

NVDA ENHANCEMENT

The first objective of this project is to develop a fully functional free/open source screen reader that provides support for Indian languages. This will involve the following activities:

- Benchmark NVDA with commercially available screen readers to identify gaps in essential functionality.
- Identify India-specific screen reader requirements and changes that need to be made to NVDA to provide support for Indian languages and scripts.
- Work with the NVDA development team in Australia to the extent that it is necessary to carry out enhancements.
- Create and roll out India-specific distribution for NVDA.

eSPEAK DEVELOPMENT

The second objective of this project is to build text to speech language output for multiple Indian languages. This is essential in order to bring the benefits of the improved screen reading solution to a pan-Indian audience. The activities involved in this include:

- Work with eSpeak speech synthesizer team to understand the eSpeak software, the requirements for creating speech synthesizers for new languages and the current level of support available for Indian languages. The languages will be categorized into three priority groups for ease of organizing the work schedule.
- Work with specific language experts to create the text to speech engine for additional Indian languages as well as to enhance the already available software for Hindi, Kannada and Tamil.

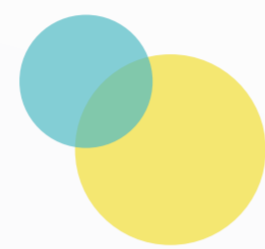
IMPACT

This project will aid all those with print disabilities in India — whether on account of having a visual disability, age-related low vision or inability to read or write in English or any of the languages listed earlier. It will also benefit persons who are illiterate and those who are unable to read English or regional languages.

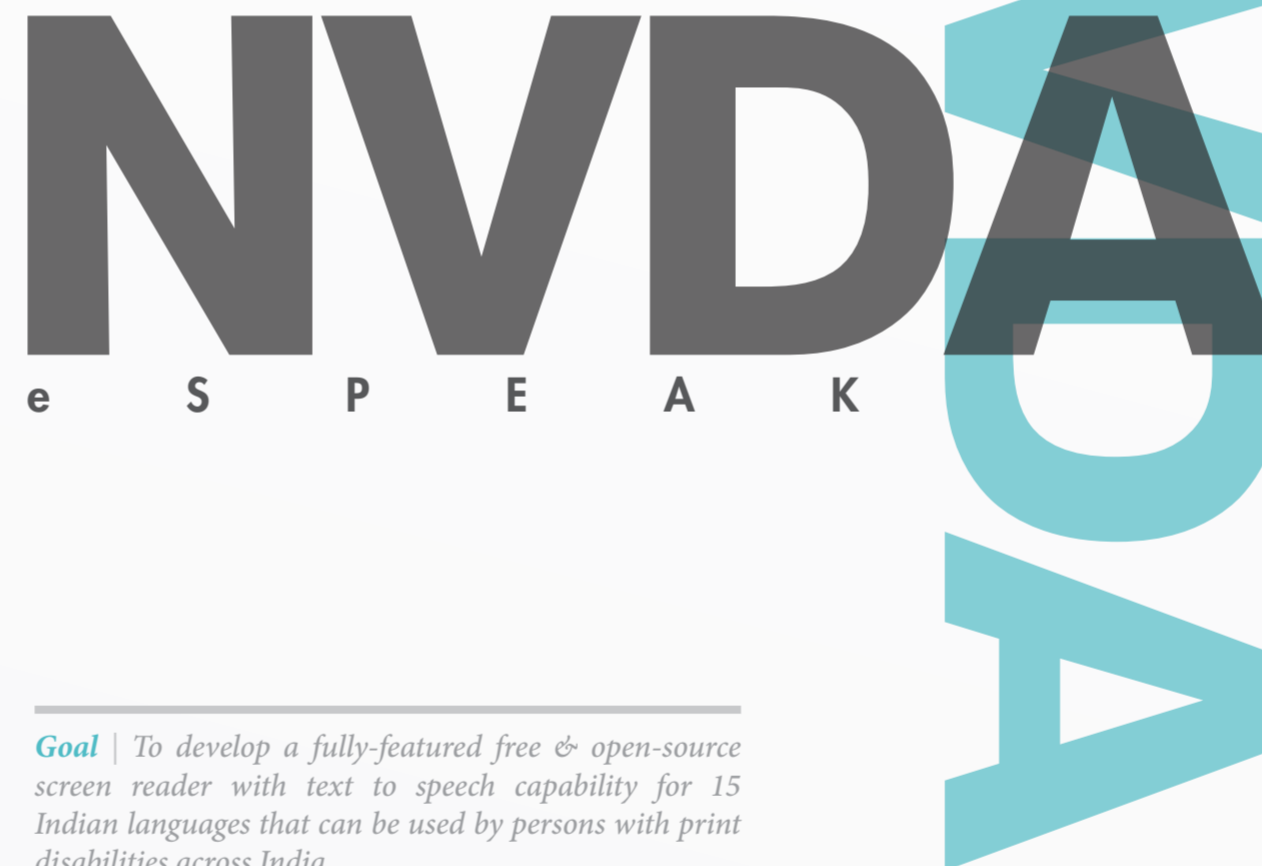
ACHIEVEMENTS TILL DATE

- Bugs on issues related to Word 2010 and Outlook 2010 are being closed.
- A driver using the existing open source components was written to replace an expensive driver for Hindi vocalization.
- CIS has signed a contract with Mahiti Infotech to close 12 bugs from the NVDA list and also signed another contract to develop e-speak text-to-speech (TTS) for four languages, namely, Malayalam, Hindi, Gujarati and Bengali.
- Changes made for Bangla, Hindi, Malayalam and Telugu are part of eSpeak public release version (Ver 1.47.09).
- Upon invitation, Indian Institute of Technology (IIT), Delhi, has agreed to join the project. IIT has also agreed to have three

DEVELOPING A SCREEN READER AND TEXT TO SPEECH SYNTHESIZER FOR INDIAN LANGUAGES.



DONOR: HANS FOUNDATION



Goal | To develop a fully-featured free & open-source screen reader with text to speech capability for 15 Indian languages that can be used by persons with print disabilities across India.



professors involved in the project and let students work on this project. This will help in capacity building and build a stronger open source community.

- NVDA team of Australia has agreed to reflect in their main NVDA development page all the work done on NVDA development in India.

ABOUT NVDA

NVDA runs on both 32-bit and 64-bit editions of Microsoft Windows XP or later. NVDA has no additional hardware requirements beyond those of the operating system and requires around 50 MB of disk space.

NVDA Key Features:

- Free.
- Provides feedback by synthetic speech and Braille.
- Rapidly gained popularity and respect since 2006 and enables blind users to access PC.
- A viable alternative to commercial screen readers.
- Support for popular applications including web browsers, email clients, internet chat programs and office suites.
- Built in speech synthesizer supporting over 43 languages.
- Support for many refreshable Braille displays.
- Ability to run entirely from a USB stick or other portable media without the need for installation and much more..

<http://community.nvda-project.org/>

ABOUT eSPEAK

eSpeak is a compact open source software speech synthesizer for English and other languages, for Linux and Windows.

<http://espeak.sourceforge.net/>

LANGUAGES BENGALI • TELUGU • MARATHI • TAMIL • URDU • GUJARATI • KANNADA • MALAYALAM • ORIYA • PUNJABI • ASSAMESE • KASHMIRI • SINDHI • KONKANI • MANIPURI

All of these languages have over one million speakers. Of the languages listed above, Hindi, Kannada and Tamil are already supported at a basic level by eSpeak, but might need to be enhanced to bring them on par with the proposed depth of coverage for other languages.