

Innovative Ideas

Mouseware- Hands-Free Access to computer and smart phones by Dextroware Devices

As part of the new normal, we live in a digital world with most of our lives and careers based on computers. Digital devices have closed the gap between urban and rural populations and have made the job market accessible to every demographic. Every person has the right to access such technological tools to strive towards better career opportunities. However, Persons with Disabilities (PwDs), especially many people with upper limb amputations or those who don't have control over their hands & fingers find it very challenging to interact with computers.

Out of the 40,000 people, who lose their upper limbs (hands), 85% live without any assistive aids due to the prohibitively high costs of such arm prosthetics. Also, these aids pose several challenges ergonomically in interacting with computers or any digital device.

Inaccessibility to digital devices is not only limited to amputations but also due to various neurological

disorders like Carpal Tunnel Syndrome, Parkinson's disease, Cerebral palsy, hand fractures, and so on.

Not just people with permanent disability, even the other people meeting with accidents and suddenly from that moment, that person is completely cut-off from technology and unable to rejoin their job. Limited medical and paid leave at the workplace adds up a level to this challenge, forcing them to settle for some low-paying jobs less than their capability.

” That's why we came up with a SINGLE solution that has the capability to solve these problems. A Head-wearable device that enables hands-free operation of Computers & Smartphones with simple head movements. All the user needs to do is to wear our Headgear and rotate their head to the direction the mouse cursor has to be moved. So your head movement is synchronous with the cursor on the screen. This same device can also be used to operate smartphones, tablets & smart TVs. The best part is, we are not going to confine the user to wear it in a single method. They can wear it as a cap or spectacles or headset or head strap. The mouse click is performed by multiple accessible switches like foot switch, finger switch, universal switch, etc. and the user is free to

choose any accessory depending on their comfort. We enable voice typing through a powerful Speech to Text engine that includes most English accents and regional languages. The user can also execute voice commands that can be customized to perform tasks or open applications” says Pravin Kumar, Chief Executive Officer, Dextroware Devices.



Picture description -A man wearing Mouseware above his ears on his head and accessing computer

This kind of assistive tech is not well known in India due to many barriers. We researched multiple factors and found a way to overcome most of the issues. For example, a vital component of computer usage: Typing, was not addressed by other players developing a similar solution. We address it by including a voice typing feature along with customized voice commands. Also, there was no SINGLE INTEGRATED solution to operate all smart devices. Another vital barrier was the cost-effectiveness of such an Assistive Tech.

Other players are providing a similar solution at a price range between Rs.45,000 & Rs.1 Lakh. But, **Dextroware Devices** mission is to make it affordable. Hence, the price of Mouseware is capped at Rs.15,000.

www.dextrowaredevices.com