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Tips to a person performing data acquisition for data to be converted to BIDS format

The BIDS folder structure for images is:
rawdata/sub-SUBJID/ses-SESSID/modality/sub-SUBJID_ses-SESSID_XX.nii.gz

The acquisition phase ensuring successful BIDS conversion is easy in practice. The most important task for ensuring painless conversion is to ensure that subject and session naming is consistent. This should be ensured already while typing acquisition parameters in the console. This data will then form the backbone of the BIDS rawdata data structure. Hyphen (-) and underscore (_) are special reserved characters, so they are not recommended to be used in either subject or session naming. Unfortunately, our conventional naming contains hyphens.

The conversion tool for the Bruker data is brkraw (). The tool works on Python 3.6. Brkraw process has three phases: 1) collection of relevant information and representation of the information in XLSX spreadsheet, 2) checking and correcting the information in the XLSX sheet by the researcher, 3) conversion of data from Bruker format to rawdata folder in NIfTI-BIDS format.

Bruker tool changes hyphens in the subject and session naming to 'Hyphen' and underscores to 'Underscore'. This must be corrected in the XSLX file. We have chosen to change hyphens to 'x' as our convention. In order to keep the list in alphabetic order, we usually add leading zeroes (0s) to the subject and week numbers. Therefore, original subject name, such as JPa-7-2w becomes sub-JPax007x02w. This kind of repeated changes that are the same for each subject and session can be automated by using scripts that perform the changes in the XLSX file.

In addition to Bruker conversions, we have scripts performing the same on Agilent data.

If you are thinking of using sequences that are less common, such as RAFF, MT, please consult your nearest data expert before the acquisitions. Planning file naming and related things beforehand may make the conversion much smoother.

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