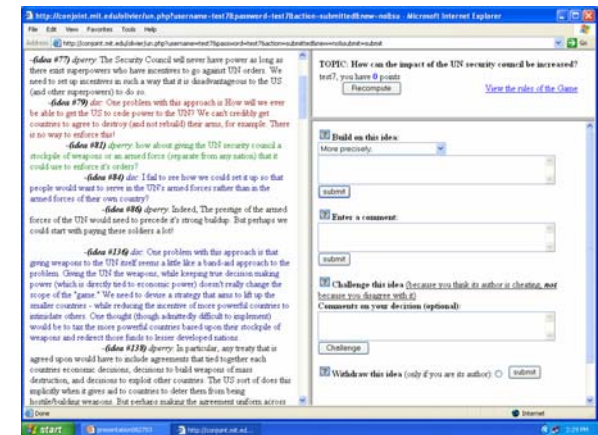
Opportunity identification II

- "Listening In" to web-based advisors***
  - when customers ask for that which is not currently being made
  - identify new platform stars
  - intervene with virtual engineer and design palette

- Genetic algorithms for aesthetic design***

Design

- Polyhedral conjoint analysis***
  - Freund's algorithm
  - optimally adaptive, reduce respondent burden
  - enhance accuracy and overcome "endogeneity"

- Greedoid-based lexicography
  - theory from Orlin and Yee
  - identify "must have" and "must not have" features
  - provide a feasible means to investigate rich theories in psychology (seconds rather than years)

Practical applications

Testing

- Prelec's Information scoring
  - "truth serum" for subjective beliefs
  - published in science
  - applied to forecasting

- "Truth telling" game
  - cluers and guessers
  - incentive compatible to provide best information

- Web-based concept evaluation
  - simple but effective
  - careful empirical tests

- Simulated "stock" markets in product concepts
  - Dahan, Lo, and Poggio
  - still being tested

Many marketing science methods

- Urban's research on trust-based initiatives***

- Simester's research on catalogue companies***

- Tucker's research on technology diffusion

- Braun's research on pseudo-deductables

- (Zhang's research on silent word of mouth)

Scaling up trust-based methods

Summary of the Virtual Customer

- **Industry impact**

- As the VOC moves to the web, we can exploit new capabilities for more accurate and faster feedback

- Quiet revolution
  - rich media
  - instantaneous communication
  - fast, hidden computation

- Better managerial decisions

- Adoption, e.g., GM, Colgate, Harris, NFO, AMS, and seven start-ups

- **Academic recognition**

- Polyhedral
  - Little Best Paper (INFORMS) Award 2004
  - Bass Dissertation (INFORMS) Award 2005
  - Howard Dissertation (AMA) Award 2005
  - Finalist, Green Market Research (AMA) Award 2004

- Greedoid
  - Explor Practice (AMA) Award 2004

- Web-based testing
  - Hustad Best Paper (PDMA) Award 2001
  - Hustad Finalist (PDMA) 2002 & 2003

- *MKS*(5), *JMR*, *JM*, *JPIM*(3), *Science*, book chapters and many others under review