This overview tells you all you need to know about plugins with a short introduction, how to install them, how to use them, which ones are available and how to check for updates.

Introduction

Plugins provide a means to extend the computational capabilities of BrainVoyager QX. As a user, you benefit from additional features which may be provided by any plugin developer, i.e. programmers from Brain Innovation, colleagues at other universities and neuroimaging centers, or from programmers within your own research group. BrainVoyager QX exposes all major internal data structures to the plugin programmer allowing creation of new tools based on the software's powerful data handling and visualization capabilities. Since created plugins are embedded in the user interface, you can call the respective functions like any other routine in BrainVoyager QX.

Installation

The main plugin file will have extension **.dll** for windows, **.dylib** on Mac OS X and **.so** for linux. A plugin you download will usually be zipped so you need to **unzip** it into the plugin driectory in order to install it

The plugin directory is slightly different depending on your operating system. The directory is automatically created during the brainvoyager installation and will be called either **Plugins_32** (for 32bit Brainvoyager) or **Plugins_64** (for 64bit Brainvoyager):

For windows XP the plugins directory can be found in: ....\My Documents\BVQXExtensions
For windows vista, 7, Mac OS X or Linux it will be in: .....\Documents\BVQXExtensions

Usage and help

After placing the file(s) into the plugin directory, your plugin will automatically show up in Brainvoyager in the plugins menu. You can find a little information about each plugin in Plugins ? Description of Plugins. For most plugins that are automatically installed with Brainvoyager, there is also a link to more extensive help in these short descriptions.

When a plugin is downloaded from the support website, this is usually the place where you find the documentation.

List of Plugins on the Support website (08-2014)

Anatabacus - EPI distortion correction of your functional data (requires acquisition of fieldmaps)

Anatomy Wizard - Easily automatize the processing of your anatomical data

Batch Processing Wizard 4D - Easily automatize the processing of your functional data, extremely useful

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DesignMatrix Generator - Generate SDMs from PRTs in a batch processing option

COPE - EPI distrotion correction of FMR or DMR data (requires volume with opposite phase encoding direction)

DirectionInspector - For DWI data only. Visualizes the diffusion gradient directions as quality check

FMR2VMR - Performs Initial Alignment and reverse to get the anatomy in functional space

GIFTI converter - Lets you work with the GIFTI file format for surface data

GLMrunner - Calculate many single subject GLMs at once

Image Resampler - Change resolution of FMR data, advised for pixel shift maps

Merge SMPs - Merge 2 SMP files, just like you can merge 2 surface meshes in Brainvoyager

Motion Correction Processor - Create different confounds models out of the motion predictors (e.g. derivatives)

NIFTI converter - Lets you work with the NIFTI file format for volumetric data

Protocol Generator - Generate PRTs from presentation log files

Protocol Linker - Links PRTs to VTCs according to information provided in a text file

SDM Inspector - Checks for basic errors in any of the SDMs within a MDM

SDM Merger - Merges SDMs in different ways and calculates predictor correlations

SDM Model Tester - Compares models to find out which / how many confounds would be best

Segmentation Helper - Store intermediate segmentation states and advanced options to help you in segmenting

Surface Tool - Change the color of a mesh or write the SRF header to the BrainVoyager Log tab

Talairach Coordinate to VOI - Generate a spherical VOI with a radius of choice at a certain TAL-coordinate

VMPs Property Editor - Change properties of all currently loaded Volume Maps

VOI to POI - Convert VOIs into POIs

VTC inspector - Inspect your data: looks for outliers, spikes and calculates the TSNR

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For a graphical overview, please see Available tools.

List of Plugins on the Brainvoyager website (included with installation)

ASL Perfusion - Calculates relative and absolute cerebral blood flow maps, as well as time series

BOLD Latency Mapping - Allows analysis and mapping of latency parameters of the BOLD response

Cluster Treshold Estimator - Correction for multiple comparisons using cluster-size thresholding

Data Simulator - Creates simulated volume time course data (VTCs)

Fuzzy Clustering - Volume-based or cortex-based clustering of the voxels based on their (optionally averaged) time course

GIFTI Converter - Makes it possible to import and export surface files to GIFTI format

Granger Causality Mapping - Creates maps of directed influences (effective connectivity)

Group Data Simulator - Create simulated VTCs, PRTs and SDMs for multi-factorial designs with between and within factors.

Independent Component Analysis - Independent Component Analysis (ICA) for VTC files

Multidimensional Scaling Similarity - Visualizes similarities between maps in 2D plots

Multivariate Linear Regression - Variant of Multi Voxel Pattern Analysis

NIfTI Converter - Converts between BrainVoyager and NIfTI file formats

RFX Granger Cuasality Mapping - Multi subject analysis of effective connectivity maps

Self-Organizing Group ICA - Self-organizing group-level ICA for VTC files

Updates

Some of the plugins are quite small simple tools and will not need regular updates. For the more complicated plugins, their functionality might be extended over time and other small improvements are often made. There is no automatic update checker for plugins, so for updates you would have to visit the corresponding plugin page. A link to all pages is provided above in the "List of Plugins" part.

Plugins that are included with the brainvoyager installation will automatically be updated when you update brainvoyager!

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Questions or Bug Reports

All plugins listed above are developed by programmers from Brain Innovation, so whenever you have a question you can always contact support and your question will automatically end up with the developer: supportATbrainvoyagerDOTcom

Whenever you find an bug or error in a plugin you can also write to support and we'll try to fix it as soon as possible.

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