Nuance’s Vocalizer total speech output solution generates high quality speech through a seamless blending of dynamic text-to-speech, pre-recorded audio and optimized tuned text to speech. The carefully selected top quality voice characters bring excellent speech output to all your applications through a powerful combination of state-of-the-art technology, user-friendly optimization and customization tools and an experienced service team. Designed as a highly flexible and scalable solution, Vocalizer can fit a wide range of embedded platforms and devices.

Applications

Vocalizer has been deployed successfully in numerous demanding applications ranging from navigation and automotive UI systems and consumer electronics to assistive technologies and industrial applications.

Automotive
- route guidance
- turn-by-turn directions
- infotainment systems

Consumer electronics
- cell phones
- e-book readers
- toys
- electronic dictionaries

Accessibility products
- for the blind and disabled
- screen readers for PCs and mobile phones
- daisy book readers
- talking kiosks and ATMs

Industrial
- warehousing
- order pick
- transportation

Nuance Vocalizer is the leading speech output solution converting any written text into spoken output. Vocalizer combines state-of-the-art text-to-speech (TTS) technology with tools and services for enabling high quality speech output in a broad range of applications and markets.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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</thead>
<tbody>
<tr>
<td>Naturalness</td>
<td>Natural sounding human speech output guarantees an exceptional end user listening experience</td>
</tr>
<tr>
<td>Accuracy</td>
<td>High linguistic accuracy offers correct readout for all types of text input including a large dictionary of person names</td>
</tr>
<tr>
<td>Scalability</td>
<td>A wide range of footprints scaling from 2MB to 400 MB ensures optimal performance on embedded platforms from very small mobile devices to powerful multi-media systems</td>
</tr>
<tr>
<td>Built-in domain intelligence</td>
<td>Optimization settings provide extra control options for special use cases such as sms reading</td>
</tr>
<tr>
<td>Flexible speech generation</td>
<td>Volume and speaking rate can be changed at run time for more dynamic and lively effects</td>
</tr>
<tr>
<td>Direct phonetic input</td>
<td>Allows for optimal and seamless read out of off-line phonetic databases such as navigation map data</td>
</tr>
<tr>
<td>User text rules</td>
<td>Customized read out of application specific abbreviations and text pattern is possible using a user text processing ruleset</td>
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<tr>
<td>User dictionaries</td>
<td>Application specific lexicata can be phonetically optimized for accurate readout of exceptional pronunciations</td>
</tr>
<tr>
<td>Tuned prompts</td>
<td>With off line tuning options any prompt set can be further optimized and customized for readout</td>
</tr>
<tr>
<td>Seamless prompt insertion</td>
<td>Recorded audio prompts or tuned prompts can be blended with dynamic text to speech seamlessly by active prompt matching</td>
</tr>
<tr>
<td>Vocalizer studio tool</td>
<td>A comprehensive user-friendly tools suite to prototype and optimize speech output applications by easily creating optimization data such as user text rules, user dictionaries and prompt databases</td>
</tr>
<tr>
<td>Universal portfolio</td>
<td>Offering 40 languages and more than 55 voices this truly universal voice portfolio facilitates the creation of global solutions using a single engine</td>
</tr>
<tr>
<td>Unrivaled multi-lingual readout</td>
<td>Using intelligent language identification and phonetic conversion capabilities, Vocalizer can interpret and correctly read out text and phonetic fragments from foreign languages</td>
</tr>
<tr>
<td>Data file only configuration</td>
<td>Configuration is possible through the simple addition of data files</td>
</tr>
</tbody>
</table>
About Nuance Communications

Nuance is the leading provider of speech and imaging solutions for businesses and consumers around the world. Its technologies, applications and services make the user experience more compelling by transforming the way people interact with information and how they create, share and use documents. Every day, millions of users and thousands of businesses experience Nuance’s proven applications and professional services. For more information, please visit www.nuance.com.

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Languages

Vocalizer offers the world’s largest language and voice portfolio with 40 languages and more than 55 voices. This universal coverage facilitates the creation of global solutions using a single engine.

Arabic
Australian English
Bahasa Indonesian
Basque
Brazilian Portuguese
Canadian French
Cantonese
Castilian Spanish
Catalan
Czech
Danish
Dutch Belgium
Dutch Netherlands
EU Portuguese
European French
Finish
German
Greek
Hindi
Hungarian
Indian English
Irish (English)
Italian
Japanese
Korean
Mandarin Chinese
Mandarin Taiwanese
Norwegian
Polish
Romanian
Russian
Scottish English
Slovakian
South African English
Swedish
Thai
Turkish
UK English
US English
US Spanish

Vocalizer Speech Output Solutions

HIGH ACCURACY. FLEXIBILITY. SCALABILITY.

With approximately 2 MB engine size, the total footprint of a Vocalizer solution can vary from less than 4 MB to over 400 MB depending on voice, language and choice of voice model. With a broad range of options, Vocalizer offers an excellent quality/trade-off for a variety of platforms and applications.

Code

The code size for a fully featured Vocalizer engine is ~2 MB. This can be optimized depending on required language set, features and compiler choices.

Language Data

Language data sizes range from 500 kB to 5 MB. Average size of language data across all languages is ~1.5 MB. When loaded at run time, language data requires ~300 kB of RAM.

Voice Data

<table>
<thead>
<tr>
<th>Voice Model</th>
<th>Data size per voice</th>
<th>Total RAM usage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact – small versatile TTS suited for constrained platforms</td>
<td>average: 650 kB</td>
<td>average: 3500 kB max: 4000 kB</td>
</tr>
<tr>
<td>Standard – natural sounding TTS with attractive footprint</td>
<td>average: 20 MB max: 30 MB</td>
<td>average: 4500 kB max: 6500 kB</td>
</tr>
<tr>
<td>Premium light – high quality TTS optimized for navigation and in-car infotainment readout</td>
<td>average: 48 MB max: 65 MB</td>
<td>average: 7900 kB max: 10100 kB</td>
</tr>
<tr>
<td>Premium – largest number of voices with highest quality readout for all types of applications and use cases</td>
<td>average: 110 MB max: 270 MB</td>
<td>average: 30000 kB max: 55000 kB</td>
</tr>
<tr>
<td>Standard high**</td>
<td>average: 55 MB max: 90 MB</td>
<td>average: 4500 kB max: 6500 kB</td>
</tr>
<tr>
<td>Premium high**</td>
<td>average: 360 MB max: 850 MB</td>
<td>average: 30000 kB max: 55000 kB</td>
</tr>
</tbody>
</table>

* total RAM usage includes code, language data, voice data and dynamic RAM
** standard high and premium high use same voice repository as standard and premium but different audio data compression

With approximately 2 MB engine size, the total footprint of a Vocalizer solution can vary from less than 4 MB to over 400 MB depending on voice, language and choice of voice model. With a broad range of options, Vocalizer offers an excellent quality/trade-off for a variety of platforms and applications.