Project Structure

A good project directory structure is the key to build scalable and expandable software projects. Therfore each project folder has to fulfill an associated task. Additionally, a good structure facilitates project navigation and the retrieval and reuse of project content. Further on Matlab provides stratgies to add content to existing project structures and label it for script based execution of project task to manage project files. To add new content have a look at the links below.

Contents

See Also

- Specify Project Path
- Add Files to the Project
- Add Labels to Files

Directory Overview

```
GaussianProcessDipoleSimulation
├── [4.0K]  data
│   ├── [4.0K]  test
│   └── [4.0K]  training
├── [4.0K]  docs
│   ├── [ 12K]  html
│   │   ├── [4.0K]  figures
│   │   ├── [4.0K]  helpsearch-v3
│   │   └── [4.0K]  images
│   │       ├── [4.0K]  avi
│   │       ├── [4.0K]  eps
│   │       ├── [4.0K]  pdf
│   │       └── [4.0K]  svg
│   └── [4.0K]  latex
│       ├── [4.0K]  BA_Thesis_Tobias_Wulf
│       └── [4.0K]  Manual
├── [4.0K]  resources
├── [4.0K]  scripts
├── [4.0K]  src
│   ├── [4.0K]  sensorArraySimulation
│   └── [4.0K]  util
│       └── [4.0K]  plotFunctions
├── [4.0K]  temp
└── [4.0K]  tests

23 directories
```

Generated with linux shell command from on directory above the main project directory.

```
tree -dhn GaussianProcessDipoleSimulation ...
    -o GaussianProcessDipoleSimulation/docs/html/Directory_Tree.txt -I ...
    "project|Project_*|thesis|images"
```

Directory Tasks

Directory	Task
./	Main project directory which contains the Matlab project sandbox files and the hidden repository files. Matlab project sandbox directory. Project root directory which contains the Matlab project file, the info.xml, .gitignore, .gitattributes files and all other project related subdirectories. Startup directory.
.git	Hidden repository for local statndalone work. Saves daily working results. Provide a Git clonable instance of sandbox the directory. Replacable. Not Matlab driven, simulates remote repository.
./resources	Autogenerated directory from Matlab project. Contains the local project versionation and project xml-files.
./data	Contains all project related datasets e.g. mat-files.
./data/trainig	Contains mat-files from sensor array simulation for training cases of the gaussian process.
./data/test	Contains mat-files from sensor array simulation for test cases of the gaussian process.
./docs	Documentation directory which contains m-files only for documtation use and the direcoty where all project remarked files are published into HTML output files.
./docs/html	Publish directory where published m-files are collected and bind to a Matlab help browser readable documentation. It contains html-files and subdirectory for images and figures which are used in the documentaion. The help browser search database is placed here too. Much more important the directory contains the helptoc.xml which pointed by the info.xml from root project directory.
./docs/html/figures	Contains all needed fig-files which are used in the documentation.
./docs/html/helpsearch-v3	Contains autogenerated help search database entries. The directory is rewritten during the publish documentation process.
./docs/html/images	Contains all needed image files like png-files which are used in the documentation.
./docs/html/images/avi	Contains video avi-files.
./docs/html/images/eps	Contains saved figures as eps-files.
./docs/html/images/pdf	Contains saved figures as pdf-files.
./docs/html/images/svg	Contains saved figures as svg-files.
./docs/latex	Documentation directory which LaTeX documentation of the project including subfolders for Thesis of each project participant.
./docs/latex/BA_Thesis_Tobias_Wulf	Bachelor Thesis directory of Tobias Wulf.
./docs/latex/Manual	Export directory for documentation written in Matlab as pdf export.

Directory	Task
./scripts	The sripts directory contains all executable script m-files to solve certain tasks in the project, to generate datasets or execute parts of the toolbox source code.
./src	Source code directory which contains reusable source code clustered in submodule direcotries. The code can be function oriented or class oriented or a mix of both. Contains no bare script files.
./src/sensorArraySimulation	Sensor Array Simulation function and class. Contains functions, mathematical functions and classes to simulate an N x N sensor array on base of the TDK TAS2141 characterization dataset.
./src/util	Util function and class space. Function and class source code to slove upcomming help tasks e.g. to manage project content, to support plot framework or reporting or publishing processes.
./src/util/plotFunctions	Contain plot functions for reuse.
./tests	For test driven development each function or class needs a own test space or file. The directory contains these test.
./temp	Temporally working directory to save intermediate results or the last software state from session before or scratch files which flies arround.

Add New Elements

Add new folder to project:

1. Create a new folder and add to Project Path after Matlab flow.
2. Run Checks > Add Files.
3. Run tree command from shell to update directory for the documentation (optional).
4. Update directorry task table of this document.

Add new file to project:

1. Create new File and edit the file after Documentation Workflow. and Conventions.
2. Run Checks > Add Files.
3. Label the new file from project pane.
4. Commit file into active branch.
5. Registrate to the documentation if needed (publish, toc and listings docs).

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