#### **Braille Tutor**



Learn Braille for English, languages Indian Numerals with tutorials and exercises

#### Tablet Mounts



Table mounts with swivel motion for persons with motor difficulties to easily handle mobile devices and tablets in workstations.

## Online Labs with Simulations



Interactive online simulations for practical experiments in Physics, Chemistry, Biology, Math's for children with hearing, intellectual impairments as a virtual science laboratory

## DAISY Players



DAISY players support persons with print disabilities to listen to text books as talking books easy navigation, with bookmarks and can read PDFs, document files

## Online accessible Library





Online accessible library for persons with print disabilities to read books magnified, as audio, as well as convert to braille if required.

## **Mobility Alert Aids** Support for VI





Mobility Aids like Smart Cane, Saarthi, Ausion support with visual persons impairment in identifying obstacles above ground level for navigation with vibration, audio alerts

## **Vocational Training Devices**

## Scanners, Printers and Lamination Machines



**Sublimation Printing** 

sublimation Dye printing transfers images onto materials with a colour impression on them











Tactile Graphics, Braille Printing

#### ICT Lab Users

From inception in 2015, the lab has created awareness and encouraged various stakeholders in knowledge acquisition, training and use

- 1. Persons with Disabilities
- 2. Parents
- 3. Teachers
- 4. Special Educators
- 5. Vocational Instructors
- 6. HRD Trainees

- 7. Internship students
- 8. Rehabilitation Professionals
- 9. Teacher Training Institutions
- 10. Children in Special and Inclusive Schools
- 11. Visitors from various fields
- 12. Government Authorities 13. Employers (Private & Public Sectors)

## NATIONAL INSTITUTE FOR EMPOWERMENT OF PERSONS

WITH MULTIPLE DISABILITIES (DIVYANGJAN) ~Accredited by NAAC~ ~ISO 9001:2015~ (HRD & Clinical Services)

(Dept.of Empowerment of Persons with Disabilities (Divyangian), Ministry of Social Justice & Empowerment, Govt. of India) East Coast Road, Kovalam Post, Muttukadu, Chennai - 603112 Phone: 044-27472423, 27472104, Toll Free No: 1800-425-0345



Information & Communication Technology (ICT) Lab for Persons with Multiple Disabilities is initiative of NIEPMD in order to facilitate the objectives of various act & policies implemented at National & International level to create awareness on ICT and empowerment of Persons with Disabilities (PwDs) by their usage.

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## Objectives of this ICT Lab

- Access to Technology aided skills and communication development of Communication.
- Adaptations through Assistive Technology for individual's abilities
- Knowledge acquisition, encouragement for collaborative efforts and updates through network connectivity
- > Encourage research and development for make in India Assistive Technology products facilitating product evaluation and feedback from users
- Training modules on Assistive technology and ICT based teaching to develop listening, speaking reading and writing, drawing, mathematical skills

### Need for this ICT lab

- > New learning methodologies for PwDs include Information Communication Technologies (ICT) And Assistive Technology (AT).
- > They offer significant improvements in inclusion, development, e-learning and education particularly for Persons with Multiple Disabilities.
- > They assist and support them as vital enablers in their path for equal employment and independent living opportunities.

This lab is established with special reference to RPwD Act 2016, Chapter 8 Section No. 42 "Access to Information and Communication Technology"

## This ICT Lab for PwDs aims to fulfill the mandate of

- Signatory to Declaration on the Full Participation and Equality of PwD's in Asia Pacific Region (2000)
- Signatory to the Biwako Millennium Framework (2002) for action Towards inclusive
- Barrier free and rights based society, Biwako plus Five (2007)
- UN Convention on the Rights of PwD's (2008)
- The Incheon Strategy to "Make the Right Real" for PwDs in Asia and the Pacific (2012)
- The Sustainable Development Goals (2015) pledges for "Leaving no." One Behind"
- National Action plan an skilling for PwDs 2015
- The Rights of Persons with Disabilities Act, 2016

Contact: Phone: 044-27472113, 27472046, (Extn No.368),

Toll Free No: 1800-425-0345

E-mail: niepmd.dail.ictlab@gmail.com, niepmd.dail@gmail.com

## Assistive Devices in ICT Lab for Persons with Multiple Disabilities

## **Touch Screen and Large Display Monitor**



Magnified viewing, clicking, scanning and typing text and operate on icons, menu, with onscreen keyboard for low vision and fine motor gross / difficulties

## **Refreshable Braille Display and Note Taker**



Reading text, navigating, Typing operating commands from computers / Mobile devices computer / laptop / mobile with color contrast keys for devices in braille, typing / input persons with low vision, text using 6 Key typing with reading difficulties note taking for blindness, deaf blind conditions

## **Large Print Keyboard**



operating

## **Colour Coded Hard Press** Keyboard



rugged aggressive operations, that enable clicking, scanning fine motor difficulties with type inputs with word different colour code for prediction with easy typing and alphabets, numbers, command composing longer contexts for keys, special characters to assist persons with gross / fine motor typing and operations for difficulties intellectual and developmental disabilities

## **Onscreen Keyboard**



Onscreen keyboard Hard press rugged keys for computers or mobile devices

## **Trackball Mouse**



Adapted Mouse for rugged operations, with firm grip to surface for gross and fine motor difficulties, amputation in hands with easy to scroll trackball and distant left and right click keys

## **Foot Mouse**



Adapted Mouse with firm grip to surface for gross and fine motor difficulties, amputation or absence of hands with easy to scroll foot control and distant left and right click keys to operate computers / mobile devices







Adapted Contact Switches for rugged or fine contacts using hands or any body parts, or palm and finger grasp pressing, or single finger press operational, easy to fix in any assistive device to operate computers / mobile devices for persons with gross or fine motor difficulties

## **Assistive Software in ICT Lab for Persons with Multiple Disabilities**



based Adapted Camera Mouse for computer operations for those with severe gross / fine motor difficulties in hands and legs

### Screen Reader





Read language text contents, menus in computer / mobile devices and operate applications with voice enabled. Also, convert text to braille for refreshable braille display reading for visual impairments and reading difficulties



computer Learn keyboard operations with practice sessions and exercises voice enabled for visual impairments

**Talking Typing** 

**Tutor** 

azabat

## **Speech Recognition** Software





Speak and Operate the computer or Mobile Device, or type with voice in English as well as Indian languages for note taking for persons with severe locomotor, visual impairments.

## **Literacy Support Software** with Easy Word Processing **Features**





Easy to use word processor with Language development app multi- disciplinary way of output in multi-language and input features that support images, audio recording persons with intellectual, autism facility for children with learning difficulties, locomotor, speech impairments, autism visual and hearing impairments and other developmental with word prediction, interactive disabilities worksheets, visuals, text as well as audio

# **Picture Text Speech App**



Communication

## **Contact and Non-Contact Switches**





## **Augmentative Alternative** Communication (AAC)





Augmentative communication App facilitates picture, text, speech in words, sentence formats also by typing for persons with non-verbal conditions of autism, cerebral palsy and speech impairments

## **Mobility Aid and Reading App**



Mobility aid app supports in finding the location, nearby facilities, scan and read text in print forms for persons with visual impairments. audio recording facility for children with speech impairments, autism and other developmental disabilities

## **Indian Sign Language** Dictionary



Learn and communicate with Indian Sign language for English and Indian languages