



The Currency Denominator: IRIS

Iris is a low-cost, highly reproducible, light weight, pocket-size, easy-to-use tool that identifies the value of each of the seven denominations of Indian paper currency. Designed by engineers at the Indian Institute of Technology (IIT) Guwahati, Iris will help the visually impaired become more independent and confident in monetary transactions, empowering them in day-to-day life.

Identifying Currency: A Challenge for the Visually Impaired (VI)

Indian currency is filled with symbols of the nation's history, culture, and institutions. Each currency bursts with color and overflows with information. The notes, which vary in size and are used by millions of people every day, support the flow of commerce and the livelihood of each citizen. Obviously, the function of currency is indispensable to society. Yet its utility and convenience often excludes one numerous group — the visually impaired. The situation in India is dim. India's more than 15 million blind persons, and several million more who suffer other vision impairments, are helpless when it comes to currency detection; no standard policy exists for their aid. A few sporadic attempts across the country to address VI currency usage have not yet resulted in permanent, widely useful solutions.

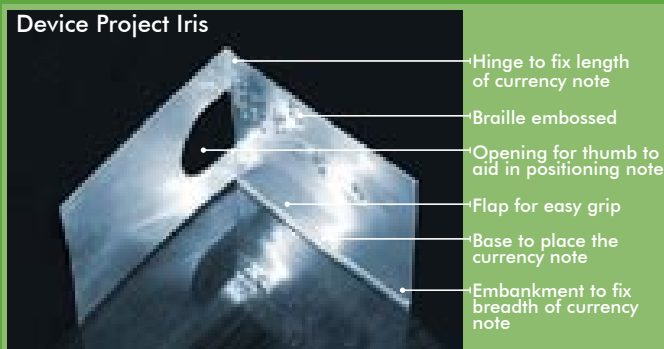
Project Iris: The Simple Solution

The Project Iris Currency Denominator the proposed device for Indian currency has to take into account both the length and breadth.

The device has unique construction that facilitates securing two sides of the note. The breadth is fixed on the embankment of the base plate. The length is fixed by aligning the note along the hinge between the two plates. The excess length of the note is folded to the backside of the base plate, where the denomination of the note is determined by reading Braille written along the periphery where the note ends.

The currency's original embossing is also provided on the plate next to the Braille, for VI who does not read Braille. It is so simple to use that 86% of VI surveyed said that they are willing to trust and buy Iris.

Device Project Iris

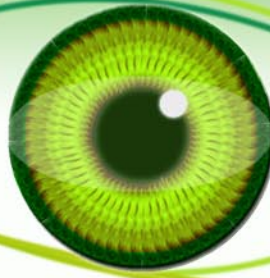


In our national survey, 86% of the visually impaired stated that they are willing to trust and buy the device, while 83% feel that the device will empower them and enhance self-confidence. Some testers in New Delhi praised its helpfulness, noting the device's convenience and ease-of-use. Importantly, they were easily able to learn how to manipulate it on their own, without instruction.

While Indian rupees are each a different size, the VI cannot always distinguish between the notes. And, while the currency does have distinguishable embossing, these surface attributes degrade over time. Ad hoc methods of detection differ from individual to individual. Some discern face values on the basis of texture, some use a folding method, and still others judge different denominations, amazingly, based on smell.

A majority of VI agrees that these attempts are hit-and-miss, frequently prone to error, ultimately ending up as guesses. And most VI are afraid to carry notes of high monetary value, as chances of loss are, unfortunately, large. Now, through Project Iris, we have an easy-to-implement, inexpensive, and long-term answer.

Notably, Iris testers were easily able to learn how to manipulate the tool on their own, without instruction. Device Iris requires no change to existing currency policies, granting VI people independence in discerning denominations of notes right now, despite currency attributes that baffle many VI. A national survey indicates that 69% of VI shop by themselves. Of those surveyed, 63% said that they are involved in daily monetary transactions. More than 30% do not trust people/shop vendors, and about 25% of respondents said they feel that they are sometimes being cheated in monetary transactions. Nearly three-quarters of respondents expressed the need to have a device in hand to identify currency. Importantly, 83% feel that Iris will empower them and enhance self-confidence.



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Project Iris Currency Denominator: Features

- Simple and highly reproducible** - giving Iris an edge over other (often electronic) readers that are expensive and suffer from low reproducibility.
- Extremely durable** - it contains no complex mechanical or electrical parts.
- Cost effective** - its market price is expected to be only about Rs. 20/-, hence Iris can easily be purchased or subsidized. Low capital investment for its production.
- Convenient** - small size (93mm x 75mm) and light weight make it simple to carry in a pocket or purse.
- Handy and intuitive** - no prior training is required to use the detector; any VI individual, able to read Braille, will benefit. For those who cannot read Braille, each note's original embossing is also permanently recreated on the Iris device.
- Reliable** - Iris is highly dependable, robust, and requires no battery; once purchased it can be used for years.
- Ready now** - the prototype has been made; no special technology or laboratory facilities are required.

Awards and Recognition

It is often difficult to design straightforward solutions that have an immediate and direct impact. But, at IIT Guwahati, driven by a spirit of innovation, Hari Singhal, supervised by Professor Harshal Nemade, developed the ingenious, yet simple, design for this low-cost device, and an Indian patent has been filed.

- In December 2006, the currency denominator was judged best engineering project nationwide and was awarded a gold medal at the Intel IRIS competition, a collaborative effort by Intel, the Department of Science and Technology, and the Confederation of Indian Industry.
- The denominator was among the top five items in the IDEAZ IIT Bombay, Pan IIT Alumni Business Idea competition.
- The product's simplicity and potential social impact created such excitement that it was featured in an October 2007 NDTV (India's Premier news channel) program, "The Next Big Thing."



Colorss Foundation

Colorss Foundation is directly engaged in programs and projects to assist, train, and empower India's various marginalized populations, including the physically disabled and mentally handicapped. The foundation is working on the national launch of the Project Iris Currency Denominator, and hopes to raise awareness of the issue, as well as the funds necessary for large-scale production and mass distribution of the device. Colorss' program will empower the visually impaired, enabling them to easily conduct monetary transactions, while enhancing their self-confidence. Colorss Foundation works toward the mainstream integration of marginalized individuals through psychological, social, and professional training and rehabilitation. The foundation will promote self-sustaining projects aimed not only at preventing the erosion and loss of an individual's innate skills, but also building key life skills.

There is always a simple way to make an individual's life bright. We need considerable financial support to pursue Project Iris. We seek donations from individuals and companies, as well as the collaboration of organizations that are currently working with the VI to help establish a wide-reaching network to help make the currency denominator available.

To send your donation to our bank account:
Colorss Foundation: Current A/C number: 30562854518
State Bank of India, New Sama Road, Vadodara
You can also mail contributions, payable to "Colorss Foundation" to our address as given below.



Colorss Foundation

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