Dynamic Voice Recognition Grammars Using JSAPI2

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> Began developing software at age 9 – 1976
> Sold first application (Inventory Management) - 1977
> Founded T&R Software 1987
> Founded Burning Sun Enterprises 1994
> Co-Founded Harpoon Technologies 2004
> Working with Speech Technology since 1998
> Working with JavaFX™ since 2007
I wish I was programming in Java right now.
Let's use JSAPI2 for everything!
<item weight="3"> Time for coffee <tag>ASL:Coffee-Time.mpg</tag> </item>
<item weight="3"> Time for dancing <tag>ASL:Dancing-Time.mpg</tag> </item>
<item weight="3"> Computer Programming Time <tag>ASL:Computer-Programming-Time.mpg</tag> </item>
<item weight="3"> Time to laugh <tag>ASL:Laughing-Time.mpg</tag> </item>
<item weight="3"> Time to learn <tag>ASL:Learning-Time.mpg</tag> </item>
<item weight="3"> Our Favorite Time <tag>ASL:Our-Favorite-Time.mpg</tag> </item>
<item weight="1"> Playtime <tag>ASL:Playing-Time.mpg</tag> </item>
<item weight="2"> Programming time <tag>ASL:Programmer-Time.mpg</tag> </item>
<item weight="2"> Reading Time <tag>ASL:Reading-Time.mpg</tag> </item>
<item weight="2"> Signing Time <tag>ASL:Signing-Time.mpg</tag> </item>
<item weight="3"> Time to chat <tag>ASL:Talking-Time.mpg</tag> </item>
<item weight="2"> Teaching Time <tag>ASL:Teaching-Time.mpg</tag> </item>
<item weight="1"> Thanks <tag>ASL:Thank-you.mpg</tag> </item>
<item weight="2"> Thank you <tag>ASL:Thank-you.mpg</tag> </item>
<item weight="3"> Time for questions <tag>ASL:Time-Questions.mpg</tag> </item>
<item weight="2"> goodbye computer <tag>ACTION_EXIT</tag> </item>
</one-of>
<!--
Document : Demo2.xml
Created on : April 11, 2008, 2:04 AM
Author : Eric M. Smith
Description:
   Grammar for simple word-for-word translation.
-->  
<!DOCTYPE grammar PUBLIC "-//W3C//DTD GRAMMAR 1.0//EN"
   "http://www.w3.org/TR/speech-grammar/grammar.dtd">
<grammar xmlns="http://www.w3.org/2001/06/grammar"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.w3.org/2001/06/grammar
   http://www.w3.org/TR/speech-grammar/grammar.xsd"
   xml:lang="en"
   version="1.0"
   mode="voice"
   root="Demo3Grammar">
   <meta name="author" content="Eric M. Smith" />
   <rule id="Demo3Grammar" scope="public">
      <one-of>
         <item weight="3"> Time for coffee <tag>ASL:Coffee-Time.mpg</tag></item>
         <item weight="3"> Time for dancing <tag>ASL:Dancing-Time.mpg</tag></item>
         <item weight="3"> Computer Programming Time <tag>ASL:Computer-Programming-Time.mpg</tag></item>
         <item weight="3"> Time to laugh <tag>ASL:Laughing-Time.mpg</tag></item>
         <item weight="3"> Time to learn <tag>ASL:Learning-Time.mpg</tag></item>
         <item weight="3"> Our Favorite Time <tag>ASL:Our-Favorite-Time.mpg</tag></item>
         <item weight="1"> Playtime <tag>ASL:Playing-Time.mpg</tag></item>
         <item weight="2"> Programming time <tag>ASL:Programmer-Time.mpg</tag></item>
         <item weight="2"> Reading Time <tag>ASL:Reading-Time.mpg</tag></item>
         <item weight="2"> Signing Time <tag>ASL:Signing-Time.mpg</tag></item>
         <item weight="2"> Teaching Time <tag>ASL:Teaching-Time.mpg</tag></item>
         <item weight="1"> Thanks <tag>ASL:Thank-you.mpg</tag></item>
         <item weight="2"> Thank you <tag>ASL:Thank-you.mpg</tag></item>
         <item weight="3"> Time for questions <tag>ASL:Time-Questions.mpg</tag></item>
         <item weight="2"> goodbye computer <tag>ACTION_EXIT</tag></item>
      </one-of>
   </rule>
</grammar>
<one-of>
  <item>Apples<tag>APPLES_TAG</tag></item>
  <item>Oranges<tag>ORANGES_TAG</tag></item>
</one-of>
Basic Application

Apples

Oranges
<one-of>
  <item>Apples<tag>APPLES_TAG</tag></item>
  <item>Oranges<tag>ORANGES_TAG</tag></item>
</one-of>
Demo 1
Basic Application

- Apples
- Oranges
- Add New Button
<rule id="add_button" scope="public">
  <item>Add Button</item>
  <item repeat="0-"> <ruleref uri="#letter"/> </item>
  <item>Complete</item>
</rule>

<rule id="letter">
  <one-of>
    <item>A</item>
    <item>B</item>
    ...
    <item>Z</item>
  </one-of>
</rule>
Demo 2
Checklist

1) Phrase to be Recognized.

2) Button to Activate.

3) Method to Recognize New Grammar Rule
Class Rule

public class Rule
extends Object

Represents a Rule in a RuleGrammar. Each Rule in a RuleGrammar defines a named grammar rule in terms of RuleComponents.

In traditional grammar terminology, the name of the Rule represents the left-hand side (LHS) and the RuleComponent expansion represents the right-hand side (RHS). The RuleGrammar class defines how to create and use a Grammar with Rules.

At least one Rule within a RuleGrammar must have PUBLIC scope to allow external reference with a Rule name. Otherwise, a single root Rule must be defined in the associated RuleGrammar (see createRuleGrammar).

See Also:
Grammar, RuleGrammar, createRuleGrammar

Field Summary

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIVATE</td>
<td>private constant</td>
<td>A constant that specifies private scope for a Rule.</td>
</tr>
<tr>
<td>PUBLIC</td>
<td>private constant</td>
<td>A constant that specifies public scope for a Rule.</td>
</tr>
</tbody>
</table>
Demo 3
Demo 4
Grammar Writer Code
Demo 5
Additional Information

> Blogs
  - http://creativity.burningsunenterprises.com

> Email
  - esmithbss@burningsunenterprises.com
  - esmithbss@gmail.com

> Tools
  - JSAPI2 – http://conversay.com
Thank You.