P. Ponsa, M. Díaz, C. Angulo. An ergonomic approach to computer vision interaction. Gerontechnology 2008; 7(2):190. The paper presents an experimental task based on computer vision interaction and cognitive ergonomics to improve the use of an interface. **Methods** Diverse studies are made applying human-computer interaction knowledge and techniques, such as accessibility and usability, to help people with cerebral palsy or other severe disabilities carry out specific tasks with a computer[1]. One of the aims of this paper is improve the use of the facial mouse interface with a qualitative task when the user must emulate the control of the technological devices in his living room. Another aim is the application of a human factors guideline for supervisory control interface design in order to create a display design of a home environment[2]. The experimental study was carried out in June 2007. With the Facial Mouse of Crea enterprise, a QuickCam Connect of Logitech, a personal computer, and a display created with Intouch software. The participants were been a set of four electronic engineering students: (i) Comparison between the use of the mouse versus the use of the Facial Mouse, (ii) Best location of the webcam: over the screen (left, center, right), over the table (near the computer), (iii) Living room graphical interface with all the real functions (visual information devices, switches, alarms). Each participant had two trials sessions, the first one with the mouse, and the second with the Facial Mouse. The duration of each session was variable, from 1 to 3 minutes. The instructor had an instruction in order to lower/raise the blind, on/off the light, change the set point of the temperature loop, and open the outside door. When the users end the trials, the instructor used the NASA-TLX questionnaire to evaluate the mental workload. **Results and discussion** We show in Figure 1 that the facial mouse demands more mental workload than normal mouse, but in this case the results would be also influenced by the experience of the users with the normal mouse and not with the facial mouse. The authors are working in home-interfaces design (kitchen, room, etc.) and in the creation of a users' satisfaction questionnaire

References

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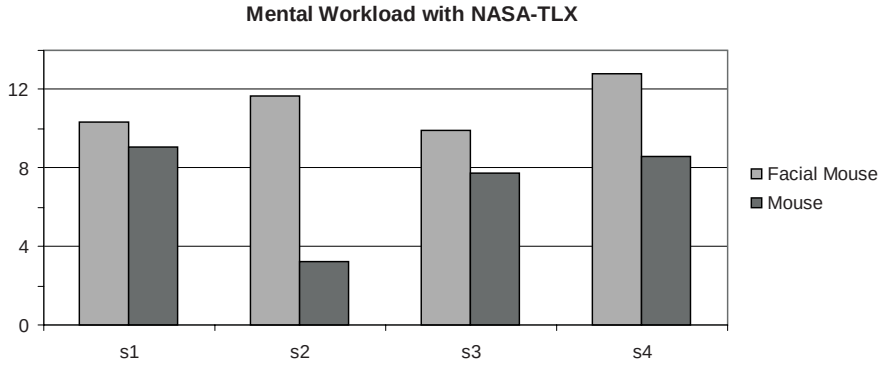

Figure 1 NASA Task Load Index results (s1 is student one)