Exploring Caller Dialogue: Analyzing Information Search through Call Center for Tourism Products

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Communication Channels with Customers

- Traditional printed media – books, brochures, etc.
- Travel agencies, etc.
- Computer based - kiosks, etc.
- The Internet (Web sites, email-lists)
- Call centers
In rational decision making theory, information searching is used to maximize the utility of the outcome of decision. All the evaluation rules can be classified as either attributes-based or alternative-based (Bettman and etc, 1998)

• Ongoing search vs. prepurchase search (Bloch, 1985)
Background in Information Search and Decision Making in Tourism

• Tourists search information for various kinds of needs (Vogt and Fesenmaier, 1998): functional; hedonic; innovation; aesthetic; sign.

• Travel decisions have been shown to be relatively complex, involving a number (10-18) of sub-decisions or facets (Jeng, 1998): destination(s); travel group; timing; route; activities and etc.
A Framework of Tourist Information Search

Ongoing Search

Destination Choice Search

Planning Search

Need Recognition

Destination Decision

Most Functional

Least Functional

Most Hedonic

Least Hedonic
1-800-2connect

- Call center: part of Customer Relationship Management System (CRMS)
- Provide up-to-date tourist information about:
  - location: cities/towns, directions/maps, etc.
  - interest: activities, events, etc.
  - amenity: prices/discounts, etc.
- Provide travel counseling services:
  - availability of services, etc.
## Search Format

<table>
<thead>
<tr>
<th>ID</th>
<th>Seq.</th>
<th>Location</th>
<th>Amenity</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Chicago</td>
<td>Hotel</td>
<td>Aquarium</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Chicago</td>
<td>Hotel</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Springfield</td>
<td>Camping</td>
<td></td>
</tr>
</tbody>
</table>

Session and inquiries
Location and Interest Depth

• Illinois General (0)
  – Illinois Regions (1, Chicago Land, Northern Illinois…)
    • Illinois Counties (2, Cook County, Peoria County…)
      – Illinois Cities (3, Chicago, Urbana…)

• General Interest (0)
  – Categorical Interest (1, Accommodation, outdoors…)
    • Detailed Interest (2, Land, Water…)
      – Very Detailed Interest (3, Hunting, Picnicking…)
Focus of Study

• **Amount of Search** (how many inquiries? What elements determined the amount of search?)

• **Directions of Search** and depth of Search (Location dominated or interest dominated? How detailed are their inquiries? Can we infer different decision stages from the search?)

• **Marketing Implications.** (How can we use these information?)
From Jan to Sept, 1999

74,850 caller sessions for Chicagoland;

169,426 total inquiries;

Average inquiries during a session: 2.3
## Top Countries of Inquiries

<table>
<thead>
<tr>
<th>Country</th>
<th>Calls</th>
<th>Percentage</th>
<th>Lasting time</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>65422</td>
<td>97.99</td>
<td>10.2</td>
</tr>
<tr>
<td>Canada</td>
<td>1144</td>
<td>1.71</td>
<td>11.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>74</td>
<td>0.11</td>
<td>13.9</td>
</tr>
<tr>
<td>Germany</td>
<td>23</td>
<td>0.03</td>
<td>10.8</td>
</tr>
<tr>
<td>Australia</td>
<td>15</td>
<td>0.02</td>
<td>14.2</td>
</tr>
<tr>
<td>Ireland</td>
<td>13</td>
<td>0.02</td>
<td>10.2</td>
</tr>
<tr>
<td>France</td>
<td>8</td>
<td>0.01</td>
<td>7.7</td>
</tr>
<tr>
<td>New Zealand</td>
<td>8</td>
<td>0.01</td>
<td>8.4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>6</td>
<td>0.01</td>
<td>20.4</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>5</td>
<td>0.01</td>
<td>7.7</td>
</tr>
<tr>
<td>Brazil</td>
<td>4</td>
<td>0.01</td>
<td>40.1</td>
</tr>
<tr>
<td>Japan</td>
<td>4</td>
<td>0.01</td>
<td>8.6</td>
</tr>
<tr>
<td>Belgium</td>
<td>3</td>
<td>0</td>
<td>11.7</td>
</tr>
<tr>
<td>Iraq</td>
<td>3</td>
<td>0</td>
<td>8.9</td>
</tr>
</tbody>
</table>
Travel Distance and Inquiries

• No significant correlation exists between distance and number of inquiries and between distance and session duration;

• Illinois callers made less inquiries (significant) compared with all USA callers; USA caller make longer sessions compared with foreign callers (significant)
The First Inquiry – Location and Interest

Levels of Location in First Search

- Illinois General: 64%
- Illinois Region: 21%
- Illinois County: 14%
- Illinois City: 1%

Levels of Interest in First Search

- General Interest: 91%
- Categorical Interest: 6%
- Detailed Interests: 1%
- Very Detailed Interest: 1%
The percentage of those people who made their first inquiry about a city or a categorical interest drastically decrease among the multiple search people.
Distance and Depth of Search

<table>
<thead>
<tr>
<th></th>
<th>Depth of location search of first inquiry</th>
<th>Depth of interest search of first inquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F Value</strong></td>
<td>31.26</td>
<td>6.82</td>
</tr>
<tr>
<td><strong>Prob &gt; P</strong></td>
<td>0.0001</td>
<td>0.009</td>
</tr>
</tbody>
</table>
Change of Levels of Location and Interests

Mean Location and Interest Levels in Different Search

- Location
- Interest

Search Levels:
1 2 3 4 5 6 7 8 9 10
### Different Dominance for Multiple Inquiries

<table>
<thead>
<tr>
<th></th>
<th>Not interest-dominant</th>
<th>Interest-dominant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not location-dominant</td>
<td>15472</td>
<td>3942</td>
</tr>
<tr>
<td>Location-dominant</td>
<td>12343</td>
<td>5581</td>
</tr>
</tbody>
</table>
Change of Proportions of Different Callers

Changes of Search Pattern by Number of Inquires

- Same Location Different Interest
- Same Interest Different Location
- Both Dominance
- Location Dominance
- Interest Dominance

Percentage

Search

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Marketing Implications

• We can infer different search patterns but hard to infer difference search stages;
• Branding at city level seems to be most effective; very few people are using county as search cues;
• The first search has the role of leading to more search; a large amount of first search are mainly functional, focusing on one city and one categorical interest;
• From 8th to 12th inquiry is the most effective time (largest percentage of prepurchase search) for cross-marketing and cross-selling.
System Design Implications

• Information Organization: location-based and interest-based; more direct links from detailed location to more general location (network of locations);

• Most important element for the first search is speed; after the 8th element we can more focus on the hedonic part of the dialogue.
Limitations

- In-direct inferences;
- System error (more than 20 hours calling time);
- More information is needed to explore the relationship between decision process and the search pattern.