

# ARI HRTF format v2

## *Structures & matrices in the hrtf\_M\_\* files*

Last Update: 13.10.2011 by Michael Mihocic

### **stimPar**

- SamplingRate: Sampling rate of wav files
- Resolution: Bit rate of wav files
- GenMode: 1=acoustical
- WorkDir: Local directory (eg. "hrtf" for hrtf measurement)
- ID: Experiment ID
- SubjectID: Subject's ID in ARI HRTF database (<http://www.kfs.oeaw.ac.at/hrtf>)
- Version: hM format version
- Application:
  - Name (eg. "AMTatARI")
  - Version
  - FWVersion (FrameWork Version)

### **hM**

- Matrix with the impulse responses (IRs)
- size: ["length" "position-count" "channel-count"]
  - length: length of each IR in samples
  - position-count: the total number of positions for which HRTFs have been measured
  - channel-count: the total number of recorded audio channels. For HRTFs this number is 2 (left ear, right ear).

### **meta**

- pos: Information about the position for each IR in hM.
  - size: ["position-count" 7]
    - Column 1: `azi`, (from 0° to 359°, spherical coordinate system)
    - Column 2: `ele` (from -30° to 90°, spherical coordinate system)
    - Column 3: `channel` (index of the audio channel used for system excitation)
    - Column 4: `azimuth` (from -90° to +90°, spherical coordinate system)
    - Column 5: `elevation` (from -90° to +270°, spherical coordinate system)
    - Column 6: `lateral` (from -90° to +90°, horizontal-polar coordinate system)
    - Column 7: `polar` (from -90° to +270°, horizontal-polar coordinate system)
- itemidx: Item list index number for each IR
  - size: ["position-count" 1]
- lat: Latency of the IRs in samples, relative to Settings/Signal/"System Latency".
  - size: ["position-count" "channel-count"]
- amp: Amplitude of the excitation signal for an item in dB PD
  - size: ["position-count" 1]
- toa: Time-Of-Arrival
  - optional
  - size: ["position-count" "channel-count"]