

SitePal Technical Note: Using the Text-To-Speech API

This technical note explains how to implement real time Text-To-Speech (TTS) in your web page using the SitePal Standard (Client) API.

You do not need to be a programmer to follow the instructions in this document, though basic familiarity with HTML and the concept of making a Javascript function call is assumed.

Introduction

Your (Silver Plan and higher) account supports TTS functionality, which means that your SitePal avatars can 'convert' text input to audio, and speak it. Over 40 languages and hundreds of voices are supported.

Tip: a great place to check out our available languages and voices is this public demo: www.ttsdemo.com.

Text to Speech can be used with your SitePal characters in one of two ways –

1. "Static TTS" - via the user interface - by typing in your text in the SitePal editor. When you do so, that audio is assigned to your Scene, and will be spoken by your SitePal character when the Scene is displayed.
2. "Dynamic TTS" - via the API - by calling the API JavaScript function 'sayText'. Using this method your SitePal character can be directed to speak text in real time on your web page.

The first method is simpler. The second is more powerful. To use Static TTS simply select the TTS option in the SitePal Editor, select your language and voice, and enter your text. There is no need to read any further. The rest of this document explains how to use Dynamic TTS.

Note that with Dynamic TTS the text spoken to each website visitor may be different and uniquely crafted. You may for example include in the spoken text personal details relevant to your customers (e.g. personal balance, items they have looked at before), and/or mention points relevant to the day or time of their visit. You may even connect the speech to your (3rd party) AI bot engine, and have bot responses visualized by your speaking SitePal character.

Implementation

Dynamic Text To Speech is made possible by using the API function call 'sayText', which allows you to specify the text to be spoken by your SitePal character. The steps to make this work are as follows:

1. Embed your SitePal Scene into your HTML page

Create a Scene where the audio is set to "none". Select the "Publish" option, copy your Scene's embed code, and paste it into your HTML page.

2. Setup a Licensed Domain

Add your web page domain name to your Licensed Domains to enable Dynamic TTS. This should be the domain name of the page(s) in which your SitePal character appears.

In your SitePal account, select "Account" from the Options menu at top right. At the bottom left of the page, you can manage your Licensed Domains.

We require Licensed Domains to be specified for your protection, to restrict Dynamic TTS use to those domains which you authorize.

Your domain name is visible in the browser's address bar when your web page loads. With protocol and path information removed, the domain name looks like this -

www.mycompany.com or 69.63.176.13

For example, if the browser's address bar reads:

https://www.mycompany.com/abc/xyz/index.html

Enter www.mycompany.com as your domain name.

Notes:

1. Enter a 2, 3 or 4 part domain name only, without protocol, port or path info.
2. IP address may be used.
3. Wildcard for the first part of the name is allowed and supported.
4. "localhost" and "127.0.0.1" are always supported and do not need to be added.
5. If your character is embedded in an iframe, the domain names for both parent and child pages must be added.

3. Review the 'sayText' API function

Review the documentation for the sayText function call within the [Standard \(Client\) API](#) reference doc. This document and other helpful resources are available in the SitePal support page (www.sitepal.com/support).

Function parameters allow you to select the language and voice to be used. The list of available languages and voices can be found in Appendix B.

Tip: Advanced users may also wish to examine available SSML tags, which allow you to fine-tune TTS audio. See Appendix C for details & check out the support example "Fine Tuning TTS" in the support page.

We also recommend reading through the Introduction section in the API Reference - to gain some useful insight about other relevant aspects of using the API.

4. Call the 'sayText' API function

Call sayText to initiate speech at any time after the Scene is fully loaded.

Note: API function calls may not work as expected until your embedded Scene or Show is fully loaded. It is therefore advisable to implement the 'vh_sceneLoaded' callback – and not call any API function before this callback is received.

Common ways to use the 'sayText' function include speaking when the cursor rolls over a certain area of your page, or speaking after a certain amount of time has elapsed. But the two most common uses are -

- You want your character to speak when a link is clicked. The link should refer to "javascript:sayText(...)". In a similar way you may invoke TTS in response to rollover or any other event that Javascript can detect.

Example: https://sitepal.com/api/examples/faq_sayText.html

- You want your character to speak when page is loaded. To do so, you must add an event callback function to your page to capture the 'vh_SceneLoaded' callback event. This event indicates that the Scene is loaded and ready to accept your call (see more information about Event Callback functions in the API Reference). Add the sayText function call within this callback function.

Example:

```
function vh_sceneLoaded(){
    sayText("Welcome to my website!",3,1,3);
}
```

Note: audio playback when page is loaded (a.k.a. 'play on load' or 'autoplay') may be blocked by the web browser in many instances, and will always be blocked on mobile. Please see more information about "Play on load" limitations in the Programming for Mobile section in the API Reference.

Working Example

A technical example of the Text to Speech implementation using the methods described above, is available in our support examples page. Here is a direct link:

https://sitepal.com/api/examples/saytext_classic.html

View the source code of the page to see how it is implemented. Feel free to copy & paste portions to use in your own page (but if you do so don't forget to replace our embed code with the embed code from your own account).

Troubleshooting

You followed the instructions above but TTS does not work in your page? Here is what you should look into:

1. Verify that your Embed code is indeed included in your page. View the source code of the page ([here's how](#)), and search for 'Embed'. The embed code should appear in your page exactly as copied from your SitePal account.
2. Verify that the licensed domain name for your web page has been configured properly. Login to SitePal & open your "Settings" page. At bottom left you will see the list of licensed domains configured for your account. One of the domain names configured here

must be identical to the domain name you see in your browser's 'address' line – after stripping away the preceding “http://” and any path information.

For example – if browser address line is:

```
http://www.mycompany.com/abcd/index.html
```

The Licensed Domain name in this case should be:

```
www.mycompany.com
```

Note: Wildcard notation is also supported (for first segment only). In the above example, you could enter either `www.mycompany.com` or `*.mycompany.com`.

3. If your SitePal avatar is embedded in an iframe, verify that the domain names of both parent and child pages are added to your licensed domains.
4. Verify that the sayText function is indeed being called. The best way to do so would be to add a JavaScript alert just prior to the 'sayText' function call.
Add the line:

```
alert("sayText is called");
```

and try again. The alert should come up whenever you expect your character to speak. If you don't see the alert come up, then your code is not initiating the function call to sayText. You need to examine your code.
5. You might be calling sayText prior to your Scene being fully loaded. Use the callback `vh_sceneLoaded` to verify that the Scene is ready before any API call is issued. See “Status Callback Functions” in the [Client API Reference](#).
6. You may be calling sayText as soon as the page is loaded, but before the user interacts with the page. There is nothing wrong with trying to do so - but audio playback may be blocked by the browser. Please see more information about "Play on Load" in the Introduction section of the [Client API Reference](#).
7. Your text input might contain unbalanced angle brackets: “<” or “>”. This is considered invalid input and will fail to generate audio.
Angle brackets will cause failure if they are not part of valid SSML code. These are the only characters that can cause failure - because they have potential functional use in the text, and the TTS engine attempts to interpret them as SSML.
Unless you are using SSML directives in your text, do not include angle brackets in your text input. This includes HTML code which should be avoided.
8. Verify that the language of your text input matches the language of the specified voice. A mismatch may cause your sayText API call to fail. For example – providing Japanese text while specifying an English voice.

Questions? Send us a note to: support@sitepal.com