Package ‘mscstts’

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Description R Client for the Microsoft Cognitive Services 'Text-to-Speech' REST API, including voice synthesis. A valid account must be registered at the Microsoft Cognitive Services website <https://www.microsoft.com/cognitive-services/> in order to obtain a (free) API key. Without an API key, this package will not work properly.
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**ms_create_ssml**

Create SSML for Passing to Synthesize

**Usage**

```r
ms_create_ssml(
  script,
  voice = NULL,
  gender = c("Female", "Male"),
  language = "en-US",
  escape = FALSE
)
```

**Arguments**

- `script`: A character vector of lines to be spoken
- `voice`: Full voice name, usually from `ms_language_to_ms_name`. Will override language and gender.
- `gender`: Sex of the Speaker
- `language`: Language to be spoken, must be from `ms_language_codes`
- `escape`: Should non-standard characters be substituted? Should not be used if `script` has SSML tags

**Value**

A character string of the text and SSML markup

**Examples**

```r
ms_create_ssml("hey I really like things & dogs", escape = TRUE)
ms_create_ssml("hey I really like things")
ms_create_ssml("hey I <emphasis level="strong">really like</emphasis> things")
ms_create_ssml("hey I <emphasis level="strong">really like</emphasis> things', escape = TRUE)
```
Find API Key for Microsoft Text To Speech (TTS) or Cognitive Services

**Description**

Determines if `option(ms_tts_key)` or `option(ms_tts_key)` is set. If not, it stops and returns an error. If so, returns the value.

**Usage**

```r
ms_get_tts_key(api_key = NULL, error = TRUE)
ms_have_tts_key(api_key = NULL)
ms_set_tts_key(api_key)
ms_valid_tts_key(api_key = NULL, region = ms_regions())
```

**Arguments**

- `api_key`  
  Microsoft Cognitive Services API key
- `error`  
  Should the function error if `api_key = NULL`?
- `region`  
  Subscription region for your key. See https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/rest-apis#text-to-speech

**Value**

API key

**Note**

You can either set the API key using `option(ms_tts_key)` or have it accessible by `api_key = Sys.getenv("MS_TTS_API_KEY"), or code(api_key = Sys.getenv("MS_TTS_API_KEY1")), or code(api_key = Sys.getenv("MS_TTS_API_KEY2"))`

**Examples**

```r
res = ms_get_tts_key(error = FALSE)
```
**ms_get_tts_token**  
*Get Microsoft Text To Speech (TTS) or Cognitive Services Token from API Key*

**Description**
Get Microsoft Text To Speech (TTS) or Cognitive Services Token from API Key

**Usage**

```r
ms_get_tts_token(api_key = NULL, region = ms_regions())
ms_auth_url(region = ms_regions())
ms_expired_token(token = NULL)
```

**Arguments**

- `api_key` Microsoft Cognitive Services API key
- `region` Subscription region for your key. See [https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/rest-apis#text-to-speech](https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/rest-apis#text-to-speech)
- `token` An authentication of class `token`, likely from `ms_get_tts_token`

**Value**
A list of the request, and token

**Examples**

```r
if (ms_valid_tts_key()) {
  token = ms_get_tts_token()
}
```

---

**ms_language_to_ms_name**  
*Language and Gender to Microsoft Voice Name*

**Description**
Language and Gender to Microsoft Voice Name

**Usage**

```r
ms_language_to_ms_name(language = "en-US", gender = c("Female", "Male"))
ms_validate_language_gender(language = "en-US", gender = c("Female", "Male"))
```
Arguments

- **language**: A language code, see `ms_language_codes`
- **gender**: Either Male or Female, not all languages support both genders

Value

- A character string of the name of the voice

Examples

```r
ms_language_to_ms_name()
ms_validate_language_gender()
```

---

**ms_list_voices**

List Voices

Description

List Voices

Usage

```
ms_list_voices(token = NULL, api_key = NULL, region = NULL, ...)
```

Arguments

- **token**: An authentication token, base-64 encoded usually from `ms_get_tts_token`. If not provided, will be created from `ms_get_tts_token`
- **api_key**: Microsoft Cognitive Services API key, if token is not provided.
- **region**: Subscription region for your key. See [https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/rest-apis#text-to-speech](https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/rest-apis#text-to-speech)
- ... Additional arguments to send to GET

Value

- A `data.frame` of the names and their long names.

Examples

```r
## Not run:
if (ms_have_tts_key()) {
  res = ms_list_voices()
}
## End(Not run)
```
ms_locales

Description
Locales for Microsoft Translate

Usage
ms_locales()
ms_locale_df()
ms_languages()
ms_language_codes()

Value
A list of Locales and the Speech Voices

Note
This is generated from the JSON output of ms_list_voices

Examples
ms_locales()

ms_read_synthesis

Description
Read Synthesized output

Usage
ms_read_synthesis(output)

Arguments
output List from ms_synthesize with elements output_format and content

Value
A Wave Object
**ms_synthesize**

**Note**

The tuneR package cannot read all different types of the output here.

---

| ms_synthesize | Get Microsoft Text To Speech (TTS) or Cognitive Services Token from API Key |

**Description**

Get Microsoft Text To Speech (TTS) or Cognitive Services Token from API Key

**Usage**

```r
ms_synthesize(
  script,
  token = NULL,
  api_key = NULL,
  gender = c("Female", "Male"),
  language = "en-US",
  voice = NULL,
  output_format = c("raw-16khz-16bit-mono-pcm", "raw-8khz-8bit-mono-mulaw",
                   "raw-8khz-8bit-mono-alaw", "riff-8khz-8bit-mono-mulaw",
                   "riff-16khz-16bit-mono-pcm", "audio-16khz-128kbitrate-mono-mp3",
                   "audio-16khz-64kbitrate-mono-mp3", "audio-16khz-32kbitrate-mono-mp3",
                   "riff-24khz-16bit-mono-pcm", "audio-24khz-160kbitrate-mono-mp3",
                   "audio-24khz-96kbitrate-mono-mp3", "audio-24khz-48kbitrate-mono-mp3"),
  escape = FALSE,
  region = NULL,
  api = c("tts", "bing"),
  ...
)
```

```r
ms_region(region = ms_regions())
```

```r
ms_regions()
```

```r
ms_set_region(region = ms_regions())
```

```r
ms_synthesize_api_url(api = c("tts", "bing"), region = NULL)
```

**Arguments**

- `script` A character vector of lines to be spoken
- `token` An authentication token, base-64 encoded usually from `ms_get_tts_token`. If not provided, will be created from `ms_get_tts_token`
- `api_key` Microsoft Cognitive Services API key, if token is not provided.
gender  Sex of the Speaker
language Language to be spoken, must be from ms_language_codes
voice full voice name, usually from ms_language_to_ms_name. Will override language and gender.
output_format Format of the output, see https://docs.microsoft.com/en-us/azure/cognitive-services/speech/api-reference-rest/bingvoiceoutput for more information
escape Should non-standard characters be substituted? Should not be used if script has SSML tags. See ms_create_ssml
region Subscription region for your key. See https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/rest-apis#text-to-speech
api which API to authorize on, either tts for text to speech or bing for Bing text to speech API
... Additional arguments to send to POST

Value
A list of the request, content, token, and ‘SSML’.

Note
The content is likely in a binary format and the output depends on the ‘output_format’ chosen. For example, if the ‘output_format’ is an ‘MP3’, then see below example

Examples
```r
## Not run:
if (ms_have_tts_key()) {
  res = ms_synthesize(
    script = "hey, how are you doing? I'm doing pretty good",
    output_format = "audio-16khz-128kbitrate-mono-mp3"
  )
  tmp <- tempfile(fileext = ".mp3")
  writeBin(res$content, con = tmp)
  mp3 = tuneR::readMP3(tmp)
}
## End(Not run)
ms_regions()
```

print.token  Print method for token

Description
Print method for token
print.token

Usage

### S3 method for class 'token'

print(x, reveal = FALSE, ...)

reveal(x, ...)

Arguments

- **x**: an object used to select a method.
- **reveal**: Should the token be revealed
- **...**: further arguments passed to or from other methods

Examples

```r
x = "asdf"
class(x) = "token"
print(x)
attr(x, "timestamp") = Sys.time()
print(x)

print(x, reveal = TRUE)
```
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