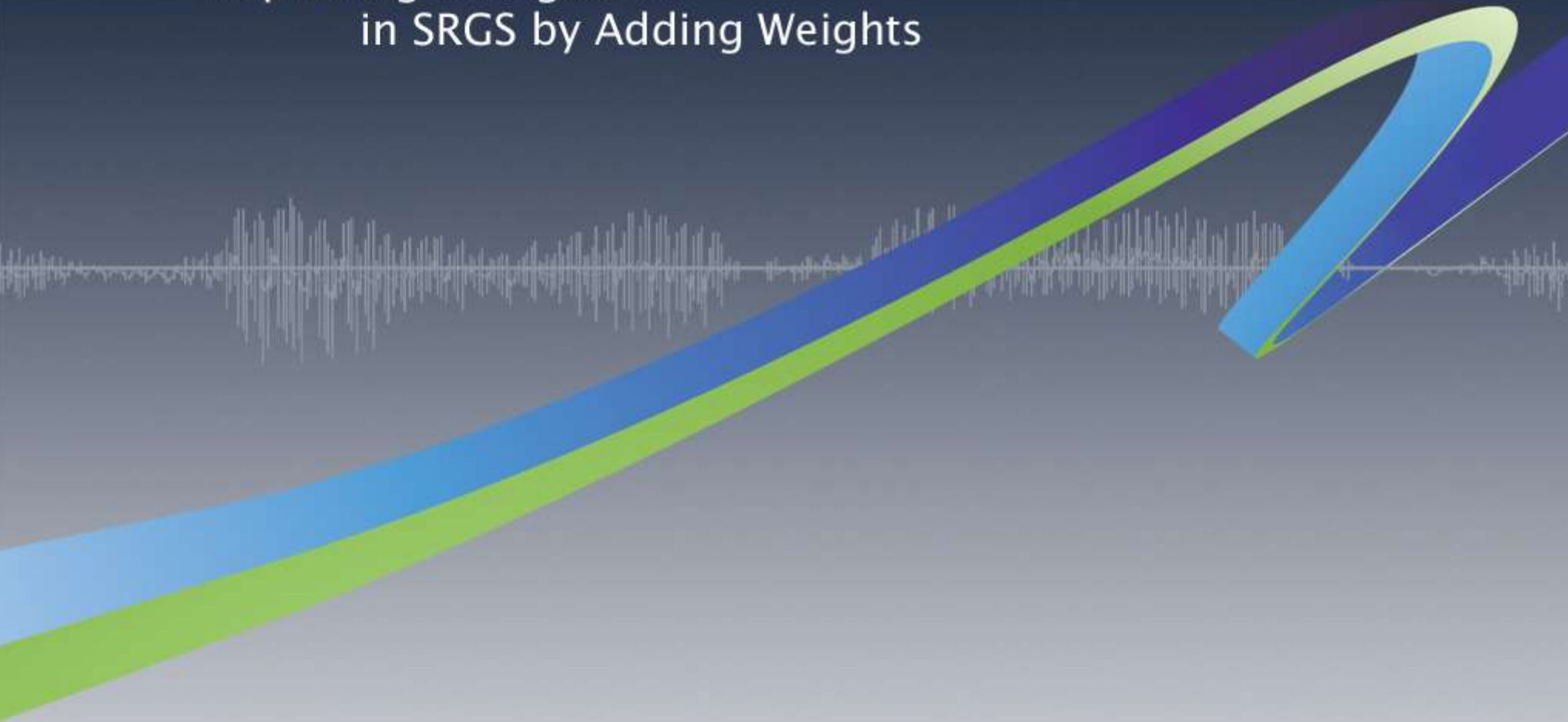


LumenVox
Speech Understood

Improving Recognition in SRGS by Adding Weights



Why Weight?



- Speech recognizers are probability engines.
- Adding weights to helps the recognizer when confronted with multiple search paths through a grammar.

This is particularly important with large grammars, vital in doing searching.

Also important when accuracy requirements are high.

How to Weight



- Weighting allows you to take what you know about your users and have that knowledge help the recognizer.
- Thus, you will need to have some idea of how your users will respond to prompts.
- Be careful. Weighting is a powerful tool, which means it can be a dangerous tool.

Prescriptive Approach

- You know going in to the application design that users are more likely to answer based a certain way.
- E.g. asking callers in which city they live for a national phone system, higher population cities are more likely to be picked.

Therefore, “New York” much more likely than “Newark.”

Descriptive Approach

- You have a good sample set of transcribed data from a deployed application. You know for a fact what sort of responses users give, and in what proportion.
- You can also tell exactly what sorts of errors the system is making, and weight appropriately.

Scale



- Recognizers treat weights differently. You will need to experiment and test.
- Weights are relative to one another.
- Weighting is multiplicative, so numbers above 1.0 provide positive weights and below 1.0 negative.

Syntax

- ABNF: Weights are entered in front of grammar items, denoted by front-slashes:

```
$rule = /10/ yes | /1/ no;
```

- GrXML: Use the weight attribute in an item element.

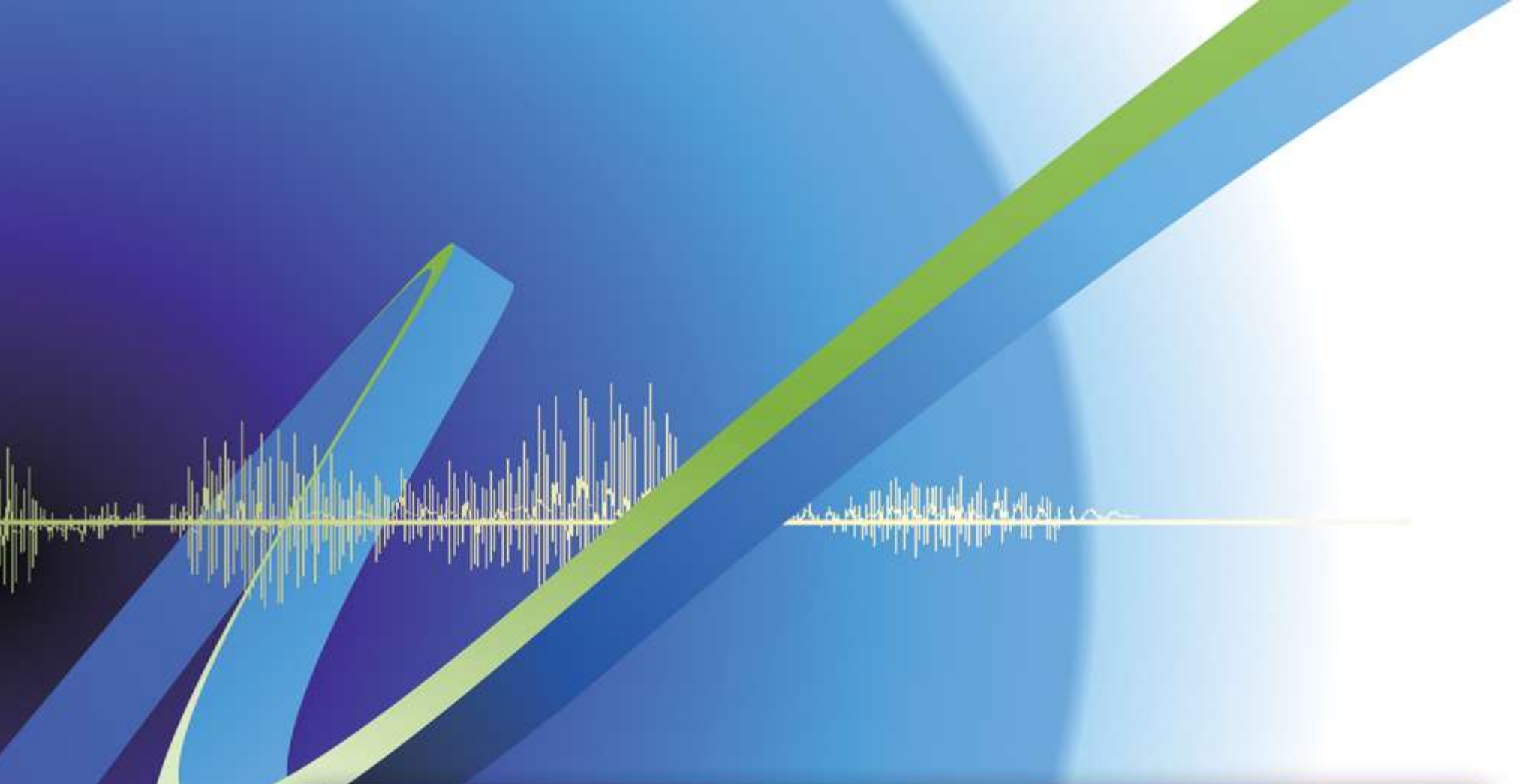
```
<one-of>  
  <item weight="10">yes</item>  
  <item weight="1">no</item>  
</one-of>
```


Example

```
/4599/(Alabama ){out.state='Alabama';} |  
/4451/(Arkansas ){out.state='Arkansas';} |  
/4679/(Arizona ){out.state='Arizona';} |  
/5220/(California ){out.state='California';} |  
/4606/(Colorado ){out.state='Colorado';} |  
/4521/(Connecticut ){out.state='Connecticut';} |  
/4093/(Delaware ){out.state='Delaware';} |  
/5008/(Florida ){out.state='Florida';} |  
/4806/(Georgia ){out.state='Georgia';} |  
/4217/(Hawaii ){out.state='Hawaii';} |
```

Testing

- It is vital you run tests on any weights you add or change.
- Use a different data set than the one you used to perform the initial weighting.
- Monitor a live system very closely after adding weights.



Contact



Call our demo hotline!
+1-877-977-0707
and say "demo"



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