C-TOC meeting – April 30, 2010

Attendees: Joanna McGrenere (JM), Matthew Brehmer (MB), Claudia Jacova (CJ), Sarah Le Huray (SLH)

1). Updated JM and MB on progress with C-TOC prototype and on results of focus groups. Discussed the tests that remain problematic, viz. Similarities, Pattern construction, Pattern recall, and Sentence production. Beyond conceptual and potential cross-cultural problems, there are also those related to time for task completion and implementation. Is there added value in having lengthy tasks in the battery? Can people be expected to use the mouse to move shapes, either by dragging (drag & drop) or clicking (click & snap) on target and destination? We may want to add a trial specifi cally to assess people's preferences and abilities in our interviews.

2). With respect to the Misplaced Objects test, the following points were notes:

- During encoding, each scene should have more than 1 clickable object, but only 1 that doesn't really belong (right now the clickable object stands out too much); it is possible that this will yield interesting data on perceptual functioning;

- During recall, once patient picks the scene, they are given boxes to place the object in the exact location it was originally. It is possible that once the boxes are shown, the pt may realize that they picked the wrong scene. We need to enable a corrected selection, where a lesser score is achieved. We will need to work on how to present this possibility. Perhaps by saying: Is this the scene you want to select?

3). Timing test performance: JM felt it was appropriate to time performance on all tests. This will be necessary in light of remote administration, where we do not know how long people take on those tasks that currently do not require quick responding. We will carefully need to word instructions for each test to emphasize either accuracy or speed as the most important purpose of the test. We will need some sample wording to address the accuracy-speed tradeoff in our tests. Accordingly:

- All tests should be timed and we should remove the icons.

- Timing will serve as an indicator of performance as well as whether someone has stopped the test entirely.

- We may need some type of "are you still there" phrase that appears after a certain amount of mouse inactivity.

- Questions that we will need to address in the development of C-TOC: How do we determine when a test performance is invalid? What will be the time limit for inactivity, for example a cut off of greater than 5 min?

- We need to be especially careful in between encoding and recall portions of tests.

4). Task interruption and resumption will likely be the most signifi cant problem in administering the C-TOC online. In future research we will need to determine what percent of valid data, or validly completed batteries we obtain with online administration. We will need to decide how to establish validity (see above), for single tests and for the entire battery.

This raises the important HCI question of how to keep people on task, who is most likely to have problems staying on task, how is this a function of cognitive impairment, what types of impairment are associated with the greatest difficulties of staying on task? It is possible that some HCI feature can help address task interruption/resumption but this needs to be identified. If C-TOC performance online were valid in say 70% of cases, that could be considered a success. The remaining patients could take the C-TOC at their doctors' offices, or when they come to clinic.

If test interruptions become too much of an issue, the idea of using a test proctor can be explored. For example, a loved one can be used as a proctor and would have to sign in before the examinee and promise to remove distractions and keep the examinee on task. Such setups have been successfully employed in different types of online testing.

5). Next steps will be to make the C-TOC prototype fully interactive for interviews with patients. Steve will work on this with Active-X in power point. If he is not successful, Java coding can be attempted (Steve, MB).

The interview submitted as part of the grant will have to be revised to contain a clinical and an HCI component, the first administered by CJ or SLH, the second by MB. CJ will make revisions and circulate a new version of the interview to all for feedback, comments, edits, prior to commencing the interviews. All interviews will be conducted by two interviewers. To set up interviews, SLH will need to ensure MB is available.

The C-TOC interview can be conducted in a clinic exam room. We can download the C-TOC prototype on the exam room computer, for patients to interact with. Where consent is obtained, interviews will be video- or audio-recorded. As interviews are conducted, it is likely that questions will become more focused, some will become redundant, and some new questions arise.