Packaged Call Routing and Service Creation Leveraging SOA

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Topics of Discussion

– An Ideal Target for a Packaged Solution:
  • Natural Language Routing
  • Nortel Natural Speech Navigator
    (Powered by Nuance Open Call Steering)

– Reuse Strategy leveraging Services Oriented Architecture
Google (verb)

Google (verb)

From Wikipedia, the free encyclopedia

Redirected from To google

The verb to Google, or to google (depending on your dictionary) means "to use the Google search engine to obtain information on the Internet." For example, "Mary googled for Wikipedia references." Compare with grep. This new word arose from the tremendous popularity of the Google search engine. The American Dialect Society chose the verb google as the "most useful word of 2002," [citation needed] in July, 2006, the verb 'google' was officially added to the 11th edition of the Merriam-Webster Collegiate Dictionary, as well as to the Oxford English Dictionary.

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Overview

Use of the word could be used in the context of, "googling" a boyfriend/girlfriend, or to say that some brand or
Tell us how we can help you.

Ah .. I’d like know how much is left on my loan..

“Ok – Get Payoff Amount. Your Options are..”

Use our speech-enabled self service account management tool Get Account balance, loan payment info

Hold for a loan representative Wait time is currently 2 minutes.

Let us Call You back If there is a better time to talk, leave us a number to reach you.

Use our loan management system through the Web access us at www.mybank.com/loan
Natural Language Routing (NLR) is an ideal target for application reuse.

– Why Package Speech Call Routing?
  • Efficient Routing is a challenge across verticals
    – Similar Application functionality
    – Touch-tone and speech menus represent pervasive problem
  • No backend data requirement
  • More satisfying caller experience
  • Strong ROI
## Top Needs for Contact Centers

**Question:** Of the following types of calls, which ones would you like to increase automation rates with DTMF or speech technology?

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call routing</td>
<td>48%</td>
</tr>
<tr>
<td>Information access/FAQ</td>
<td>37%</td>
</tr>
<tr>
<td>Financial transactions/billing</td>
<td>34%</td>
</tr>
<tr>
<td>Product/tech support</td>
<td>32%</td>
</tr>
<tr>
<td>Internal IT helpdesk/password reset</td>
<td>26%</td>
</tr>
<tr>
<td>Employee/HR self-service</td>
<td>22%</td>
</tr>
<tr>
<td>Name/address change</td>
<td>17%</td>
</tr>
<tr>
<td>Upsell/cross-selling campaigns</td>
<td>17%</td>
</tr>
<tr>
<td>Unified messaging/e-mail access</td>
<td>17%</td>
</tr>
<tr>
<td>Employee voice portal</td>
<td>13%</td>
</tr>
<tr>
<td>Purchasing of goods/services</td>
<td>11%</td>
</tr>
</tbody>
</table>

Survey of over 100 Contact Center Decision Makers

© Datamonitor Pool Survey, 2005
Goals of Natural Speech Navigator

- Faster time to market and ROI benefits
- Best practices dialog methodology
- Lower total cost of ownership
Natural Speech Navigator
Designer User Interface

Per-state details are edited here
<?xml version="1.0" encoding="UTF-8" ?>
<DOCTYPE vxml (View Source for full doctype...)>  
- <vxml xmlns:nuance="http://voicexml.nuance.com/dialog"
         xmlns="http://www.w3.org/2001/vxml" version="2.0"
         application="root.vxml">
  <var name="dialogVariant" />
- <form id="WelcomeState_form" scope="dialog">
  - <block>
    <log label="calllog?key=NGS_MAX_SAMM_ATTEMPTS"
         expr="g_max_samm_attempts" />
    <log label="calllog?key=NGS_MAX_ERROR_THRESHOLD"
         expr="g_max_error_count" />
    <log label="calllog?key=NGS_MAX_ERROR_THRESHOLD_GLOBAL"
         expr="g_max_global_error_count" />
    <log label="calllog?key=NGS_MAX_OPERATOR_COUNT"
         expr="g_max_operator_count" />
    <log label="calllog?key=NGS_MAX_NEGATIVE_CONFIRMATION_COUNT"
         expr="g_max_no" />
    - <prompt cond="g_barge_in_welcome_state" bargein="true"
               version="1.0">
      - <audio expr="PromptPath + 'welcome_init' + '.wav'">
        <value treatasmarkup="true" expr="promptText
                                          ('welcome_init')" />
      </audio>
    </prompt>  
  </block>
</form>
Benefits of NSN Auto Generation

- Consistency among Different resources/skill-sets
  - Individuals working on routing flow, grammars, prompts, and docs. Auto-generating each of these ensures consistency
- Automated VUI/VoiceXML Code Generation
  - Developers can focus on solution specific integration code. VUI 100% auto-generated
- Automated Finite State Grammar Generation
  - Grammar structure all auto-generated.
  - Grammar designer can focus on grammar semantics rather than integration points to VUI code
- Automated Doc Generation
  - Dialog specifications, prompts lists, are time consuming to write and maintain
  - Often fall out of sync with implementation.
  - One button generation of specs, synchronized with implementation
- Upgrade path to latest call steering features
NSN Dialog Strategy
More than the Opening Prompt

But what about:

“I’ve got a question about my bill.”
NSN Dialog Strategy
Disambiguation

Welcome State
Main Menu

Destinations

Disambiguation Menu
SubMenu
SubMenu

“I’ve got a question about my bill.”

“OK. Billing. Now, which of these options are you calling about…”
NSN Dialog Strategy
“The Back-off”

Welcome State
Main Menu

Disambiguation Menu
SubMenu
SubMenu

But what about:
“Oh, uh I have a question...”
NSN Dialog Strategy
“The Back-off”

Welcome State
Main Menu

Destinations

Back-off Main Menu
SubMenu
SubMenu
SubMenu
SubMenu
SubMenu
SubMenu

Disambiguation Menu
SubMenu
SubMenu

The Back-off
NSN Dialog Strategy
“The Back-off”

A “shortcut” to a submenu in the back-off
The basics: What is SOA?

... a service?

A repeatable business task – e.g., verify customer credit; open new account

... service oriented architecture (SOA)?

An IT architectural style that supports integrating your business as linked services

"SOA impacts every aspect of IT and business."
The Services Oriented Application (SOA) Model

Applications are written as a “collection” of services, the services operate in a common framework call the SOA.

- Service included in Enterprise SOA
- Service written by PSO
- Service written by SCE DEV – could be based on previous PSO effort
Flow

Customer request

1. Define new blocks
2. Blocks developed and integrated into tool
3. Define blocks in tool that can be utilized
4. RPQ prepared – custom and licensed components identified
5. Delivery

Professional services

Blocks developed by PSO
Unified Service Creation Environment

- Automate Business process workflows - not just call flow dialogs
- Single graphical integrated workflow & service creation environment for Nortel Applications Center
  - Workflow for Contact Center, Self-Service and Unified Messaging apps
  - Runs inside Eclipse IDE
    - common look and feel for Contact Center and Self-Service
  - WorkFlow Integration -
    - Could invoke SS features while defining a CC workflow and vice-versa
The Convergence of Real-Time Communications & Collaboration with the Enterprise

The Extended Enterprise

Today:
Significant human-centric delays in ~85% of today’s manually oriented, largely Un-automated Business Processes

Promise:
Improved TTR via Business Process automation (reduction in human-centric delays.)
In Summary …

– There are Clear Benefits Associated with a Packaged Call Routing Solution

– Services Oriented Architecture (SOA) Is the Key To An Effective Reuse Strategy
Empowering Your customers and employees with speech technologies

SpeechTEKI 2006 Empower

The Voice Solutions Showcase

Thank You