Package 'textgRid'

October 14, 2022

Title Praat TextGrid Objects in R

Version 1.0.1

Description The software application Praat can be used to annotate
waveform data (e.g., to mark intervals of interest or to label events).
(See <http://www.fon.hum.uva.nl/praat/> for more information about Praat.)
These annotations are stored in a Praat TextGrid object, which consists of
a number of interval tiers and point tiers. An interval tier consists of
sequential (i.e., not overlapping) labeled intervals. A point tier consists
of labeled events that have no duration. The 'textgRid' package provides
S4 classes, generics, and methods for accessing information that is stored
in Praat TextGrid objects.

Depends R (>= 3.2.3)

Imports methods

Suggests testthat

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 5.0.1

Collate 'Tier-class.R' 'IntervalTier-class.R'
'IntervalTier-accessors.R' 'IntervalTier-constructor.R'
'IntervalTier-utilities.R' 'PointTier-class.R'
'PointTier-accessors.R' 'PointTier-constructor.R'
'PointTier-utilities.R' 'TextGrid-class.R'
'TextGrid-accessors.R' 'TextGrid-constructor.R'
'TextGrid-utilities.R' 'Tier-accessors.R' 'Tier-utilities.R'
'finders.R' 'textgRid.R'

URL www.praat.org,
<http://www.fon.hum.uva.nl/praat/manual/TextGrid.html>

BugReports <https://github.com/patrickreidy/textgRid>

NeedsCompilation no

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R topics documented:

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findIntervals   *Find intervals within an IntervalTier.*

Description

Find intervals according to various search criteria.

Usage

```
findIntervals(tier, pattern = "*", from = -Inf, to = Inf,
  at = numeric(), ...)
```

Arguments

tier	An `IntervalTier` object.
pattern	A regular expression for matching interval labels. Default is `'*'` so that the search finds all intervals within [`from`, `to`].
from	A numeric, the earliest time from which to search for intervals. Default is `-Inf` so that the search includes the start of `tier`.
to	A numeric, the latest time to which to search for intervals. Default is `Inf` so that the search includes the end of `tier`.
at	A numeric, an exact time at which to find intervals. Default is `numeric()` so that intervals are searched within [`from`, `to`].
...	optional arguments passed to `grep`.

Details

Default behavior of findIntervals is to search for intervals within [from, to]. If the at argument is a non-empty numeric vector, then this default behavior is overridden, and the tier is searched only at the time given by at.

Value

A data.frame whose rows correspond to the intervals found according to the search criteria, and whose columns are: $Index, $StartTime, $EndTime, $Label,

See Also

[IntervalTier-class](), [grep]()

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findPoints   *Find points within a PointTier.*

Description

Find points according to various search criteria: e.g., that occur within a time range, whose labels match a pattern.

Usage

```
findPoints(tier, pattern = "*", from = -Inf, to = Inf, ...)
```

Arguments

tier	A PointTier object.
pattern	A regular expression for matching point labels. Default is '*' so that the search finds all points within [from, to].
from	A numeric, the earliest time from which to search for points. Default is -Inf so that the search includes the start of tier.
to	A numeric, the latest time to which to search for points. Default is Inf so that the search includes the end of tier.
...	optional arguments passed to grep.

Value

A data.frame whose rows correspond to the points found according to the search criteria, and whose columns are: $Index, $Time, $Label.

See Also

[PointTier-class](), [grep]()

IntervalTier-accessors

Access the slots of IntervalTier objects.

Description

Functions for accessing the slots of an IntervalTier object.

Usage

```
intervalStartTimes(tier)

intervalEndTimes(tier)

intervalLabels(tier)
```

Arguments

tier   An IntervalTier object.

See Also

IntervalTier-class, IntervalTier-constructor, Tier-accessors

IntervalTier-class   *IntervalTier S4 class for Praat TextGrids.*

Description

The IntervalTier class extends the Tier class. An IntervalTier object describes a sequence of non-overlapping labeled intervals. An interval's label is typically the annotation of some contiguous portion of waveform data (e.g., a phonetic segment or word in speech data).

Slots

name A character string, the name of the Tier.

number An integer, the number of the Tier within the TextGrid.

startTimes A numeric vector, the start times of the intervals in the IntervalTier.

endTimes A numeric vector, the end times of the intervals in the IntervalTier.

labels A character vector, the labels of the intervals in the IntervalTier.

See Also

IntervalTier-constructor, IntervalTier-accessors, TextGrid-class, Tier-class

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```
IntervalTier-constructor
```
Create an instance of the IntervalTier class.

Description

An S4 generic and S4 methods for creating an [IntervalTier](#) object.

Usage

```
IntervalTier(praatText, ...)

## S4 method for signature 'character'
IntervalTier(praatText)
```

Arguments

praatText   A character vector, the lines of text from a `.TextGrid` file that define an IntervalTier.

...   optional arguments for multiple dispatch (in development).

Value

A [IntervalTier](#) object. Values for the tierName, tierNumber, startTimes, endTimes, and labels slots are parsed automatically from the praatText.

See Also

[IntervalTier-class](#), [IntervalTier-accessors](#)

PointTier-accessors   *Access the slots of PointTier objects.*

Description

Functions for accessing the slots of a [PointTier](#) object.

Usage

```
pointTimes(tier)

pointLabels(tier)
```

Arguments

tier   A [PointTier](#) object.

See Also

[PointTier-class](), [PointTier-constructor](), [Tier-accessors]()

PointTier-class   *PointTier S4 class for Praat TextGrids.*

Description

The `PointTier` class extends the [`Tier`]() class. A `PointTier` object describes a sequence of labeled points in time. A point's label is typically the annotation of some event in waveform data (e.g., the onset of voicing in speech data).

Slots

name A character string, the name of the Tier.

number An integer, the number of the Tier within the TextGrid.

times A numeric vector, the times of the points in the PointTier.

labels A character vector, the labels of the points in the PointTier.

See Also

[PointTier-constructor](), [PointTier-accessors](), [TextGrid-class](), [Tier-class]()

PointTier-constructor   *Create an instance of the PointTier class.*

Description

An S4 generic and S4 methods for creating an [`PointTier`]() object.

Usage

```
PointTier(praatText, ...)

## S4 method for signature 'character'
PointTier(praatText)
```

Arguments

praatText   A character vector, the lines of text from a `.TextGrid` file that define a PointTier.

...   optional arguments for multiple dispatch (in development).

Value

A [PointTier](#) object. Values for the tierName, tierNumber, times, and labels slots are parsed automatically from the praatText.

See Also

[PointTier-class](#), [PointTier-accessors](#)

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textgRid   *textgRid: Praat TextGrid Objects in R*

Description

The software application Praat can be used to annotate waveform data (e.g., to mark intervals of interest or to label events). These annotations are stored in a Praat TextGrid object, which consists of a number of interval tiers and point tiers. An interval tier consists of sequential (i.e., not overlapping) labeled intervals. A point tier consists of labeled events that have no duration. The textgRid package provides S4 classes, generics, and methods for accessing information that is stored in Praat TextGrid objects.

S4 classes

[Tier](#), [IntervalTier](#), [PointTier](#), [TextGrid](#)

S4 generics and methods

[TextGrid()](#) object constructor

Functions

[findIntervals](#), [findPoints](#)

TextGrid-accessors   *Access the slots of TextGrid objects.*

Description

Functions for accessing the slots of a [TextGrid](#) object.

Usage

```
textGridStartTime(textGrid)

textGridEndTime(textGrid)
```

Arguments

textGrid   An [TextGrid](#) object.

See Also

[TextGrid-class](#), [TextGrid-constructor](#)

TextGrid-class   *TextGrid S4 class for Praat TextGrids.*

Description

The `TextGrid` class extends the [list](#) class. A `TextGrid` object is essentially a list of [IntervalTier](#) and [PointTier](#) objects.

Slots

`.Data` A list of [IntervalTier](#) and [PointTier](#) objects.

`startTime` A numeric, the start time of the TextGrid.

`endTime` A numeric, the end time of the TextGrid.

See Also

[TextGrid-constructor](#), [TextGrid-accessors](#), [IntervalTier-class](#), [PointTier-class](#)

TextGrid-constructor   *Create an instance of the TextGrid class.*

Description

An S4 generic and S4 methods for creating a [TextGrid](#) object.

Usage

```
TextGrid(textGrid, ...)

## S4 method for signature 'character'
TextGrid(textGrid)
```

Arguments

textGrid   A character vector

...   optional arguments for multiple dispatch (in development).

Value

A [TextGrid](#) object.

Details for signature c(textGrid = 'character')

If `textGrid` is a string (i.e., a character vector with `length(textGrid)=1`), then it is assumed that the `textGrid` argument is the path to a `.TextGrid` file. Otherwise, the `textGrid` argument is assumed to be a character vector whose elements are the lines of some `.TextGrid` file.

See Also

[TextGrid-class](#), [TextGrid-accessors](#)

Tier-accessors *Methods for* Tier *objects.*

Description

Get the values of slots in a [Tier](#) object.

Usage

```
tierName(tier)

tierNumber(tier)
```

Arguments

tier   A [Tier](#) object.

See Also

[Tier-class](#)

Tier-class *Tier S4 class for Praat TextGrids.*

Description

The `Tier` class is extended by the [PointTier](#) and [IntervalTier](#) classes. As such, the `Tier` class encapsulates only very general information that is common to both subtypes of tier-like object.

Slots

name   A character string, the name of the Tier.

number   An integer, the number of the Tier within the TextGrid.

See Also

IntervalTier-class, PointTier-class, TextGrid-class, Tier-accessors

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