# **Phylogeotool**Installation Reference Manual

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### 1 Installation

# 1.1 Preparations before installation

#### Java

Download and install the newest Java Development Kit (JDK) from http://www.oracle.com/technetwork/java/javase/downloads/index.html. The current version of the tool was build on JDK 1.8.0\_31.

#### **Tomcat**

Download and install the newest Tomcat version from http://tomcat.apache.org.

#### Github

Download the code from https://github.com/rega-cev/phylogeotool/. The project is currently still private. During the trial period you can send an email to ewout.vandeneynden@kuleuven.be with your Github account name to get read rights on the project.

#### Ant

Download and install the newest Ant version from http://ant.apache. org/ as we will use it to build our project. The current version of the tool was build with Ant 1.9.4

# 2 Data preparation

After building the code, different jar files can be found in the dist folder. Their function is explained here.

# 2.1 DistanceMatrix.jar

Tool to create a distance matrix based on the phylogenetic tree that will be used in the PhyloGeoTool.

DistanceMatrix.jar takes the following input values:

- phylo.tree: Link to the phylogenetic tree to be used in the Phylo-GeoTool.
- distance matrix: Link to the location where the distance matrix can be written.

# 2.2 PreRender.jar

Before any data can be shown to the user, a lot of calculations are done backend. To speed up the process, most of those calculations can be done beforehand.

PreRender.jar is a multithreaded application meaning that it performs best on any Java version > 7. Lower Java versions do not support our implementation of multithreading and will thus fail.

PreRender.jar takes the input files:

- phylo.tree: Link to the phylogenetic tree used in the PhyloGeoTool.
- csvFile: Link to the csv file that connects nodes in the tool to attributes.
   Note: The id in the csv file has to be the same as the id of the nodes in the tree.
- distance matrix: Link to the distance matrix that was generated from this tree.
- folder xml tree: Link to the folder where this jar can write its resulting tree files.
- folder xml clusters: Link to the folder where this jar can write its resulting cluster files.
- folder xml csv: Link to the folder where this jar can write its resulting csv files.
- folder figtree: Link to the folder where this jar can write its resulting figtree representations.