Temporally Dynamic Web Search Snippets

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Key Finding: Including temporal information in snippets is valuable for trending queries. Search result snippets help users make relevance decisions about the underlying page. Previous research: Query-biased snippets

Example: tom bosley

Tom Bosley: Biography from Answers.com

Tom Bosley won a Tony Award in 1958 for his lead role as New York mayor Fiorello LaGuardia in the Broadway musical Fiorello!. But Tom Bosley is better remembered for his role on the long-running TV show Happy Days (1974-1984).

www.answers.com/topic/tom-bosley

Baseline Snippet

Temporal Snippet (with new content)

Snippet Generation

For each sentence in a webpage, determine
• Position in the current version of the page
• Number of unique query terms it contains
• Change (using Dice coefficient) from cached version of page

Select 2 (short) or 4 (long) key sentences
• Baseline Snippets: Sentences with most unique query terms
• Temporal Snippets: Sentences that changed the most

Show sentences in original position order for readability

User Study

Participants  
66 Microsoft employees (50 male, 16 female)

Methodology
1. Selected a query from a list of candidate queries, drawn from
   • General Queries (frequency-weighted sample)
   • Trending Queries (queries that spiked the prior day)
2. Shown two snippets and selected preferred snippet
   • For each query, judged snippets for 5 distinct URLs
   • For each query-URL pair, compared 3 cases
     - Baseline (Short) vs. Temporal (Short)
     - Baseline (Short) vs. Temporal (Short Blend)
     - Baseline (Long) vs. Temporal (Long Blend)

Results

<table>
<thead>
<tr>
<th>Snippet Comparison</th>
<th>General or Trending Queries</th>
<th>Fresh or Old Cached Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snippet Length</td>
<td>Temporal Content</td>
<td>General Queries</td>
</tr>
<tr>
<td>Short Temporal</td>
<td>17% 23% 60% 18% 20% 62%</td>
<td></td>
</tr>
<tr>
<td>Short Blend</td>
<td>17% 18% 65% 23% 16% 61%</td>
<td></td>
</tr>
<tr>
<td>Long Blend</td>
<td>11% 14% 75% 12% 12% 76%</td>
<td></td>
</tr>
</tbody>
</table>

General Queries: Baseline Snippets preferred
Trending Queries: Blended Snippets preferred

Baseline Snippets prefers: Fresh Cached Page
Temporal & Blended Snippets preferred