Package ‘SpaDES’

February 3, 2019

Type  Package
Title  Develop and Run Spatially Explicit Discrete Event Simulation Models
Description  Metapackage for implementing a variety of event-based models, with a focus on spatially explicit models. These include raster-based, event-based, and agent-based models. The core simulation components (provided by ‘SpaDES.core’) are built upon a discrete event simulation (DES; see Matloff (2011) ch 7.8.3 <https://nostarch.com/artofr.htm>) framework that facilitates modularity, and easily enables the user to include additional functionality by running user-built simulation modules (see also ‘SpaDES.tools’). Included are numerous tools to visualize rasters and other maps (via ‘quickPlot’), and caching methods for reproducible simulations (via ‘reproducible’). Additional functionality is provided by the ‘SpaDES.addins’ and ‘SpaDES.shiny’ packages.

Date  2019-01-28
Version  2.0.3
Depends  R (>= 3.3.0)
Imports  methods, quickPlot, reproducible, SpaDES.addins, SpaDES.core, SpaDES.tools, utils
Suggests  knitr, RandomFields, raster, rmarkdown, testthat, tkrplot
Encoding  UTF-8
Language  EN-CA
License  GPL-3
VignetteBuilder  knitr, rmarkdown
BugReports  https://github.com/PredictiveEcology/SpaDES/issues
ByteCompile  yes
Collate  'spades-package.R' 'zzz.R'
RoxygenNote  6.1.0.9000
Metapackage for implementing a variety of event-based models, with a focus on spatially explicit models. These include raster-based, event-based, and agent-based models. The core simulation components (provided by SpaDES.core) are built upon a discrete event simulation (DES; see Matloff (2011) ch 7.8.3 https://nosta.ch/artofr.htm) framework that facilitates modularity, and easily enables the user to include additional functionality by running user-built simulation modules (see also SpaDES.tools). Included are numerous tools to visualize rasters and other maps (via quickPlot), and caching methods for reproducible simulations (via reproducible). Additional functionality is provided by the SpaDES.addins and SpaDES.shiny packages (see below).

Bug reports:

- quickPlot package: https://github.com/PredictiveEcology/quickPlot/issues
- reproducible package: https://github.com/PredictiveEcology/reproducible/issues
- SpaDES.addins package: https://github.com/PredictiveEcology/SpaDES.addins/issues
- SpaDES.core package: https://github.com/PredictiveEcology/SpaDES.core/issues
- SpaDES.shiny package: https://github.com/PredictiveEcology/SpaDES.shiny/issues
- SpaDES.tools package: https://github.com/PredictiveEcology/SpaDES.tools/issues

Module repository: https://github.com/PredictiveEcology/SpaDES-modules

Wiki: https://github.com/PredictiveEcology/SpaDES/wiki
The **SpaDES.core package**

The core discrete event simulation framework. See `SpaDES.core` and the vignettes therein (`browseVignettes()`).

The **SpaDES.tools package**

Additional utilities for developing ecological simulation models. See `SpaDES.tools`.

The **SpaDES.addins package**

A set of RStudio addins to assist with SpaDES module development.

The **SpaDES.shiny package**

Utilities for developing and running shiny-based app interfaces to SpaDES simulations.

The **quickPlot package**

The core SpaDES plotting engine, build upon speed and modularity.

The **reproducible package**

Provides several aspects of reproducible simulations, including simulation caching.

**Author(s)**

**Maintainer**: Alex M Chubaty <alex.chubaty@gmail.com> (0000-0001-7146-8135)

Authors:

- Eliot J B McIntire <eliot.mcintire@canada.ca> (0000-0002-6914-8316)

Other contributors:

- Yong Luo <yluo1@lakeheadu.ca> [contributor]
- Steve Cumming <Steve.Cumming@sbf.ulaval.ca> [contributor]
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See Also

Useful links:

- http://spades.predictiveecology.org
- https://github.com/PredictiveEcology/SpaDES
- Report bugs at https://github.com/PredictiveEcology/SpaDES/issues
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