The `phonrule` package (v1.3.0)

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1   Purpose

This package provides macros for typesetting phonological rules like those in *Sound Pattern of English* (Chomsky, Noam & Morris Halle. 1968. *The sound pattern of English.* New York, Evanston, and London: Harper & Row).

2   Usage

```
\phon⟨{⟩input⟨}{⟩output}
```

The command `\phon` has two arguments: the first one is the input of the rule and the second is its output. Here is an example with the code and the result it produces:

(1)   `\phon{z}{r}`

(2)   z → r

```
\phonc⟨{⟩input⟨}{⟩output⟨}{⟩context}
```

`\phonc` adds a third argument for the context:

(3)   `\phonc{a}{ə}{[-stressed]}`

(4)   a → ə / [–stressed]

The commands `\phonl`, `\phonr` and `\phonb` add a place holder line and put the context, respectively, on the left (l), on the right (r) and on both sides (b):

(5)   a. `\phonl{k}{c}{i}`
      b. k → t / i_

(6)   a. `\phonr{t}{ts}{u}`
      b. t → ts / _u

(7)   a. `\phonb{s}{z}{V}{V}`
      b. s → z / V_V

The `\oneof` command provides the possibility to compile several contexts, one per line, embraced by a left curly bracket.

(8) \phonc{t}{ts}{
        \oneof{
        \phold i \\
        \phold u}
        }

$$(9) \quad \text{t} \rightarrow \text{ts} \;/\; \left\{ \begin{array}{l} \underline{}\text{i} \\ \underline{}\text{u} \end{array} \right.$$

The `\phonfeat` command allows you to insert feature specifications:

(10) \phonc{t}{ts}{\phold
        \phonfeat{-
            consonantal \\
            +high \\
            +front}
        }

$$(11) \quad \text{t} \rightarrow \text{ts} \;/\; \underline{} \begin{bmatrix} -\text{consonantal} \\ +\text{high} \\ +\text{front} \end{bmatrix}$$

`\phold` typesets a place holder line. You can nest `oneof` and `phonfeat` commands for complex rules. The `oneof` command accepts an optional argument which tells the alignment of the context.

(12) \phonc{x}{y}{\oneof[l]{
        \phold z \\
        \phonfeat{
            +feature x \\-
            feature y
        } \phold
        }}

$$(13) \quad \text{x} \rightarrow \text{y} \;/\; \left\{ \begin{array}{l} \underline{}\text{z} \\ \begin{bmatrix} +\text{feature x} \\ -\text{feature y} \end{bmatrix} \underline{} \end{array} \right.$$

You can use `\env`, `\envl`, `\envr`, `\envb` for rules with more than one output: these commands typeset only the different outputs with their respective environments. The possible values are `[c]` for centre (the default), `[l]` for left-aligned, and `[r]` for right aligned. The following example shows the use of the optional argument with `[l]`. The `\env`, `\envl`, `\envr`, `\envb` have a starred version to be used when an optional argument is set in `\oneof`.

(14) \phon{x}{\oneof[l]{
        \envr*{w}{z} \\
        \envl*{v}{\phonfeat{
            +feature x \\-
            feature y
        }}}}

$$(15) \quad x \to \left\{ \begin{array}{l} \text{w} \ / \quad \underline{\quad}\text{z} \\[4pt] \text{v} \ / \quad \left[\begin{array}{l} +\text{feature x} \\ -\text{feature y} \end{array} \right] \underline{\quad} \end{array} \right.$$

3 Change log

v1.3.0 - 2016-12-26

Added

- optional argument for text alignment in \oneof command

- starred version of the \env command family for use with optional argument in \oneof

Changed

- definition of \phon command family

- header of phonrule.sty

- extension of README, now .md

Removed

- package ragged2e

v1.2.0

Added

- ragged2e package for \Centering command

Fixed

- Fixed: now the content of the feature matrices is centred and not left aligned

v1.1.0

Changed

- definition of \phonfeat and \oneof with \pbox (requires package pbox)

    ### Fixed

- documentation typos

v1.0.0

Added

- new commands \env for personalised outputs

Changed

- definition of commands with `\ensuremath`

- environments to commands

- place holder to 1.5ex length, -1.5pt vertical position

- curly brackets to only left in `\oneof` command