1 Naming Scheme for MRI Sequences

1.1 General Naming Scheme

The sequence name contains:

<prefix><index>_<task1>[-<task2>[...]]_<session>[-<run>]_<acquisition>

- prefix: use the BIDS suffix as prefix
- index: increment index in bijective base-26 system (A, B, ..., Z, AA, ..., AZ, BA, ..., ZZ, AAA) for sequences, which would be identical otherwise
- task: abbrevation of task name or open tag, multiple tasks allowed, e.g. for anatomical images used for post-processing of several tasks
- session: multiple sessions (visits)
- run: a within session repetition of a MRI acquisition with the same parameters, optional, default: 1
- acquisition: <coil>-<orientation>-<phase encoding>-<contrasts>-<multiband>-<ipat>-<partial fourier>-<resolution>-<te>-<tr>|<duration>

For sequences with multiple slice blocks only the values of the first slice blocks are given

e.g: boldA_nback_training-1_32-t-a-1-4-2-8-30302505-25-2360

- fMRI with BOLD contrast
- task: n-back
- session: training
- run: 1
- coil: 32 Channel head coil
- orientation: transversal
- phase encoding: anterior-posterior
- readout:
  - multiecho contrasts: 1
  - multiband factor: 4
  - ipat factor: 2
  - partial fourier: 8/8
- resolution: 3x3x3 mmˆ3
  - slice thickness: 2.5
  - slice gap: 0.5
- Echo time: 25 ms
- Repetition time: 2360 ms

Exception: AAScout_32

1.1.1 <prefix>

Prefix	Name	Description
AAScout	AAScout	Siemens AAScout for autoalign
bold	BOLD fMRI	functional imaging
fmap	Fieldmap	
epif	EPI fieldmap	EPI based fieldmap
sef	SE-fieldmap	Spin echo fieldmap, two phase encodings for topup
dwi	Diffusion w.	Diffusion weighted imaging
T1w	T1 weighted	
T2w	T2 weighted	
T1map	T1 map	quantitative T1 map (likewise for T2)
T2map	T2 map	quantitative T2 map
FLAIR	FLAIR	
FLASH	FLASH	
PD	Proton density	
PDT2	Combined PD/T2	
inplaneT1	Inplane T1	T1-weighted anatomical image matched to functional acquisition
inplaneT2	Inplane T2	T2-weighted anatomical image matched to functional acquisition
angio	Angiography	
defacemask	Defacing mask	Mask used for defacing
SWI	(SWI)	Susceptibility Weighted Imaging Magnitude and corresponding phase images of the SWI

1.1.2 <index>

Some sequences differ only in parameters not shown in sequence name. To avoid identical naming increment index in bijective base-26 system ('A', 'B', ..., 'Z', 'AA', ...) for sequences, which would be identical otherwise.

1.1.3 <task>

Abbrevation of the Task name. Current tasks in use:

Task	Long name	Study	Description
restcl	resting state closed	all	Resting state with closed eyes
restop	resting state opened	all	Resting state with open eyes
restfw	resting state fixation white	all	Resting state with open eyes and white fixation cross (black background)
restfb	resting state fixation black	all	Resting state with open eyes and black fixation cross (white background)
foo	food	034	
nav	navigation	034	

1.1.4 <acquisition>

Acquisition contains:

<coil>-<orientation>-<phase encoding>-<contrasts>-<multiband>-<ipat>-<partial fourier>-<resolution>-<te>-<tr>[-<optional parameters>]

1.1.4.1 <coil>

Coil	Long name
bc	body coil
12	12 channel coil
32	32 channel coil
sp	spinal coil

1.1.4.2 <orientation>

t: transversal
s: sagital
c: coronal
m: multiple slice groups

1.1.4.3 <phase encoding>

Abbrevation	Name	Long name
a	ap	anterior - posterior
p	pa	posterior - anterior
r	rl	right - left
l	lr	left - right

1.1.4.4 <contrasts>

contrasts	Long name	Description
1	only on contrast	e.g. standard T1w, EPI
2	two contrasts	e.g. multiecho EPI, fieldmap
...	...	
10	10 contrasts	e.g. look locker for T1 mapping
...	...	
60	60 contrasts	e.g. number of entries in DiffusionVector.txt, 60 diffusion weighted directions

1.1.4.5 <multiband>

multiband	Long name	Description
1	no multiband	multiband deactivated
2	mb factor 2	multiband factor 2
...	...	
10	mb factor 10	multiband factor 10

1.1.4.6 <ipat>

ipat	Long name	Description
1	no ipat	ipat deactivated
2	factor 2	ipat factor 2
3	factor 3	ipat factor 3
4	factor 4	ipat factor 4
22	2 - 2	3D sequence, two encoding directions: inplane 2, slice 2
43	4 - 3	3D sequence, two encoding directions: inplane 4, slice 3

1.1.4.7 <partial fourier>

partial fourier	Long name	Description
8	no ps	partial fourier deactivated
7	ps 7/8	partial fourier 7/8
6	ps 6/8	partial fourier 6/8
5	ps 5/8	partial fourier 5/8
4	ps 4/8	partial fourier 4/8
87	8/8 - 7/8	inplane 8/8, slice direction 7/8

partial fourier	Long name	Description
67	6/8 - 7/8	inplane 6/8, slice direction 7/8

1.1.4.8 <resolution>

xxyyzzgg

xx: resolution in x direction in 0.1mm
yy: resolution in y direction in 0.1mm
zz: resolution in z direction in 0.1mm
gg: gap in 0.1 mm or 3D for 3D readout

e.g.: 3.0mm x 3.0mm x 2.0mm with 1.0mm gap becomes:

30302010

1.1.4.9 <te>

Echo time in ms, for multiecho sequences the shortest echo time is given

1.1.4.10 <tr>|<duration>

Repetition time in ms or duration in mmss or hhmmss