

Package ‘CLDedgelister’

August 5, 2026

Type Package

Title Import System-Dynamics Models and Convert Them to Edge Lists

Version 1.0.2

Description Imports causal and system-dynamics models from 'Vensim', 'Stella' / 'iThink' and 'Powersim Studio' ('XMILE'), 'AnyLogic' and 'GoldSim' (exported 'XML'), and converts them into a two-column edge list of cause-to-effect links. 'Vensim' models are read from their native diagram files; 'Powersim Studio' and 'GoldSim' are read from their exported 'XMILE' or 'XML'. Provides an 'RStudio' add-in with a simple point-and-click interface, together with command-line functions that return a data frame or write it to 'CSV' or 'Excel'.

License MIT + file LICENSE

Encoding UTF-8

Imports xml2, tools, utils, stats

Suggests shiny, miniUI, rstudioapi, writexl, DT, testthat (>= 3.0.0)

Config/testthat/edition 3

RoxygenNote 7.2.3

NeedsCompilation no

Author Taddias Prince Mpofu [aut, cre],
Joel Runyu [aut]

Maintainer Taddias Prince Mpofu <princetaddy@gmail.com>

Repository CRAN

Date/Publication 2026-08-05 09:10:08 UTC

Contents

cld_edgelist_addin	2
cld_formats	2
model_to_edgelist	3
model_to_edgelist_file	3

Index	5
--------------	----------

cld_edgelist_addin	<i>Import a model and convert it to an edge list (RStudio addin)</i>
--------------------	--

Description

Opens a small window to pick a Vensim, Stella, Powersim, AnyLogic or GoldSim model, preview the resulting INPUT -> OUTPUT edge list, and optionally save it as CSV or Excel. The chosen edge list is returned as a data.frame when the gadget closes, so it can be captured with `e1 <- cld_edgelist_addin()`.

Usage

```
cld_edgelist_addin()
```

Value

A data.frame of INPUT/OUTPUT edges (invisibly NULL if cancelled). When launched from the RStudio Addins menu the result is returned to the console.

cld_formats	<i>Supported model formats</i>
-------------	--------------------------------

Description

Supported model formats

Usage

```
cld_formats()
```

Value

A character vector of the format labels the package understands.

Examples

```
cld_formats()
```

model_to_edgelist	<i>Convert a system-dynamics model file to an edge list</i>
-------------------	---

Description

Reads a model from Vensim, Stella / iThink, Powersim Studio, AnyLogic or GoldSim and returns a two-column data.frame of INPUT (cause) and OUTPUT (effect) links — the same edge list produced by the SDM Network Analyzer.

Usage

```
model_to_edgelist(path, format = NULL)
```

Arguments

path	Path to the model file.
format	One of <code>cld_formats()</code> . If NULL (default) the format is guessed from the file extension.

Value

A data.frame with columns INPUT and OUTPUT. Node diagram positions, when available, are attached as `attr(x, "positions")`.

Examples

```
# Convert the bundled example Vensim model to an edge list
mdl <- system.file("extdata", "example_model.mdl", package = "CLDedgelist")
el <- model_to_edgelist(mdl)
head(el)
```

model_to_edgelist_file	<i>Convert a model file and write the edge list to disk</i>
------------------------	---

Description

Convert a model file and write the edge list to disk

Usage

```
model_to_edgelist_file(path, out_path = NULL, format = NULL)
```

Arguments

<code>path</code>	Path to the model file.
<code>out_path</code>	Output file (.csv or .xlsx). If NULL, the model's name with an <code>_edgelist.csv</code> suffix is used.
<code>format</code>	See model_to_edgelist .

Value

(invisibly) the edge list data.frame.

Examples

```
mdl <- system.file("extdata", "example_model.mdl", package = "CLDedgelist")
out <- tempfile(fileext = ".csv")
model_to_edgelist_file(mdl, out)
```

Index

`cld_edgelist_addin`, [2](#)
`cld_formats`, [2](#)

`model_to_edgelist`, [3](#), [4](#)
`model_to_edgelist_file`, [3](#)