JOENSUUN YLIOPISTO
Tietojenkäsittelytieteen laitos
Usability Engineering / Käytettävyystekniikat

EXERCISES 3, Week 5

7, 8, 9: **X task**

Observing user behavior using thinking aloud – *note, reserve enough time to complete this assignment.*

a) Think-aloud (protocol), in the context of usability, is a basic technique that allows us to get deeper insights into users' thoughts. Familiarize yourself with think aloud (see additional materials). In about ten sentences, summarize the main ideas of the TA method as used in usability studies and engineering. Consider using TA with users with special needs.

b) Individually or in pair: From the talk of **Arthur Benjamin: Lightning calculation and other "Mathemagic"** (TED talks, **http://www.ted.com/talks/view/id/199**), transcribe the segment between 13:56 – 15:00 (from the start of thinking out loud).

For each row, have one column with timestamp, one column containing the text in individual sentences, and one column with additional notes, e.g. mark the actions (e.g. writing, re-reading), gestures, facial expressions etc. In the next week, we will use the transcribed data for more advanced analysis.

Email the solutions (do NOT use attachment) and take your observation notes to exercise session.

In order to complete the exercise, you have to email your answers by midnight before the demos to Roman Bednarik (firstname.lastname@cs.joensuu.fi), subject: UE demo 3. Take a hard copy of your answers with you to the demo, too.

Additional materials:
1 chapter 5 (sect. 5.5) in **Lewis and Rieman: Task-Centered User Interface Design: A Practical Introduction** (shareware at: http://grouplab.cpsc.ucalgary.ca/saul/hci_topics/tcsd-book/contents.html)

2 Monique W.M. Jaspers, Thiemo Steen, Cor van den Bos and Maud Geenen, **The think aloud method: a guide to user interface design,** International Journal of Medical Informatics, Volume 73, Issues 11-12, , November 2004, Pages 781-795. http://dx.doi.org/10.1016/j.ijmedinf.2004.08.003 (from joensuu.fi domain)

3 Think aloud and users with special needs:

Vera Louise Roberts and Deborah I. Fels, **Methods for inclusion: Employing think aloud protocols in software usability studies with individuals who are deaf**, International Journal of Human-Computer Studies, Volume 64, Issue 6, , June 2006, Pages 489-501. http://dx.doi.org/10.1016/j.ijhcs.2005.11.001

Chandrashekar, S., Stockman, T., Fels, D., and Benedyk, R. **Using think aloud protocol with blind users:: a case for inclusive usability evaluation methods.** In *ACM SIGACCESS Conference on Computers and Accessibility* (2006). Assets '06. ACM, New York, NY, 251-252 http://doi.acm.org/10.1145/1168987.1169040

4 There is a lot of information about TA available online, check e.g. portal.acm.org.