Package ‘nzilbb.labbcat’

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Description 'LaBB-CAT' is a web-based language corpus management system developed by the New Zealand Institute of Language, Brain and Behaviour (NZILBB) - see <https://labbcat.canterbury.ac.nz>. This package defines functions for accessing corpus data in a 'LaBB-CAT' instance. You must have at least version 20220401.1842 of 'LaBB-CAT' to use this package.
For more information about 'LaBB-CAT', see
or
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addDictionaryEntry

Adds an entry to a dictionary.

Description
This function creates adds a new entry to the given dictionary.

Usage
addDictionaryEntry(labcat.url, manager.id, dictionary.id, key, entry)

Arguments
labcat.url URL to the LaBB-CAT instance
manager.id The layer manager ID of the dictionary, as returned by getDictionaries
dictionary.id The ID of the dictionary, as returned by getDictionaries
key The key (word) in the dictionary to add an entry for.
entry The value (definition) for the given key.

Details
You must have edit privileges in LaBB-CAT in order to be able to use this function.

Value
NULL if the entry was added, or a list of error messages if not.

See Also
getDictionaries
gerarLayoutEntries
addLayerDictionaryEntry

Adds an entry to a layer dictionary.

Description

This function adds a new entry to the dictionary that manages a given layer, and updates all affected
tokens in the corpus. Words can have multiple entries.

Usage

addLayerDictionaryEntry(labbcat.url, layer.id, key, entry)

Arguments

- labbcat.url: URL to the LaBB-CAT instance
- layer.id: The ID of the layer with a dictionary configured to manage it.
- key: The key (word) in the dictionary to add an entry for.
- entry: The value (definition) for the given key.

Details

You must have edit privileges in LaBB-CAT in order to be able to use this function.

Value

NULL if the entry was added, or a list of error messages if not.

See Also

- generateLayer

Examples

## Not run:
## Add the word "robert" to the CELEX wordform pronunciation dictionary
addDictionaryEntry(labbcat.url, "CELEX-EN", "Phonology (wordform)", "robert", ","'rQ-b@t"")

## End(Not run)

## Not run:
## Add a pronunciation for the word "robert" to the phonemes layer dictionary
addLayerDictionaryEntry(labbcat.url, "phonemes", "robert", ","'rQ-b@t"")

## End(Not run)
**annotatorExt**

Retrieve annotator’s "ext" resource.

**Description**

Retrieve a given resource from an annotator’s "ext" web app. Annotators are modules that perform different annotation tasks, and can optionally implement functionality for providing extra data or extending functionality in an annotator-specific way. If the annotator implements an "ext" web app, it can provide resources and implement a mechanism for interrogating the annotator. This function provides a mechanism for accessing these resources via R.

**Usage**

```r
annotatorExt(labbcat.url, annotator.id, resource, parameters = NULL)
```

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance.
- `annotator.id` ID of the annotator to interrogate.
- `resource` The name of the file to retrieve or instance method (function) to invoke. Possible values for this depend on the specific annotator being interrogated.
- `parameters` Optional list of ordered parameters for the instance method (function).

**Value**

The resource requested.

**Examples**

```r
## Not run:
## Get the version of the currently installed LabelMapper annotator:
annotatorExt(labbcat.url, "LabelMapper", "getVersion")

## Get the summary of the segment to speakerDependentPhone mapping
## implemented by the LabelMapper annotator:
summaryJson <- annotatorExt(labbcat.url,
   "LabelMapper", "summarizeMapping", list("segment","speakerDependentPhone"))
summary <- jsonlite::fromJSON(summaryJson)

## End(Not run)
```
countAnnotations

Counts the number of annotations on the given layer of the given transcript.

**Description**

Returns the number of annotations on the given layer of the given transcript.

**Usage**

```r
countAnnotations(labbcat.url, id, layer.id)
```

**Arguments**

- `labbcat.url`: URL to the LaBB-CAT instance
- `id`: A transcript ID (i.e. transcript name)
- `layer.id`: A layer ID

**Value**

The number of annotations on that layer

**See Also**

- `getTranscriptIds`
- `getTranscriptIdsInCorpus`
- `getTranscriptIdsWithParticipant`

**Examples**

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Count the number of words in UC427_ViktoriaPapp_A_ENG.eaf
tenke.count <- countAnnotations(labbcat.url, "UC427_ViktoriaPapp_A_ENG.eaf", "orthography")

## End(Not run)
```
deleteLayer

Deletes an existing layer.

Description

This function deletes an existing annotation layer, including all annotation data associated with it.

Usage

deleteLayer(labbcat.url, layer.id)

Arguments

labbcat.url URL to the LaBB-CAT instance
layer.id The ID of the layer to delete.

Details

You must have administration privileges in LaBB-CAT in order to be able to use this function.

Value

NULL, or an error message if deletion failed.

See Also

newLayer saveLayer

Examples

## Not run:
## Delete the phonemes layer
deleteLayer(labbcat.url, "phonemes")

## End(Not run)
deleteLexicon  

Delete a previously loaded lexicon.

Description

By default LaBB-CAT includes a layer manager called the Flat Lexicon Tagger, which can be configured to annotate words with data from a dictionary loaded from a plain text file (e.g. a CSV file).

Usage

deleteLexicon(labbcat.url, lexicon)

Arguments

- labbcat.url  URL to the LaBB-CAT instance.
- lexicon     The name of the lexicon to delete, e.g. 'cmudict'

Details

This function deletes such a lexicon, which was previously added using loadLexicon.

You must have editing privileges in LaBB-CAT in order to be able to use this function.

Value

NULL if the deletion was successful, or an error message if not.

See Also

loadLexicon

Examples

```r
## Not run:
## Delete the previously loaded CMU Pronouncing Dictionary lexicon
deleteLexicon(labbcat.url, "cmudict")

## End(Not run)
```
deleteTranscript

Delete a transcript from the corpus.

Description
This function deletes the given transcript, and all associated files.

Usage
deleTranscript(labbcat.url, id)

Arguments
labbcat.url URL to the LaBB-CAT instance
id The ID transcript to delete.

Details
For this function to work, the credentials used to connect to the server must have at least 'edit' access.

Value
The ID of the deleted transcript

Examples
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## delete a transcript from the server
deleteTranscript(labbcat.url, "my-transcript.eaf")

## End(Not run)

generateLayer

Generates a layer.

Description
Generates annotations on a given layer for all transcripts in the corpus.

Usage
generateLayer(labbcat.url, layer.id, no.progress = FALSE)
## generateLayerUtterances

Generates a layer for a given set of utterances.

### Description

Generates annotations on a given layer for a given set of utterances, e.g., force-align selected utterances of a participant.

### Usage

```r
generateLayerUtterances(
  labbcat.url,
  match.ids,
  layer.id,
  collection.name = NULL,
  no.progress = FALSE
)
```

### Arguments

- `labbcat.url`: URL to the LaBB-CAT instance
- `layer.id`: The ID of the layer to generate.
- `no.progress`: TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when `interactive()`.

### Value

The final status of the layer generation task.

### See Also

- `getAllUtterances`

### Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labcat.canterbury.ac.nz/demo/"

## Generate all phonemic transcription annotations
generateLayer(labbcat.url, "phonemes")

## End(Not run)
```
**getAllUtterances**

Get all utterances of participants.

### Description

Identifies all utterances of a given set of participants.

### Usage

```r
ggetAllUtterances(
  labbcat.url, 
  participant.ids, 
  transcript.types = NULL, 
  mainparticipant = TRUE,
)```

### Arguments

- **labbcat.url** URL to the LaBB-CAT instance
- **match.ids** A vector of annotation IDs, e.g. the MatchId column, or the URL column, of a results set.
- **layer.id** The ID of the layer to generate.
- **collection.name** An optional name for the collection, e.g. the participant ID.
- **no.progress** TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().

### Value

The final status of the layer generation task.

### See Also

- `getAllUtterances`

### Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get all utterances of a participant
allUtterances <- getAllUtterances(labbcat.url, "AP2505_Nelson")

## Force-align the participant's utterances
generateLayerUtterances(labbcat.url, allUtterances$MatchId, "htk", "AP2505_Nelson")

## End(Not run)
```
getAllUtterances

```r
max.matches = NULL,
no.progress = FALSE
)
```

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance
- `participant.ids` A list of participant IDs to identify the utterances of.
- `transcript.types` An optional list of transcript types to limit the results to. If null, all transcript types will be searched.
- `main.participant` TRUE to search only main-participant utterances, FALSE to search all utterances.
- `max.matches` The maximum number of matches to return, or null to return all.
- `no.progress` TRUE to supress visual progress bar. Otherwise, progress bar will be shown when interactive().

**Value**

A data frame identifying matches, containing the following columns:

- `SearchName` A name based on the pattern – the same for all rows
- `Number` Row number
- `Transcript` Name of the transcript in which the match was found
- `Line` The start offset of the utterance/line
- `LineEnd` The end offset of the utterance/line
- `MatchId` A unique ID for the matching target token
- `Before.Match` Transcript text immediately before the match
- `After.Match` Transcript text of the match
- `Before.Match` Transcript text immediately after the match
- `Target.word` Text of the target word token
- `Target.word.start` Start offset of the target word token
- `Target.word.end` End offset of the target word token
- `Target.segment` Label of the target segment (only present if the segment layer is included in the pattern)
- `Target.segment.start` Start offset of the target segment (only present if the segment layer is included in the pattern)
- `Target.segment.end` End offset of the target segment (only present if the segment layer is included in the pattern)

**See Also**

- `getParticipantIds`
getAnchors

Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## get all utterances of the given participants
participant.ids <- getParticipantIds(labbcat.url)[1:3]
results <- getAllUtterances(labbcat.url, participant.ids)

## results$MatchId can be used to access results

## End(Not run)
```

getAnchors

`getAnchors(labbcat.url, id, anchor.id, page.length = 1000)`

Description

Lists the given anchors in the given transcript.

Usage

getAnchors(labbcat.url, id, anchor.id, page.length = 1000)

Arguments

- `labbcat.url` URL to the LaBB-CAT instance
- `id` A transcript ID (i.e. transcript name)
- `anchor.id` A vector of anchor IDs (or a string representing one anchor ID)
- `page.length` In order to prevent timeouts when there are a large number of matches or the network connection is slow, rather than retrieving anchors in one big request, they are retrieved using many smaller requests. This parameter controls the number of anchors retrieved per request.

Value

A named list of anchors, with members:

- `id` The annotation’s unique ID,
- `offset` The offset from the beginning (in seconds if it’s a transcript of a recording, or in characters if it’s a text document)
- `confidence` A rating from 0-100 of the confidence of the offset, e.g. 10: default value, 50: force-aligned, 100: manually aligned

See Also

- getAnnotations
Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/

## Get the first 20 orthography tokens in UC427_ViktoriaPapp_A_ENG.eaf
orthography <- getAnnotations(labbcat.url, "UC427_ViktoriaPapp_A_ENG.eaf", "orthography", 20, 0)

## Get the start anchors for the above tokens
word.starts <- getAnchors(labbcat.url, "UC427_ViktoriaPapp_A_ENG.eaf", orthography$startId)

## End(Not run)
```

getAnnotations

**getAnnotations**

*Gets the annotations on the given layer of the given transcript.*

### Description

Returns the annotations on the given layer of the given transcript.

### Usage

```r
getAnnotations(
  labbcat.url, 
  id, 
  layer.id, 
  page.length = NULL, 
  page.number = NULL
)
```

### Arguments

- **labbcat.url**: URL to the LaBB-CAT instance
- **id**: A transcript ID (i.e. transcript name)
- **layer.id**: A layer ID
- **page.length**: The maximum number of annotations to return, or null to return all
- **page.number**: The zero-based page number to return, or null to return the first page

### Value

A named list of annotations, with members:

- **id**: The annotation’s unique ID
- **layerId**: The name of the layer it comes from
- **label**: The value of the annotation
**getAnnotatorDescriptor**

- **startId** The ID of the start anchor,
- **endId** The ID of the end anchor,
- **parentId** The ID of the parent annotation,
- **ordinal** The ordinal of the annotation among its peers,
- **confidence** A rating from 0-100 of the confidence of the label e.g. 10: default value, 50: automatically generated, 100: manually annotated

**See Also**

getTranscriptIds getTranscriptIdsInCorpus getTranscriptIdsWithParticipant countAnnotations

**Examples**

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get all the orthography tokens in UC427_ViktoriaPapp_A_ENG.eaf
orthography <- getAnnotations(labbcat.url, "UC427_ViktoriaPapp_A_ENG.eaf", "orthography")

## Get the first 20 orthography tokens in UC427_ViktoriaPapp_A_ENG.eaf
orthography <- getAnnotations(labbcat.url, "UC427_ViktoriaPapp_A_ENG.eaf", "orthography", 20, 0)

## End(Not run)
```

---

**getAnnotatorDescriptor**

*Gets annotator information.*

**Description**

Retrieve information about an annotator. Annotators are modules that perform different annotation tasks. This function provides information about a given annotator, for example the currently installed version of the module, what configuration parameters it requires, etc.

**Usage**

`getAnnotatorDescriptor(labbcat.url, annotator.id)`

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance.
- `annotator.id` ID of the annotator module.
Value

The annotator info:

- annotatorId The annotator's unique ID
- version The currently install version of the annotator.
- info HTML-encoded description of the function of the annotator.
- infoText A plain text version of $info (converted automatically).
- hasConfigWebapp Determines whether the annotator includes a web-app for installation or general configuration.
- configParameterInfo An HTML-encoded definition of the installation config parameters, including a list of all parameters, and the encoding of the parameter string.
- configParameterInfoText A plain text version of $configParameterInfo (converted automatically).
- hasTaskWebapp Determines whether the annotator includes a web-app for task parameter configuration.
- taskParameterInfo An HTML-encoded definition of the task parameters, including a list of all parameters, and the encoding of the parameter string.
- taskParameterInfoText A plain text version of $taskParameterInfo (converted automatically).
- hasExtWebapp Determines whether the annotator includes an extras web-app which implements functionality for providing extra data or extending functionality in an annotator-specific way.
- extApiInfo An HTML-encoded document containing information about what endpoints are published by the ext web-app.
- extApiInfoText A plain text version of $extApiInfo (converted automatically).

See Also

annotatorExt newLayer

Examples

```r
## Not run:
## Get information about the BAS Annotator
basAnnotator <- getAnnotatorDescriptor("https://labbcat.canterbury.ac.nz/demo/", "BASAnnotator")
cat(basAnnotator$infoText)
## End(Not run)
```
**getAvailableMedia**

List the media available for the given transcript.

**Description**

List the media available for the given transcript.

**Usage**

```r
getAvailableMedia(labbcat.url, id)
```

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance
- `id` A transcript ID (i.e. transcript name)

**Value**

A named list of media files available for the given transcript, with members:

- `trackSuffix` The track suffix of the media
- `mimeType` The MIME type of the file
- `url` URL to the content of the file
- `name` Name of the file

**See Also**

`getTranscriptIds`

**Examples**

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## List the media files available for BR2044_OllyOhlson.eaf
media <- getAvailableMedia(labbcat.url, "BR2044_OllyOhlson.eaf")

## End(Not run)
```
getCorpusIds

*Gets a list of corpus IDs.*

**Description**

Returns a list of corpora in the given 'LaBB-CAT' instance.

**Usage**

`getCorpusIds(labbcat.url)`

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance

**Value**

A list of corpus IDs

**Examples**

```r
## Not run:
## List corpora
corpora <- getCorpusIds("https://labbcat.canterbury.ac.nz/demo/"
## End(Not run)
```

getDeserializerDescriptors

*Lists the descriptors of all registered deserializers.*

**Description**

Returns a list of deserializers, which are modules that import transcriptions and annotation structures from a specific file format, e.g. Praat TextGrid, plain text, etc.

**Usage**

`getDeserializerDescriptors(labbcat.url)`

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance
Value

A list of serializers, each including the following information:

- **name** The name of the format.
- **version** The installed version of the serializer module.
- **fileSuffixes** The normal file name suffixes (extensions) of the files.
- **mimeType** The MIME type of the format, i.e. the value to use as the *mimeType* parameter of *getFragments*.

Examples

```r
## Not run:
## List file upload formats supported
formats <- getDeserializerDescriptors("https://labbcat.canterbury.ac.nz/demo/")

## can we upload as plain text?
plainTextSupported <- "text/plain" %in% formats$mimeType

## End(Not run)
```

---

**getDictionaries**  
*List the dictionaries available.*

Description

List the dictionaries available.

Usage

```
getDictionaries(labbcat.url)
```

Arguments

- **labbcat.url** URL to the LaBB-CAT instance

Value

A named list of layer manager IDs, each of which containing a list of dictionaries that the layer manager makes available.

See Also

*getDictionaryEntries*
getDictionaryEntries

Lookup entries in a dictionary.

Description

Lookup entries in a dictionary.

Usage

getDictionaryEntries(labbcat.url, manager.id, dictionary.id, keys)

Arguments

labbcat.url URL to the LaBB-CAT instance
manager.id The layer manager ID of the dictionary, as returned by getDictionaries
dictionary.id The ID of the dictionary, as returned by getDictionaries
keys A list of keys (words) identifying entries to look up

Value

A data frame with the keys and their dictionary entries, if any.

See Also

getDictionaries

Examples

## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

keys <- c("the", "quick", "brown", "fox")

## get the pronunciations according to CELEX
entries <- getDictionaryEntries(labbcat.url, "CELEX-EN", "Phonology (wordform)", keys)

## End(Not run)
getFragments

Description

This function gets fragments of transcripts from 'LaBB-CAT', converted to a given format (by default, Praat TextGrid).

Usage

getFragments(
  labbcat.url, id, start, end, layer.ids, mime.type = "text/praat-textgrid", path ="
)

Arguments

labbcat.url URL to the LaBB-CAT instance
id The transcript ID (transcript name) of the sound recording, or a vector of transcript IDs.
start The start time in seconds, or a vector of start times.
end The end time in seconds, or a vector of end times.
layers The layer IDs.
mime.type Optional content-type - "text/praat-textgrid" is the default, but your LaBB-CAT installation may support other formats, which can be discovered using getSerializerDescriptors.
path Optional path to directory where the files should be saved.

Details

NB Although many formats will generate exactly one file for each interval (e.g. mime.type=text/praat-textgrid), this is not guaranteed; some formats generate a single file or a fixed collection of files regardless of how many fragments there are.

Value

The name of the file, which is saved in the current directory, or a list of names of files, if multiple id's/start's/end's were specified.
If a list of files is returned, they are in the order that they were returned by the server, which *should* be the order that they were specified in the id/start/end lists.
getGraphIds

See Also

getSerializerDescriptors

Examples

```
# Not run:
# define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/

# Get the 5 seconds starting from 10s after the beginning of a recording
textgrid.file <- getFragments(labbcat.url, "AP2505_Nelson.eaf", 10.0, 15.0,
  c("transcript", "phonemes"), path="samples")

# Load some search results previously exported from LaBB-CAT
results <- read.csv("results.csv", header=T)

# Get a list of fragment TextGrids, including the utterances, transcript, and phonemes layers
textgrid.files <- getFragments(
  labbcat.url, results$Transcript, results$Line, results$LineEnd,
  c("utterance", "word", "phonemes"))

# Get a list of fragment TextGrids
textgrid.files <- getFragments(
  labbcat.url, results$Transcript, results$Line, results$LineEnd)

# End(Not run)
```

---

**getGraphIds**

Deprecated synonym for getTranscriptIds.

Description

Returns a list of graph IDs (i.e. transcript names).

Usage

graphIds(labbcat.url)

Arguments

- `labbcat.url` URL to the LaBB-CAT instance

Value

A list of graph IDs

See Also

getTranscriptIds
getGraphIdsInCorpus

Examples

## Not run:
## List all transcripts
transcripts <- getGraphIds("https://labbcat.canterbury.ac.nz/demo/")

## End(Not run)

defunct

getGraphIdsInCorpus (Deprecated synonym for getTranscriptIdsInCorpus).

Description

Returns a list of corpora in the given 'LaBB-CAT' instance.

Usage

getGraphIdsInCorpus(labbcat.url, id)

Arguments

labbcat.url URL to the LaBB-CAT instance
id The ID (name) of the corpus

Value

A list of corpus IDs

See Also

getGraphIdsInCorpus

Examples

## Not run:
## List transcripts in the QB corpus
transcripts <- getGraphIdsInCorpus("https://labbcat.canterbury.ac.nz/demo/", "QB")

## End(Not run)
getGraphIdsWithParticipant

Deprecated synonym for getTranscriptIdsWithParticipant.

Description
Returns a list of IDs of graphs (i.e. transcript names) that include the given participant.

Usage
getGraphIdsWithParticipant(labbcat.url, id)

Arguments
labbcat.url URL to the LaBB-CAT instance
id A participant ID

Value
A list of graph IDs

See Also
getTranscriptIdsWithParticipant

Examples
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## List transcripts in which UC427_ViktoriaPapp_A_ENG speaks
transcripts <- getGraphIdsWithParticipant(labbcat.url, "UC427_ViktoriaPapp_A_ENG")

## End(Not run)

getId

Gets the store’s ID.

Description
The store’s ID - i.e. the ID of the 'LaBB-CAT' instance.

Usage
getId(labbcat.url)
getLayer

Arguments

labbcat.url URL to the LaBB-CAT instance

Value

The annotation store’s ID

Examples

## Not run:
## Get ID of LaBB-CAT instance
instance.id <- getId("https://labbcat.canterbury.ac.nz/demo/")

## End(Not run)

getLayer

Gets a layer definition.

Description

Gets a layer definition.

Usage

getLayer(labbcat.url, id)

Arguments

labbcat.url URL to the LaBB-CAT instance
id ID of the layer to get the definition for

Value

The definition of the given layer, with members:

- id The layer’s unique ID
- parentId The layer’s parent layer ID
- description The description of the layer
- alignment The layer’s alignment - 0 for none, 1 for point alignment, 2 for interval alignment
- peers Whether children have peers or not
- peersOverlap Whether child peers can overlap or not
- parentIncludes Whether the parent t-includes the child
- saturated Whether children must temporally fill the entire parent duration (true) or not (false)
- parentIncludes Whether the parent t-includes the child
- type The type for labels on this layer
- validLabels List of valid label values for this layer
getLayerIds

See Also

getLayerIds getLayers

Examples

## Not run:
## Get the definition of the orthography layer
orthography.layer <- getLayer("https://labcat.canterbury.ac.nz/demo/", "orthography")

## End(Not run)

getLayerIds(labbcat.url)

Arguments

labbcat.url URL to the LaBB-CAT instance

Value

A list of layer IDs

Examples

## Not run:
## Get names of all layers
layer.ids <- getLayerIds("https://labcat.canterbury.ac.nz/demo/")

## End(Not run)
getLayers

getLayers

*Gets a list of layer definitions.*

## Description

Gets a list of layer definitions.

## Usage

`getLayers(labbcat.url)`

## Arguments

- `labbcat.url` URL to the LaBB-CAT instance

## Value

A list of layer definitions, with members:

- `id` The layer’s unique ID
- `parentId` The layer’s parent layer ID
- `description` The description of the layer
- `alignment` The layer’s alignment - 0 for none, 1 for point alignment, 2 for interval alignment
- `peers` Whether children have peers or not
- `peersOverlap` Whether child peers can overlap or not
- `parentIncludes` Whether the parent t-includes the child
- `saturated` Whether children must temporally fill the entire parent duration (true) or not (false)
- `parentIncludes` Whether the parent t-includes the child
- `type` The type for labels on this layer
- `validLabels` List of valid label values for this layer

## See Also

- `getLayerIds`

## Examples

```r
## Not run:
## Get definitions of all layers
layers <- getLayers("https://labbcat.canterbury.ac.nz/demo/")

## End(Not run)
```
getMatchAlignments

Gets temporal alignments of matches on a given layer.

Description

Gets labels and start/end offsets of annotations on a given layer, identified by given match IDs.

Usage

```r
getMatchAlignments(
  labbcat.url,
  match.ids,
  layer.ids,
  target.offset = 0,
  annotations.per.layer = 1,
  anchor.confidence.min = 50,
  include.match.ids = FALSE,
  page.length = 1000,
  no.progress = FALSE
)
```

Arguments

- `labbcat.url`: URL to the LaBB-CAT instance
- `match.ids`: A vector of annotation IDs, e.g. the MatchId column, or the URL column, of a results set.
- `layer.ids`: A vector of layer IDs.
- `target.offset`: The distance from the original target of the match, e.g.
  - 0 – find annotations of the match target itself,
  - 1 – find annotations of the token immediately after match target
  - -1 – find annotations of the token immediately before match target
- `annotations.per.layer`: The number of annotations on the given layer to retrieve. In most cases, there’s only one annotation available. However, tokens may, for example, be annotated with ‘all possible phonemic transcriptions’, in which case using a value of greater than 1 for this parameter provides other phonemic transcriptions, for tokens that have more than one.
- `anchor.confidence.min`: The minimum confidence for alignments, e.g.
  - 0 – return all alignments, regardless of confidence;
  - 50 – return only alignments that have been at least automatically aligned;
  - 100 – return only manually-set alignments.
- `include.match.ids`: Whether or not the data frame returned includes the original MatchId column or not.
In order to prevent timeouts when there are a large number of matches or the network connection is slow, rather than retrieving matches in one big request, they are retrieved using many smaller requests. This parameter controls the number of results retrieved per request.

TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().

Details
You can specify a threshold for confidence in the alignment, which is a value from 0 (not aligned) to 100 (manually aligned). The default is 50 (automatically aligned), so only alignments that have been at least automatically aligned are specified. For cases where there’s a token but its alignment confidence falls below the threshold, a label is returned, but the start/end times are NA.

Value
A data frame with label, start time, and end time, for each layer.

See Also
getMatches getMatchLabels

Examples
```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Perform a search
results <- getMatches(labbcat.url, list(segment="I"))

## Get the segment following the token, with alignment if it's been manually aligned
following.segment <- getMatchAlignments(labbcat.url, results$MatchId, "segment",
                                        target.offset=1, anchor.confidence.min=100)
```

getMatches

Search for tokens.

Description
Searches through transcripts for tokens matching the given pattern.
Usage

getMatches(
  labbcat.url,
  pattern,
  participant.ids = NULL,
  transcript.types = NULL,
  main.participant = TRUE,
  aligned = FALSE,
  matches.per.transcript = NULL,
  words.context = 0,
  max.matches = NULL,
  overlap.threshold = NULL,
  page.length = 1000,
  no.progress = FALSE
)

Arguments

labbcat.url URL to the LaBB-CAT instance

An object representing the pattern to search for.

Strictly speaking, this should be a named list that replicates the structure of the ‘search matrix’ in the LaBB-CAT browser interface, with one element called “columns”, containing a named list for each column.

Each element in the “columns” named list contains an element named “layers”, whose value is a named list for patterns to match on each layer, and optionally an element named “adj”, whose value is a number representing the maximum distance, in tokens, between this column and the next column - if “adj” is not specified, the value defaults to 1, so tokens are contiguous.

Each element in the “layers” named list is named after the layer it matches, and the value is a named list with the following possible elements:

- **pattern** A regular expression to match against the label
- **min** An inclusive minimum numeric value for the label
- **max** An exclusive maximum numeric value for the label
- **not** TRUE to negate the match
- **anchorStart** TRUE to anchor to the start of the annotation on this layer (i.e. the matching word token will be the first at/after the start of the matching annotation on this layer)
- **anchorEnd** TRUE to anchor to the end of the annotation on this layer (i.e. the matching word token will be the last before/at the end of the matching annotation on this layer)
- **target** TRUE to make this layer the target of the search; the results will contain one row for each match on the target layer

Examples of valid pattern objects include:

```r
## words starting with 'ps...'
pattern <- list(columns = list(
```
getMatches

```r
list(layers = list(
    orthography = list(pattern = "ps.*")))

## the word 'the' followed immediately or with one intervening word by
## a hapax legomenon (word with a frequency of 1) that doesn't start with a vowel
pattern <- list(columns = list(
    list(layers = list(
        orthography = list(pattern = "the")),
        adj = 2),
    list(layers = list(
        phonemes = list(not = TRUE, pattern = "[cCEFHiIPquJV0123456789~#\$@].*"),
        frequency = list(max = "2")))))
```

For ease of use, the function will also accept the following abbreviated forms:

```r
## a single list representing a 'one column' search,
## and string values, representing regular expression pattern matching
pattern <- list(orthography = "ps.*")
```

```r
## a list containing the columns (adj defaults to 1, so matching tokens are contiguous).
pattern <- list(
    list(orthography = "the"),
    list(phonemes = list(not = TRUE, pattern = "[cCEFHiIPquJV0123456789~#\$@].*"),
         frequency = list(max = "2")))
```

participant.ids
An optional list of participant IDs to search the utterances of. If not supplied, all utterances in the corpus will be searched.

transcript.types
An optional list of transcript types to limit the results to. If null, all transcript types will be searched.

main.participant
TRUE to search only main-participant utterances, FALSE to search all utterances.

aligned
ture to include only words that are aligned (i.e. have anchor confidence ≥ 50, false to search include un-aligned words as well.

matches.per.transcript
Optional maximum number of matches per transcript to return. NULL means all matches.

words.context
Number of words context to include in the ‘Before.Match’ and ‘After.Match’ columns in the results.

max.matches
The maximum number of matches to return, or null to return all.

overlap.threshold
The percentage overlap with other utterances before simultaneous speech is excluded, or null to include overlapping speech.

page.length
In order to prevent timeouts when there are a large number of matches or the network connection is slow, rather than retrieving matches in one big request, they are retrieved using many smaller requests. This parameter controls the number of results retrieved per request.
getMatches

no.progress TRUE to supress visual progress bar. Otherwise, progress bar will be shown when interactive().

Value

A data frame identifying matches, containing the following columns:

- **SearchName** A name based on the pattern – the same for all rows
- **MatchId** A unique ID for the matching target token
- **Transcript** Name of the transcript in which the match was found
- **Participant** Name of the speaker
- **Corpus** The corpus of the transcript
- **Line** The start offset of the utterance/line
- **LineEnd** The end offset of the utterance/line
- **Before.Match** Transcript text immediately before the match
- **Text** Transcript text of the match
- **After.Match** Transcript text immediately after the match
- **Number** Row number
- **URL** URL of the first matching word token
- **Target.word** Text of the target word token
- **Target.word.start** Start offset of the target word token
- **Target.word.end** End offset of the target word token
- **Target.segment** Label of the target segment (only present if the segment layer is included in the pattern)
- **Target.segment.start** Start offset of the target segment (only present if the segment layer is included in the pattern)
- **Target.segment.end** End offset of the target segment (only present if the segment layer is included in the pattern)

See Also

getParticipantIds

Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/

## create a pattern object to match against
pattern <- list(columns = list(  
  list(layers = list(    
    orthography = list(pattern = "the")),  
    adj = 2),  
  list(layers = list(  
```

getMatchingGraphIds

Deprecated synonym for getMatchingTranscriptIds.

Description

Gets a list of IDs of graphs (i.e. transcript names) that match a particular pattern.

Usage

getMatchingGraphIds(labbcat.url, expression, page.length = NULL, page.number = NULL, order = NULL)

Arguments

labbcat.url URL to the LaBB-CAT instance
expression An expression that determines which graphs match
page.length The maximum number of IDs to return, or null to return all
page.number The zero-based page number to return, or null to return the first page
order An expression that determines the order the graphs are listed in - if specified, this must include the keyword 'ASC' for ascending or 'DESC' for descending order.

Details

The results can be exhaustive, by omitting pageLength and page.number, or they can be a subset (a 'page') of results, by given pageLength and page.number values.

The order of the list can be specified. If omitted, the graphs are listed in ID order.

The expression language is currently not well defined, but is based on JavaScript syntax.
The `labels` function can be used to represent a list of all the annotation labels on a given layer. For example, each transcript can have multiple participants, so the participant labels (names) are represented by: `labels('participant')`

Use the `includes` function on a list to test whether the list contains a given element. e.g. to match transcripts that include the participant 'Joe' use: `labels('participant').includes('Joe')`

Use the `first` function to identify the first (or the only) annotation on a given layer. e.g. the annotation representing the transcript’s corpus is: `first('corpus')`

Single annotations have various attributes, including 'id', 'label', 'ordinal', etc. e.g. the name of the transcript’s corpus is: `first('corpus').label`

Regular expressions can be matched by using expressions like `/regex/.test(str)`, e.g. to test if the ID starts with 'BR' use: `/^BR.+/.test(id)` or to test if the transcript’s corpus includes a B use: `/.*/.test(first('corpus').label)`

Expressions such as those in the examples can be used.

**Value**

A list of graph IDs (i.e. transcript names)

**Examples**

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get all transcripts whose names start with "BR"
transcripts <- getMatchingGraphIds(labbcat.url, "/^BR.+/.test(id)")

## Get the first twenty transcripts in the "QB" corpus
transcripts <- getMatchingGraphIds(
  labbcat.url, "first('corpus').label = 'QB', 20, 0")

## Get the second transcript that has "QB247_Jacqui" as a speaker
transcripts <- getMatchingGraphIds(
  labbcat.url, "labels('participant').includes('QB247_Jacqui')", 1, 1)

## Get all transcripts in the QB corpus whose names start with "BR"
## in word-count order
transcripts <- getMatchingGraphIds(
  labbcat.url, "first('corpus').label = 'QB' & & /^BR.+/.test(id)",
  order="first('transcript_word_count').label ASC")

## End(Not run)
```
getMatchingParticipantIds

Description

Gets a list of IDs of participants that match a particular pattern.

Usage

```r
getMatchingParticipantIds(
  labbcat.url,
  expression,
  page.length = NULL,
  page.number = NULL
)
```

Arguments

- `labbcat.url` URL to the LaBB-CAT instance
- `expression` An expression that determines which participants match
- `page.length` The maximum number of IDs to return, or null to return all
- `page.number` The zero-based page number to return, or null to return the first page

Details

The results can be exhaustive, by omitting page.length and page.number, or they can be a subset (a 'page') of results, by given page.length and page.number values.

The expression language is currently not well defined, but is based on JavaScript syntax.

- The `labels` function can be used to represent a list of all the annotation labels on a given layer. For example, each participant can have multiple corpora, so the corpus labels (names) are represented by: `labels('corpus')`
- Use the `includes` function on a list to test whether the list contains a given element. e.g. to match participants that include the corpus 'QB' use: `labels('corpus').includes('QB')`
- Use the `first` function to identify the first (or the only) annotation on a given layer. e.g. the annotation representing the participant's gender is: `first('participant_gender')`
- Single annotations have various attributes, including 'id', 'label', 'ordinal', etc. e.g. the label of the participant's gender is: `first('participant_gender').label`
- Regular expressions can be matched by using expressions like `/regex/.test(str)`, e.g. to test if the ID starts with 'BR' use: `/^BR.+/test(id)` or to test if the participant's gender includes 'binary' use: `/.*binary.*/.test(first('participant_gender').label)`

Expressions such as those in the examples can be used.
getMatchingTranscriptIds

*Value*

A list of participant IDs

*Examples*

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get all participants whose IDs start with "BR"
participants <- getMatchingTranscriptIds(labbcat.url, "/^BR.+/.test(id)"

## Get the first twenty transcripts in the "QB" corpus
participants <- getMatchingTranscriptIds(
  labbcat.url, "labels('corpus').includes('QB')", 20, 0)

## Get all participants in the "QB" corpus that have "Jacqui" as part of the ID
participants <- getMatchingTranscriptParticipantIds(
  labbcat.url, "labels('corpus').includes('QB') && /^BR.+/.test(id)"

## End(Not run)
```

---

**getMatchingTranscriptIds**

*Gets a list of IDs of transcripts that match a particular pattern.*

**Description**

Gets a list of IDs of transcripts (i.e. transcript names) that match a particular pattern.

**Usage**

```r
getMatchingTranscriptIds(
  labbcat.url, 
  expression, 
  page.length = NULL, 
  page.number = NULL, 
  order = NULL
)
```

**Arguments**

- **labbcat.url**: URL to the LaBB-CAT instance
- **expression**: An expression that determines which transcripts match
- **page.length**: The maximum number of IDs to return, or null to return all
- **page.number**: The zero-based page number to return, or null to return the first page
getMatchingTranscriptIds

order

An expression that determines the order the transcripts are listed in - if specified, this must include the keyword 'ASC' for ascending or 'DESC' for descending order.

Details

The results can be exhaustive, by omitting page.length and page.number, or they can be a subset (a 'page') of results, by given page.length and page.number values.

The order of the list can be specified. If omitted, the transcripts are listed in ID order.

The expression language is currently not well defined, but is based on JavaScript syntax.

- The labels function can be used to represent a list of all the annotation labels on a given layer. For example, each transcript can have multiple participants, so the participant labels (names) are represented by: labels('participant')
- Use the includes function on a list to test whether the list contains a given element. e.g. to match transcripts that include the participant 'Joe' use: labels('participant').includes('Joe')
- Use the first function to identify the first (or the only) annotation on a given layer. e.g. the annotation representing the transcript’s corpus is: first('corpus')
- Single annotations have various attributes, including 'id', 'label', 'ordinal', etc. e.g. the name of the transcript's corpus is: first('corpus').label
- Regular expressions can be matched by using expressions like '/regex/.test(str)', e.g. to test if the ID starts with 'BR' use: /^BR.+/.test(id) or to test if the transcript's corpus includes a B use: /.B.*/.test(first('corpus').label)

Expressions such as those in the examples can be used.

Value

A list of transcript IDs (i.e. transcript names)

Examples

## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get all transcripts whose names start with "BR"
transcripts <- getMatchingTranscriptIds(labbcat.url, "/^BR.+.test(id)"

## Get the first twenty transcripts in the "QB" corpus
transcripts <- getMatchingTranscriptIds(labbcat.url, "first('corpus').label = 'QB', 20, 0"

## Get the second transcript that has "QB247_Jacqui" as a speaker
transcripts <- getMatchingTranscriptIds(labbcat.url, "labels('participant').includes('QB247_Jacqui')", 1, 1"

## Get all transcripts in the QB corpus whose names start with "BR"
## in word-count order
transcripts <- getMatchingTranscriptIds(
    labbcat.url, "first('corpus').label = 'QB' && /^BR.+/.test(id),
    order="first('transcript_word_count').label ASC")

## End(Not run)

getMatchLabels

\textit{getMatchLabels}\hspace{1cm} \textit{Gets labels of annotations on a given layer, identified by given match IDs.}

\textbf{Description}

Gets labels of annotations on a given layer, identified by given match IDs.

\textbf{Usage}

\begin{verbatim}
getMatchLabels(
    labbcat.url, 
    match.ids, 
    layer.ids, 
    target.offset = 0, 
    annotations.per.layer = 1, 
    include.match.ids = FALSE, 
    page.length = 1000, 
    no.progress = FALSE
)
\end{verbatim}

\textbf{Arguments}

\begin{itemize}
  \item \texttt{labbcat.url} URL to the LaBB-CAT instance
  \item \texttt{match.ids} A vector of annotation IDs, e.g. the MatchId column, or the URL column, of a results set.
  \item \texttt{layer.ids} A vector of layer IDs.
  \item \texttt{target.offset} The distance from the original target of the match, e.g.
    \begin{itemize}
      \item 0 – find annotations of the match target itself,
      \item 1 – find annotations of the token immediately after match target
      \item -1 – find annotations of the token immediately before match target
    \end{itemize}
  \item \texttt{annotations.per.layer} The number of annotations on the given layer to retrieve. In most cases, there’s only one annotation available. However, tokens may, for example, be annotated with ‘all possible phonemic transcriptions’, in which case using a value of greater than 1 for this parameter provides other phonemic transcriptions, for tokens that have more than one.
  \item \texttt{include.match.ids} Whether or not the data frame returned includes the original MatchId column or not.
\end{itemize}
In order to prevent timeouts when there are a large number of matches or the network connection is slow, rather than retrieving matches in one big request, they are retrieved using many smaller requests. This parameter controls the number of results retrieved per request.

TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().

A data frame of labels.

See Also

getMatches getMatchAlignments

Examples

```r
# Not run:
# define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

# Perform a search
results <- getMatches(labbcat.url, list(orthography="quake"))

# Get the topic annotations for the matches
topics <- getMatchLabels(labbcat.url, results$MatchId, "topic")

# End(Not run)
```

getMedia

**Gets a given media track for a given transcript.**

Gets a given media track for a given transcript.

```r
getMedia(labbcat.url, id, track.suffix = "", mime.type = "audio/wav")
```

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance
- `id` A transcript ID (i.e. transcript name)
- `track.suffix` The track suffix of the media
- `mime.type` The MIME type of the media
getMediaTracks

List the predefined media tracks available for transcripts.

Description

List the predefined media tracks available for transcripts.

Usage

getMediaTracks(labbcat.url)

Arguments

labbcat.url URL to the LaBB-CAT instance

Value

A list of media track definitions.

Examples

## Not run:
## Get the media tracks configured in LaBB-CAT
tracks <- getMediaTracks("https://labbcat.canterbury.ac.nz/demo/"

## End(Not run)
getParticipantAttributes

*Gets participant attribute values for given participant IDs.*

**Description**

Gets participant attribute values for given participant IDs.

**Usage**

`getParticipantAttributes(labbcat.url, participant.ids, layer.ids)`

**Arguments**

- `labbcat.url`: URL to the LaBB-CAT instance
- `participant.ids`: A vector of participant IDs
- `layer.ids`: A vector of layer IDs corresponding to participant attributes. In general, these are layers whose ID is prefixed `participant_`, however formally it’s any layer where `layer$parentId == 'participant' && layer$alignment == 0`.

**Value**

A data frame of attribute value labels.

**Examples**

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get gender and age for all participants
attributes <- getParticipantAttributes(labbcat.url, 
  getParticipantIds(labbcat.url),
  c('participant_gender', 'participant_age'))

## End(Not run)
```
getParticipantIds

Gets a list of participant IDs.

Description

Returns a list of participant IDs.

Usage

getParticipantIds(labbcat.url)

Arguments

labbcat.url URL to the LaBB-CAT instance

Value

A list of participant IDs

Examples

## Not run:
## List all speakers
speakers <- getParticipantIds("https://labbcat.canterbury.ac.nz/demo/")

## End(Not run)

getSerializerDescriptors

Lists the descriptors of all registered serializers.

Description

Returns a list of serializers, which are modules that export annotation structures as a specific file format, e.g. Praat TextGrid, plain text, etc., so the mimeType of descriptors reflects what mimeTypes can be specified for getFragments.

Usage

getSerializerDescriptors(labbcat.url)

Arguments

labbcat.url URL to the LaBB-CAT instance
getSoundFragments

Value

A list of serializers, each including the following information:

• name The name of the format.
• version The installed version of the serializer module.
• fileSuffixes The normal file name suffixes (extensions) of the files.
• mimeType The MIME type of the format, i.e. the value to use as the mimeType parameter of getFragments.

See Also

getFragments

Examples

## Not run:
## List file export formats supported
formats <- getSerializerDescriptors("https://labbcat.canterbury.ac.nz/demo/")

## can we export as plain text?
plainTextSupported <- "text/plain" %in% formats$mimeType

## End(Not run)

getSoundFragments

Gets sound fragments from 'LaBB-CAT'.

Description

Gets sound fragments from 'LaBB-CAT'.

Usage

getSoundFragments(
  labbcat.url,  
  ids,  
  start.offsets, 
  end.offsets, 
  sample.rate = NULL, 
  path = "", 
  no.progress = FALSE
)
### Arguments

- **labbcat.url** URL to the LaBB-CAT instance
- **ids** The transcript ID (transcript name) of the sound recording, or a vector of transcript IDs.
- **start.offsets** The start time in seconds, or a vector of start times.
- **end.offsets** The end time in seconds, or a vector of end times.
- **sample.rate** Optional sample rate in Hz - if a positive integer, then the result is a mono file with the given sample rate.
- **path** Optional path to directory where the files should be saved.
- **no.progress** TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().

### Value

The name of the file, which is saved in the current directory, or a list of names of files, if multiple id's/start's/end’s were specified.

If a list of files is returned, they are in the order that they were returned by the server, which *should* be the order that they were specified in the id/start/end lists.

### Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get the 5 seconds starting from 10s after the beginning of a recording
wav.file <- getSoundFragments(labbcat.url, "AP2505_Nelson.eaf", 10.0, 15.0, path="samples")

## Get the 5 seconds starting from 10s as a mono 22kHz file
wav.file <- getSoundFragments(labbcat.url, "AP2505_Nelson.eaf", 10.0, 15.0, 22050)

## Load some search results previously exported from LaBB-CAT
results <- read.csv("results.csv", header=T)

## Get a list of fragments
wav.files <- getSoundFragments(labbcat.url, results$Transcript, results$Line, results$LineEnd)

## Get a list of fragments
wav.file <- getSoundFragments(  
    labbcat.url, results$Transcript, results$Line, results$LineEnd)

## End(Not run)
```
getSystemAttribute

**Gets the value of the given system attribute.**

**Description**

Gets the value of the given system attribute.

**Usage**

getSystemAttribute(labbcat.url, attribute)

**Arguments**

- labbcat.url: URL to the LaBB-CAT instance
- attribute: Name of the attribute.

**Value**

The value of the given attribute.

getLayers

**Examples**

```r
## Not run:
## Get the name of the LaBB-CAT instance
title <- getSystemAttribute("https://labbcat.canterbury.ac.nz/demo/", "title")

## End(Not run)
```

getTranscriptAttributes

**Gets transcript attribute values for given transcript IDs.**

**Description**

Gets transcript attribute values for given transcript IDs.

**Usage**

getTranscriptAttributes(labbcat.url, transcript.ids, layer.ids)

**Examples**

```r
## Not run:
## Get the name of the LaBB-CAT instance
title <- getSystemAttribute("https://labbcat.canterbury.ac.nz/demo/", "title")

## End(Not run)
```
getTranscriptIds

Arguments

labbcat.url URL to the LaBB-CAT instance
transcript.ids A vector of transcript IDs
layer.ids A vector of layer IDs corresponding to transcript attributes. In general, these are layers whose ID is prefixed 'transcript_', however formally it’s any layer where layer$parentId == 'transcript' && layer$alignment == 0, which includes 'corpus' as well as transcript attribute layers.

Value

A data frame of attribute value labels.

Examples

## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/

## Get language, duration, and corpus for transcripts starting with 'BR'
attributes <- getTranscriptAttributes(labbcat.url,
getMatchingTranscriptIds(labbcat.url, "/BR\.+/.test(id)"),
c('transcript_language', 'transcript_duration', 'corpus'))

## End(Not run)

getTranscriptIds

*Gets a list of transcript IDs.*

Description

Returns a list of transcript IDs (i.e. transcript names).

Usage

getTranscriptIds(labbcat.url)

Arguments

labbcat.url URL to the LaBB-CAT instance

Value

A list of transcript IDs
getTranscriptIdsInCorpus

Examples

```r
## Not run:
## List all transcripts
transcripts <- getTranscriptIds("https://labbcat.canterbury.ac.nz/demo/")

## End(Not run)
```

---

**getTranscriptIdsInCorpus**  
*Gets a list of transcript in a corpus.*

Description

Returns a list of transcript IDs in the given corpus.

Usage

`getTranscriptIdsInCorpus(labbocat.url, id)`

Arguments

- `labbocat.url`: URL to the LaBB-CAT instance
- `id`: The ID (name) of the corpus

Value

A list of transcript IDs

Examples

```r
## Not run:
## List transcripts in the QB corpus
transcripts <- getTranscriptIdsInCorpus("https://labbcat.canterbury.ac.nz/demo/", "QB")

## End(Not run)
```
getTranscriptIdsWithParticipant

*Gets a list of IDs of transcripts that include the given participant.*

**Description**

Returns a list of IDs of transcripts (i.e. transcript names) that include the given participant.

**Usage**

```r
getTranscriptIdsWithParticipant(labbcat.url, id)
```

**Arguments**

- `labbcat.url`: URL to the LaBB-CAT instance
- `id`: A participant ID

**Value**

A list of transcript IDs

**See Also**

- `getParticipantIds`

**Examples**

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## List transcripts in which UC427_ViktoriaPapp_A_ENG speaks
transcripts <- getTranscriptIdsWithParticipant(labbcat.url, "UC427_ViktoriaPapp_A_ENG")

## End(Not run)
```

getUserInfo

*Gets information about the current user.*

**Description**

Returns information about the current user, including the roles or groups they are in.

**Usage**

```r
getUserInfo(labbcat.url)
```
labbcatCredentials

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>labbcat.url</td>
<td>URL to the LaBB-CAT instance</td>
</tr>
</tbody>
</table>

**Value**

A named list containing information about the current LaBB-CAT user.

**See Also**

labbcatCredentials

**Examples**

```r
## Not run:
## List file export formats supported
me <- getUserInfo("https://labbcat.canterbury.ac.nz/demo/")

## am I an administrator?
admin <- "admin" %in% me$roles

## End(Not run)
```

---

**labbcatCredentials**

Sets the username and password that the package should use for connecting to a given LaBB-CAT server in future function calls.

**Description**

This step is optional, as all functions will prompt the user for the username and password if required. If the script is running in RStudio, then the RStudio password input dialog is used, hiding the credentials from view. Otherwise, the console is used, and credentials are visible.

**Usage**

labbcatCredentials(labcat.url, username, password)

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>labbcat.url</td>
<td>URL to the LaBB-CAT instance</td>
</tr>
<tr>
<td>username</td>
<td>The LaBB-CAT username, if it is password-protected</td>
</tr>
<tr>
<td>password</td>
<td>The LaBB-CAT password, if it is password-protected</td>
</tr>
</tbody>
</table>

**Details**

The recommended approach is to *not* use labbcatCredentials, to avoid saving user credentials in script files that may eventually become visible to others. Use labbcatCredentials *only* in cases where the script execution is unsupervised.
labbcatTimeout

Sets the timeout for request to the LaBB-CAT server in future function calls. The default timeout is 10 seconds.

Description

Sets the timeout for request to the LaBB-CAT server in future function calls. The default timeout is 10 seconds.

Usage

labbcatTimeout(seconds = NULL)

Arguments

seconds The number of seconds before requests return with a timeout error.

Value

The request timeout in seconds

Examples

## Not run:
## the request timeout
labbcatTimeout(30)

## End(Not run)
**loadLexicon**

Upload a flat lexicon file for lexical tagging.

**Description**

By default LaBB-CAT includes a layer manager called the Flat Lexicon Tagger, which can be configured to annotate words with data from a dictionary loaded from a plain text file (e.g. a CSV file). The file must have a 'flat' structure in the sense that it’s a simple list of dictionary entries with a fixed number of columns/fields, rather than having a complex structure.

**Usage**

```r
loadLexicon(
  labbcат.уrl,  # URL to the LaBB-CAT instance.
  file,         # The full path name of the lexicon file.
  lexicon,      # The name for the resulting lexicon. If the named lexicon already exists, it will be completely replaced with the contents of the file (i.e. all existing entries will be deleted before adding new entries from the file). e.g. 'cmudict'
  field.delimiter,  # The character used to delimit fields in the file. If this is " - ", rows are split on only the <em>first</em> space, in line with common dictionary formats. e.g. '.' for Comma Separated Values (CSV) files.
  field.names,    # A list of field names, delimited by field.delimiter, e.g. 'Word,Pronunciation'.
  quote = "",    # The character used to quote field values (if any), e.g. '"'.
  comment = "",  # The character used to indicate a line is a comment (not an entry) (if any) e.g. '#'.
  skip.first.line = FALSE,  # Whether to ignore the first line of the file (because it contains field names).
  no.progress = FALSE   # TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().
)
```

**Arguments**

- `labbcат.уrl`: URL to the LaBB-CAT instance.
- `file`: The full path name of the lexicon file.
- `lexicon`: The name for the resulting lexicon. If the named lexicon already exists, it will be completely replaced with the contents of the file (i.e. all existing entries will be deleted before adding new entries from the file). e.g. 'cmudict'
- `field.delimiter`: The character used to delimit fields in the file. If this is " - ", rows are split on only the <em>first</em> space, in line with common dictionary formats. e.g. '.' for Comma Separated Values (CSV) files.
- `field.names`: A list of field names, delimited by `field.delimiter`, e.g. 'Word,Pronunciation'.
- `quote`: The character used to quote field values (if any), e.g. '"'.
- `comment`: The character used to indicate a line is a comment (not an entry) (if any) e.g. '#'.
- `skip.first.line`: Whether to ignore the first line of the file (because it contains field names).
- `no.progress`: TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().
newLayer

Details

This function uploads such a lexicon file, for use in tagging tokens.
You must have editing privileges in LaBB-CAT in order to be able to use this function.

Value

An error message, or NULL if the upload was successful.

See Also

getDictionaries deleteLexicon

Examples

## Not run:
## Upload the CMU Pronouncing Dictionary
loadLexicon(labbcat.url, "cmudict", " - ", ",", ",;", "Word - Pron", FALSE, "cmudict.txt")

## End(Not run)

newLayer

Creates a new layer.

Description

This function creates a new annotation layer. The layer may be configured with a layer manager ID and task parameters, for automatic annotation. If so, this function will create the layer and the automation task, but automatic annotation will not be run by this function. To generate the automatic annotations, use generateLayer.

Usage

newLayer(
  labbcat.url,
  layer.id,
  description,
  type = "string",
  alignment = 0,
  category = "General",
  parent.id = "word",
  annotator.id = NULL,
  annotator.task.parameters = NULL
)

newLayer

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>labbcat.url</td>
<td>URL to the LaBB-CAT instance</td>
</tr>
<tr>
<td>layer.id</td>
<td>The ID of the layer to create, which must be unique to the LaBB-CAT instance.</td>
</tr>
<tr>
<td>description</td>
<td>A description of the annotations the layer will contain.</td>
</tr>
<tr>
<td>type</td>
<td>The type of data the labels will represent. Valid values are &quot;string&quot;, &quot;number&quot;, &quot;ipa&quot; (for phoneme representations), or &quot;boolean&quot; (labels &quot;0&quot; or &quot;1&quot;).</td>
</tr>
<tr>
<td>alignment</td>
<td>How annotations on the layer will relate to time alignment; valid values are 0 (no alignment; annotations are just tags on the parent annotation), 1 (instants; annotations mark a single point in time), or 2 (intervals; annotations have a start and end time).</td>
</tr>
<tr>
<td>category</td>
<td>The project/category the layer belongs to.</td>
</tr>
<tr>
<td>parent.id</td>
<td>The parent layer; valid values are &quot;word&quot; (for word layers), &quot;segment&quot; (for segment layers) &quot;turn&quot; (for phrase layers), or &quot;transcript&quot; (for span layers).</td>
</tr>
<tr>
<td>annotator.id</td>
<td>The ID of the layer manager that automatically fills in annotations on the layer, if any</td>
</tr>
<tr>
<td>annotator.task.parameters</td>
<td>The configuration the layer manager should use when filling the layer with annotations. This is a string whose format is specific to each layer manager.</td>
</tr>
</tbody>
</table>

Details

You must have administration privileges in LaBB-CAT in order to be able to use this function.

Value

The resulting layer definition, with members:

- id The layer’s unique ID
- parentId The layer’s parent layer ID
- description The description of the layer
- alignment The layer’s alignment - 0 for none, 1 for point alignment, 2 for interval alignment
- peers Whether children have peers or not
- peersOverlap Whether child peers can overlap or not
- parentIncludes Whether the parent t-includes the child
- saturated Whether children must temporally fill the entire parent duration (true) or not (false)
- parentIncludes Whether the parent t-includes the child
- type The type for labels on this layer
- validLabels List of valid label values for this layer

See Also

generateLayer saveLayer deleteLayer
Examples

```r
## Not run:
## Upload the CMU Pronouncing Dictionary
loadLexicon(labbcat.url, "cmudict", " - ", ";", "Word - Pron", FALSE, "cmudict.txt")

## Create a layer that tags each token with its CMU Pronouncing Dictionary pronunciation
newLayer(labbcat.url, "pronunciation", "CMU Dict pronunciations encoded in ARPAbet",
         annotator.id="FlatFileDictionary",
         annotator.task.parameters="tokenLayerId=orthography&tagLayerId=phonemes&dictionary=cmudict:Word->Pron")

## Generate the pronunciation tags
generateLayer(labbcat.url, "pronunciation")

## End(Not run)
```

---

**newTranscript**

*Upload a new transcript.*

**Description**

This function adds a transcript and optionally a media file to the corpus.

**Usage**

```r
newTranscript(
  labbcat.url,
  transcript,
  media = NULL,
  transcript.type = NULL,
  corpus = NULL,
  episode = NULL,
  no.progress = FALSE
)
```

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance
- `transcript` The path to the transcript to upload.
- `media` The path to the media to upload, if any.
- `transcript.type` The transcript type.
- `corpus` The corpus to add the transcript to.
- `episode` The transcript’s episode.
- `no.progress` TRUE to supress visual progress bar. Otherwise, progress bar will be shown when interactive().
Details

For this function to work, the credentials used to connect to the server must have at least 'edit' access.

Value

The ID of the new transcript in the corpus

Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get attributes for new transcript
corpus <- getCorpusIds(labbcat.url)[1]
transcript.type.layer <- getLayer(labbcat.url, "transcript_type")
transcript.type <- transcript.type.layer$validLabels[[1]]

## upload transcript
newTranscript(
  labbcat.url, "my-transcript.eaf", "my-transcript.wav",
  "", transcript.type, corpus, "episode-1")

## End(Not run)
```
Index of help topics:

addDictionaryEntry Adds an entry to a dictionary.
addLayerDictionaryEntry Adds an entry to a layer dictionary.
annotatorExt Retrieve annotator’s “ext” resource.
countAnnotations Gets the number of annotations on the given layer of the given transcript.
deleteLayer Deletes an existing layer.
deleteLexicon Delete a previously loaded lexicon.
deleteTranscript Delete a transcript from the corpus.
generateLayer Generates a layer.
generateLayerUtterances Generates a layer for a given set of utterances.
getAllUtterances Get all utterances of participants.
getAnchors Gets the given anchors in the given transcript.
getAnnotations Gets the annotations on the given layer of the given transcript.
getAddressorDescriptor Gets annotator information.
getAvailableMedia List the media available for the given transcript.
getCorpusIds Gets a list of corpus IDs.
getAddressorDescriptors Lists the descriptors of all registered deserializers.
getDictionaries List the dictionaries available.
getAddressorEntries Lookup entries in a dictionary.
getFragments Gets fragments transcript in a given format.
getGraphIds Deprecated synonym for getTranscriptIds.
getGraphIdsInCorpus Deprecated synonym for getTranscriptIdsInCorpus.
getGraphIdsWithParticipant Deprecated synonym for getTranscriptIdsWithParticipant.
getId Gets the store’s ID.
getLayer Gets a layer definition.
getLayerIds Gets a list of layer IDs.
getLayers Gets a list of layer definitions.
getMatchAlignments Gets temporal alignments of matches on a given layer.
getMatchLabels Gets labels of annotations on a given layer, identified by given match IDs.
getMatches Search for tokens.
getMatchingGraphIds Deprecated synonym for getMatchingTranscriptIds.
getMatchingParticipantIds Gets a list of IDs of participants that match a particular pattern.
getMatchingTranscriptIds Gets a list of IDs of transcripts that match a particular pattern.
getMedia Gets a given media track for a given transcript.
getMediaTracks List the predefined media tracks available for transcripts.
getParticipantAttributes Gets participant attribute values for given participant IDs.
getParticipantIds Gets a list of participant IDs.
getSerializerDescriptors Lists the descriptors of all registered serializers.
getSoundFragments Gets sound fragments from 'LaBB-CAT'.
getSystemAttribute Gets the value of the given system attribute.
getTranscriptAttributes Gets transcript attribute values for given transcript IDs.
getTranscriptIds Gets a list of transcript IDs.
getTranscriptIdsInCorpus Gets a list of transcript in a corpus.
getTranscriptIdsWithParticipant Gets a list of IDs of transcripts that include the given participant.
getUserInfo Gets information about the current user.
labbcatCredentials Sets the username and password that the package should use for connecting to a given LaBB-CAT server in future function calls.
labbcatTimeout Sets the timeout for request to the LaBB-CAT server in future function calls. The default timeout is 10 seconds.
loadLexicon Upload a flat lexicon file for lexical tagging.
newLayer Creates a new layer.
newTranscript Upload a new transcript.
nzilbb.labbcat Accessing Data Stored in 'LaBB-CAT' Instances
praatScriptCentreOfGravity Generates a script for extracting the CoG, for
praatScriptFastTrack: Generates a script for extracting formants using FastTrack, for use with processWithPraat.
praatScriptFormants: Generates a script for extracting formants, for use with processWithPraat.
praatScriptIntensity: Generates a script for extracting maximum intensity, for use with processWithPraat.
praatScriptPitch: Generates a script for extracting pitch, for use with processWithPraat.
processWithPraat: Process a set of intervals with Praat.
removeDictionaryEntry: Removes an entry from a dictionary.
removeLayerDictionaryEntry: Removes an entry from a layer dictionary.
saveLayer: Saves the details of an existing layer.
updateFragment: Update a transcript fragment.
updateTranscript: Update an existing transcript.

'LaBB-CAT' is a web-based language corpus management system and this package provides access to data stored in a 'LaBB-CAT' instance. You must have at least version 20220401.1842 'LaBB-CAT' to use this package.

Author(s)
NA

References


Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Perform a search
results <- getMatches(labbcat.url, list(segment="I"))

## Get the phonemic transcriptions for the matches
phonemes <- getMatchLabels(labbcat.url, results$MatchId, "phonemes")

## Get sound fragments for the matches
wav.files <- getSoundFragments(labbcat.url, results$Transcript, results$Line, results$LineEnd)

## End(Not run)
```
praatScriptCentreOfGravity

Generates a script for extracting the CoG, for use with processWithPraat.

Description

This function generates a Praat script fragment which can be passed as the praat.script parameter of processWithPraat, in order to extract one or more spectral centre of gravity (CoG) measurements.

Usage

praatScriptCentreOfGravity(powers = c(2), spectrum.fast = TRUE)

Arguments

powers A vector of numbers specifying which powers to query for to extract, e.g. c(1.0,2.0).
spectrum.fast Whether to use the ‘fast’ option when creating the spectrum object to query.

Value

A script fragment which can be passed as the praat.script parameter of processWithPraat

See Also

processWithPraat
praatScriptFormants
praatScriptIntensity
praatScriptPitch
praatScriptFastTrack

Examples

## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Perform a search
results <- getMatches(labbcat.url, list(segment="I"))

## Get centres of gravity for all matches
cog <- processWithPraat(
  labbcat.url,
  results$MatchId, results$Target.segment.start, results$Target.segment.end,
  praatScriptCentreOfGravity(powers=c(1.0,2.0)))

## End(Not run)
praatScriptFastTrack

Generates a script for extracting formants using FastTrack, for use with `processWithPraat`.

**Description**

This function generates a Praat script fragment which can be passed as the praat.script parameter of `processWithPraat`, in order to extract selected formants using the FastTrack Praat plugin.

**Usage**

```r
praatScriptFastTrack(
  formants = c(1, 2),
  sample.points = c(0.5),
  lowest.analysis.frequency = 5000,
  lowest.analysis.frequency.male = 4500,
  highest.analysis.frequency = 7000,
  highest.analysis.frequency.male = 6500,
  gender.attribute = "participant_gender",
  value.for.male = "M",
  time.step = 0.002,
  tracking.method = "burg",
  number.of.formants = 3,
  maximum.f1.frequency = 1200,
  maximum.f1.bandwidth = NULL,
  maximum.f2.bandwidth = NULL,
  maximum.f3.bandwidth = NULL,
  minimum.f4.frequency = 2900,
  enable.rhotic.heuristic = TRUE,
  enable.f3.f4.proximity.heuristic = TRUE,
  number.of.steps = 20,
  number.of.coefficients = 5
)
```

**Arguments**

- **formants**: A vector of integers specifying which formants to extract, e.g. `c(1, 2)` for the first and second formant.
- **sample.points**: A vector of numbers (0 <= sample.points <= 1) specifying multiple points at which to take the measurement. The default is a single point at 0.5 - this means one measurement will be taken halfway through the target interval. If, for example, you wanted eleven measurements evenly spaced throughout the interval, you would specify sample.points as being `c(0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0)`.
- **lowest.analysis.frequency**: Lowest analysis frequency (Hz) by default.
praatScriptFastTrack

lowest.analysis.frequency.male
Lowest analysis frequency (Hz) for male speakers, or NULL to use the same value as lowest.analysis.frequency.

highest.analysis.frequency
Highest analysis frequency (Hz) by default.

highest.analysis.frequency.male
Highest analysis frequency (Hz) for male speakers, or NULL to use the same value as highest.analysis.frequency.

gender.attribute
Name of the LaBB-CAT participant attribute that contains the participant’s gender - normally this is "participant_gender".

df
time.step
Time step in seconds.

training.method
tracking_method parameter for trackAutoselectProcedure; "burg" or "robust".

number.of.formants
Number of formants to track - 3 or 4.

maximum.f1.frequency
Specifying a non-NULL value enables the F1 frequency heuristic: Median F1 frequency should not be higher than this value.

maximum.f1.bandwidth
Specifying a non-NULL value (e.g. 500) enables the F1 bandwidth heuristic: Median F1 bandwidth should not be higher than this value.

maximum.f2.bandwidth
Specifying a non-NULL value (e.g. 600) enables the F2 bandwidth heuristic: Median F2 bandwidth should not be higher than this value.

maximum.f3.bandwidth
Specifying a non-NULL value (e.g. 900) enables the F3 bandwidth heuristic: Median F3 bandwidth should not be higher than this value.

minimum.f4.frequency
Specifying a non-NULL value enables the F4 frequency heuristic: Median F4 frequency should not be lower than this value.

enable.rhotic.heuristic
Whether to enable the rhotic heuristic: If F3 < 2000 Hz, F1 and F2 should be at least 500 Hz apart.

enable.f3.f4.proximity.heuristic
Whether to enable the F3/F4 proximity heuristic: If (F4 - F3) < 500 Hz, F1 and F2 should be at least 1500 Hz apart.

number.of.steps
Number of analyses between low and high analysis limits. More analysis steps may improve results, but will increase analysis time (50 percent more steps = around 50 percent longer to analyze).

number.of.coefficients
Number of coefficients for formant prediction. More coefficients allow for more sudden, and 'wiggly' formant motion.
praatScriptFormants

Details

The FastTrack Praat plugin, developed by Santiago Barreda, automatically runs multiple formant analyses on each segment, selects the best (the smoothest, with optional heuristics), and makes the winning formant object available for measurement. For more information, see https://github.com/santiagobarreda/FastTrack

Value

A script fragment which can be passed as the praat.script parameter of processWithPraat

See Also

processWithPraat
praatScriptCentreOfGravity
praatScriptIntensity
praatScriptPitch
praatScriptFormants

Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get all tokens of the KIT vowel
results <- getMatches(labbcat.url, list(segment="I"))

## Get the first 3 formants at three points during the vowel
formants <- processWithPraat(
  labbcat.url,
  results$MatchId, results$Target.segment.start, results$Target.segment.end,
  window.offset=0.025,
  praatScriptFastTrack(formants=c(1,2,3),
    sample.points=c(0.25,0.5,0.75)))

## End(Not run)
```

praatScriptFormants  Generates a script for extracting formants, for use with processWithPraat.

Description

This function generates a Praat script fragment which can be passed as the praat.script parameter of processWithPraat, in order to extract selected formants.
praatScriptFormants

Usage

praatScriptFormants(  
  formants = c(1, 2),  
  sample.points = c(0.5),  
  time.step = 0,  
  max.number.formants = 5,  
  max.formant = 5500,  
  max.formant.male = 5000,  
  gender.attribute = "participant_gender",  
  value.for.male = "M",  
  window.length = 0.025,  
  preemphasis.from = 50
)

Arguments

formants A vector of integers specifying which formants to extract, e.g c(1,2) for the first and second formant.
sample.points A vector of numbers (0 <= sample.points <= 1) specifying multiple points at which to take the measurement. The default is a single point at 0.5 - this means one measurement will be taken halfway through the target interval. If, for example, you wanted eleven measurements evenly spaced throughout the interval, you would specify sample.points as being c(0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0).
time.step Time step in seconds, or 0.0 for 'auto'.
max.number.formants Maximum number of formants.
max.formant Maximum formant value (Hz) for all speakers, or for female speakers, if max.formant.male is also specified.
max.formant.male Maximum formant value (Hz) for male speakers, or NULL to use the same value as max.formant.
gender.attribute Name of the LaBB-CAT participant attribute that contains the participant’s gender - normally this is "participant_gender".
value.for.male The value that the gender.attribute has when the participant is male.
window.length Window length in seconds.
preemphasis.from Pre-emphasis from (Hz)

Details

The praatScriptFastTrack function provides an alternative to this function which uses the FastTrack Praat plugin for formant analysis.
praatScriptIntensity

Value

A script fragment which can be passed as the praat.script parameter of processWithPraat

See Also

processWithPraat
praatScriptCentreOfGravity
praatScriptIntensity
praatScriptPitch
praatScriptFastTrack

Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Get all tokens of the KIT vowel
results <- getMatches(labbcat.url, list(segment="I"))

## Get the first 3 formants at three points during the vowel
formants <- processWithPraat(
  labbcat.url,
  results$MatchId, results$Target.segment.start, results$Target.segment.end,
  window.offset=0.025,
  praatScriptFormants(formants=c(1,2,3),
                      sample.points=c(0.25,0.5,0.75))
)

## End(Not run)
```

praatScriptIntensity  Generates a script for extracting maximum intensity, for use with processWithPraat.

Description

This function generates a Praat script fragment which can be passed as the praat.script parameter of processWithPraat, in order to extract maximum intensity value.

Usage

```r
praatScriptIntensity(
  minimum.pitch = 100,
  time.step = 0,
  subtract.mean = TRUE,
  get.maximum = TRUE,
  sample.points = NULL,
)```
praatScriptIntensity

interpolation = "cubic",
skip.errors = TRUE
)

Arguments

minimum.pitch  Minimum pitch (Hz).
time.step       Time step in seconds, or 0.0 for 'auto'.
subtract.mean  Whether to subtract the mean or not.
get.maximum    Extract the maximum intensity for the sample.
sample.points  A vector of numbers (0 <= sample.points <= 1) specifying multiple points at
               which to take the measurement. The default is NULL, meaning no individual
               measurements will be taken (only the aggregate values identified by get.mean,
               get.minimum, and get.maximum). A single point at 0.5 means one measurement
               will be taken halfway through the target interval. If, for example, you wanted
               eleven measurements evenly spaced throughout the interval, you would specify
               sample.points as being c(0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0).
interpolation  If sample.points are specified, this is the interpolation to use when getting in-
               dividual values. Possible values are 'nearest', 'linear', 'cubic', 'sinc70', or
               'sinc700'.
skip.errors    Sometimes, for some segments, Praat fails to create an Intensity object. If
               skip.errors = TRUE, analysis those segments will be skipped, and corresponding
               pitch values will be returned as "–undefined–". If skip.errors = FALSE, the error
               message from Praat will be returned in the Error field, but no pitch measures will
               be returned for any segments in the same recording.

Value

A script fragment which can be passed as the praat.script parameter of processWithPraat

See Also

processWithPraat
praatScriptFormants
praatScriptCentreOfGravity
praatScriptPitch
praatScriptFastTrack

Examples

## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Perform a search
results <- getMatches(labbcat.url, list(segment="s"))
## Get intensity for all matches

```r
intensity <- processWithPraat(
  labbcat.url,
  results$MatchId, results$Target.segment.start, results$Target.segment.end,
  praatScriptIntensity())
```

## End(Not run)

---

**praatScriptPitch**

Generates a script for extracting pitch, for use with `processWithPraat`.

### Description

This function generates a Praat script fragment which can be passed as the `praat.script` parameter of `processWithPraat`, in order to extract pitch information.

### Usage

```r
praatScriptPitch(
  get.mean = TRUE,
  get.minimum = FALSE,
  get.maximum = FALSE,
  time.step = 0,
  pitch.floor = 60,
  max.number.of.candidates = 15,
  very.accurate = FALSE,
  silence.threshold = 0.03,
  voicing.threshold = 0.5,
  octave.cost = 0.01,
  octave.jump.cost = 0.35,
  voiced.unvoiced.cost = 0.35,
  pitch.ceiling = 500,
  pitch.floor.male = 30,
  voicing.threshold.male = 0.4,
  pitch.ceiling.male = 250,
  gender.attribute = "participant_gender",
  value.for.male = "M",
  sample.points = NULL,
  interpolation = "linear",
  skip.errors = TRUE
)
```

### Arguments

- **get.mean**: Extract the mean pitch for the sample.
- **get.minimum**: Extract the minimum pitch for the sample.
- **get.maximum**: Extract the maximum pitch for the sample.
praatScriptPitch

time.step  Step setting for praat command
pitch.floor Minimum pitch (Hz) for all speakers, or for female speakers, if pitch.floor.male is also specified.
max.number.of.candidates Maximum number of candidates setting for praat command
very.accurate Accuracy setting for praat command
silence.threshold Silence threshold setting for praat command
voicing.threshold Voicing threshold (Hz) for all speakers, or for female speakers, if voicing.threshold.male is also specified.
octave.cost Octave cost setting for praat command
octave.jump.cost Octave jump cost setting for praat command
voiced.unvoiced.cost Voiced/unvoiced cost setting for praat command
pitch.ceiling Maximum pitch (Hz) for all speakers, or for female speakers, if pitch.floor.male is also specified.
pitch.floor.male Minimum pitch (Hz) for male speakers.
voicing.threshold.male Voicing threshold (Hz) for male speakers.
pitch.ceiling.male Maximum pitch (Hz) for male speakers.
gender.attribute Name of the LaBB-CAT participant attribute that contains the participant’s gender - normally this is "participant_gender".
value.for.male The value that the gender.attribute has when the participant is male.
sample.points A vector of numbers (0 <= sample.points <= 1) specifying multiple points at which to take the measurement. The default is NULL, meaning no individual measurements will be taken (only the aggregate values identified by get.mean, get.minimum, and get.maximum). A single point at 0.5 means one measurement will be taken halfway through the target interval. If, for example, you wanted eleven measurements evenly spaced throughout the interval, you would specify sample.points as being c(0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0).
interpolation If sample.points are specified, this is the interpolation to use when getting individual values. Possible values are ‘nearest’ or ‘linear’.
skip.errors Sometimes, for some segments, Praat fails to create a Pitch object. If skip.errors = TRUE, analysis those segments will be skipped, and corresponding pitch values will be returned as ”–undefined–”. If skip.errors = FALSE, the error message from Praat will be returned in the Error field, but no pitch measures will be returned for any segments in the same recording.

Value

A script fragment which can be passed as the praat.script parameter of processWithPraat
processWithPraat

Process a set of intervals with Praat.

Description

This function instructs the LaBB-CAT server to invoke Praat for a set of sound intervals, in order to extract acoustic measures.

Usage

```r
processWithPraat(
  labbcat.url,
  match.ids,
  start.offsets,
  end.offsets,
  praat.script,
  window.offset = 0,
  gender.attribute = "participant_gender",
  attributes = NULL,
  no.progress = FALSE
)
```

See Also

- processWithPraat
- praatScriptFormants
- praatScriptCentreOfGravity
- praatScriptIntensity
- praatScriptFastTrack

Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Perform a search
results <- getMatches(labbcat.url, list(segment="I"))

## Get pitch mean, max, and min for all matches
pitch <- processWithPraat(
  labbcat.url,
  results$MatchId, results$Target.segment.start, results$Target.segment.end,
  praatScriptPitch(get.mean=TRUE, get.minimum=TRUE, get.maximum=TRUE))

## End(Not run)
```
processWithPraat

Arguments

- `labbcat.url` URL to the LaBB-CAT instance
- `match.ids` A vector of annotation IDs, e.g. the MatchId column, or the URL column, of a results set.
- `start.offsets` The start time in seconds, or a vector of start times.
- `end.offsets` The end time in seconds, or a vector of end times.
- `praat.script` Script to run on each match. This may be a single string or a character vector.
- `window.offset` In many circumstances, you will want some context before and after the sample start/end time. For this reason, you can specify a "window offset" - this is a number of seconds to subtract from the sample start and add to the sample end time, before extracting that part of the audio for processing. For example, if the sample starts at 2.0s and ends at 3.0s, and you set the window offset to 0.5s, then Praat will extract a sample of audio from 1.5s to 3.5s, and do the selected processing on that sample.
- `gender.attribute` Which participant attribute represents the participant’s gender.
- `attributes` Vector of participant attributes to make available to the script. For example, if you want to use different acoustic parameters depending on what the gender of the speaker is, including the "participant_gender" attribute will make a variable called participant_gender$ available to the praat script, whose value will be the gender of the speaker for that segment.
- `no.progress` TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().

Details

The exact measurements to return depend on the praat.script that is invoked. This is a Praat script fragment that will run once for each sound interval specified.

There are functions to allow the generation of a number of pre-defined praat scripts for common tasks such as formant, pitch, intensity, and centre of gravity – see praatScriptFormants, praatScriptCentreOfGravity, praatScriptIntensity and praatScriptPitch.

You can provide your own script, either by building a string with your code, or loading one from a file.

LaBB-CAT prefixes praat.script with code to open a sound file and extract a defined part of it into a Sound object which is then selected.

LaBB-CAT ‘Remove’ this Sound object after the script finishes executing. Any other objects created by the script must be ‘Remove’d before the end of the script (otherwise Praat runs out of memory during very large batches)

LaBB-CAT assumes that all calls to the function ’print’ correspond to fields for export and each field must be printed on its own line. Specifically it scans for lines of the form:

```
print 'myOutputVariable' 'newline$
```

Variables that can be assumed to be already set in the context of the script are:

- `windowOffset` – the value used for the Window Offset; how much context to include.
• `windowAbsoluteStart` – the start time of the window extracted relative to the start of the original audio file.
• `windowAbsoluteEnd` – the end time of the window extracted relative to the start of the original audio file.
• `windowDuration` – the duration of the window extracted (including window offset).
• `targetAbsoluteStart` – the start time of the target interval relative to the start of the original audio file.
• `targetAbsoluteEnd` – the end time of the target interval relative to the start of the original audio file.
• `targetStart` – the start time of the target interval relative to the start of the window extracted.
• `targetEnd` – the end time of the target interval relative to the start of the window extracted.
• `targetDuration` – the duration of the target interval.
• `sampleNumber` – the number of the sample within the set of samples being processed.
• `sampleName$` – the name of the extracted/selected Sound object.

Value

A data frame of acoustic measures, one row for each matchId.

See Also

`praatScriptFormants`
`praatScriptCentreOfGravity`
`praatScriptIntensity`
`praatScriptPitch`

Examples

```r
## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## Perform a search
results <- getMatches(labbcat.url, list(segment=\"I\"))

## get F1 and F2 for the mid point of the vowel
formants <- processWithPraat(
  labbcat.url, 
  results$MatchId, results$Target.segment.start, results$Target.segment.end, 
  praatScriptFormants())

## get first 3 formants at three points during the sample, the mean, min, and max
## pitch, the max intensity, and the CoG using powers 1 and 2
acoustic.measurements <- processWithPraat(
  labbcat.url, 
  results$MatchId, results$Target.segment.start, results$Target.segment.end, 
  paste(
    "praatScriptIntensity\n    praatScriptPitch\n    praatScriptCentreOfGravity\n    praatScriptFormants()")
```
praatScriptFormants(c(1,2,3), c(0.25,0.5,0.75)),
praatScriptPitch(get.mean=TRUE, get.minimum=TRUE, get.maximum=TRUE),
praatScriptIntensity(),
praatScriptCentreOfGravity(powers=c(1.0,2.0)),
window.offset=0.5)

## execute a custom script loaded form a file
acoustic.measurements <- processWithPraat(
  labbcat.url,
  results$MatchId, results$Target.segment.start, result$Target.segment.end,
  readLines("acousticMeasurements.praat"))

## End(Not run)

removeDictionaryEntry  

---

removeDictionaryEntry  

**Removes an entry from a dictionary.**

**Description**

This function removes an existing entry from the given dictionary.

**Usage**

```r
removeDictionaryEntry(
  labbcat.url, 
  manager.id, 
  dictionary.id, 
  key, 
  entry = NULL
)
```

**Arguments**

- `labbcat.url` URL to the LaBB-CAT instance
- `manager.id` The layer manager ID of the dictionary, as returned by getDictionaries
- `dictionary.id` The ID of the dictionary, as returned by getDictionaries
- `key` The key (word) in the dictionary to remove an entry for.
- `entry` The value (definition) for the given key, or NULL to remove all entries for the key.

**Details**

You must have edit privileges in LaBB-CAT in order to be able to use this function.

**Value**

NULL if the entry was removed, or a list of error messages if not.
removeLayerDictionaryEntry

Removes an entry from a layer dictionary.

Description

This function removes an existing entry from the dictionary that manages a given layer, and updates all affected tokens in the corpus. Words can have multiple entries.

Usage

removeLayerDictionaryEntry(labbcat.url, layer.id, key, entry = NULL)

Arguments

labbcat.url | URL to the LaBB-CAT instance
layer.id | The ID of the layer with a dictionary configured to manage it.
key | The key (word) in the dictionary to remove an entry from.
entry | The value (definition) for the given key, or NULL to remove all entries for the given key.

Details

You must have edit privileges in LaBB-CAT in order to be able to use this function.

Value

NULL if the entry was added, or a list of error messages if not.

See Also

generateLayer
saveLayer  

Examples

### Not run:

```r
## Remove a pronunciation for "robert" from the phonemes layer dictionary
removeLayerDictionaryEntry(labbcat.url, "phonemes", "robert", "'rQ-bErt")
```

### End(Not run)

---

**saveLayer**  
*Saves the details of an existing layer.*

**Description**

This function saves the definition of an existing annotation layer.

**Usage**

```r
saveLayer(labbcat.url, layer)
```

**Arguments**

- `labbcat.url`  
  URL to the LaBB-CAT instance

- `layer`  
  A named list object representing the layer attributes, as would be returned by `getLayer` or `newLayer`, with members:
  - `id` The layer’s unique ID
  - `parentId` The layer’s parent layer ID
  - `description` The description of the layer
  - `alignment` The layer’s alignment - 0 for none, 1 for point alignment, 2 for interval alignment
  - `peers` Whether children have peers or not
  - `peersOverlap` Whether child peers can overlap or not
  - `parentIncludes` Whether the parent t-includes the child
  - `saturated` Whether children must temporally fill the entire parent duration (true) or not (false)
  - `type` The type for labels on this layer
  - `validLabels` List of valid label values for this layer

**Details**

You must have administration privileges in LaBB-CAT in order to be able to use this function.
updateFragment

Value

The resulting layer definition, with members:

- **id** The layer’s unique ID
- **parentId** The layer’s parent layer ID
- **description** The description of the layer
- **alignment** The layer’s alignment - 0 for none, 1 for point alignment, 2 for interval alignment
- **peers** Whether children have peers or not
- **peersOverlap** Whether child peers can overlap or not
- **parentIncludes** Whether the parent t-includes the child
- **saturated** Whether children must temporally fill the entire parent duration (true) or not (false)
- **parentIncludes** Whether the parent t-includes the child
- **type** The type for labels on this layer
- **validLabels** List of valid label values for this layer

See Also

newLayer getLayer deleteLayer

Examples

```r
## Not run:
## Get the pronunciation layer definition
pronunciation <- getLayer(labbcat.url, "pronunciation")

## Change some details of the definition
pronunciation$description <- "CMU Dict pronunciations encoded in DISC"
pronunciation$type <- "ipa"

## Save the changes to the layer definition
saveLayer(labbcat.url, pronunciation)

## End(Not run)
```

updateFragment Update a transcript fragment.

Description

This function uploads a file (e.g. Praat TextGrid) representing a fragment of a transcript, with annotations or alignments to update in LaBB-CAT’s version of the transcript.

Usage

updateFragment(labbcat.url, fragment.path)
Arguments

labbcat.url  URL to the LaBB-CAT instance
fragment.path  The path to the fragment to upload.

Details

For this function to work, the credentials used to connect to the server must have at least 'edit' access.

Value

A named list with information about the fragment that was updated.

Examples

## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## upload new version of transcript transcript
updateFragment(labbcat.url, "my-transcript__1.234-5.678.TextGrid")

## End(Not run)

updateTranscript  Update an existing transcript.

Description

This function uploads a new version of an existing transcript.

Usage

updateTranscript(labbcat.url, transcript.path, no.progress = FALSE)

Arguments

labbcat.url  URL to the LaBB-CAT instance
transcript.path  The path to the transcript to upload.
no.progress  TRUE to suppress visual progress bar. Otherwise, progress bar will be shown when interactive().

Details

For this function to work, the credentials used to connect to the server must have at least 'edit' access.
Value

The ID of the updated transcript in the corpus

Examples

## Not run:
## define the LaBB-CAT URL
labbcat.url <- "https://labbcat.canterbury.ac.nz/demo/"

## upload new version of transcript transcript
updateTranscript(labbcat.url, "my-transcript.eaf")

## End(Not run)
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