Facilities

By apais

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By apais October 28, 2013

**MR Scanner:**

The Neuroimaging Unit houses a 3 Tesla Siemens MAGNETOM Skyra scanner with a wide bore (70cm) magnet, and high performance gradient system (max. amplitude 45 mT/m, slew rate 200T/m/s). The up-to-date scanner software, SyngoVD13, was installed recently, containing fast imaging sequences for fMRI studies, and the new readout segmented (multi-shot) diffusion-weighted EPI (RESOLVE) as well as analysis packages such as BOLD and DTI.

**RF Coils:**

Include the integrated body coil, a 20-channels head/neck and a 32-channels head receive-only coils, a spine coil and two flexible surface coils (4-ch and 8-ch).

**Visual Stimulus:**

A 32” MR-compatible LCD Monitor (NordicNeuroLab, Bergen, Norway) is placed at the rear side of the bore. The screen is connected to the experimental computer via a mirror converter box.

**Auditory Stimulus:**

- S14 fMRI-compatible insert earphones system with dedicated canal tips (Sensimetrix Corporation, Malden, MA). You can read more about S14 noise attenuation [here](#).
- MR-compatible HP-SC03 headphones
  - for 20-ch coil or HP-PIUS ultra-small piezo headphones for 32-ch coil (MR confon, Magdeburg, Germany). See [MR CONFON setup description](#).

**Response Box:**

Subject responses and scanner triggers are collected using an 8-button fiber optic response pad (fORP, Current Designs Inc, PA).

**Eye Tracking:**

We have a long-range mount EyeLink 1000 system (SR Research, Kanata, Ontario, Canada), with 50mm and 75 mm lens for MRI. The system is equipped with dedicated first-surface mirrors for each head coil.

**MediGlasses for fMRI:**
In the control room you can find MR safe prescription glasses suitable for use in fMRI (Cambridge Research Systems, Rochester, UK). The goggles are easy push fit interchange system with -5 to +3 dioptre Rx/lenses in 0.5 dioptre increments, and come with a vision test chart. No previous optical knowledge is necessary for clear, quick, and safe patient/subject vision correction.

**PACS:**

Dicom data are stored in a local PACs (Picture Archiving and Communication System) server for about one year.

You can download your data [HERE](#).

**Computer Facilities:**

**The unit is equipped with three PC Computers:**

1. **Experimental computer (control room)**
   - In use to run fMRI experiment. For correct timing, this PC has no internet connection and no anti-virus software. No USB can be plugged-in. You can download your scripts via a shared drive with the Backup computer.

2. **Backup Computer (control room)** - in use by the RT, and can be switch to run fMRI experiments in case the experimental computer is down. This computer also serves to fetch raw data from the scanner, and as a BIOPAC workstation.

3. **Training Computer (behavioural training room)**
   - All computers have a Windows OS with basic Office package. Below you can find a detailed description of the softwares installed in each computer:

<table>
<thead>
<tr>
<th>Software</th>
<th>Experimental</th>
<th>Backup</th>
<th>Training</th>
<th>Comment</th>
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<tr>
<td>Presentation 19.0</td>
<td>V</td>
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| E-prime 2.0/E-Studio 2.0        | V- Single User License  
2.0.10.353 (SP1)/2.0.10.248 | V- Single User License  
2.0.10.242/2.0.10.147     | V- Single User License  
2.0.10.242/2.0.10.147     | we have only one dongle. |
| Matlab with psychotoolbox      | V            | V              | V              | 2016A                    |
| Monitor/ Resolution            | Samsung      | Dell           | Samsung        |                          |
|                                 | 1920x1080    | 1920x1200      | 1920x1080      |                          |
General Do-Not Rules:

- Do not store data on the Desktop, we clean the desktop once a week.
- Check your scripts before your next experiment, and delete unnecessary log files.
- Do NOT INSTALL any software or upgrade w/o approval of ENU Staff.
- Do NOT UNPLUG any dongle from the computers.

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