Objectives:
The purpose of the study is to assess computer use habits and difficulties of patients (pts) with Parkinson’s disease (PD). These are preliminary data for the MAMEM project (Multimedia Authoring and Management using your Eyes and Mind).

Background:
Motor and non-motor symptoms of PD affect the ability to use computers. There are very few studies concerning computer use of patients with PD. Although patients consider computer use as an important part of their everyday life they face many difficulties using the keyboard and the mouse.

Methods:
Thirty five PD pts [28 men, 7 women] with a long experience in computer operation were included in the study. Their mean age was 59.5 (SD8.27) years. Most of them were in Hoehn and Yahr stage II (N=32). PD pts uses, habits, and difficulties with the computer were explored by means of a structured interview which provided information in the form of yes/no answers to questions relevant to a wide range of usual computer uses and applications as well as difficulties in performing various tasks relevant to computer operation. Two quantitative scales: a) the Computer Contribution in Life Scale (CCLS) referring to the contribution of the computer in a patient’s social life, everyday activities, emotional well-being [total score: 9=not important / 45=very important] and b) the Disease Impact on Computer Operation Scale (DICOS), exploring the disease impact on various aspects of computer operation [total score: 11=no effect / 55=maximum effect] were also employed. Both Questionnaires are presented in Appendix.

Statistical Analysis: Reliability of both scales was assessed by means of Cronbach’s alpha coefficient.

Results:
PD pts reported having a mean 13.9 (SD=9.8) years of computer experience and a mean daily use of 3.7 (SD=2.6) hours. The most frequent computer uses were communication (80%), information (62.9%), social participation (54.3%) and everyday finances (51.4%). The most frequent computer applications used were internet browser (94.3%) and e-mail (80%). Other relevant applications are presented in table I.

Specific difficulty was reported in the following tasks: double clicking (48.6%), moving cursor (45.7%), using two keys at once (42.9%), keyboard use (37.1%), etc. (figure 1).

Reliability analysis for both scales yielded satisfactory results. Cronbach’s alpha was 0.76 for CCLS and 0.92 for the DICOS, while item to total correlations ranged from 0.224 (item: emotional wellbeing) to 0.649 for CCLS and from 0.436 to 0.772 for DICOS. The two quantitative scales yielded moderate mean total scores [23.2 (SD 7.2) for CCLS] and [25.9 (SD 9.9) for DICOS]. Boxplots of both scales scores are presented in figure 2 & 3.

Conclusions: Our preliminary results highlight the various aspects of computer uses and difficulties experienced by PD pts. This information is important for the development of innovating technology helping patients to overcome their specific disabilities.