



Age:	35
Location:	Albacete, Spain
Marital status:	Single
Education:	High school
Job:	Unemployed
Visual impairment:	Severe motor problems

## meet Mikel Vargas...

Mikel is 35 years old and single. Mikel was born with spina bifida, a disease that causes a poor development of the spinal cord. Mikel's lower limbs have been completely paralyzed, which forces him to sit in a wheelchair. He only has very little control left over his upper limbs and makes slight involuntary head movements. Due to his condition, he was never able to find a job. Mikel lives in communal living with shared leisure infrastructure. He enjoys the good atmosphere in group, but would like a more independent lifestyle.

### technology use

Mikel does not own a computer; however, the communal infrastructure lets him make use of a shared desktop that has been equipped with a collection of assistive technologies, including a head tracker, which follows a reflective dot on a cap he has to wear, and a blink switch. Buying and fully equipping a personal system would be unaffordable for Mikel. He considers himself to be an average user but is always willing to help out others who are just starting to use the computer.



Mikel never chats on the computer because those applications are generally too cluttered to access and control, but internet access does help him to keep in touch via email and videocalls.

Mikel owns a PDA but he actually uses it seldom by himself. A lot of functions can be reached by shortcuts customized to his personal preferences, so he is able to use some basic functionalities like calling and accessing his calendar by himself. He spent a lot of money on that phone, just to be able to use functionalities also offered by very basic and cheap cellular mobile phones. Unfortunately those basic models are usually far less accessible or offer no shortcuts, which Mikel really needs.



One of his favourite functions is the voice dialling feature that rather quickly learned to correctly interpret his voice.





## problems

- Mikel always needs assistance of another person when using the phone to use some more advanced features like transferring music from winamp to his mobile.
- Physically accessing the computer is a tedious job with a wheelchair.
- The main language of the computer is often a barrier.
- The overload of information on certain pages makes it hard to gauge what is important. Small texts and links are hard to select using the head tracker as a pointing device, in spite of a screen magnifier. Mikel also would rather not wear a baseball cap indoors just to use the tracker.
- Mikel tried a blink switch as well as dwell-click functionality, but found it unreliable and hard to adjust. It also only gave him one type of click. He would like to try a gesture switch which might detect, for example, a smile from him as a left click and raised eye-brows as a right click.
- Drag-and-drop movements are impossible to execute because they require Mikel to press and hold something while moving his gaze.
- The lack of facilities in Microsoft Word to switch between headers and footers, or to resize boxes and tables using only the keyboard.



## needs & wants

- Mikel wants a personal computer, so he wouldn't always have to wait to take his turn. Also, some privacy would be nice when he's making a videocall. "I would like to be like an able-bodied person with some privacy with e.g. hearing aids, cochlear implants...". When videocalling, it is required to speak really loud for the built-in microphone to properly work.
- He needs better connectivity between computer and phone (wireless).
- He really wants more training for all the assistive technologies, but since the equipment itself is so expensive, it is only possible to hire a trainer for a limited time each or every second year.
- He wants better support for AT like head movements and speech input on the internet in combination with personalized pages.
- Mikel searches for an alternative function to a normal mouse click that would make it easier to simulate the rapid succession of clicks to double click.
- Mikel would welcome less cables on the ground so wheelchair access to the computer becomes easier.

## last month...

Mikel is an avid film fan and likes to watch at least one movie every other day. He also collects films but used to depend on his friends and family to buy and bring them over. Since last month, Mikel has registered an account at Amazon with the help of his brother. He knows his way around the site and is now able to shop and order new films for his collection all by himself. They are even delivered right at his doorstep!