**Description CI coding strategy CIS and n-of-m**

This coding strategy is based on the description of Nogueira et. al (2005). The package includes four coding examples: 1. CIS with all electrodes activated, 2. CIS with electrode 7 and 8 switched off, 3. N-of-m with 7 electrodes active in one cycle, 4. FL-F0F1F2.

In the script START\_STIMULATION.m variables can be adjusted and the coding strategy can be chosen and started. For each strategy a separate parameter file exists.

Variables of START\_STIMULATION.m:

Strategy: 1, 2 or 3 as described above.

T\_Thresh: Threshold in CU

C\_Thresh: Comfortable level in CU

CalibLevel: x dB above base level. According to the level the RMS of the input wav file is calibrated.

Variables of Parameter file:

m: Fix for Med EL (12)

nDeactivated=[]: Electrode number that is deactivated

n: Number of stimulated electrodes in one Cycle. Has to be adjusted if n-of-m strategy is used OR if electrodes are deactivated.

Pps: 1x12 vector. Pulse rate needs to be equal for all electrodes.

ipg: Inter phase gap (µs)

PulseWidth: Width of one pulse phase

CIFs: Sampling rate ofInput sound file

Sequence: Order in which electrodes are stimulated

T: Defined in START\_STIMULATION.m

C: Defined in START\_STIMULATION.m

B: Base level. Level that is mapped to individual T-Level

M: Maximum Level. Level that is mapped to individual C-level CompFac: Compression Factor for loudness growth function vol: Limits C Level and therefore dynamic range. 1 = 100 %

From the script START\_STIMULATION.m the function CIStrat.m is run. The Output of CIStrat.m can directly be used for the Wrapper for direct stimulation of MED EL electrode arrays.

REFERENCE

Nogueira, W., B ¨uchner, A., Lenarz, T., & Edler, B. (2005). A psychoacoustic nofm-type speech coding strategy for cochlear implants. EURASIP Journal on Applied Signal Processing, 2005, 3044–3059.