INTRODUCTION

We all use assistive technology, for example: glasses, watches, bicycles, washing machines, computers, trains, and weather satellites. These devices help us to carry out tasks we cannot do or to facilitate activities. The devices are a common and natural part of our daily life.

People with a disability use assistive devices just like anybody else, but the authorities often grant the assistive devices based on need assessment for medical treatment and improved individual functionality. On this basis, one wonders what perspective people with disabilities have on assistive technology?

The history of modern assistive technology for people with disabilities started with prosthetic equipment and is thus deeply rooted in the medical environment and culture [1]. Assistive devices in the Western welfare states seem mostly to be a professional work area [2,3,4], and professionals are often the ones who perform research in this area of assistive technology [5]. Professionals have also developed theories and methodologies in this area, for example, the Human Activity Assistive Technology model (HAAT) [6] the Lawton model of competence [7] or Wile’s Model of Human Performance Technology [8].

Against this backdrop it may be important to explore what users of assistive technology think of assistive devices and to examine which impact assistive devices have on their daily lives.

1. OVERALL AIMS OF THE STUDY

This study focuses on user perspective on assistive technology and has the following overall aims:

- To achieve a deeper knowledge about user perspectives on assistive technology in order to develop and enhance the service delivery system of assistive technology for the benefit of the users.
- To establish aspects or elements about user perspectives on assistive technology. These aspects or elements can be used for further research and for developing theories in order to promote and enhance the perspective of the users in the area of assistive technology delivery and development.

2. METHODS OF THE STUDY

Naturally occurring data in the form of 55 letters from 33 Danish citizens applying for assistive technology were used. These letters were inductively analysed and interpreted [9]. A deductive content analysis [9] was also undertaken using categories for coding developed from three models:

- The Human Activity Assistive Technology model (HAAT) [6].
- International Classification of Functioning (ICF) [10].
3. LITERATURE REVIEW

The findings of the literature review highlight the circumstance that many factors seem to influence the way users perceive assistive technology, that their perception can alter from person to person, from one situation to another, from place to place, and that the user can have both positive and negative opinions of the assistive devices at the same time.

Some core aspects of the user’s perspective on assistive technology seem nevertheless to appear throughout the literature. They seem to concentrate on issues of quality of life, realisation of personal goals and on the importance of carrying out roles (including employment), positive self image and personal dignity. They refer to elements of dependence/independence, of possibilities to perform activities and to participate (occupation) including self-care and security. Other aspects are concerned with external influencing factors such as: lack of access in surroundings, professional domination of the assistive device area, cultural stigma and negative symbolic value, as well as cumbersome, standardised assistive devices [12,13,14,15].

4. THE MATERIAL OF THE STUDY

The material for the study consists as mentioned above of 55 letters from 33 persons written during the period of November 1998 – February 2004. It was not possible to register age or gender of the writer based on the contents of the letters involved. The following two tables give a description of the sample.

Three citizens applied for more than one assistive device. Of the 33 applicants 24 of them applied for mobility aids for use outside the home. 24 of the citizens used other assistive devices. This indicates that they are accustomed to using assistive devices. The remainder (9 persons) did not mention in their letters whether they used other assistive devices.

5. FINDINGS

The content analysis

The main findings from the content analysis show that the reasons for applying for assistive technology – and thereby the aspects for user perspectives on assistive technology – seem to have a broad gamut. See figure 1.

This illustrates that the user perspectives on assistive technology seem particularly to involve aspects related to self-care activities. However, the findings also express that the user perspectives on assistive technology seem to involve many other elements such as physical body functions, participation, spiritual aspects and individual aspects in the environment.

The reasons given in the letters regarding body care activities, productivity and leisure activities are not very often expressed literally as activities, but rather as intentions or objectives of the activity/occupation for example:

‘Avoid just sitting and staring into the wall and just twiddling one's thumbs’, ‘participate in job activating’, ‘Visiting friends and acquaintances’, ‘Not to be isolated from society’.

The thematic analysis

The findings from the thematic analysis open coding were categorized in four main categories:
1. Category. Obstructions or difficulties concerning keeping up daily living
2. Category. Objectives of life
3. Category. Mastering and managing life situations by assistive technology
4. Category. Occupations of daily living

Figure 2 shows the relationship between the main categories and - from a user perspective - how assistive devices interact with the main categories. Here the properties of the main categories are shown too.

The main message in the letters seems to be that the citizens apply for the assistive devices in order to master and manage their life situations, which means to be able to function, to minimize or repair the influence of their disability or obstructions of other sorts.

The assistive devices can enhance mastering and managing in a way that is consistent with the person’s occupations of daily living and objectives of life: A chair must for example in addition to “sitting physically well” also give a feeling of rest, comfort and dignity. The chair must make it possible to do other activities like, for example, dining, cooking, working or whatever the user finds necessary to master or manage his or her life situations.

Examples of assistive technology found in the letters show how mastering and managing is central: You are granted a special mattress for sleeping better at night and then you function (master and manage) better during the day time, or you get a car for all sorts of transportation and then you have the possibility to keep up social contacts and get together any time it is necessary or any time you like (master and managing) etc.

6. DISCUSSION AND CONCLUSIONS

These findings of the study highlight that personal aspects such as goals, keeping up roles, self image and dignity seem to be important elements of user perspectives on assistive technology. This implies that according to users’ opinions service delivery of assistive technology is not only a technical matter of compensation or reduction of physical disability but a deeper question regarding the quality of life.

These findings are interesting seen in the light of the current professional practice, which mostly sees assistive devices as ‘tools’ for performing activities. However, the findings suggest, that assistive technology according to users’ perspectives, seems to enhance users’ mastering and managing abilities so that they might be capable of independently fulfilling their objectives of life by managing and mastering adequate occupations of daily living.

The findings also seem to be closely related to the theories of empowerment. This indicates that occupational therapists in the area of assistive technology must incorporate these theories in their daily practice. They must also focus on the aspects of mastering and managing in order to achieve the users’ objectives of life.
rather than focusing on different and specific activities of daily living.

The findings furthermore accentuate that inaccessible surroundings both physical and socio-cultural as well as poor design of the assistive devices seemed to influence user perspectives on assistive devices negatively.

References