Package: Rglottography (via r-universe)

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Title Programmatic Access to Glottography Speaker Area Polygons

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Description Provides programmatic access to Glottography, an online repository of geospatial speaker-area polygons for the world's languages. The package allows users to list available datasets, download and install them, and load speaker-area polygons as standard spatial 'sf' objects in R. Data are sourced from either the Glottography organization on GitHub <https://github.com/Glottography> or the Glottography community on Zenodo <https://zenodo.org/communities/glottography>. Based on Ranacher et al. (2026) <doi:10.5334/johd.459>.

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BugReports https://github.com/Glottography/Rglottography/issues

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`collect_sources` *Collect sources referenced by a Glottography object*

Description

Extracts and returns the unique source identifiers referenced by a Glottography object. If the input is a `glottography_collection`, sources are taken directly from the object. Otherwise, the function determines the associated datasets, reads them from the local registry, and collects all referenced sources.

Usage

```
collect_sources(glottography)
```

Arguments

`glottography`	A Glottography object of class `glottography_features`, `glottography_languages`, or `glottography_families`; a `data.frame` derived from a Glottography object (containing a `dataset` column); or a `glottography_collection`. For non-collection inputs, the function identifies the associated datasets and retrieves their sources from the local registry.

Value

A character vector of unique source identifiers referenced by the input `glottography` object, in BibTeX format.

`install_datasets` *Install Glottography datasets*

Description

Installs Glottography datasets by checking their status in the registry and downloading them from the Zenodo Glottography community.

Usage

```
install_datasets(datasets, update = c("missing", "outdated", "always"))
```

Arguments

`datasets`	Character vector specifying the datasets to install, or one of the following special values: • `"all"`: install all available datasets. • `"outdated"`: install all datasets for which an update is available (new version or updated timestamp). • `"missing"`: install all datasets that are not yet installed.
`update`	Character string indicating when selected datasets should be installed. One of: • `"outdated"`: install only if an update is available on Zenodo. • `"missing"`: install only if the dataset is not present locally. • `"always"`: install regardless of local status. This argument is ignored when `datasets` is `"all"`, `"outdated"`, or `"missing"`.

Details

By default, datasets are cached in the directory returned by `tools::R_user_dir("Rglottography", "data")`. You can change the cache location using `set_cache_dir(path)`.

Value

Invisibly returns the installed datasets, or `NULL` if none were installed.

`list_datasets` *List available Glottography datasets*

Description

Lists all available Glottography datasets. The function reads the package's registry file, which contains metadata for all datasets along information on local installation status.

Usage

```
list_datasets(online = TRUE)
```

Arguments

`online`	Logical. Should the function attempt to sync the registry with the online version? Defaults to `TRUE`.

Details

If `online = TRUE` and an internet connection is available, the function attempts to sync the registry with the Glottography community on Zenodo by updating the local registry. Otherwise, it runs in offline mode and uses the local, unsynced registry.

Value

A `data.frame` containing metadata and status information for all Glottography datasets with the following columns:

- `name`: Dataset name. Serves as a unique identifier.
- `installed`: Logical; whether the dataset is installed locally.
- `created`: Creation date of the dataset on Zenodo.
- `version`: Latest available version online.
- `version_local`: Version currently installed locally, or `NA` if none.
- `modified`: Timestamp of the most recent online update.
- `modified_local`: Timestamp of the local version, or `NA` if none.

`load_datasets` *Load Glottography datasets*

Description

Loads Glottography speaker area data and associated metadata from the Glottography collection into the current R session, optionally installing missing datasets.

Usage

```
load_datasets(
  datasets = "installed",
  level = c("all", "features", "languages", "families"),
  install_missing = FALSE,
  sync_registry = FALSE
)
```

Arguments

`datasets`	Character vector specifying the names of datasets to load, or one of the following special values: • `"installed"`: all datasets already installed locally. • `"all"`: all datasets (attempts to install any missing datasets).
`level`	Character vector specifying the level(s) of aggregation to load: • `"features"`: speaker areas according to the original source classification. • `"languages"`: speaker areas aggregated at the Glottolog language level. • `"families"`: speaker areas aggregated at the Glottolog family level. • `"all"`: all levels. Only valid levels will be selected.
`install_missing`	Logical. If `TRUE`, allows automatic downloading and installation of missing datasets.
`sync_registry`	Logical. If `TRUE`, synchronises the local registry with Zenodo before loading datasets.

Details

If `install_missing = TRUE`, the function automatically installs any missing datasets before loading.

Value

A validated Glottography collection (S3 class `glottography_collection`) containing the following components (if requested):

- `features`: a `glottography_features` object; speaker areas according to the original source classification.
- `languages`: a `glottography_languages` object; speaker areas aggregated at the Glottolog language level.
- `families`: a `glottography_families` object; speaker areas aggregated at the Glottolog family level.
- `sources`: a `glottography_sources` object; list of bibliographic references in BibTeX format.

Components not requested are omitted.

`Rglottography` *Rglottography: Programmatic Access to the 'Glottography' Geolinguistic Data Platform*

Description

Provides programmatic access to Glottography, an online repository of geospatial speaker-area polygons for the world's languages. This package allows users to list available datasets, download and install them, and load speaker-area polygons as standard spatial 'sf' objects in R.

Details

The package is the primary R interface for the Glottography data platform. It simplifies the workflow of obtaining georeferenced speaker areas linked to 'Glottolog' identifiers.

Key functions

- `list_datasets`: View available datasets.
- `install_datasets`: Download Glottography datasets from GitHub or Zenodo.
- `load_datasets`: Load Glottography datasets into the current R session.
- `set_cache_dir`: Manage where datasets are stored locally.

Author(s)

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References

Ranacher, P., et al. (2026). "Glottography: an open-source geolinguistic data platform for mapping the world's languages." Journal of Open Humanities Data. doi:10.5334/johd.459

See Also

Useful links:

- https://github.com/Glottography/Rglottography
- Report bugs at https://github.com/Glottography/Rglottography/issues

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`set_cache_dir` *Set cache directory for Rglottography*

Description

Sets the cache directory used by Rglottography for storing datasets and the registry. Optionally, existing cache files from the current cache directory can be copied to the new location and removed from the old.

Usage

```
set_cache_dir(path, copy_existing = TRUE, remove_old = FALSE)
```

Arguments

`path`	Character string specifying the path to the new cache directory.
`copy_existing`	Logical; if `TRUE`, copies existing cache files from the current to the new cache directory. Defaults to `TRUE`.
`remove_old`	Logical; if `TRUE`, deletes cache files from old cache. Defaults to `FALSE`.

Value

Invisibly returns the path to the new cache directory. Sets the option `"Rglottography.cache_dir"` for the current session.

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