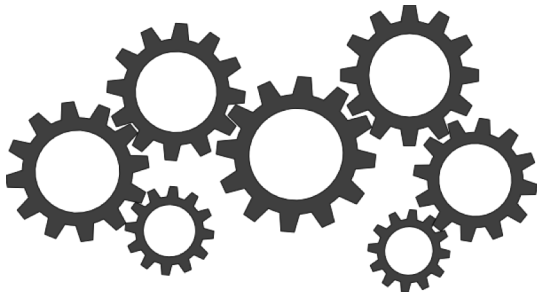
What is BIDS?

- Brain Imaging Data Structure (BIDS) is a specification for how to **organize and describe** human neuroimaging datasets.

- We provide an easy to follow **guide** on how to convert your dataset to BIDS, over 20 **example datasets** and a **validation tool**.

- BIDS makes it easy to work with a growing set of neuroimaging tools (Nipype, Automatic Analysis, PyMVPA etc.)



Principles behind BIDS

1. **Adoption** is crucial.
2. **Don't reinvent the wheel**.
3. **Some metadata** is better than no metadata
4. **Don't rely on external software** (databases) or complicated file formats (RDF).
5. Aim to capture **80% of experimental designs** but give the remaining 20% space to extend the standard.

Features

- Based on file and folder names.
- Metadata stored in human readable JSON files.
- Supports multiple sessions and runs.
- Supports multiple formats of fieldmaps.

Example

participants.tsv

dataset_description.json

README

CHANGES

sub-control01/

sub-control01_scans.tsv

anat/

sub-control01_T1w.nii.gz

sub-control01_T1w.json

sub-control01_T2w.nii.gz

sub-control01_T2w.json

func/

sub-control01_task-nback_bold.nii.gz

sub-control01_task-nback_bold.json

sub-control01_task-nback_events.tsv

sub-control01_task-nback_sbref.nii.gz

sub-control01_task-nback_sbref.json

dwi/

sub-control01_dwi.nii.gz

sub-control01_dwi.bval

sub-control01_dwi.bvec

fmap/

sub-control01_phasediff.nii.gz

sub-control01_phasediff.json

sub-control01_magnitude1.nii.gz

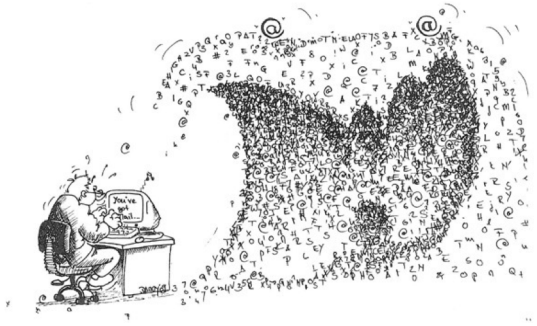
Brain Imaging Data Structure

An easy way to avoid getting lost in your data!

bids.neuroimaging.io

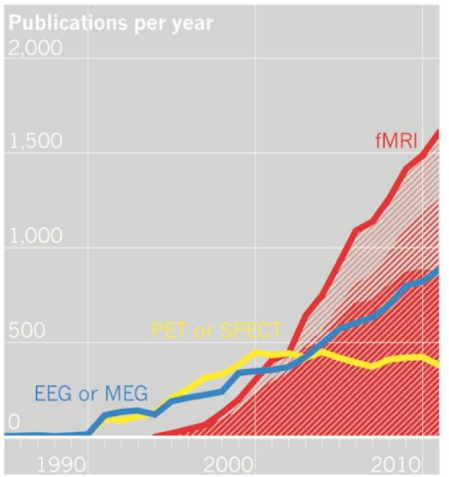
Who is it for?

- Are you acquiring human neuroimaging data?
- Are you a PI and want to make sure your students and postdocs document their data so other members of your lab can reuse it later?
- Are you planning to share your data with other researchers?
- Do you want to avoid having to call up your scanner manager to figure out what was the dwell time?
- Is this how you feel when working with data acquired by someone else?



The problem

- MRI has been used to study the human brain for over 20 years



- Despite similarities in experimental designs and data types each researcher tends to organize and describe their data in their own way.
- This practice causes a lot of problems with:
  - sharing data,
  - figuring out acquisition parameters,
  - running automatic analyses.