

Convertir DICOMs a BIDS

Dada la creciente aparicion de software de analisis que utiliza el formato [BIDS](#) necesitamos implementar un procedimiento para convertir las imagenes DICOM directamente. Ya hemos implementado un [esquema para convertir los NiftI](#) deberiamos quitar el paso intermedio y asegurarnos que no haya perdida de datos por el camino. Voy a empezar mirando [dcm2bids](#) que parece prometedor.

Know your data ;-)

Lo mas complicado es que tenemos que escribir un archivo de configuracion para el proceso.

Primero corremos *dcm2bids_scaffold* que genera la estructura necesaria para ejecutar la conversion,

```
[osotolongo@detritus tmp]$ dcm2bids_scaffold
[osotolongo@detritus tmp]$ ls
CHANGES code dataset_description.json derivatives participants.json
participants.tsv README sourcedata
```

Ahora ejecutamos *dcm2bids_helper* sobre un sujeto de ejemplo,

```
[osotolongo@detritus tmp]$ dcm2bids_helper -d /nas/corachan/MOPEAD/24N223T4/
Example in:
/nas/data/mopead/tmp/tmp_dcm2bids/helper
[osotolongo@detritus tmp]$ ls tmp_dcm2bids/helper/
10001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008.json
23001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.json
10001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008.nii.gz
23001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.nii.gz
1001_24N223T4_AAhead_scout_20181205124008.json
24001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.json
1001_24N223T4_AAhead_scout_20181205124008.nii.gz
24001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.nii.gz
11001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008.json
25001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.json
11001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008.nii.gz
25001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.nii.gz
12001_24N223T4_ep2d_bold_p2_resting_state_20181205124008.json
27001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.json
12001_24N223T4_ep2d_bold_p2_resting_state_20181205124008.nii.gz
27001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.nii.gz
14001_24N223T4_ep2d_fid_basic_bold_p2_AP_20181205124008.json
28001_24N223T4_DTIep2d_diff_mddw_4b0_PA_20181205124008.json
14001_24N223T4_ep2d_fid_basic_bold_p2_AP_20181205124008.nii.gz
28001_24N223T4_DTIep2d_diff_mddw_4b0_PA_20181205124008.nii.gz
15001_24N223T4_ep2d_fid_basic_bold_p2_PA_20181205124008.json
5001_24N223T4_t1_mprage_sag_p2_iso_20181205124008.json
```

```
15001_24N223T4_ep2d_fid_basic_bold_p2_PA_20181205124008.nii.gz
5001_24N223T4_t1_mprage_sag_p2_iso_20181205124008.nii.gz
16001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008.json
6001_24N223T4_t2_space_dark-fluid_sag_p2_iso_20181205124008.json
16001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008.nii.gz
6001_24N223T4_t2_space_dark-fluid_sag_p2_iso_20181205124008.nii.gz
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008_e1.json
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1a.json
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008_e1.nii.gz
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1a.nii.gz
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008.json
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1.json
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008.nii.gz
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1.nii.gz
20001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.json
8001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008.json
20001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.nii.gz
8001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008.nii.gz
22001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.json
9001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008_ph.json
22001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008.nii.gz
9001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008_ph.nii.gz
```

Esto genera los archivos NIFTI y .json con el contenido del DCM. De aqui debemos generar el archivo de configuracion.

Lo que nos interesa es T1, T2, DTI y fMRI. Vamos a empezar por el T1,

```
[osotolongo@detritus tmp]$ ls tmp_dcm2bids/helper/ | grep t1
5001_24N223T4_t1_mprage_sag_p2_iso_20181205124008.json
5001_24N223T4_t1_mprage_sag_p2_iso_20181205124008.nii.gz
[osotolongo@detritus tmp]$ cat
tmp_dcm2bids/helper/5001_24N223T4_t1_mprage_sag_p2_iso_20181205124008.json
{
  "Modality": "MR",
  "MagneticFieldStrength": 3,
  "Manufacturer": "Siemens",
  "ManufacturersModelName": "MAGNETOM_Vida",
  "InstitutionName": "Clinica_Corachan",
  "InstitutionAddress": "Calle_Buigas_19_Barcelona_ES_08007",
  "DeviceSerialNumber": "175609",
  "StationName": "AWP175609",
  "BodyPartExamined": "BRAIN",
  "PatientPosition": "HFS",
  "ProcedureStepDescription": "RM_CRANEO_PROT_MOPEAD",
  "SoftwareVersions": "syngo_MR_XA10",
  "MRAcquisitionType": "3D",
  "SeriesDescription": "t1_mprage_sag_p2_iso",
  "ProtocolName": "t1_mprage_sag_p2_iso",
  "ScanningSequence": "GR",
  "SequenceVariant": "SK",
```

```

"ScanOptions": "PFP_PER",
"SequenceName": "_tfl3d1_16ns",
"ImageType": ["ORIGINAL", "PRIMARY", "M", "NORM", "DIS2D", "MFSPLIT"],
"SeriesNumber": 5001,
"AcquisitionTime": "12:41:26.122500",
"AcquisitionNumber": 1,
"SliceThickness": 1.2,
"SAR": 0.0822361,
"EchoTime": 0.00223,
"RepetitionTime": 2.2,
"InversionTime": 0.968,
"FlipAngle": 8,
"PercentPhaseFOV": 93.75,
"PhaseEncodingSteps": 240,
"AcquisitionMatrixPE": 240,
"ReconMatrixPE": 256,
"PixelBandwidth": 199,
"ImageOrientationPatientDICOM": [
    0,
    0.99916,
    -0.0409808,
    0,
    -0.0409808,
    -0.99916 ],
"InPlanePhaseEncodingDirectionDICOM": "ROW",
"ConversionSoftware": "dcm2niix",
"ConversionSoftwareVersion": "v1.0.20180622 (JP2:OpenJPEG) (JP-
LS:CharLS) GCC5.5.0"
}

```

Tenemos que hacer un archivo que diga el criterio de búsqueda para dcm2bids y como etiquetar la salida,

```

{
  "descriptions": [
    {
      "dataType": "anat",
      "modalityLabel": "T1w",
      "criteria": {
        "SeriesDescription": "t1_mprage_sag_p2_iso"
      }
    }
  ]
}

```

Vamos a probarlo ahora, segun nuestra DB, este sujeto es el 0024, asi que,

```

[osotolongo@detritus tmp]$ dcm2bids -d /nas/corachan/MOPEAD/24N223T4/ -p
0024 -c conv_config.json
INFO:dcm2bids.dcm2bids:--- dcm2bids start ---
INFO:dcm2bids.dcm2bids:OS:version:

```

```
Linux-2.6.32-431.17.1.el6.centos.plus.x86_64-x86_64-with-centos-6.10-Final
INFO:dcm2bids.dcm2bids:python:version: 3.4.8 (default, Apr 9 2018,
11:43:18) [GCC 4.4.7 20120313 (Red Hat 4.4.7-18)]
INFO:dcm2bids.dcm2bids:dcm2bids:version: 2.1.4
INFO:dcm2bids.dcm2bids:dcm2niix:version: v1.0.20180622
INFO:dcm2bids.dcm2bids:participant: sub-0024
INFO:dcm2bids.dcm2bids:session:
INFO:dcm2bids.dcm2bids:config: /nas/data/mopead/tmp/conv_config.json
INFO:dcm2bids.dcm2bids:BIDS directory: /nas/data/mopead/tmp
INFO:dcm2bids.utils:Running dcm2niix -b y -ba y -z y -f '%3s_%f_%p_%t' -o
/nas/data/mopead/tmp/tmp_dcm2bids/sub-0024 /nas/corachan/MOPEAD/24N223T4/
INFO:dcm2bids.dcm2niix:Check log file for dcm2niix output
INFO:dcm2bids.sidecar:Sidecars pairing:
INFO:dcm2bids.sidecar:No Pairing <-
1001_24N223T4_AAhead_scout_20181205124008
INFO:dcm2bids.sidecar:_T1w <-
5001_24N223T4_t1_mprage_sag_p2_iso_20181205124008
INFO:dcm2bids.sidecar:No Pairing <- 6001_24N223T4_t2_space_dark-
fluid_sag_p2_iso_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1
INFO:dcm2bids.sidecar:No Pairing <-
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1a
INFO:dcm2bids.sidecar:No Pairing <-
8001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
9001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008_ph
INFO:dcm2bids.sidecar:No Pairing <-
10001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
11001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
12001_24N223T4_ep2d_bold_p2_resting_state_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
14001_24N223T4_ep2d_fid_basic_bold_p2_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
15001_24N223T4_ep2d_fid_basic_bold_p2_PA_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
16001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008_e1
INFO:dcm2bids.sidecar:No Pairing <-
20001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
22001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
23001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
24001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
```

```
INFO:dcm2bids.sidecar:No Pairing <-
25001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
27001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
28001_24N223T4_DTIep2d_diff_mddw_4b0_PA_20181205124008
INFO:dcm2bids.dcm2bids:moving acquisitions into BIDS folder
WARNING:dcm2bids.version:Your using dcm2niix version v1.0.20180622
WARNING:dcm2bids.version:A new version exists : v1.0.20190410
WARNING:dcm2bids.version:Check https://github.com/rordenlab/dcm2niix
```

y nos deja el T1 en su sitio,

```
[osotolongo@detritus tmp]$ tree sub-0024
sub-0024
├── anat
│   ├── sub-0024_T1w.json
│   └── sub-0024_T1w.nii.gz
└──
```

1 directory, 2 files

Vamos a intentar añadir ahora el fMRI que se ve menos complicado,

```
[osotolongo@detritus tmp]$ cat conv_config.json
{
  "descriptions": [
    {
      "dataType": "anat",
      "modalityLabel": "T1w",
      "criteria": {
        "SeriesDescription": "t1_mprage_sag_p2_iso"
      }
    },
    {
      "dataType": "func",
      "modalityLabel": "bold",
      "customLabels": "task-rest",
      "criteria": {
        "SeriesDescription": "*resting_state",
      }
    }
  ]
}
[osotolongo@detritus tmp]$ dcm2bids -d /nas/corachan/MOPEAD/24N223T4/ -p
0024 -c conv_config.json
INFO:dcm2bids.dcm2bids:--- dcm2bids start ---
INFO:dcm2bids.dcm2bids:OS:version:
Linux-2.6.32-431.17.1.el6.centos.plus.x86_64-x86_64-with-centos-6.10-Final
INFO:dcm2bids.dcm2bids:python:version: 3.4.8 (default, Apr 9 2018,
11:43:18) [GCC 4.4.7 20120313 (Red Hat 4.4.7-18)]
INFO:dcm2bids.dcm2bids:dcm2bids:version: 2.1.4
```

```
INFO:dcm2bids.dcm2bids:dcm2niix:version: v1.0.20180622
INFO:dcm2bids.dcm2bids:participant: sub-0024
INFO:dcm2bids.dcm2bids:session:
INFO:dcm2bids.dcm2bids:config: /nas/data/mopead/tmp/conv_config.json
INFO:dcm2bids.dcm2bids:BIDS directory: /nas/data/mopead/tmp
WARNING:dcm2bids.dcm2niix:Previous dcm2niix directory output found:
WARNING:dcm2bids.dcm2niix:/nas/data/mopead/tmp/tmp_dcm2bids/sub-0024
WARNING:dcm2bids.dcm2niix:Use --forceDcm2niix to rerun dcm2niix
INFO:dcm2bids.sidecar:Sidecars pairing:
INFO:dcm2bids.sidecar:No Pairing <-
1001_24N223T4_AAhead_scout_20181205124008
INFO:dcm2bids.sidecar:No Pairing <- 6001_24N223T4_t2_space_dark-
fluid_sag_p2_iso_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1
INFO:dcm2bids.sidecar:No Pairing <-
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1a
INFO:dcm2bids.sidecar:No Pairing <-
8001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
9001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008_ph
INFO:dcm2bids.sidecar:No Pairing <-
10001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
11001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008
INFO:dcm2bids.sidecar:_task-rest_bold <-
12001_24N223T4_ep2d_bold_p2_resting_state_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
14001_24N223T4_ep2d_fid_basic_bold_p2_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
15001_24N223T4_ep2d_fid_basic_bold_p2_PA_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
16001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008_e1
INFO:dcm2bids.sidecar:No Pairing <-
20001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
22001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
23001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
24001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
25001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
27001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
28001_24N223T4_DTIep2d_diff_mddw_4b0_PA_20181205124008
```

```
INFO:dcm2bids.dcm2bids:moving acquisitions into BIDS folder
WARNING:dcm2bids.version:Your using dcm2niix version v1.0.20180622
WARNING:dcm2bids.version:A new version exists : v1.0.20190410
WARNING:dcm2bids.version:Check https://github.com/rordenlab/dcm2niix
[osotolongo@detritus tmp]$ tree sub-0024
sub-0024
├── anat
│   ├── sub-0024_T1w.json
│   └── sub-0024_T1w.nii.gz
└── func
    ├── sub-0024_task-rest_bold.json
    └── sub-0024_task-rest_bold.nii.gz

2 directories, 4 files
```

Voy a cambiar las reglas y asegurarme que se sobrescriba todo,

```
[osotolongo@detritus tmp]$ cat conv_config.json
{
  "descriptions": [
    {
      "dataType": "anat",
      "modalityLabel": "T1w",
      "criteria": {
        "SeriesDescription": "t1_mprage_sag_p2_iso"
      }
    },
    {
      "dataType": "func",
      "modalityLabel": "bold",
      "customLabels": "task-rest",
      "criteria": {
        "SeriesDescription": "*resting_state+"
      }
    },
    {
      "dataType": "func",
      "modalityLabel": "bold",
      "customLabels": "task-rest_dir-PA_sbref",
      "criteria": {
        "SeriesDescription": "ep2d_fid_basic_bold_p2_PA"
      }
    },
    {
      "dataType": "func",
      "modalityLabel": "bold",
      "customLabels": "task-rest_dir-AP_sbref",
      "criteria": {
        "SeriesDescription":
"ep2d_fid_basic_bold_p2_AP"
      }
    }
  ]
}
```

```
}  
]  
}  
  
[osotolongo@detritus tmp]$ dcm2bids -d /nas/corachan/MOPEAD/24N223T4/ -p  
0024 -c conv_config.json --clobber --forceDcm2niix  
INFO:dcm2bids.dcm2bids:--- dcm2bids start ---  
INFO:dcm2bids.dcm2bids:OS:version:  
Linux-2.6.32-431.17.1.el6.centos.plus.x86_64-x86_64-with-centos-6.10-Final  
INFO:dcm2bids.dcm2bids:python:version: 3.4.8 (default, Apr 9 2018,  
11:43:18) [GCC 4.4.7 20120313 (Red Hat 4.4.7-18)]  
INFO:dcm2bids.dcm2bids:dcm2bids:version: 2.1.4  
INFO:dcm2bids.dcm2bids:dcm2niix:version: v1.0.20180622  
INFO:dcm2bids.dcm2bids:participant: sub-0024  
INFO:dcm2bids.dcm2bids:session:  
INFO:dcm2bids.dcm2bids:config: /nas/data/mopead/tmp/conv_config.json  
INFO:dcm2bids.dcm2bids:BIDS directory: /nas/data/mopead/tmp  
WARNING:dcm2bids.dcm2niix:Previous dcm2niix directory output found:  
WARNING:dcm2bids.dcm2niix:/nas/data/mopead/tmp/tmp_dcm2bids/sub-0024  
WARNING:dcm2bids.dcm2niix:'force' argument is set to True  
WARNING:dcm2bids.dcm2niix:Cleaning the previous directory and running  
dcm2niix  
INFO:dcm2bids.utils:Running dcm2niix -b y -ba y -z y -f '%3s_%f_%p_%t' -o  
/nas/data/mopead/tmp/tmp_dcm2bids/sub-0024 /nas/corachan/MOPEAD/24N223T4/  
INFO:dcm2bids.dcm2niix:Check log file for dcm2niix output  
INFO:dcm2bids.sidecar:Sidecars pairing:  
INFO:dcm2bids.sidecar:No Pairing <-  
1001_24N223T4_AAhead_scout_20181205124008  
INFO:dcm2bids.sidecar:_T1w <-  
5001_24N223T4_t1_mprage_sag_p2_iso_20181205124008  
INFO:dcm2bids.sidecar:No Pairing <- 6001_24N223T4_t2_space_dark-  
fluid_sag_p2_iso_20181205124008  
INFO:dcm2bids.sidecar:No Pairing <-  
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1  
INFO:dcm2bids.sidecar:No Pairing <-  
7001_24N223T4_pd+t2_tse_tra_p2_3mm_20181205124008_e1a  
INFO:dcm2bids.sidecar:No Pairing <-  
8001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008  
INFO:dcm2bids.sidecar:No Pairing <-  
9001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008_ph  
INFO:dcm2bids.sidecar:No Pairing <-  
10001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008  
INFO:dcm2bids.sidecar:No Pairing <-  
11001_24N223T4_t2_swi_tra_p2_384_2mm_20181205124008  
INFO:dcm2bids.sidecar:No Pairing <-  
12001_24N223T4_ep2d_bold_p2_resting_state_20181205124008  
INFO:dcm2bids.sidecar:_task-rest_dir-AP_sbref_bold <-  
14001_24N223T4_ep2d_fid_basic_bold_p2_AP_20181205124008  
INFO:dcm2bids.sidecar:_task-rest_dir-PA_sbref_bold <-  
15001_24N223T4_ep2d_fid_basic_bold_p2_PA_20181205124008  
INFO:dcm2bids.sidecar:No Pairing <-
```



```

16001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
18001_24N223T4_asl_3d_tra_iso_3.0_highres_20181205124008_e1
INFO:dcm2bids.sidecar:No Pairing <-
20001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
22001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
23001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
24001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
25001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
27001_24N223T4_DTIep2d_diff_mddw_48dir_p3_AP_20181205124008
INFO:dcm2bids.sidecar:No Pairing <-
28001_24N223T4_DTIep2d_diff_mddw_4b0_PA_20181205124008
INFO:dcm2bids.dcm2bids:moving acquisitions into BIDS folder
INFO:dcm2bids.dcm2bids:'/nas/data/mopead/tmp/sub-0024/anat/sub-0024_T1w.json
' already exists
INFO:dcm2bids.dcm2bids:Overwriting because of 'lobber' option
INFO:dcm2bids.dcm2bids:'/nas/data/mopead/tmp/sub-0024/anat/sub-0024_T1w.nii.
gz' already exists
INFO:dcm2bids.dcm2bids:Overwriting because of 'lobber' option
WARNING:dcm2bids.version:Your using dcm2niix version v1.0.20180622
WARNING:dcm2bids.version:A new version exists : v1.0.20190410
WARNING:dcm2bids.version:Check https://github.com/rordenlab/dcm2niix
[osotolongo@detritus tmp]$ tree sub-0024
sub-0024
├── anat
│   ├── sub-0024_T1w.json
│   └── sub-0024_T1w.nii.gz
└── func
    ├── sub-0024_task-rest_bold.json
    ├── sub-0024_task-rest_bold.nii.gz
    ├── sub-0024_task-rest_dir-AP_sbref_bold.json
    ├── sub-0024_task-rest_dir-AP_sbref_bold.nii.gz
    ├── sub-0024_task-rest_dir-PA_sbref_bold.json
    └── sub-0024_task-rest_dir-PA_sbref_bold.nii.gz

2 directories, 8 files

```

y por ultimo el DTI,

```

[osotolongo@detritus tmp]$ cat conv_config.json
{
  "descriptions": [
    {
      "dataType": "anat",

```

```
    "modalityLabel": "T1w",
    "criteria": {
      "SeriesDescription": "t1_mprage_sag_p2_iso"
    }
  },
  {
    "dataType": "func",
    "modalityLabel": "bold",
    "customLabels": "task-rest",
    "criteria": {
      "SeriesDescription": "*resting_state*"
    }
  },
  {
    "dataType": "func",
    "modalityLabel": "bold",
    "customLabels": "task-rest_dir-PA_sbref",
    "criteria": {
      "SeriesDescription": "ep2d_fid_basic_bold_p2_PA"
    }
  },
  {
    "dataType": "func",
    "modalityLabel": "bold",
    "customLabels": "task-rest_dir-AP_sbref",
    "criteria": {
      "SeriesDescription":
"ep2d_fid_basic_bold_p2_AP"
    }
  },
  {
    "dataType": "dwi",
    "modalityLabel": "dwi",
    "criteria": {
      "SeriesDescription": "DTIep2d_diff_mddw_48dir_p3_AP"
    }
  },
  {
    "dataType": "dwi",
    "modalityLabel": "dwi",
    "customLabels": "dir-PA_sbref",
    "criteria": {
      "SeriesDescription":
"DTIep2d_diff_mddw_4b0_PA"
    }
  }
]
}
```

[osotolongo@detritus tmp]\$ tree sub-0024/
sub-0024/

```
├── anat
│   ├── sub-0024_T1w.json
│   └── sub-0024_T1w.nii.gz
├── dwi
│   ├── sub-0024_dir-PA_sbref_dwi.json
│   ├── sub-0024_dir-PA_sbref_dwi.nii.gz
│   ├── sub-0024_dwi.json
│   └── sub-0024_dwi.nii.gz
└── func
    ├── sub-0024_task-rest_bold.json
    ├── sub-0024_task-rest_bold.nii.gz
    ├── sub-0024_task-rest_dir-AP_sbref_bold.json
    ├── sub-0024_task-rest_dir-AP_sbref_bold.nii.gz
    ├── sub-0024_task-rest_dir-PA_sbref_bold.json
    └── sub-0024_task-rest_dir-PA_sbref_bold.nii.gz
```

3 directories, 12 files

Convirtiendo

Ya tengo la estructura de conversión hecha. Ahora debo intentar convertir los sujetos según la base de datos del proyecto.

Tengo la estructura de nombres y directorio almacenados en *ni_names.csv* y la configuración en *tmpbids/conv_config.json*.

Como siempre que se corre en un grupo grande empiezan a surgir problemas así que he tenido que hacer algunos cambios en la configuración.

```
[osotolongo@detritus tmpbids]$ cat conv_config.json
{
  "descriptions": [
    {
      "dataType": "anat",
      "modalityLabel": "T1w",
      "criteria": {
        "SeriesDescription": "t1_mprage_sag_p2_iso"
      }
    },
    {
      "dataType": "anat",
      "modalityLabel": "T2w",
      "criteria": {
        "SeriesDescription": "t2_space_dark-
fluid_sag_p2_iso"
      }
    },
    {
      "dataType": "func",
```

```
        "modalityLabel": "bold",
        "customLabels": "task-rest",
        "criteria": {
            "SeriesDescription": "*resting_state*",
            "RepetitionTime": 2.13
        }
    },
    {
        "dataType": "func",
        "modalityLabel": "bold",
        "customLabels": "task-rest_dir-PA_sbref",
        "criteria": {
            "SeriesDescription":
"ep2d_fid_basic_bold_p2_PA"
        }
    },
    {
        "dataType": "func",
        "modalityLabel": "bold",
        "customLabels": "task-rest_dir-AP_sbref",
        "criteria": {
            "SeriesDescription":
"ep2d_fid_basic_bold_p2_AP"
        }
    },
    {
        "dataType": "dwi",
        "modalityLabel": "dwi",
        "criteria": {
            "SeriesDescription":
"DTIep2d_diff_mddw_48dir_p3_AP"
        }
    },
    {
        "dataType": "dwi",
        "modalityLabel": "dwi",
        "customLabels": "dir-PA_sbref",
        "criteria": {
            "SeriesDescription":
"DTIep2d_diff_mddw_4b0_PA"
        }
    }
}
]
```

```
[osotolongo@detritus tmpbids]$ for x in `cat ../ni_names.csv`; do
pname=$(echo ${x} | awk -F"," '{print $1}'); id=$(echo ${x} | awk -F","
'{print $2}'); dcm2bids -d /nas/corachan/MOPEAD/${pname}
/ -p ${id} -c conv_config.json; done
INFO:dcm2bids.dcm2bids:--- dcm2bids start ---
```

```
INFO:dcm2bids.dcm2bids:OS:version:
Linux-2.6.32-431.17.1.el6.centos.plus.x86_64-x86_64-with-centos-6.10-Final
INFO:dcm2bids.dcm2bids:python:version: 3.4.8 (default, Apr 9 2018,
11:43:18) [GCC 4.4.7 20120313 (Red Hat 4.4.7-18)]
INFO:dcm2bids.dcm2bids:dcm2bids:version: 2.1.4
INFO:dcm2bids.dcm2bids:dcm2niix:version: v1.0.20191031
INFO:dcm2bids.dcm2bids:participant: sub-0001
INFO:dcm2bids.dcm2bids:session:
INFO:dcm2bids.dcm2bids:config: /nas/data/mopead/tmpbids/conv_config.json
INFO:dcm2bids.dcm2bids:BIDS directory: /nas/data/mopead/tmpbids
INFO:dcm2bids.utils:Running dcm2niix -b y -ba y -z y -f '%3s_%f_%p_%t' -o
/nas/data/mopead/tmpbids/tmp_dcm2bids/sub-0001
/nas/corachan/MOPEAD/24A8DVSH/
INFO:dcm2bids.dcm2niix:Check log file for dcm2niix output
INFO:dcm2bids.sidecar:Sidecars pairing:
INFO:dcm2bids.sidecar:No Pairing <-
013_24A8DVSH_ep2d_bold_p2_resting_state_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
017_24A8DVSH_asl_3d_tra_iso_3.0_highres_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
019_24A8DVSH_asl_3d_tra_iso_3.0_highres_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
021_24A8DVSH_DTiep2d_diff_mddw_48dir_p3_AP_20180714105659
INFO:dcm2bids.sidecar:_T1w <-
5001_24A8DVSH_t1_mprage_sag_p2_iso_20180714105659
INFO:dcm2bids.sidecar:_T2w <- 6001_24A8DVSH_t2_space_dark-
fluid_sag_p2_iso_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
7001_24A8DVSH_pd+t2_tse_tra_p2_3mm_20180714105659_e1
INFO:dcm2bids.sidecar:No Pairing <-
7001_24A8DVSH_pd+t2_tse_tra_p2_3mm_20180714105659_e1a
INFO:dcm2bids.sidecar:No Pairing <-
8001_24A8DVSH_t2_swi_tra_p2_384_2mm_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
9001_24A8DVSH_t2_swi_tra_p2_384_2mm_20180714105659_ph
INFO:dcm2bids.sidecar:No Pairing <-
10001_24A8DVSH_t2_swi_tra_p2_384_2mm_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
11001_24A8DVSH_t2_swi_tra_p2_384_2mm_20180714105659
INFO:dcm2bids.sidecar:_task-rest_bold <-
12001_24A8DVSH_ep2d_bold_p2_resting_state_20180714105659
INFO:dcm2bids.sidecar:_task-rest_dir-AP_sbref_bold <-
14001_24A8DVSH_ep2d_fid_basic_bold_p2_AP_20180714105659
INFO:dcm2bids.sidecar:_task-rest_dir-PA_sbref_bold <-
15001_24A8DVSH_ep2d_fid_basic_bold_p2_PA_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
16001_24A8DVSH_asl_3d_tra_iso_3.0_highres_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
18001_24A8DVSH_asl_3d_tra_iso_3.0_highres_20180714105659
INFO:dcm2bids.sidecar:No Pairing <-
18001_24A8DVSH_asl_3d_tra_iso_3.0_highres_20180714105659a
```

```
INFO:dcm2bids.sidecar:_dwi <-  
20001_24A8DVSH_DTIep2d_diff_mddw_48dir_p3_AP_20180714105659  
INFO:dcm2bids.sidecar:No Pairing <-  
22001_24A8DVSH_DTIep2d_diff_mddw_48dir_p3_AP_20180714105659  
INFO:dcm2bids.sidecar:No Pairing <-  
23001_24A8DVSH_DTIep2d_diff_mddw_48dir_p3_AP_20180714105659  
INFO:dcm2bids.sidecar:No Pairing <-  
24001_24A8DVSH_DTIep2d_diff_mddw_48dir_p3_AP_20180714105659  
INFO:dcm2bids.sidecar:No Pairing <-  
25001_24A8DVSH_DTIep2d_diff_mddw_48dir_p3_AP_20180714105659  
INFO:dcm2bids.sidecar:No Pairing <-  
27001_24A8DVSH_DTIep2d_diff_mddw_48dir_p3_AP_20180714105659  
INFO:dcm2bids.sidecar:_dir-PA_sbref_dwi <-  
28001_24A8DVSH_DTIep2d_diff_mddw_4b0_PA_20180714105659  
INFO:dcm2bids.dcm2bids:moving acquisitions into BIDS folder
```

```
[osotolongo@detritus tmpbids]$ tree sub-0001/  
sub-0001/  
├── anat  
│   ├── sub-0001_T1w.json  
│   ├── sub-0001_T1w.nii.gz  
│   ├── sub-0001_T2w.json  
│   └── sub-0001_T2w.nii.gz  
├── dwi  
│   ├── sub-0001_dir-PA_sbref_dwi.json  
│   ├── sub-0001_dir-PA_sbref_dwi.nii.gz  
│   ├── sub-0001_dwi.bval  
│   ├── sub-0001_dwi.bvec  
│   ├── sub-0001_dwi.json  
│   └── sub-0001_dwi.nii.gz  
└── func  
    ├── sub-0001_task-rest_bold.json  
    ├── sub-0001_task-rest_bold.nii.gz  
    ├── sub-0001_task-rest_dir-AP_sbref_bold.json  
    ├── sub-0001_task-rest_dir-AP_sbref_bold.nii.gz  
    ├── sub-0001_task-rest_dir-PA_sbref_bold.json  
    └── sub-0001_task-rest_dir-PA_sbref_bold.nii.gz
```

3 directories, 16 files

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Permanent link: <https://mail.fundacioace.com/wiki/doku.php?id=neuroimagen:dcm2bids>

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