

Tethys for the management of bioacoustic data

Tethys, Antioch mosaic, 3rd century from Baltimore Museum of Art

Where to start for the impatient:

- Need to install the software? Read the setup section of Tethys. If you want the custom startup scripts to function correctly, be sure to install each software module under a single parent folder (e.g., Tethys/Server, Tethys/JavaClient, Tethys/Databases, etc.)
- Need to start a server? Execute the Tethys.bat file in either Databases/metadata (a blank database) or Databases/demodb (a demonstration database with about a half million detections and localizations). Note that some organizations prevent double clicking on batch (.bat) files and you may need to open a command shell and type "tethys.bat" after changing to the current directory (cd).

Once you have a server running, you will need to determine how you will interact with Tethys. If you are a user who wishes to query data:

- DataExplorer is a program that hosts a web application on your local machine and communicates with the Tethys server. It is designed for general data exploration and visualization. As it is designed to be simple, users do not have as fine-grained control as they do with other interfaces to Tethys.
- Matlab Client is a set of MATLAB interfaces for querying and visualizing data. See the Matlab Cookbook documentation for details on how to use it.
- R Client is an R class for querying data using a simplified query language (see documentation).
- WebClient is Tethys's built-in web interface. It provides methods to query data.

Note that if you do not start the server, clients will not work. The Tethys manual provides instructions on how to have the server run as a service if you so desire. Services start automatically when your machine boots and will thus make Tethys available even after your machine reboots for updates.

If you wish to add data to Tethys:

- If you have data in a Tethys-compliant extended-markup language (XML) or if someone has set up an import (source) mapping for you, you can read about ways to import data in the DataImport documention. Programs such as PAMGuard are capable of producing Tethys-ready XML.
- If you wish to establish a new import map so that you can add bespoke data to Tethys, read the latter sections of the DataImport documentation which explain how to do this using a graphical drag-and-drop interface or by writing an XML specification.
- If your data require complex logic to translate (e.g., many special cases, etc.) and you know how to program, you may wish to read the Nilus documentation. Nilus is a Java library for producing Tethys-compliant XML and can be called from most languages.

If you are a programmer:

- JavaClient is a set of Java interfaces for interacting with Tethys. As these interfaces are typically
 used from other language libraries, formal documentation for the JavaClient is limited to a
 subset of its functionality that people are likely to use, but there is a set of application
 programming interface documents in the JavaClient directory that provides additional
 information for this library.
- PythonClient is a set of Python interfaces for querying Tethys.
- The Web Services Interface document describes the RESTful resources available in the Tethys server.