



*Editor's Desk*

Edition 32

Dear friends,

*“Accessibility allows us to tap into everyone’s potential.”*

*- Debra Ruh*

Personally the month has been a very satisfying with loads of exciting news about inclusion through technology innovations at Empower Conference at Delhi. Yes of course, we will celebrate when it reaches the common man like you and me .This edition features interesting steps towards inclusion by different agencies.

Happy Reading!!

Regards,

Bhavna Botta

We are on the web

[connectspecial.in](http://connectspecial.in)



# **The Centre for Assistive Technology and Innovation (CATI) -Implementing affordable AT solutions**

*Dr Akila Surendran ,National Institute of Speech & Hearing (NISH),  
Trivandrum*

The Centre for Assistive Technology and Innovation (CATI) at NISH strives to meet the Assistive Technology (AT) needs of persons with disability (PwD), especially the accessibility needs of students and clients of National Institute of Speech & Hearing (NISH), Trivandrum, Kerala.

CATI was envisioned to be a state-of-the-art resource centre on the lines of Assistive Technology Centres (ATCs) in leading Universities in the USA. However, working in a low-resources environment, CATI has evolved own strategies to come up with affordable and scalable innovations, which can be easily replicated to raise the quality of living of PwDs.



Over a period of three years , many solutions have been implemented to improve communication and education of PwDs. The partnership with the Speech Language Pathologists at NISH was essential to set up the Alternative and Augmentative Communication (AAC) unit.

CATI mentors student projects and start ups working on AT products; and constantly trying to develop DIY solutions, also using digital fabrication methods. Collaborations with AT developers by assisting them with need identification; testing their products or prototypes and giving them the consolidated users' perspective on their product ensured low cost devices to become a reality.



NISH,Trivandrum



A few approaches that are consistent across all projects are as follows:

- (1) Need identification and refinement, in collaboration with end-users and rehabilitation professionals,
- (2) intense market survey and making best use of trial and demo options to screen a range of products before choosing one for procurement,
- (3) preferring software over hardware solutions,
- (4) preferring universal design, mainstream market solutions over specialized AT solutions,
- (5) developing an AT device lending library to further awareness and provide options for the users,
- (6) Training and following up with the users to ensure minimal AT abandonment and
- (7) Documenting and sharing our knowledge as widely as possible, towards developing an AT ecosystem in the country.



## **Meet the new Google translator: An AI app that converts sign language into text, speech**

Originally featured at Access and Inclusion through Technology

<https://www.freepressjournal.in/technology/new-artificial-intelligence-app-to-translate-sign-language-into-speech/1384374>

A Netherlands-based start-up has developed an artificial intelligence (AI) powered smartphone app for deaf and mute people, which it says offers a low-cost and superior approach to translating sign language into text and speech in real time.

The easy-to-use innovative digital interpreter dubbed as "Google translator for the deaf and mute" works by placing a smartphone in front of the user while the app translates gestures or sign language into text and speech.



The app, called GnoSys, uses neural networks and computer vision to recognise the video of sign language speaker, and then smart algorithms translate it into speech.

Affordable and always available interpreter services are in huge demand in the deaf community. Every day thousands of local businesses around the globe face problems with providing their services to deaf, said Konstantin Bondar, Co-Founder & CTO of Evalk, the company which developed the app.

According to the National Deaf Association (NAD), 18 million people are estimated to be deaf in India.

The app is expected to hit the Indian market next year, Roman Wyhowski Founder & CEO Evalk told PTI

The new application can find use in a B2B setting, where businesses who want to employ deaf and mute employees can use it to convey



employee messages to the end consumer, according to the company.

It will help drive inclusivity at the workplace by removing communication barriers between the disabled and able, Wyhowski said.

"Deaf people do not have that many options for communicating with a hearing person, and all of the alternatives do have major flaws. Interpreters aren't usu ..

He said the translation softwares in the market are either slow or expensive, or rely on old technology which does not allow scaling to another markets outside country of origin.

"By comparison, we offer a compellingly fast, easy, comfortable and economical solution," Bondar said.

Showcased in the Netherlands recently, the app can be used on multiple devices such as smartphones, tablets, laptops, or PCs.

It can translate as quick as the person speaks,



translate any signal.

It just requires a camera on the device facing the signing person, and a connection to the internet, said Bondar.

"Using only camera on your device, our system provides the same services only an experienced sign language interpreter could do," he said.

"All the translation is done by algorithms so that means we can differentiate on price as well, offering an inexpensive translation service which is handy and gives a lot of benefits to both deaf people, and businesses . Working in collaboration with India Accelerator, the start-up is in touch with NAD and is gathering sign language data for India, he said.

"We have partnered with them already in order to know better how we can help deaf people in India," Wyhowski said.

"Plus we plan to get in touch with Indian government, in order to know if some of the government spending on deaf people can be used to provide them with digital interpreter service, which can lead to higher employment of the deaf.





## How to make your house wheelchair user friendly

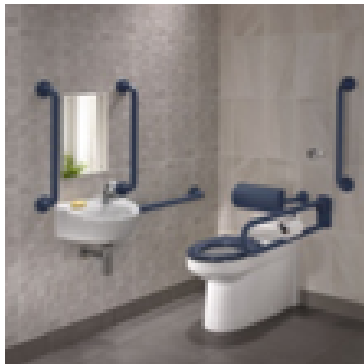
- Use wooden planks as portable ramps, remember -the ramp should have 1" rise for every 12" length (1 to 12 ratio). Put handrails on both sides of stairs.
- To take a wheelchair through a doorway, it should have at least 32" clear opening.
- Reorganise the furniture to give more space for wheelchair manoeuvre. Push furniture to the wall to create more space.
- Bathroom door can be made to open out by reversing the hinges Add non-slip surfaces.



a wooden plank as a ramp

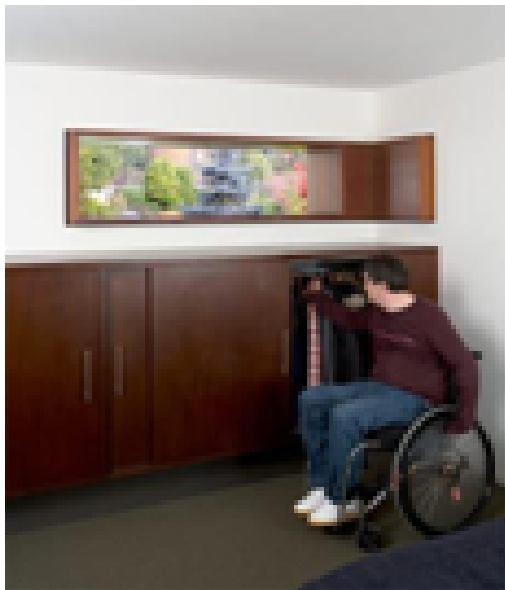


- To take a wheelchair through a doorway, it should have at least 32" clear opening.
- Reorganise the furniture to give more space for wheelchair manoeuvre. Push furniture to the wall to create more space.
- Bathroom door can be made to open out by reversing the hinges
- Add non-slip surfaces.
- Put a portable toilet frame on the western closet
- Install grab bars, railings around wash basin or a portable toilet frame can be put on the toilet closet
- a hand-held shower can be added
- Get a bath bench/chair
- 





- For cupboards --  
make them low height, install reachers



reachers

low height cupboards

In the kitchen add a low pull-out cutting board

- Remove cabinet and install lower counter or table
- install roll out storage spaces for vessels

